

A Guide to QuarkXPress Server 10.1

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Conventions

Formatting conventions highlight information to help you quickly find what you need.

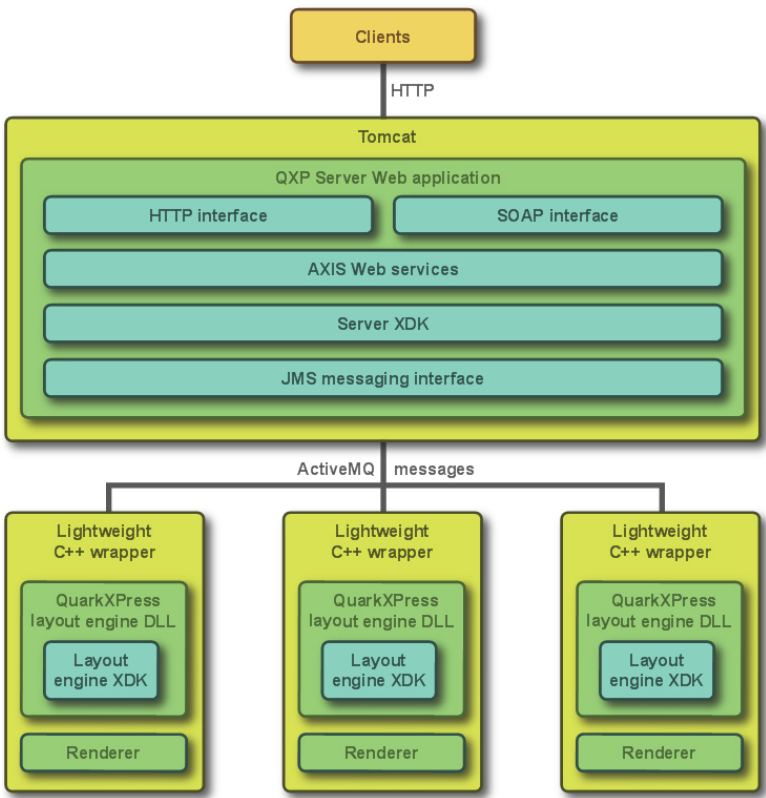
- **Bold type style:** The names of all dialog boxes, fields, and other controls are set in bold type. For example: "Click **OK**."
- **References:** In descriptions of features, parenthetical references guide you in accessing those features. For example: "The **Find/Change** dialog box (**Edit** menu) lets you find and replace text."
- **Arrows:** You will often see arrows (>), which map out the menu path to a feature. For example: "Choose **Edit > Style Sheets** to display the **Style Sheets** dialog box."
- **Icons:** Although many tools and buttons are referenced by name, which you can see by displaying ToolTips, in some cases icons are shown for easy identification. For example, "Click the  button on the **Measurements** palette to center text."
- **Cross-platform issues:** This application is quite consistent across operating systems. However, some labels, buttons, key combinations, and other aspects of the application must differ between Mac OS® and Windows® because of user interface conventions or other factors. In such cases, both the Mac OS and Windows versions are presented, separated by a slash, with the Mac OS version presented first. For example, if the Mac OS version of a button is labeled **Select**, and the Windows version is labeled **Browse**, you are directed to "Click **Select/Browse**." More complex cross-platform differences are mentioned in notes or parenthetical statements.

Getting started with QuarkXPress Server

QuarkXPress Server lets you render QuarkXPress projects in a variety of formats.

QuarkXPress Server architecture

The QuarkXPress Server architecture is shown in the following diagram.



QuarkXPress Server architecture diagram

Understanding QuarkXPress Server

QuarkXPress Server lets you output customized QuarkXPress layouts in a variety of formats — including JPEG, Portable Document Format (PDF), and PostScript® — from a centralized QuarkXPress Server application. To send a request to a QuarkXPress Server

application, all you need to do is enter a URL into your Web browser's address field. For example, the following URL instructs the QuarkXPress Server application named "QXPServer" to return the file "MyProject.qxp" as a PDF file:

```
http://QXPServer:8080/pdf/MyProject.qxp
```

The QuarkXPress Server application receives these requests, renders (creates) the requested projects in the requested formats, and then returns the rendered file to the client application (in this case, the Web browser).

- ➔ The format of QuarkXPress Server URL requests is described in detail in "[Creating URL requests](#)" and in "[Using QuarkXPress Server](#)."
- ➔ You can also create custom applications that communicate with a QuarkXPress Server application using HTTP, Simple Object Access Protocol (SOAP), or another protocol. For more information, see "[Using QuarkXPress Server](#)."

You can think of QuarkXPress Server as a special version of QuarkXPress that runs on a server with the following main differences:

- Instead of accepting input from a keyboard and mouse, QuarkXPress Server accepts input in the form of URLs and other types of requests.
- Instead of sending a project to a printer, QuarkXPress Server renders (creates) output in a particular format and sends the rendered file to a client.

Server templates and static projects

QuarkXPress Server can open, render, and serve two types of projects:

- *Static projects* are QuarkXPress projects that can be rendered and served as-is in a variety of formats by the QuarkXPress Server application. For example, you might make a product manual available as a static project and allow customers to download that manual in a variety of formats.
 - *Server templates* are QuarkXPress projects that can be manipulated by the QuarkXPress Server application before being rendered and served. For example, you might make a sales piece available as a server template so that each person who downloads it receives a personalized copy.
- ➔ QuarkXPress Server can open QuarkXPress documents, projects, and templates created in any language edition of QuarkXPress 7.0 or later. QuarkXPress Server can save and export projects in QuarkXPress 8.x, 9.x and 10.x format.

The document pool and the Streaming Document Provider

QuarkXPress Server has two main ways to find or receive content for rendering.

- The document pool
- The Streaming Document Provider

QuarkXPress Server can read templates and static projects from a directory called the *document pool*. The document pool can be any directory that is available to

QuarkXPress Server through a file system or an FTP server. You can use any of the following methods to place files in the document pool:

- Drag the files to the document pool directory.
- Use the **Add Files** command in the **Document Pool** screen of the QuarkXPress Server Web interface.
- Upload the files using FTP to the document pool directory.
- Use Telegraph XTensions® software to upload the files to the document pool from within QuarkXPress. (For more information about Telegraph XTensions software, see "[Telegraph XTensions software](#).")

For more information about the document pool, see "[The QuarkXPress Server user interface](#)."

➡ The document pool directory cannot be an encrypted directory.

QuarkXPress Server can also receive templates, projects, and other files as part of a multipart HTTP request. For more information, see "[Using the Streaming Document Provider](#)."

In addition, QuarkXPress Server can serve documents from a database, a content management system, or other sources. Collectively, the document pool and any other source of files to be served are referred to as *document providers*.

Projects and layouts

QuarkXPress projects can contain one or more layouts, and only one layout can be rendered at any given time. If you do not specify a layout when you send a rendering request, QuarkXPress Server renders the first layout in the project.

Job Jackets and resources

In QuarkXPress, *resources* are things such as style sheets, colors, H&Js, output styles, and item styles. Resources are stored in a *Job Jackets structure*, which can be either embedded in a project or stored in a separate Job Jackets file.

QuarkXPress Server uses a default Job Jackets file to make a default set of resources available to all projects handled by QuarkXPress Server, regardless of whether they are included in the projects and articles you render. You can update this file in two ways:

- Using the QuarkXPress Server Web interface. For more information, see "[Job Jackets dialog box](#)."
- Using request handlers. For more information, see "[Jobjacket](#)" and "[updateprefsfromjj](#)."

Once you've downloaded the default Job Jackets file, you can update its resources using QuarkXPress. For more information, see "Job Jackets" in *A Guide to QuarkXPress*.

The location of the default Job Jackets file is stored in the QuarkXPress Server preferences folder. For more information, see "[QuarkXPress Server preferences](#)."

Caching

To maximize efficiency, QuarkXPress Server uses cached versions of all rendered projects whenever possible. You can configure projects so that they are never cached, so that they are cached for a particular amount of time, or so that they are rendered every time they are served.

QuarkXPress Server preferences

When you launch QuarkXPress Server, the application creates preferences files that are functionally and structurally equivalent to the preferences files created by QuarkXPress. These preferences files reside in the QuarkXPress Server "Preferences" folder. QuarkXPress Server also creates a "QuarkXPress Server.prf" file in the "Preferences" folder. This file contains preference settings that are specific to QuarkXPress Server.

QuarkXPress Server uses these preferences the same way QuarkXPress uses them. If an XTensions module creates a project in QuarkXPress Server, that project draws its settings from the QuarkXPress Server preferences just as a new QuarkXPress project draws its settings from the QuarkXPress preferences.

Preferences files are stored in the following locations:

- Mac OS: `[User]/Library/Preferences/Quark/QuarkXPress Server Renderer 10.0/`
- Windows Vista, Windows 2008, or Windows 2008 R2 64-bit when QuarkXPress Server is running normally or as a service under a domain user account: `C:\Users\[user name]\AppData\Roaming\Quark\QuarkXPress Server Renderer 10.0\`
- Windows 2008 or Windows Vista, when QuarkXPress Server is running as a service under a local user account:
`C:\Windows\System32\config\systemprofile\AppData\Roaming\Quark\QuarkXPress Server Renderer 10.0\`
- Windows 2008 R2 64-bit, when QuarkXPress Server is running as a service under a local user account:
`C:\Windows\SysWOW64\config\systemprofile\AppData\Roaming\Quark\QuarkXPress Server Renderer 10.0`

For more information about preferences, see "[Administration menu](#)."

Quark License Administrator

To prevent unauthorized use, QuarkXPress Server requires the presence of a Quark® License Administrator (QLA) server to launch. QuarkXPress Server follows the configuration and control rules that are enforced by QLA. For more information about QLA, see the QLA documentation included with QuarkXPress Server.

Master-renderer environment

Requests for project renders are stored in a *connection queue*. The requests in the rendering queue can be processed by a single QuarkXPress Server application, or by a master QuarkXPress Server application and several renderers (additional instances of QuarkXPress Server). The master QuarkXPress Server application launches the available number of renderers and then passes the requests in the connection queue to those

renderers as they become available. The number of renderers available for launch is determined by the number of licenses available from the QLA server.

The master QuarkXPress Server process and all of the renderers it launches share the following elements:

- The same application preferences (each renderer has its own preferences files, but QuarkXPress Server keeps them synchronized)
- The same document cache in memory
- The same memory cache
- The same server XTensions modules (a separate instance of each XTensions module runs with each renderer)
- The same server document pool (if defined in the QuarkXPress Server preferences or if a document provider is used in place of the document pool)

If a renderer unexpectedly quits, the master QuarkXPress Server restarts the renderer without requiring any action from you.

Changing logging levels in "log4j.xml"

You can change the logging levels for QuarkXPress Server. Options include **ERROR**, **INFO**, **WARN**, **DEBUG**, and **TRACE**.

- **ERROR** = includes messages that indicate disrupted and failed requests.
- **INFO** = includes messages that indicate the state of services.
- **WARN** = includes non-critical service error messages
- **DEBUG** = includes messages that indicate server resource usage.
- **TRACE** = includes messages according to activity related to requests.

Refer to Java documentation for more information about logging levels.

To change logging levels:

- 1 Open the "conf" folder in your QuarkXPress Server folder.
- 2 Open "log4j.xml" in a text-editing application.
- 3 To define the logging level for QuarkXPress Server errors, scroll to `<logger name=com.quark.qxps`. The structure is as follows:

```
<logger name="com.quark.qxps">
  <level value="ERROR" />
</logger>
```

- 4 To define the logging level for QuarkXPress Server transactions, scroll to `<logger name=QXPSTransactionLogger`. The structure is as follows:

```
<logger name="com.quark.qxps" additivity="false">
  <level value="INFO" />
  <appender-ref ref="QxpsTransactionFileAppender" />
</logger>
```

- 5 To define the logging level for other activity, scroll to the `<root>`. The structure is as follows:

```
<root>
  <priority value="ERROR" />
  <appender-ref ref="QxpsServerAsyncAppender" />
</root>
```

- 6 Save and close "log4j.xml."

Understanding QuarkXPress Server XTensions software

QuarkXPress Server ships with a collection of XTensions software that adds capabilities to QuarkXPress Server. For example, PDF Export XTensions software lets QuarkXPress Server serve content in PDF format; Modifier XTensions software lets you retrieve, manipulate, and reconstruct XML representations of projects; and QuarkCopyDesk® Renderer XTensions software lets you create QuarkCopyDesk articles. Telegraph XTensions software works with QuarkXPress to allow designers to name boxes in template files so that those boxes can be addressed by URLs.

For more information about XTensions software included with QuarkXPress Server, see "[QuarkXPress Server XTensions software](#)" and "[Telegraph XTensions software](#)."

The QuarkXPress Server XTensions API

In addition to the XTensions modules included with QuarkXPress Server, developers can create custom XTensions software that add features. The complete server XTensions Application Programming Interface (API) documentation is available in the QuarkXPress Server XTensions Developer's Kit (XDK).

- ➡ As of version 8.0, the QuarkXPress Server XDK is Unicode-compliant.

The QuarkXPress Server XDK lets you create XTensions modules that provide the following abilities:

- The ability to register request handlers
- The ability to register project providers
- The ability to register new render formats
- The ability to add items to the list of response properties, cookies, and HTTP header items
- The ability to log messages in log files
- The ability to initiate a new transaction to be processed by the server
- The ability to completely control how projects are processed by the server

In addition, QuarkXPress Server XTensions software can register for the following basic callbacks:

- Pre-processing
- Content loading
- Layout modification

- Post-processing
- Removing slugs while running the QuarkXPress project renderer
- Analyzing the server after a transaction is complete
- Pre- and post-transaction callback

Configuring QuarkXPress Server for launch

To configure QuarkXPress Server prior to launch, open the file [QuarkXPress Server application folder]/conf/ServerApp.properties (folder) and modify it as follows:

- To make the server run without loading any network interface, use the `-nonetwork` option with the `qxpservercore.serverRendererParameters`. In this mode, the only transactions a server can run are those passed to it by another process.
- To control whether renderers are monitored, set `qxpservercore.monitorrenderers.value` to true or false.
- To specify the query interval for monitoring renderers, set `qxpservercore.monitorrenderers.queryinterval.value` to a value in seconds.
- To specify the number of retries for monitoring renderers, set `qxpservercore.monitorrenderers.noofretries.value` to an integer. If a renderer process has been attempting to fulfill a request for the specified number of retries (with the specified query interval in seconds between retries), the renderer monitor recycles that process.
- To control how many renderers the master process launches, specify a number for `qxpserver.subrenders`. Note that the number of renderers you can launch depends on your license.
- To force the renderers to restart on a periodic basis, specify a value in hours for `qmps.render.recycle.interval`. The default value is 24, or 24 hours. Decimal values are permitted. Renderers restart serially, so one renderer doesn't restart until the other is finished restarting. If a renderer is busy, the master process waits for 15 minutes, and then if the renderer is still busy, postpones the restart until the next interval elapses. Set this value to zero to turn the automatic restart feature off.

Launching QuarkXPress Server

On Windows, you can install QuarkXPress Server as an application or as a service (Quark recommends that you always run it as a service). On Mac OS, QuarkXPress Server always runs as an application.

If you install QuarkXPress Server on Windows as an application, you can launch it using the **Start** menu or by double-clicking the "ServerStartup.bat" in the QuarkXPress Server application folder.

- ➡ If you want to launch QuarkXPress Server as an application on Windows Server 2008 Quark recommends executing "ServerStartup.bat" as an administrator.

For information on launching QuarkXPress Server in a separate Tomcat installation, see "Deploying QuarkXPress Server externally" in the QuarkXPress Server *ReadMe*.

- ➡ QuarkXPress Server offers a browser-based user interface instead of a conventional user interface.

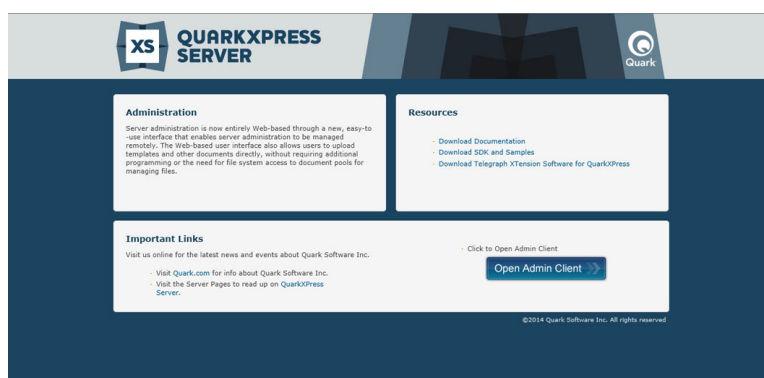
Quitting QuarkXPress Server

To quit QuarkXPress Server, press Control+C.

The QuarkXPress Server user interface

QuarkXPress Server offers a browser-based user interface instead of a conventional user interface. This chapter describes that interface and explains how you can use it to configure and customize your QuarkXPress Server application and manage your server XTensions modules.

To view the QuarkXPress Server welcome page, launch a Web browser and enter the URL `http://[server]:[port]` (where `[server]` is the IP address or domain name of the server and `[port]` is the TCP/IP port on which the server is running). The welcome screen displays.



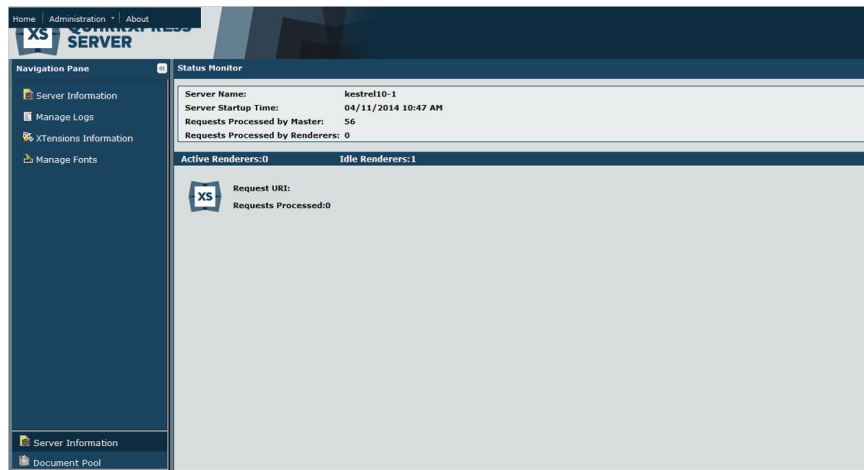
The QuarkXPress Server welcome page

To display the administrative client, click **Open Admin Client**. If the server has realm verification enabled, you will be asked to enter your user name and password. The administrative client displays.

Navigation pane

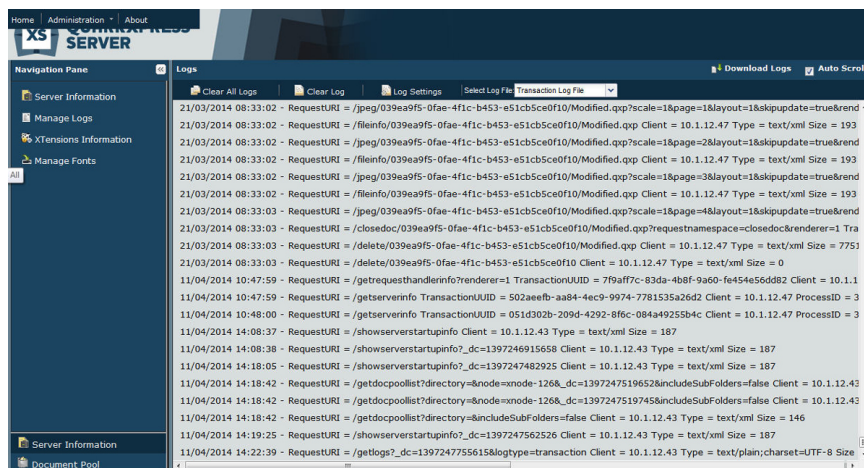
The navigation pane on the left side of the has two areas. The **Server Information** area lets you view server information and the transaction log, and the **Document Pool** area lets you view the contents of the document pool. You can collapse and expand this pane with the button at the right end of the **Navigation Pane** header.

If you click **Server Information**, the **Status Monitor** screen displays. The fields in the top area provide information about the server. The icons in the area below represent the renderers that are currently running and show which requests are being processed by each renderer in real time. This screen also shows how many active and idle renderers there are.



Status Monitor screen

If you click **Manage Logs**, the **Logs** screen displays the current transaction log.

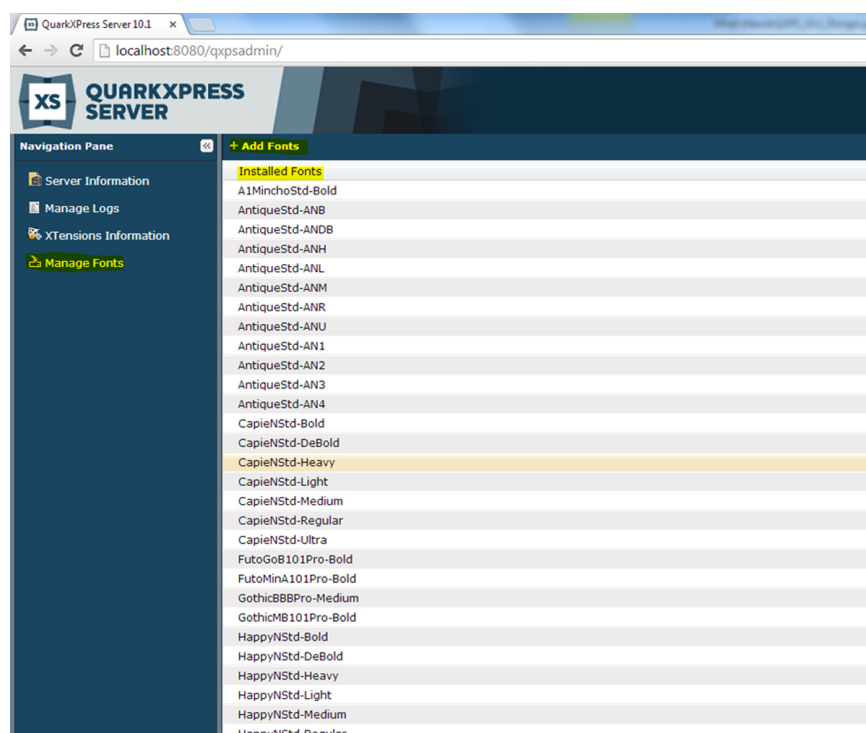


Logs screen

- To download the active log, including recent crash reports, click **Download Logs** at the top of the **Logs** header.
- To make the log scroll automatically as events occur, check **Auto Scroll**.
- To clear all logs, click **Clear All Logs**.
- To clear the current log, click **Clear Log**.
- To display the **Log Settings** dialog box, click **Log Settings**. In this dialog box, you can change the maximum log file size, the maximum rolling count, and the logging level for the general QuarkXPress Server log, the QuarkXPress Server transaction log, and the QuarkXPress Server fatal log.
- To view a particular log file, choose an option from the **Select Log File** drop-down menu.

If you click **Show XTensions Information**, the **XTensions Information** screen displays, allowing you to view the status of all installed XTensions modules.

If you click **Manage Fonts**, a list of fonts installed on the Server machine is displayed.



Fonts screen

To search fonts, use the list search box in the top right corner.

To add fonts to the Server machine, click the **Add Fonts** button. This will copy the fonts to the "privatefonts" folder in the QuarkXPress Renderer folder.

Administration menu

The administration menu lets you manage QuarkXPress Server.

➡ You do not have to restart the server in GUI mode to set preferences.

General Preferences dialog box

The **General Preferences** dialog box (**Administration > Preferences > General**) lets you set preferences that are not related to rendering. It includes the tabs described in the following topics.

➡ You can also set general preferences using the `setprefs` request handler. For more information, see "[Setprefs](#)."

General Preferences — Server

The **Server** tab (**Administration > Preferences > General > Server**) includes the following controls.

Use the **Document Root Folder** field to specify the location of the document pool.

➡ Putting the document pool on a network connected drive is not recommended, because this negatively impacts the performance of QuarkXPress Server.

Use the **Allow Memory Caching** check box to control whether memory is cached.

Use the **Max Memory Cache Size** field to specify the maximum memory size allocated to the cache memory. Valid values are from 10MB to 1024MB.

Use the **Force Served Documents Closed** check box to control whether QuarkXPress Server closes projects from the document pool after it renders them, regardless of the Telegraph XTensions software setting. Uncheck this box to keep such projects open on the server.

Use the **Default Renderer Type** drop-down menu to specify the default rendering format for the server.

- **Appstudio:** Returns a .zip file containing an HTML5 App Studio article.
- **Appstudio Upload:** Exports an HTML5 App Studio article and uploads it to the App Studio Publishing Portal.
- **AVE:** Returns a .zip file containing an AVE issue (.zave) file and its manifest.
- **ePUB:** Returns an ePUB file.
- **EPS Document:** Returns an Encapsulated PostScript (EPS) file.
- **JPEG:** Returns a JPEG file.
- **PDF:** Returns a PDF file.
- **PNG:** Returns a Portable Network Graphics (PNG) file.
- **PostScript:** Returns a PostScript file.
- **QCDDOC:** Returns a QuarkCopyDesk article.
- **QuarkXPress Document:** Returns a QuarkXPress project.
- **Raw Custom:** Returns a file in internal QuarkXPress format for use by server XTensions software developers.
- **RLE Raw Custom:** Returns a file in internal QuarkXPress format (compressed using Run Length Encoding) for use by server XTensions software developers.
- **SWF:** Returns a SWF (Flash) file.

Use the **Scale** field to specify the default scale percentage at which QuarkXPress Server should render projects.

Use the **Disable QXD Return** check box to specify whether QuarkXPress Server can return QuarkXPress projects to clients.

General Preferences — Log

The **Log** tab (**Administration > Preferences > General > Log**) includes the following controls.

Use the **Log Document Problems** check box to specify whether to include problem descriptions in transaction log files. The "Log" folder inside the QuarkXPress Server application folder contains three log files:

- **QuarkXPress Server Fatal Log.log:** This log lists all fatal errors.

- **QuarkXPress Server Log.log:** The log for the Java process. This log contains source code-level logging information that can be useful in troubleshooting.
- **QuarkXPress Server Transaction Log.log:** This log lists all transactions and all errors.

➡ Detailed application logging is enabled for these log files only if it is enabled in the "log4j.xml" file.

To log detailed transaction timing data, check **Log Timing Data**.

Logged problems include the following:

- **Missing Fonts:** If fonts are missing from a project that has been requested for rendering, a one-line description of each missing font is added to the error log. If QuarkXPress Server receives a request to render a project and does not have access to the fonts required by the project, it uses the fonts specified in the **Fonts** tab of the **Preferences** dialog box (**Administration > Preferences > General**). If these fonts are also unavailable, QuarkXPress Server substitutes Helvetica (Mac OS) or Arial (Windows). This behavior is the same as it is in QuarkXPress.
- **Missing Pictures**
- **Missing SXTs:** If a required server XTensions module is missing when a rendering request is received, a one-line description of each missing module is added to the error log. If the name of the missing module is not returnable, the XTensions module ID number is returned.
- **Text Encoding/Character Set Problems:** If text is sent to a text box in the template and the system does not have access to the correct font glyph, the issue is logged. The log data indicates the character set that the system attempted to convert. For example, the log entry might show that a request for Japanese characters was sent to an English project.

➡ Information about missing fonts and missing pictures is also recorded in the "QuarkXPressServerRenderer.log" file. This file also contains detailed timing information, including the transaction UID for each transaction. This log file can be found here:

- **Mac OS:** [drive]/Users/[user name]/Library/Logs/Quark
- **Windows:** [drive]:\Users\[user name]\AppData\Quark\Log or [drive]:\Documents and Settings\[user name]\Application Data\Quark\Log

➡ To download all logs to a non-server computer, click **Show Transaction Log** in the QuarkXPress Server Web interface, then click **Download Logs** on the home page.

General Preferences — Email

QuarkXPress Server can automatically notify someone by e-mail when the checked-out QLA license is about to expire. The **Email** tab (**Administration > Preferences > General > Email**) lets you specify where such e-mail messages should be sent.

Use the **Server** field to specify the domain name or IP address of the e-mail server that QuarkXPress Server should use to send messages (for example, mail.quark.com).

Use the **Port** field to specify the port number of the e-mail server that QuarkXPress Server should use to send messages. Valid values are from 0 to 255.

Use the **From** to specify the source e-mail address the QuarkXPress Server application should use to send messages (for example, `QXPSServer1@quark.com`).

Use the **To** to specify the e-mail address to which the QuarkXPress Server application should send messages (for example, `QXPServerAdmin@quark.com`).

General Preferences — Authentication

The **Authentication** tab (**Administration > Preferences > General > Authentication**) includes the following controls.

Check **Authenticate For Admin Requests** to enable the **Username** and **Password** fields. These fields let you control access to administrative parameters and features. You can enter up to 32 characters.

Renderer Preferences dialog box

Use the renderer **Preferences** dialog box (**Administration > Preferences > Renderer**) to set up default preferences for use when projects are created in QuarkXPress Server. It includes the tabs described in the following topics.

- ➡ Many of these preferences come into play only when you create a project in QuarkXPress Server, either using a `construct` request or through a request handled by a custom QuarkXPress Server XTensions module.
- ➡ You can also set renderer preferences using the `setrendererprefs` request handler. For more information, see "[Setrendererprefs](#)."
- ➡ In versions of QuarkXPress Server prior to 9.0, these resources were accessed through the **Document Controls** submenu.

Preferences — Display

The **Display** pane (**Administration > Preferences > Renderer > Display**) includes the following controls.

Use the **Color TIFFs** drop-down list to specify the color depth of screen previews created for color TIFFs when they are imported.

Use the **Gray TIFFs** drop-down list to specify the resolution of screen previews created for grayscale TIFFs when they are imported.

Choose a profile that corresponds to your monitor from the **Monitor Profile** drop-down menu, or choose **Automatic**. Profiles can be placed in the "Profiles" folder in the QuarkXPress Server application folder.

Preferences — Input Settings

The **Input Settings** tab (**Administration > Preferences > Renderer > Input Settings**) includes the following controls.

Check **Smart Quotes** to force QuarkXPress to replace feet (') and inches (") marks automatically with the specified quotation marks.

Use the **Format** drop-down menu to specify the default characters to be used with the **Smart Quotes** feature and **Convert Quotes** option in the **Get Text** dialog box (**File > Get Text**).

To change the separators used for indicating sequential ranges for output, enter a value in the **Sequential Page Range Separator**. This value overrides the preferences set for a project.

To change the separators used for indicating nonsequential ranges for output, enter a value in the **Non Sequential Page Range Separator**. This value overrides the preferences set for a project.

Preferences — Font Fallback

The **Font Fallback** pane (**Administration > Preferences > Renderer > Font Fallback**) includes the following controls.

Check **Font Fallback** to activate the Font Fallback feature. When this feature is active, if the application encounters a character it cannot display in the current font, it attempts to find a font that can display the character.

If the application encounters a missing font when opening a project, it uses the preferences in this pane to determine which substitute fonts to use.

➡ If you add characters to an existing project and the font cannot support those characters, the application will search the system for a font that can display the characters.

Check **Search** to have the application search for a suitable font that is used in the active project. To restrict the search to a particular range, choose an option from the **Search Type** drop-down menu. To search the entire story where a missing font occurs, choose **Active Story**. To search a particular number of paragraphs in both directions, choose **Paragraph** and enter a number in the **Search Limit** field.

To indicate which fallback fonts should be used when no other font can be found (taking the **Search** settings into account), choose options from each of the drop-down menus in the **Font List** area.

To indicate which font should be used for the slug line when a layout is printed with registration marks turned on, choose an option from the **Slug Line Font** drop-down menu.

Preferences — Open and Save

The **Open and Save** pane (**Administration > Preferences > Renderer > Open and Save**) includes the following controls.

Choose an option from the **Encoding** drop-down menu to indicate how the applications should display characters in non-Unicode text.

Preferences — Fonts

The **Fonts** pane (**Administration > Preferences > Renderer > Fonts**) includes the following controls.

To specify default replacement fonts, check **Specify Default Replacement Font** and choose options from the **Roman** and **East Asian** drop-down menu.

To highlight characters that are in a Traditional Chinese encoding's UDA/VDA (User Defined Area/Vendor Defined Area) range so that these characters can be visually verified, check **Highlight character ranges defined by Traditional Chinese font vendors**.

Preferences — EPS

The EPS pane (**Administration > Preferences > Renderer > EPS**) includes the following controls.

To control whether the application should generate a preview of an EPS file or use the preview (if any) embedded in the file, choose an option from the **Preview** drop-down list. The option specified in this pane is used only when the EPS preview is being created. If you change the preference, you need to reimport the EPS file.

Preferences — PDF

Use the PDF pane of the **Preferences** dialog box (**Administration > Preferences > Renderer > PDF**) to set preferences for rendering in PDF format.

➡ The PDF pane displays only if PDF Filter XTensions software is loaded. For more information, see "[PDF Filter XTensions software](#)".

Use this pane to specify a PDF workflow:

- Click **DirectPDF** to generate PDF output in the browser. This is the default option.
- Click **PDFtoFolder** to generate and save PDF files to a folder. Click **Select/Browse** to specify a location for the folder in the **Watched Folder** field.
- Click **PS4D** (PostScript File for Later Distilling) to generate a PostScript file. Click **Select/Browse** to specify a location for the folder in the **Watched Folder** field.

Use this pane to set the desired PDF output style. Choose from the following output styles:

- **Default PDF Output Style**
- **Print - Medium Quality/Medium Resolution**
- **PDF/X-1a:2001**
- **PDF/X-3:2002**
- **Press - High Quality/High Resolution**
- **Print - Medium Quality/Medium Resolution**
- **Screen - Low Quality/Low Resolution**
- **Screen - Medium Quality/Low Resolution**

Use this pane to specify the folder path for the distiller error log file. The path is used by the PDFFilter XTension software to create the log file to log the errors that occur during the distillation process.

- ➡ The default path to the log file is `<users>/Documents`. If you choose to change the default, the log folder specified must be a pre-existing folder on the system.

Preferences — Project General Settings

The **Project General Settings** pane (**Administration > Preferences > Renderer > Project General Settings**) includes the following controls.

Check **Use OpenType Kerning** to activate the default kerning values for OpenType fonts. When OpenType kerning is active, it overrides any kerning specified through **Kerning Table Edit** (**Utilities** menu) for OpenType fonts.

To disable OpenType kerning for full-width characters, check **Do Not Kern Full Width Characters**.

Preferences — Print Layout Settings

The **Print Layout Settings** pane (**Administration > Preferences > Renderer > Print Layout Settings**) includes the following controls.

Use the **Master Page Items** drop-down menu to control what happens to master items when master pages are applied.

- Click **Keep Changes** if you intend modified master items on your layout pages to remain when a new master page is applied. The items that are kept are no longer master items.
- Click **Delete Changes** if you want modified master items on your layout pages to be deleted when a new master page is applied.

Use the **Framing** drop-down menu to specify whether frames are placed inside or outside text and picture boxes.

- When you click **Inside**, the distance between the text and the frame is determined by the box's **Text Inset** values (**Item > Modify**). When you place a frame inside a picture box, the frame overlaps the picture.
- When you click **Outside**, the frame is placed outside the box, increasing the box's width and height. The frame cannot extend beyond a constraining box or the pasteboard.

Use the **Auto Page Insertion** drop-down menu (Print layouts only) to determine whether pages are inserted automatically to contain text overflow from an automatic text box or a chain of text boxes (on a page associated with a master page that contains an automatic text box). The drop-down menu also enables you to determine where any pages will be inserted.

Preferences — Print Layout Measurements

The **Print Layout Measurements** pane (**Administration > Preferences > Renderer > Default Print Layout Measurements**) includes the following controls.

Use the **Horizontal** and **Vertical** drop-down menus to specify the measurement system for the rulers displayed along the top and left of the layout window. **Horizontal** corresponds to the top ruler; **Vertical** corresponds to the left ruler.

Use the **Points/Inch** field to override the default value of 72 points per inch. The application uses the value here as the basis for all point and pica measurements, as well as for all point- and pica-to-inch conversions. The desktop publishing standard for points per inch is 72. However, the traditional typographic standard used on most metal typographic rulers is usually approximately 72.27 or 72.307 points per inch (range = 60 to 80 pt, measurement system = points, smallest increment = .001).

Use the **Ciceros/cm** field to specify a ciceros-to-centimeter conversion value different from the standard 2.1967 (range = 2 to 3 c, measurement system = ciceros, smallest increment = .001).

Preferences — Paragraph

The **Paragraph** pane (**Administration > Preferences > Renderer > Paragraph**) includes the following controls.

Use the **Auto Leading** feature to automatically set line spacing. Unlike paragraphs with absolute leading (identical line spacing above every line), paragraphs with auto leading may include lines with different leading when fonts and font sizes are mixed in the same paragraph.

Auto leading starts with a base amount of leading, which the application calculates by examining the ascent and descent values built into the fonts used in an auto-leaded line and the line above it; however, the user-specified text size plays the largest part in determining this base amount. Finally, a value specified by the user in the **Auto Leading** field is added to the base amount to arrive at the total amount of leading.

To specify percentage-based auto leading, enter a value from 0% to 100% in 1% increments. This value determines the amount of leading between two lines of text as follows: The largest font size in the line above is multiplied by the percentage value. This outcome is added to the base amount of auto leading between the two lines. Although the design of certain fonts complicates the process, here is a simplified example: 10-point text styled consistently in a "standard" font with **Auto Leading** set to 20% has 12 points of leading (10 pts + [20% of 10] = 12 pts).

Use the **Maintain Leading** check box to control the placement of a line of text that falls immediately below an obstruction in a column or box. If **Maintain Leading** is checked, the line's baseline is placed according to its applied leading value. If **Maintain Leading** is unchecked, the ascent of the line will abut the bottom of the obstruction or any applied runaround value.

In the **Lock to Grid Based On** area:

- Click **Ascent and Descent** to lock text to grid based on the ascenders and descenders of characters.
- Click **Font Size (Em Box)** to lock text to grid based on the size of the em boxes of the characters.

Preferences — Character

The **Character** pane (**Administration > Preferences > Renderer > Character**) includes the following controls.

Use the **Superscript** fields to control the placement and scale (size) of superscript characters. The **Superscript Offset** value determines how far below the baseline the application places a superscript character. The **Superscript Offset** value is measured as a percentage of font size. The default value is 33%. The **Superscript VScale** value determines the vertical size of the character and is a percentage of font size. The **Superscript HScale** value determines width and is a percentage of the normal character width (as specified by the font designer). The default value for both scales is 60% (range = 0 to 100%, measurement system = percentage, smallest increment = .1).

Use the **Subscript** fields to control the placement and scale (size) of subscript characters. The **Subscript Offset** value determines how far above the baseline the application places a subscript character. The **Subscript Offset** value is measured as a percentage of font size. The default value is 33%. The **Subscript VScale** value determines the vertical size of the character and is a percentage of font size. The **Subscript HScale** value determines width and is a percentage of the normal character width (as specified by the font designer). The default value for both scales is 100% (range = 0 to 100%, measurement system = percentage, smallest increment = .1).

Use the **Small Caps** fields to control the scale of characters with the **Small Caps** type style applied to them. The **Small Caps VScale** value determines the vertical size of the character and is measured as a percentage of font size. The **Small Caps HScale** value determines width and is measured as a percentage of the normal character width (as specified by the font designer). The default value for both scales is 75% (range = 0 to 100%, measurement system = percentage, smallest increment = .1).

Use the **Superior** fields to control the scale of superior characters. The **Superior VScale** value determines the vertical size of the character and is measured as a percentage of font size. The **Superior HScale** value determines width and is measured as a percentage of the normal character width (as specified by the font designer). The default value for both scales is 60% (range = 0 to 100%, measurement system = percentage, smallest increment = .1).

Use the **Ligatures Break Above** field to use ligatures built into a font. A ligature is a typographic convention in which certain characters are combined into a single glyph. Most fonts contain ligatures for the characters "f" followed by "i" and "f" followed by "l". The **Ligatures Break Above** field enables you to specify the kerning or tracking value (measured in 1/200 em space increments) above which characters will not be combined into ligatures. For example, a headline with a large tracking value would probably not contain ligatures. The default value is 1 (range = 0 to 10, measurement system = .005 [1/200] em space, smallest increment = .001). To prevent the second two letters in "ffi" and "ffl" (as in office and waffle) from being combined into ligatures, check **Not "ffi" or "ffl"**. Three-character ligatures for these combinations, common in traditional typesetting systems, are not standardized in fonts designed for Mac OS, so some typographers prefer to keep all three letters separate rather than combine only two of them. Note that many PostScript fonts do not have "ffi" and "ffl" ligatures, but most OpenType fonts do. This option is unchecked by default.

Check **Auto Kern** to specify that the application should use kerning tables, which are built into most fonts, to control intercharacter spacing. The **Auto Kern Above** field enables you to specify the point size above which automatic kerning must be used. The **Auto Kern Above** feature also implements custom tracking information specified in the **Tracking Values** dialog box for a selected font (**Utilities > Edit Tracking**) in

QuarkXPress. This option is checked by default, with a 4-point threshold (range = 0 to 72 pt, measurement system = various [", pt, cm, etc.], smallest increment = .001).

Check **Standard Em Space** to specify an em-space equivalent to the point size of the text (for example, 24pt text has a 24pt em space). If **Standard Em Space** is unchecked, the application uses the width of the two zeros in the current font as the em-space width. This option is checked by default. You can insert an em space in text by pressing Option+space/Ctrl+Shift+6.

Use the **Flex Space Width** field to change the 50% default width of a flexible space. To create a breaking flexible space, press Option+Shift+space/Ctrl+Shift+5; to create a nonbreaking flexible space, press Command+Option+Shift+space/Ctrl+Alt+Shift+5. The **Flex Space Width** value is expressed as a percentage of the normal en space for a given font and font size (range = 0 to 400%, measurement system = percentage, smallest increment = .1).

Use the **Accents for All Caps** check box to specify whether to include accent marks on accented characters with the All Caps type style applied. This option is checked by default.

Use the **Space between CJK & R** field to indicate how much space should be included by default between a Chinese, Japanese, or Korean character and an adjacent Roman character.

Preferences — Trapping

The **Trapping** pane (**Administration > Preferences > Renderer > Trapping**) includes the following controls.

Select a **Trapping Method**:

- Click **Absolute** to trap using the values in the **Auto Amount** and **Indeterminate** fields according to the object and background colors involved. If the object color is darker, the object is choked by the background using the **Auto Amount** value. If the object color is lighter, the object is spread into the background using the **Auto Amount** value.
- Click **Proportional** to trap using the value in the **Auto Amount** field multiplied by the difference between the luminance (lightness or brightness) of the object color and the background color.
- Click **Knockout All** to turn off trapping and print objects with a zero trap amount.

Check **Process Trapping** to trap each process separation plate individually when a page contains overlapping process colors.

Check **Ignore White** to specify that an object color in front of multiple background colors (including white) does not take white into account when trapping.

Enter a trapping value in the **Auto Amount** field or choose **Overprint**:

- Enter a value in the **Auto Amount** field to control the amount of trapping that QuarkXPress applies to object and background colors that have an **Auto Amount** specified in the **Trap Specifications** dialog box (**Edit > Colors > Edit Trap**), and to control the amount of trapping applied to items with an **Auto Amount (+) Trap Information** or **(-) specified in the Trap Information** palette (**Window > Trap Information**).

- Choose **Overprint** to cause overprinting for object and background colors with an **Auto Amount** specified in the **Trap Specifications** dialog box (**Edit > Colors > Edit Trap**), as well as for items with an **Auto Amount (+)** or **(-)** specified in the **Trap Information** palette (**Window > Trap Information**).

Enter a trapping value in the **Indeterminate** field or choose **Overprint**:

- Enter a value in the **Indeterminate** field to control the amount of trapping that QuarkXPress applies to object colors that are in front of indeterminate backgrounds (multiple colors with conflicting trapping relationships).
- Choose **Overprint** to cause an object color to overprint an indeterminate background.

Enter a **Knockout Limit** value. The knockout limit is the value (expressed as a percentage of darkness of the object color) that enables you to control the point at which an object color knocks out a background color.

Enter an **Overprint Limit** value. Overprint limit is a trapping setting that allows an object set to overprint to trap according to the **Auto Amount** value if the object's shade is less than a particular percentage.

Preferences — Color Manager

The **Color Manager** pane (**Administration > Preferences > Renderer > Color Manager**) includes the following controls.

To specify an engine for color transformation, choose an option from the **Color Engine** drop-down menu.

To achieve the darkest possible blacks in all output methods, check **Black Point Compensation**.

Use the **Source Setup** drop-down menu to specify the source color space of pictures and colors used in the application.

To enable the **Profile Information** command in the **Window** menu and the **Color Management** tab in the **Import Picture** dialog box, check **Enable Access to Picture Profiles**. This option allows you to view information about profiles.

To specify a default proof output setup, choose an option from the **Proof Output** drop-down menu.

To specify a rendering intent for soft proofing, choose an option from the **Rendering Intent** drop-down list. **Perceptual** scales all the colors in the source gamut so that they all fit within the destination gamut. **Relative Colorimetric** retains colors that are in both the source gamut and the destination gamut. The only source colors that are changed are those that are not within the destination gamut. **Saturation** considers the saturation of source colors and changes them to colors with the same relative saturation in the destination gamut. **Absolute Colorimetric** retains colors that are in both the source gamut and the destination gamut. Colors that are outside the destination gamut are adjusted in relation to how they would look when printed on white paper. **Defined by Sources** uses the rendering intents defined in source setup for all colors and images.

To color manage vector content in imported EPS and PDF files, check **Color Manage Vector EPS/PDF**. Note that this preference applies only to EPS and PDF files imported after this box is checked.

To color manage vector content in EPS and PDF files that have already been imported in the active project, check **Include Existing Vector EPS/PDF in Layout**.

Preferences — Layers

The **Layers** pane (**Administration > Preferences > Renderer > Layers**) has the following controls.

To make new layers visible by default, check **Visible**.

To suppress the printout of new layers by default, check **Suppress Output**.

To make new layers locked by default, check **Locked**.

To maintain runaround on new layers so that text on visible layers flows around items on hidden layers, click **Keep Runaround**.

Preferences — Kindle

Use the **Kindle** pane (**Administration > Preferences > Renderer > Kindle**) to specify the location of the KindleGen tool, which is required for Kindle output.

To get a free copy of KindleGen, visit

<https://kdp.amazon.com/self-publishing/help?topicId=A3IWA2TQYMZ5J6>.

Preferences — Modifier

Use the **Modifier** pane (**Administration > Preferences > Renderer > Modifier**) to control whether and where errors are displayed in rendered layouts.

To include descriptions of rendering errors in the layout itself, check **Annotate errors in the Output Document**. (For more information, see "[annotateerrors](#).") In rendered QuarkXPress files, errors are displayed as notes. In rendered PDFs, errors are displayed as comments. In XML output, errors are displayed as notes XML markup.

To append descriptions of rendering errors after the last page, check **Append errors into the Output Document**. (For more information, see "[appenderrors](#).") Descriptions of rendering errors are formatted in 10-point magenta Arial.

Job Jackets dialog box

The **Job Jackets** dialog box lets you edit the Job Jackets file used by QuarkXPress Server. To edit the QuarkXPress Server Job Jackets file:

- 1 In the QuarkXPress Server Web interface, choose **Administration > Job Jackets**. The **Manage Job Jacket** dialog box displays.
- 2 Click the **Get Job Jacket for editing** button and save the Job Jackets file to the desktop.
- 3 Open the downloaded Job Jackets file in QuarkXPress and make any necessary changes to the **QXPSJobTicket** Job Ticket.
- 4 In the **Job Jacket** dialog box, click **Choose File** and select the modified Job Jackets file.

- 5 Click **Submit**. The QuarkXPress Server Job Jackets file is replaced with the modified version.

App Studio preferences

The **AppStudio** dialog box lets you specify credentials and proxy settings so that QuarkXPress Server can upload HTML5 App Studio articles to the App Studio Publishing Portal. Enter your App Studio Publishing Portal user name and password, then enter the proxy settings for your proxy server (if any).

Check Out License dialog box

To check the QuarkXPress Server license out of Quark License Administrator, choose **Administration > Check Out License**. To specify the number of days for checkout, enter a value in days in the **Check out for** field. To be warned in advance of license expiration, check **Warn me** and use the corresponding fields.

Using QuarkXPress Server

The `xml` namespace deconstructs a project according to the Modifier DTD. The `construct` namespace lets the server turn an XML representation of a QuarkXPress project back into an actual project. With these namespaces, you can deconstruct a project into an XML representation, change the XML in accordance with the Modifier DTD, and then have the server generate an updated version of the QuarkXPress project. You can even create new QuarkXPress projects from scratch using XML.

In addition, you can use the `construct` namespace to:

- Create a page based on master page
- Create a project from XML, using a Job Jackets™ file as the basis for the project
- Modify text font and style, including OpenType® styles
- Apply style sheets and local formatting to text
- Create and populate tables
- Import pictures into picture boxes and specify picture attributes

The DTD used for XML construction and deconstruction is completely Unicode®-compliant, making it ideal for use in international publishing. Furthermore, the use of this DTD ensures that the schema of XML output created by Constructor does not change when server preferences change. This DTD is provided in the QuarkXPress Server application folder and fully documented in "[Modifier schema \(annotated\)](#)."

➡ Deconstructor XTensions software and the `deconstruct` namespace are no longer supported.

Creating URL requests

You can use URL requests to make QuarkXPress Server render projects in a variety of formats, to use the features of server XTensions modules, and to control the server. The topics below provide an overview of how to construct server requests and use URL parameters.

This chapter also lists functions that let you control the server. For detailed information about constructing other types of URL requests, see "[Using QuarkXPress Server](#)."

Understanding URL requests

QuarkXPress Server URL requests should use the following format:

```
http://server:port/namespace/path/projectname?parameter=value
```

- **server**: Indicates the name or IP address of the QuarkXPress Server computer.
- **port**: Indicates the QuarkXPress Server application's port number. The default port number is 8080.
- **namespace**: Sets the render type (or indicates another server functionality to access). For more information, see "[Understanding QuarkXPress Server namespaces](#)".
- **path**: Indicates the path to the directory where the target project file is stored. The project to be rendered can either be located in the document pool (in which case paths are evaluated relative to the document pool directory), or can be streamed as part of a multipart HTTP Post request. When the project is streamed as part of the request, the project name will correspond to the name given to the HTTP request part which contains the project data.
- **projectname**: Identifies the project to be rendered.
- **parameter=value**: Optional parameters that provide more detailed control over how the target project should be rendered. Multiple parameter/value pairs, separated by the "&" character, can be included.

For example, the following URL asks the QuarkXPress Server application named "QXPServer" to return the file "MyProject.qxp" as a PDF file with hyperlinks and all fonts embedded:

```
http://QXPServer:8080/pdf/MyProject.qxp?includehyperlinks=1&embedallfonts=1
```

Some URL parameters require Boolean arguments. For such parameters, valid values include 1 or 0, true or false, y or n, and yes or no.

➡ You can also send requests to QuarkXPress Server using the HTTP GET and POST protocols and using XML with XSLT. For more information about these approaches, see "[Using QuarkXPress Server](#)".

Understanding QuarkXPress Server namespaces

QuarkXPress Server namespaces differentiate among types of requests that are otherwise identical. For example, consider the following three URLs:

```
http://QXPServer:8080/project1.qxp
```

```
http://QXPServer:8080/pdf/project1.qxp
```

```
http://QXPServer:8080/postscript/project1.qxp
```

These requests are identical, except each uses a different namespace (in *italics*). (The first request does not specify a namespace, but this simply means the project is to be rendered using the server's default render type.)

Namespaces can be used to determine the format in which a rendered project is returned, as indicated above, but they can also be used to direct a request to XTensions software that performs other functions. For example, if you use Modifier XTensions

software's `xml` namespace, Modifier XTensions software can return an XML representation of the project.

Looking up a namespace

This guide lists the namespaces for every QuarkXPress Server function. There is no single list of namespaces because some functions do not require a particular namespace or are available in multiple namespaces. To determine which namespace you want to use:

- 1 In this Guide, go to the page that documents the render type you want to use. (For more information, see "[Understanding render types](#).")
 - 2 Locate the **Namespace** row. If the render type or function has an associated namespace, that namespace is listed here.
- ➔ Third-party XTensions can add their own namespaces. For information about a third-party namespace, see the documentation for the XTensions module that adds that namespace.

Understanding QuarkXPress Server parameters

Parameters let you control the details of how a request is executed. For example, you can use the `page` parameter to create a request that returns only the third page of a project:

```
http://QXPServer:8080/jpeg/project1.qxp?page=3
```

You can include multiple parameters in the same request; simply separate them with an ampersand (&). For example, here's a new version of the above URL that returns page three at a scale of 50%:

```
http://QXPServer:8080/jpeg/project1.qxp?page=3&scale=.5
```

Looking up a parameter

This Guide lists the parameters that are available for every QuarkXPress Server function. To determine which parameters you can use with a request:

- 1 In this Guide, go to the page that documents the the render type you want or the function you want to use. (For more information, see "[Understanding render types](#)" and "[Understanding render modifiers](#).")
- 2 Locate the **Parameters** row. This row lists all available parameters, and includes a description and a list of valid values for each parameter.

Supported interfaces

The following interfaces are available in QuarkXPress Server:

- **HTTP:** Lets you interact with the server using URLs that contain calls or point to XML files that contain calls. You can write client applications in any language that supports HTTP requests. For more information, see "[Getting started: HTTP and HTTPS](#)".

- **HTTPS:** Provides secure HTTP access.
- **Web services:** Lets you interact with the server via Web services using the QuarkXPress Server Manager object model. You can write client applications in Java, .NET, or any other programming language that can consume SOAP-based Web services. For more information, see "[Getting started: Web services](#)".

➡ To develop a custom load balancer or a custom application in Java, you must have version 1.5 or 1.6 of the JDK.

The Dynamic Publishing Process (DPP)

The Dynamic Publishing Process (DPP) has several stages. You may not need to use all of these stages every time, but this the order in which they occur:

- *Pre-Processing Stage:* During this stage, QuarkXPress Server performs any necessary initial steps, such as creating style sheets, colors, and H&J rules for a new QuarkXPress project.
- *Content Loading Stage:* During this stage, QuarkXPress Server loads dynamic content into boxes in the project.
- *Layout Modification Stage:* During this stage, QuarkXPress Server modifies the layout of the project.
- *Post-Processing Stage:* During this stage, QuarkXPress Server examines the project and performs maintenance tasks.

Getting started

The topics below describe how to create requests for the QuarkXPress Server Web interface.

➡ For information about the options available in such requests, see "[Using the Web interface](#)".

Getting started: HTTP and HTTPS

You can submit HTTP and HTTPS requests to QuarkXPress Server as URLs, either manually from a browser or automatically from an HTTP client application. QuarkXPress Server processes such requests and returns rendered content in the HTTP or HTTP responses. Depending on the type of request, the QuarkXPress Server preferences, and the type of content returned, the rendered content may be downloaded by the end user, displayed in the end-user's browser, or saved to a file system location accessible to QuarkXPress Server.

You can write a QuarkXPress Server client application in almost any language that can generate HTTP GET/POST requests. A QuarkXPress Server HTTP-based solution typically consists of QuarkXPress Server (running on a server computer connected to a network) plus a front-end application (usually Web-based) that provides a graphical user interface (GUI) for end users. The front-end application translates end users' input into HTTP

or HTTPS requests and sends the requests to QuarkXPress Server or QuarkXPress Server Manager, which processes the requests and returns rendered content.

Dissecting a QXP Server URL

To interact with QuarkXPress Server from a Web browser, use a URL like the following:

```
http://[server]:[port]/[namespace]/[directory]/[DocumentName]?[parameter]=Value
```

- **[server]**: The name or IP address of the computer for QuarkXPress Server or QuarkXPress Server Manager.
- **[port]**: The port number on which to contact QuarkXPress Server or QuarkXPress Server Manager. The default port is 8080 for QuarkXPress Server and 8090 for QuarkXPress Server Manager.
- **[namespace]**: Defines what the URL action will be and any parameters and conditions available to that namespace.
- **[directory]**: The path in the document pool where the project is stored, relative to the QuarkXPress Server document pool. To access the root level, no directory path is necessary. (Note that you can also supply assets as part of a multipart HTTP request. For more information, see "[Using HTTP POST with QXP Server](#).")
- **[DocumentName]**: The name of the QuarkXPress project to be processed.
- **[parameter]**: Further defines the URL action with attributes and values allowed for the namespace or general call. Pass parameters in the form `attribute=value`, with parameters separated by the "&" character.

For QuarkXPress Server Manager, use a URL like the following:

```
http://[server]:[port]/qxpsm/request/[namespace]/[directory]/[DocumentName]?[parameter]=Value
```

- ➡ Prior to QuarkXPress Server 9.0, you had to use different URL constructions when sending requests to an instance of QuarkXPress Server Manager in a QPS installation than you did when sending requests to a free-standing instance of QuarkXPress Server Manager. In versions 9.0 and later, both can use `/qxpsm/request/` after `[port]/`.
- ➡ You can now use both absolute and relative paths when you modify a project with SDK objects or classes. Relative paths are almost always relative to the document pool. If you use multiple QuarkXPress Server instances, you should use a common document pool.

Interpreting the QXP Server Manager response

When QuarkXPress Server Manager successfully processes a request through the HTTP interface, the response is the same as QuarkXPress Server's response unless the user has supplied additional parameters to QuarkXPress Manager. For more information, see "Working with QuarkXPress Server Manager" in *A Guide to QuarkXPress Server*.

If an error occurs, QuarkXPress Server Manager retries the request, either on the same QuarkXPress server instance or a different one (depending on the error and global settings established in the QuarkXPress Server Manager client). If QuarkXPress Server

Manager cannot process the request, it returns an XML response describing the error, plus any header error codes returned by QuarkXPress Server. For example:

```
<?xml version="1.0" encoding="UTF-8" ?>
<error>
  <httpresponsecode>500</httpresponsecode>
  <xpressservererrorcode>-43</xpressservererrorcode>
  <xpressservererrormessage>File not found.</xpressservererrormessage>
  <xpressserverextendedmessage> <![CDATA[ Error #-43 - File not found. ]]>
    </xpressserverextendedmessage>
  <xpressservermanagererrorcode>M8000001</xpressservermanagererrorcode>
  <xpressservermanagererrormessage>The server could not locate the specified
  file.
    </xpressservermanagererrormessage>
</error>
```

HTTP GET and POST Requests

The topics below describe how you can use HTML to interact with QuarkXPress Server.

- ➡ QuarkXPress Server supports both the GET and POST HTML methods. When you use the GET method, the browser encodes form data into a URL. When you use the POST method, form data is passed within the message body. Use the GET method only when the form processing is idempotent. In short: GET is for retrieving data, whereas POST can involve storing or updating data, ordering a product, or sending an e-mail.

Using HTTP GET with QXP Server

Use HTML like the following to specify a server and port where you want to send a request. You can specify the name of the target project, the output type, and a scaling value. You can specify the name of a box and the path of a text or picture files to import into that box, as long as the file's path is on the server's file system. You can also use HTML like the following to specify the page number and layout number of the project.

The form section of the HTML should begin with the following line of code:

```
<form id = form1 method="GET" enctype="application/x-www-form-urlencoded">
```

For both GET and POST, the browser constructs a form data set and encodes it according to the `ENCTYPE` attribute (you can use `multipart/form-data` for POST and `application/x-www-form-urlencoded` (the default) for both POST and GET).

To create fields that let the user specify the server IP address, the port, and the project name, use HTML like the following:

```
<TABLE cellSpacing=1 cellPadding=1 border=1 id=TABLE1 >
  <TBODY>
    <TR>
      <TD>
        <INPUT id=ServerTxt name=ServerTxt value="Server ID"
          readOnly size=13 style="WIDTH: 107px; HEIGHT: 22px">
      </TD>
      <TD>
        <INPUT id=Server maxLength=50 size=16 value=localhost name=Server
          style="WIDTH: 170px; HEIGHT: 22px">
      </TD>
    </TR>
    <TR>
      <TD>
        <INPUT id=PortTxt name=PortTxt value="Port Number"
          readOnly size=13 style="WIDTH: 107px; HEIGHT: 22px">
      </TD>
      <TD>
        <INPUT id=Port maxLength=50 size=17 value=8080 name=Port
          style="WIDTH: 170px; HEIGHT: 22px">
      </TD>
    </TR>
  </TBODY>
</TABLE>
```

```

        <TBODY>
</TABLE>
<TR>
    <p></p>
    <TD>
        <INPUT id=DocTxt name=DocTxt value="Document Name"
            readOnly size=13 style="WIDTH: 107px; HEIGHT: 22px">
        </TD>
        <TD>
            <INPUT id=Doc maxLength=50 size=18 name=Doc style=
                "WIDTH: 170px; HEIGHT: 22px">
            </TD>
        </TR>

```

To create a drop-down menu that lets the end user specify a render format, use HTML like the following:

```

<SELECT id="select1" name="returntype">
    <OPTION value="jpeg">JPEG</OPTION>
    <OPTION value="pdf">PDF</OPTION>
    <OPTION value="qxdoc">QuarkXPress document</OPTION>
    <OPTION value="eps">EPS Document</OPTION>
    <OPTION value="postscript">POSTSCRIPT</OPTION>
    <OPTION value="png">PNG</OPTION>
</SELECT><td/>

```

To create a drop-down menu that lets the end user specify a rendering scale, use HTML like the following:

```

<SELECT id="select2" name="scale">
    <OPTION value="1">100%</OPTION>
    <OPTION value="2">200%</OPTION>
    <OPTION value="3">300%</OPTION>
    <OPTION value="5">500%</OPTION>
    <OPTION value=".5">50%</OPTION>
</SELECT><p/>

```

To create input fields that let the end user specify a box name and the name of a file to be imported into that box, use HTML like the following:

```

<TD>
<INPUT id=box1Txt value="Box Name"
    readOnly style="WIDTH: 181px; HEIGHT: 22px" size=16>
</TD>

<TD>
<INPUT id=box1 maxLength=256 size=43 style="
    WIDTH: 293px; HEIGHT: 22px"></TD>
</TR>

<TR>
<TR>
<TD>
<INPUT id=box1FileTxt value="File on Server"
    readOnly style="WIDTH: 181px; HEIGHT: 22px" >
</TD>

<TD>
<INPUT id=box1File maxLength=256 size=43 style="
    WIDTH: 293px; HEIGHT: 22px">
</TD>
</TR>

```

To create fields that let the end user enter a page number a layout number, use HTML like the following:

```

<TABLE cellSpacing=1 cellPadding=1 border=1 style="WIDTH: 188px; HEIGHT:
61px">
    <TR>
        <TD>
            <INPUT id=PageTxt value = "Page"
                readOnly style="WIDTH: 50px; HEIGHT: 22px" size=3>
            </TD>
        <TD>
            <input id=Page size="16" maxlength="256"
                style="WIDTH: 147px; HEIGHT: 22px">
            </TD>
        </TR>
    <TR>

```

```
<TD>
<INPUT id=LayoutTxt value = "Layout"
  readOnly style = "WIDTH: 50px; HEIGHT: 22px" size=4>
</TD>
<TD>
<input id=Layout size="16" maxlength="256"
  style="WIDTH: 147px; HEIGHT: 22px">
</TD>
</TR>
</TABLE>
```

To create a button that lets the end user submit the request, use HTML like the following:

```
<input type="submit" value="Render document"
  name="Submit" LANGUAGE="javascript"
  onclick="return Submit_onclick()"/>
```

The above HTML calls a function named `Submit_onclick()`. You can add such a function to the `<HEAD>` section of the HTML. For example:

```
<head>
<TITLE>Quark Stream</TITLE>
<script ID="clientEventHandlersJS" LANGUAGE="javascript">
  function Submit_onclick() {
    var prefix;
    var renderer;
    var file;
    var url;
    var box1Name;
    var dataImportStamp = "@dataimport";
    prefix = "http://" + document.getElementById("Server").value + ":";
    port = document.getElementById("Port").value + "/";
    renderer = document.getElementById("select1").value + "/";
    file = document.getElementById("Doc").value;
    box1Name = document.getElementById("box1").value;
    if (box1Name != "") {
      document.getElementById("box1File").name = box1Name + dataImportStamp;
    } else {
      document.getElementById("box1File").name = "";
    }
    document.getElementById("Page").name = "Page";
    document.getElementById("Layout").name = "Layout";
    url = prefix + port + renderer + file;
    document.getElementById("form1").action = url;
  }
</script>
</head>
```

The `Submit_onclick()` function reads the values from the form and builds a request URL using the server, port, and render type.

- ➡ If the end user specifies a file name in the "File on Server" text box, he or she must add `file:` to the beginning of the file path (for example, `file:C:\data.txt`).
- ➡ The code above adds `@dataimport` to the end of the box name to accommodate data import.

The action of the form is defined by this line:

```
document.getElementById("form1").action = url;
```

This form's method is GET. The user agent gets the value (the URL) of the action, appends a `?` to it, adds the form data set, and submits the URL.

- ➡ In this scenario, form data must be in ASCII.

Using HTTP GET with QXP Server Manager

HTTP GET with QuarkXPress Server Manager works the same way as HTTP GET with QuarkXPress Server (see "[Using HTTP GET with QXP Server](#)"), except that Quark does not recommend using GET if you are working with non-ASCII characters. The behavior of GET requests with characters is highly browser-dependent, and there is no standard that all browsers follow. Instead, use POST.

Using HTTP POST with QXP Server

Use HTML like the HTML in "[Using HTTP GET with QXP Server](#)" to specify a server and port where you want to send a request. You can specify the name of the target project, the output type, and a scaling value. You can specify the name of a box and the path of a text or picture files to import into that box, as long as the file's path is on the server's file system. You can also use HTML like the HTML in "[Using HTTP GET with QXP Server](#)" to specify the page number and layout number of the project. Differences between the GET method and the POST method are described below.

The form section of the HTML should begin with the following line of code:

```
<form id = form1 method="post" enctype="multipart/form-data">
```

The following HTML creates a input fields that let the end user specify the name of a file to be imported into a box:

```
<TD><INPUT id=box1FileTxt value="File on Client"
  readOnly style="WIDTH: 180px; HEIGHT: 22px" ></TD>
<TD><input id=box1File type="file"
  size="32" maxlength="256" style="WIDTH: 293px;
  HEIGHT: 22px">
</TD></TR>
```

The action of the form is defined by this line:

```
document.getElementById("form1").action = url;
```

The form's method is POST. The user agent conducts an HTTP post transaction using the value of the action attribute (the URL), and a message is created according to the content type specified by the `enctype` attribute.

When you use a multipart HTTP post request, you can include in the request any files which are required by the rendering process, including QuarkXPress templates, picture files, modifier XML, and digital publishing assets. For more information, see "[Using the Streaming Document Provider](#)."

Using HTTP POST with QXP Server Manager

HTTP POST with QuarkXPress Server Manager works the same way as HTTP POST with QuarkXPress Server (see "[Using HTTP POST with QXP Server](#)"), except that with QuarkXPress Server Manager, you must use UTF-8.

Getting started: Web services

The Web services interface is a collection of request classes. You can download the SDK WSDL class definitions from

`http://[server]:[port]/qxpsm/services/RequestService?wsdl` (replace `[server]` with the QuarkXPress Server Manager computer's IP address and `[port]` with the QuarkXPress Server Manager port number.

These classes can be chained together to form compound QuarkXPress Server requests. The sample applications (see "[Sample applications](#)") show how to use these classes to invoke a QuarkXPress Server command and manipulate the response.

For more information, see "[Using the Web interface](#)." In addition to the classes listed there, the Web services interface includes the following:

- **RequestService** processes QuarkXPress Server requests. This object's generic `processRequest()` method takes a **QRequestContext** argument and returns a **QContentData** object containing the response. For more information, see the sample applications and "[Using the Web interface](#)."
- **QRequestContext** is the argument you pass to **RequestService**'s generic `processRequest()` method. This object contains settings which must be set once per request. Set all chained requests inside the request context.
- **QRequest** is the base class for all request objects (such as **PDFRenderRequest**). Consequently, all request objects share some common data members.
- **RequestParameters** is a generic class for executing any request and for adding dynamic properties to a request.
- **NameValueParam** is a generic class for adding dynamic properties to a request. This class is specifically for requests that take a box's name and/or ID as the parameter name and the box's content as the value.
- **QContentData** is the response returned when a request is executed. **QContentData** is a hyperlink that follows the same pattern as the classes above.
- **QException** is the exception class for QuarkXPress Server Manager. Web services returns a **QException** object if an error occurs with any Web service method. You can use try/catch blocks to handle **QException** objects.

If you've written a Server XTensions module, you can extend the XML interface to include any changes it makes to the Modifier DTD by simply modifying an XML file and regenerating the stubs.

➡ To exclude empty tags in the request HTML, set the value of the appropriate variable to `null`.

➡ For Javadocs, WSDL schemas, and JSP samples, see the Welcome page that displays when you launch QuarkXPress Server Manager.

The following topics describe the general Web services classes.

QRequestContext

Description	An argument passed to RequestService . Contains settings that must be set once per request. All chained requests must be set inside the request context.		
Type	Web service data object		
Members	Name	Types	Description
	<code>documentName</code>	String	File or object name on which the command will be rendered.

	<code>serverName</code>	String	Server name. Default is NULL. Load balancer searches for the host itself in this case.
	<code>serverPort</code>	Integer	Port at which the desired server is listening.
	<code>userName</code>	String	Server admin username.
	<code>userPassword</code>	String	Server admin password.
	<code>maxRetries</code>	Integer	Max number of times to try executing the command before returning failure.
	<code>requestTimeout</code>	Integer	Max time out in milliseconds.
	<code>useCache</code>	Boolean	Indicates whether the cache should be checked for an existing result or if the command should be executed again.
	<code>responseAsURL</code>	Boolean	This value indicates whether the server should send the response as-is (text or binary) or store the response on the server and return its location as a URL. Because the object model works on SOAP, which can be slow when transferring large binary files, you might choose to set this value to "true" if you suspect that the response is going to be several megabytes or larger.
	<code>bypassFileInfo</code>	Boolean	Indicates whether file info should be fetched before executing the command.
	<code>context</code>	String	Context in which the command is being executed.
	<code>request</code>	<code>QRequest</code>	QuarkXPress Server request is instances of request objects chained together.
Example, object model	<pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); rc.documentName = this.DocumentSettings1.documentName.Text; rc.responseAsURL = this.DocumentSettings1.responseAsURL.Checked; rc.useCache = this.DocumentSettings1.useCache.Checked; rc.bypassFileInfo = this.DocumentSettings1.bypassFileInfo.Checked; //Create the service and call it QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>		

RequestService

Description	Web service called to process the QuarkXPress Server request. <code>RequestService</code> has a generic method named <code>processRequest()</code> that takes <code>QRequestContext</code> as an argument and returns <code>QContentData</code> as the QuarkXPress Server response.		
Type	Web service		
Methods	<code>processRequest</code>	Processes the request context and returns the result.	
		Parameter	Type
		<code>requestCmd</code>	<code>QRequestContext</code>
	<code>createSession</code>	Creates a new session and returns a session ID.	
		Parameter	Type
			Description

	<code>timeout</code>	Long	Timeout for the session in milliseconds. If no call is executed in that time, session is expired and all the open documents in that session are closed without saving. If 0 is passed as value of timeout, default timeout is used. If a negative value is passed as timeout, the session never expires.
<code>closeAllDocs</code>	Closes all open documents in the session without saving them. If the session does not exist, an error is returned. If an error occurs while closing the document, it is logged and the document is marked closed in the internal cache. No error is returned.		
	Parameter	Type	Description
	<code>sessionId</code>	String	Session whose documents are to be closed.
<code>closeDoc</code>	Closes the specified document without saving it. If the session does not exist, an error is returned. If the document is not open, an error is returned. If the document is open in another session, an error is returned. If an error occurs while closing the document, it is logged and the document is marked closed in the internal cache. No error is returned.		
	Parameter	Type	Description
	<code>docName</code>	String	Document to be closed.
	<code>sessionId</code>	String	Session in which document was opened.
<code>closeSession</code>	Closes the specified session. If the session does not exist, an error is returned. If any documents are still open in the session, an error is returned.		
	Parameter	Type	Description
	<code>sessionId</code>	String	Session to be closed.
<code>getOpenDocs</code>	Gets all the open documents in the session. If the session does not exist, an error is returned.		
	Parameter	Type	Description
	<code>sessionId</code>	String	Session whose open documents are sought.
<code>getOpenSessions</code>	Gets all open sessions.		
<code>getPreferences</code>	Gets QuarkXPress Server preferences.		
<code>setPreferences</code>	Sets QuarkXPress Server preferences.		
<code>getXPressDOM</code>	Creates a DOM for the specified document.		
<code>newDoc</code>	Creates a new document for modification and keeps it open until further notice. The document is created with a single layout. To create a more complex document, use the <code>processRequestEx</code> API. If a document with the same name is already open, an error is returned. If the session does not exist, an error is returned.		
	Parameter	Type	Description

	<code>docName</code>	String	Document to be opened for modification. Provide the name only. You can provide a relative path when you save the document.
	<code>jobJacketName</code>	String	Name of the Job Jackets file to be used. The Job Jackets file is assumed to be already available on the QuarkXPress server computer.
	<code>jobTicketName</code>	String	Name of the Job Ticket to be used.
	<code>host</code>	String	The QuarkXPress Server instance that should be used for this document modification. If null, this value is supplied by the load balancer. If the indicated server is not an active registered server, an error is thrown.
	<code>port</code>	Integer	The port for the server specified in the <code>host</code> parameter.
	<code>sessionId</code>	String	Session in which the document should be opened.
<code>openDoc</code>	Opens the specified document and keeps it open until further notice. If the document is already open, an error is returned. If the session does not exist, an error is returned.		
	Parameter	Type	Description
	<code>docName</code>	String	Document (along with relative path if required) to be opened for modification.
	<code>host</code>	String	QuarkXPress Server instance which should be used for this document modification. If null, this value is supplied by the load balancer. If the indicated server is not an active registered server, an error is thrown.
	<code>port</code>	Integer	The port for the server specified in the <code>host</code> parameter.
	<code>sessionId</code>	String	Session in which the document should be opened.
<code>processRequestEx</code>	Executes the request context. If a session ID is specified, the document is kept open after the request is executed. If no session ID is specified, the request is executed normally without keeping the document open. If the document is open in another session, an error is returned. If the document is marked dirty, an error is returned (a document is marked dirty when the server that opened the document has become inactive; in such a case, the document must be closed and opened again).		
	Parameter	Type	Description
	<code>reqContextObj</code>	<code>QRequestContext</code>	Request to be executed.

	<code>sessionId</code>	String	Session in which the request should be executed. This value may be null. If a session ID is provided, the document is kept open. If no session ID is provided, the request is executed normally, as if <code>processRequest</code> had been called.
<code>saveAllDocs</code>	Saves all open documents in the session. The documents are saved one by one. If error occurs while saving a document, an error is returned immediately and the rest of the documents remain unsaved. If a document is marked dirty, an error is returned (a document is marked dirty when the server that opened the document has become inactive; in such a case, the document must be closed and opened again).		
	Parameter	Type	Description
	<code>relativePath</code>	String	Relative path where open documents should be saved. If this value is provided, copies of open documents with changes made so far are saved in the new location. The open documents are not saved but have all of the changes made so far.
	<code>sessionId</code>	String	Session in which the document exists.
<code>saveDoc</code>	Saves the open document. If a document is marked dirty, an error is returned (a document is marked dirty when the server that opened the document has become inactive; in such a case, the document must be closed and opened again).		
	Parameter	Type	Description
	<code>docName</code>	String	Document to be saved. Must be the same name that was used when opening or creating the document.
	<code>newName</code>	String	New name of the document. If null, the document is saved with the old name.
	<code>relativePath</code>	String	Relative path where the document should be saved. The relative path can also contain the new name of the document. If this is provided, a copy of the open document with changes made so far is saved in the new location. The open document is not saved but has all of the changes made so far.
	<code>sessionId</code>	String	Session in which the document exists.
	<code>getXPressDOMEx</code>	Lets you create a DOM of a particular layout or portion of a layout.	
	<code>getXMLFromXPressDOM</code>	Creates an XML string out of the DOM.	

	<code>getXPressDOMFromXML</code>	Takes a raw XML representation of a project as a string and returns an object model representing that project, with Project as the root class.
Example, object model	<pre> QRequestContext rc = new QRequestContext(); rc.documentName = "test.qxp"; rc.responseAsURL = false; JPEGRenderRequest jpegRequest = new JPEGRenderRequest(); rc.request = jpegRequest; RequestService svc = new RequestService(); QContextData response = svc.processRequest(rc); </pre>	

QRequest

Description	Base class for all request objects (such as <code>PDFRenderRequest</code>). All request objects share some common data members, which are described below.		
Type	Web service data object		
Members	Name	Types	Description
	<code>request</code>	<code>QRequest</code>	QuarkXPress Server request that includes instances of request objects chained together.

RequestParameters

Description	Generic class for executing any request and for adding dynamic properties to a request.		
Type	Web service data object		
Members	Name	Type	Description
	<code>requestNamespace</code>	String	Namespace of the request (for example, <code>jpeg</code>).
	<code>params</code>	<code>NameValueParam[]</code>	Parameter array for the specified request (for example, <code>jpegquality</code>).
Additional comments	<p>You can use this class to send any request for which a specific class does not exist. When this request exists in the chain, its namespace is concatenated with the namespaces of other requests. That means the namespace provided here can be null.</p> <p>The parameters of this class can be used to parameterize a request being sent to the server.</p>		
Example, object model	<pre> QRequestContext rc = new QRequestContext(); RequestParameters request = new RequestParameters(); request.setRequestNamespace("jpeg"); rc.setRequest = request; NameValueParam p1 = new NameValueParam(); p1.setParamName = "jpegquality"; p1.setTextValue = "4"; request.setParams(new NameValueParam[] {p1}); </pre>		

NameValueParam

Description	Generic class for adding dynamic properties to a request. This class is specifically for requests that take a box name/id as the parameter name and the box content as the parameter value.		
Type	Web service data object		
Members	Name	Type	Description

	<code>paramName</code>	String	Name of the parameter. In most cases this will be the name/ID of the box.
	<code>textValue</code>	String	Text value of the box. (You can set either <code>textValue</code> or <code>streamValue</code> .)
	<code>streamValue</code>	byte[]	Stream value of the box. (You can set either <code>textValue</code> or <code>streamValue</code> .)
	<code>contentType</code>	String	The MIME content type of the parameter.

QContentData

Description	A response to a Web Services call to QuarkXPress Server.		
Type	Web service data object		
Members	Name	Types	Description
	<code>contentType</code>	String	The type of the response. For example, "text/xml" or "text/plain."
	<code>textData</code>	String	If the response type is text, this contains the text. Otherwise, this value is null.
	<code>responseURL</code>	String	If the <code>responseAsURL</code> parameter was set to "true" in the request, this contains the URL of the response. Otherwise, this value is null.
	<code>streamValue</code>	binary	If the response type is binary, this contains the byte array. Otherwise, this value is null.
	<code>encodingType</code>	String	If the response type is text, this value indicates the encoding of the text (for example, UTF-8 or ANSI).
	<code>actualServerPortUsed</code>	String	Identifies the server port.
	<code>actualServerUsed</code>	String	Identifies the server.
	<code>headers</code>	String	If the response returned by the server is a set of headers, this array contains the header response.
	<code>multipartResponse</code>	String	If the response returned by the server is multipart, this array contains the multipart response parts.
Example, object model	<pre>QRequestContext context = new QRequestContext(); context.setDocumentName("sample.qxp"); context.setResponseAsURL(true); JPEGRenderRequest request = new JPEGRenderRequest(); request.setJPEGQuality("4"); context.setRequest(request); RequestService requestService = new RequestServiceStub(); QContentData response = requestService.processRequest(context); System.out.println(response.getResponseURL());</pre>		

QException

Description	Exception class for QuarkXPress Manager.		
Type	<code>Exception</code>		
Members	Name	Types	Description

	<code>httpResponseCode</code>	String	HTTP response code.
	<code>managerErrorCode</code>	String	QuarkXPress Server Manager error code.
	<code>managerErrorMessage</code>	String	QuarkXPress Server Manager localized error message.
	<code>serverErrorCode</code>	String	QuarkXPress Server error code.
	<code>serverErrorMessage</code>	String	QuarkXPress Server response message.
	<code>serverExtendedMessage</code>	String	QuarkXPress Server extended error message.
Example, object model	<pre>String docName = "notexisting.qxp"; try { QRequestContext ctx = getRequestContext(docName); QRequest request = getJPEGRequest(); ctx.setRequest(ctx); QContentData response = getService().processRequest(ctx); System.out.println(response.getResponseURL()); } catch (QException ex) { // QuarkXPress Manager threw an QException and it is not // a runtime exception. QException object will be returned. System.out.println(ex.getServerErrorCode()); }</pre>		

QXP Server Manager

The following topics are for people who want to enhance QuarkXPress Server Manager or integrate it with other software.

Please refer to <http://localhost:8090/qxpsmdocs/apidocs/index.html> for manager API documentation. (Note that the port number used to retrieve the API documentation is 8090 by default, but you should use whatever port number you specified when installing QuarkXPress Server Manager.)

QuarkXPress Server Manager was developed using interface-based programming and uses the Spring Framework to instantiate pluggable objects. When QuarkXPress Server Manager starts up, it reads the contents of a Spring context definition file named "ManagerContainerConfig.xml" and instantiates all of the beans listed in the file. QuarkXPress Server Manager then initializes by reading various configuration options from a file named "ManagerConfig.xml."

You can deploy QuarkXPress Server Manager in its own Tomcat container, in an external Tomcat container, or in a shared Spring context. For more information, see "Deploying QuarkXPress Server Manager" in the *QuarkXPress Server ReadMe*.

Using the Web interface

The topics below describe the features available via the QuarkXPress Server Web interface. The topics covered here include the following:

- *Render types* are namespaces you can use to return a QuarkXPress project in a specified file format.
- *Render modifiers* let you control which parts of a project are rendered and set the scale of the returned renderings.

- *Content modifiers* let you alter the content and formatting of boxes in layouts without using the XML modify parameter.
- *XML modify* lets you modify QuarkXPress projects using XML.
- The `xml` namespace deconstructs a project according to the Modifier DTD. The `construct` namespace lets you turn an XML representation of a QuarkXPress project back into a QuarkXPress project.
- *Administrative request handlers* let you change the behavior of QuarkXPress Server.

➡ QuarkXPress Server uses case-sensitive XML.

Understanding rendering

Rendering is the process in which QuarkXPress Server opens a QuarkXPress project, transforms it into a different format (the *render type*), and then sends a response to the requestor. Depending on the type of rendering operation, the response may be a message or a rendered file.

For information on how to submit a render request, see "[Getting started: HTTP and HTTPS](#)."

Alerts	Cannot open this document type. Please select a QuarkXPress document or template.	HTTP Error #500 This alert displays if you try to render a file that is not a QuarkXPress project.
	File not found	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you try to render a project that does not exist.
	I/O error trying to read or write to disk.	HTTP Error #500 QuarkXPress Server Error #-36 This alert displays if QuarkXPress Server is running on Windows and a shared network folder was selected as the document pool, but the folder is no longer shared. <i>What to do:</i> In the QuarkXPress Server administration interface, choose Administration > Preferences > General and set Document Root Folder to a shared folder.
	Cannot find required volume or folder.	HTTP Error #404 QuarkXPress Server Error #-35 This alert displays if QuarkXPress Server is running on Mac OS and a shared network volume was selected as the document pool, but the volume is no longer shared. <i>What to do:</i> In the QuarkXPress Server administration interface, choose Administration > Preferences > General and set Document Root Folder to a shared folder.
Logs	See Understanding logging	

Example, GET URL	<code>http://localhost:8080/sample.qxp</code>
Notes	<p>There are two ways to specify a render format:</p> <ol style="list-style-type: none"> 1. Enter the render type directly in the browser address field:<code>http://localhost:8080/pdf/project.qxp</code>. 2. In the QuarkXPress Server administration interface, choose Administration > Preferences > General and choose the default render type from the Default Renderer Type drop-down menu.

Understanding logging

If a request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. This message includes the transaction ID, date, time, request type, project name, response type, response size in bytes, and client IP address. For example:

```
07/03/2011 14:37:47 - RequestURI = /xml/sample.qxp TransactionUUID =
afb6f457-80ae-4d5d-a434-ce9f3e089761 Client = 10.91.30.216 Type = text/xml
Size = 4846
```

If an alert is displayed, an error message is written to the QuarkXPress Server transaction log file. The transaction entry contains the date and time of the request, the error code, and the error message. The following is a sample of an error log transaction entry:

```
09/03/2011 13:54:33 - RequestURI = /sample.qcd TransactionUUID =
dffc3a7e-11fd-4d97-b3fe-8f2129353d58 Client = 10.91.30.216 Error #10120
- Cannot open this document type. Please select a QuarkXPress document or
template.
```

The "QuarkXPress Server Log.log" file also contains system-level log information. For example, if a request makes a renderer stop working, you can figure out which request it was using the transaction ID and the transaction log.

```
09/03/2011 014:00:07 ERROR
[com.quark.qxps.core.server.ServerRendererMonitor][pool-1-thread-1] - The
QuarkXPress Server Renderer with processId 2620 had quit while processing
the transaction 87212dae-6ba3-4b3f-97bb-ea8f0c255bf9.
```

➡ To download all logs to a non-server computer, click **Show Transaction Log** in the QuarkXPress Server Web interface, then click **Download Logs** on the upper right.

Understanding render types

Render types are namespaces you can use to return a QuarkXPress project in a specified file format. The topics covered here include the following:

Function	Description	QuarkXPress Server Manager object model classes
<i>appstudio</i>	Returns a .zip file containing an App Studio article rendered from the App Studio layout(s) in the source project.	<code>AppStudioRenderRequest</code>
<i>ave</i>	Returns a .zip file containing an AVE issue file and its corresponding manifest.	<code>AVERenderRequest</code>
<i>eps</i>	Returns an EPS file.	<code>EPSRenderRequest</code>
<i>epub</i>	Returns an ePUB file.	<code>EPubRenderRequest</code>
<i>jpeg</i>	Returns a JPEG image.	<code>JPEGRenderRequest</code>
<i>pdf</i>	Returns a PDF file.	<code>PDFRenderRequest</code>

Function	Description	QuarkXPress Server Manager object model classes
<i>png</i>	Returns a PNG image.	<code>PNTRenderRequest</code>
<i>postscript</i>	Returns a PostScript file.	<code>PostScriptRenderRequest</code>
<i>qcddoc</i>	Returns a QuarkCopyDesk article.	<code>CopyDeskDocRequest</code>
<i>qxpdoc</i>	Returns a QuarkXPress project file.	<code>QuarkXPressRenderRequest</code>
<i>qxpr</i>	Returns an RLE Raw Custom format image.	<code>RLERawCustomRenderRequest</code>
<i>raw</i>	Returns a project in a QuarkXPress internal format.	<code>RawCustomRenderRequest</code>
<i>screenpdf</i>	Returns a low-resolution PDF file.	<code>ScreenPDFRenderRequest</code>
<i>swf</i>	Returns a SWF file.	<code>SWFRenderRequest</code>

➡ The default render type is JPEG.

➡ Developers can implement additional rendering formats through server XTensions software.

appstudio

The `appstudio` render type returns a .zip file containing an App Studio article rendered from the App Studio layout(s) in the source project. It also includes mechanisms for uploading an article to the App Studio Publishing Portal, retrieving and updating server settings, and presenting and clearing App Studio Publishing Portal credentials.

Namespace	<code>appstudio</code>		
Parameters	<code>upload</code>	String	Lets you generate an HTML5 article and upload it to the App Studio Publishing Portal. For example: <code>http://localhost:8080/appstudio/upload/template.qxp?organization=XXX&publication=YYY&issue=ZZZ&article=AAA</code>
	<code>html</code>	String	Lets you gerate an HTML5 article and returns it as a .zip file. For example: <code>http://localhost:8080/appstudio/html/template.qxp</code>
	<code>setcredential</code>	String	Lets you log in to the App Studio Publishing Portal. For example: <code>http://localhost:8080/appstudio/setcredential?username=XXX&password=YYY</code>
	<code>clearcredential</code>	String	Lets you log out of the App Studio Publishing Portal. For example: <code>http://localhost:8080/appstudio/clearcredential</code>

	<code>config</code>	String	Lets you retrieve the current publication hierarchy from the App Studio Publishing Portal. For example: <code>http://qxpserver:port/appstudio/config</code>
Render modifier parameters	<code>layout</code>	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	<code>page</code>	Integer	Lets you specify a page.
	<code>pages</code>	String (page range)	Lets you specify a range of pages.
Response	A .zip file containing an HTML5 article.		
Alerts	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a render request with the <code>box</code> parameter.	
	Cannot open this document type. Please select a QuarkXPress document or template.	HTTP Error #10120 This alert displays if you submit an <code>appstudio</code> request for a QuarkCopyDesk article.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/appstudio/sample.qxp</code>		
Example, object model	<pre>Request object name: AppStudioRenderRequest // STEP 1: Create the QuarkXPress Server Request // Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); // STEP 2 (SPECIFIC TO REQUESTS): // Create the App Studio renderer // request and embed it in the request context. AppStudioRenderRequest req = new AppStudioRenderRequest(); req.setAppStudioData(request.getParameter("AppStudioData")); requestCtx.setRequest(req); // STEP 3: Create the service and call the // processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>		

ave

The **ave** render type returns a .zip file containing an AVE issue file and its corresponding manifest.

Namespace	<code>AVE</code>		
Parameters	<code>outputstyle</code>	<code>stylename</code>	Lets you specify an output style. To use a named output style, use the name of that output style. For example: <code>http://localhost:8080/ave/sample.qxp?outputstyle=stylename</code>

			To use settings that have been captured with the Capture Settings in the QuarkXPress Export AVE for iPad dialog box, use <code>document</code> . For example: <code>http://localhost:8080/ave/sample.qxp?outputstyle=document</code>
Render modifier parameters	<code>format</code>	String	Lets you specify an output format. Use <code>avemag</code> for AVE-Mag or <code>avedoc</code> for AVE-Doc. The default is <code>avemag</code> .
	<code>layout</code>	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	<code>page</code>	Integer	Lets you specify a page.
	<code>pages</code>	String (page range)	Lets you specify a range of pages.
Response	A .zip file containing an AVE issue file and its corresponding manifest.		
Alerts	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a render request with the <code>box</code> parameter.	
	This Output Style does not exist.	This alert displays if you specify a nonexistent output style.	
	This Output Style cannot be used with this render type.	This alert displays if you specify an output style that is incompatible with this render type.	
	Cannot open this document type. Please select a QuarkXPress document or template.	HTTP Error #10120 This alert displays if you submit an <code>ave</code> request for a QuarkCopyDesk article.	
	AVE-Doc for an App Studio layout is not supported.	HTTP Error #10545 This alert displays if you submit an <code>ave</code> request with <code>format=avedoc</code> for an App Studio layout.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/ave/sample.qxp?format=avemag&layout=2</code>		
Example, object model	<pre>Request object name: AVERenderRequest //STEP1: Create the QuarkXPress Server Request //Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); //STEP 2(SPECIFIC TO REQUESTS): //Create the AVE renderer //request and embed it in the request context. AVERenderRequest avereq = new AVERenderRequest(); avereq.setAVEData(request.getParameter("AVEData")); avereq.setFormat(request.getParameter("Format")); avereq.setLayout(request.getParameter("Layout")); requestCtx.setRequest(avereq);</pre>		

	<pre>//STEP3: Create the service and call the //processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>
Notes	The default AVE output style is used.

eps

The **eps** render type returns an EPS rendering of a page or spread.

Namespace	EPS		
Parameters	outputstyle	stylename	<p>Lets you specify an output style. To use a named output style, use the name of that output style. For example:</p> <p>http://localhost:8080/pdf/sample.qxp?outputstyle=stylename</p> <p>To use settings that have been captured with the Capture Settings in the QuarkXPress Print dialog box, use document. For example:</p> <p>http://localhost:8080/pdf/sample.qxp?outputstyle=document</p>
	epsformat	color	Lets you specify an EPS format. The default value is color .
	epspreview	tiff none	Lets you include or omit a TIFF preview. The default value is tiff .
	epsdata	ascii binary clean8bit	Lets you specify a data type for the EPS file. The default value is clean8bit .
	epstransparent	1 0 true false yes no	Lets you specify whether the EPS can include transparent areas.
	updateimage	true false	Lets you specify whether to update imported pictures.
	updateflow	true false	Lets you specify whether to update the text flow version of a project to the current version.
Render modifier parameters	page	Integer	Lets you specify a page.
	produceblankpages	1 0 true false yes no	Lets you specify whether to render blank pages.
	scale	Float .1 to 6.92 for Windows .1 to 8 on Mac OS	Lets you specify a scaling percentage. The valid values are from .1 (10%) to 8 (800%) on Mac OS or 6.92 (692%) on Windows.
	spread	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page

			document, spread 1 consists of the first page.
	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	downloadlayoutFonts	1 0 true false yes no	Lets you specify whether to download all fonts used in the layout and all system fonts.
	downloadImportedPdfEpsFonts	1 0 true false yes no	Lets you specify whether to download all fonts required by imported PDF and EPS files.
Response	An EPS file.		
Alerts	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a render request with the pages or box parameter.	
	This Output Style does not exist.	This alert displays if you specify a nonexistent output style.	
	This Output Style cannot be used with this render type.	This alert displays if you specify an output style that is incompatible with this render type.	
Logs	See Understanding logging		
Example, GET URL	http://localhost:8080/eps/sample.qxp?epsformat= color&epsdata=clean8bit&epspreview=tiff&epsbleed= 0&epstransparent=0		
Example, object model	<pre>Request object name: EPSRenderRequest //STEP1: Create the QuarkXPress Server Request //Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); //STEP 2(SPECIFIC TO REQUESTS): //Create the EPS renderer //request and embed it in the request context. EPSRenderRequest epsreq = new EPSRenderRequest(); epsreq.setEPSData(request.getParameter("EPSData")); epsreq.setEPSFormat(request.getParameter("EPSFormat")); epsreq.setEPSPreview(request.getParameter("EPSPreview")); requestCtx.setRequest(epsreq); //STEP3: Create the service and call the //processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>		
Notes	<p>You can specify an output style and set additional local parameters of that output style. For example, if no bleed setting is specified in the output style named "mystylename", you can specify a bleed setting with a URL like the following:</p> <pre>http://localhost:8080/eps/sample.qxp? outputstyle=mystylename?bleed=symmetric</pre> <p>You can override settings in an output style. For example, if an asymmetric bleed is specified in the output style named "mystylename," you could override it with the same URL.</p>		

	If you do not specify an EPS output style, the default EPS output style is used.
--	--

epub

The **epub** render type returns an ePUB rendering of a layout.

Namespace	ePUB		
Render modifier parameters	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	outputstyle	String	Lets you specify an ePUB output style by name or ID.
Response	An ePUB (.epub) file.		
Alerts	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a render request with the <code>pages</code> or <code>box</code> parameter.	
	ePub not created. There is no reflow layout in the document.	HTTP Error #10543 This error appears if there is no reflow layout.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/epub/sample.qxp?outputstyle=epubl&layout=2</code>		
Example, object model	<pre>Request object name: EPubRenderRequest //STEP1: Create the QuarkXPress Server Request //Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); //STEP 2(SPECIFIC TO REQUESTS): //Create the ePUB renderer //request and embed it in the request context. EPubRenderRequest epubreq = new EPubRenderRequest(); epubreq.setEPubData(request.getParameter("EPubData")); epubreq.setCreateTOC(request.getParameter("CreateTOC")); epubreq.setLayout(request.getParameter("Layout")); requestCtx.setRequest(epubreq); //STEP3: Create the service and call the //processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>		
Notes	You can only create an ePUB file from a project that includes a reflow article.		

jpeg

The **jpeg** render type returns a JPEG rendering of a page or spread.

Namespace	JPEG		
Parameters	jpegquality	1 2 3 4	Lets you specify the image quality of a rendered JPEG image. The valid values are: 1 (highest quality), 2 (high

			quality), 3 (medium quality), and 4 (lowest quality). The default value is 1.
	<code>updateimage</code>	true false	Lets you specify whether to update imported pictures.
	<code>updateflow</code>	true false	Lets you specify whether to update the text flow version of a project to the current version.
	<code>pasteboard</code>	true false	Lets you specify whether to display pasteboard items. Works only with <code>spread</code> parameter. The default value is <code>true</code> . For example: <code>http://localhost:8080/jpeg/document.qxp?spread=1&pasteboard=true</code>
	<code>showboxoutline</code>	true false	Lets you specify whether to include bounding box outlines in the response JPEG image even if the boxes have no content.. The default value is <code>false</code> .
Render modifier parameters	<code>boxes</code>	String	Lets you request multiple boxes.
	<code>page</code>	Integer	Lets you request a single page.
	<code>scale</code>	Float .1 to 6.92 for Windows .1 to 8 on Mac OS)	Lets you specify a scaling percentage. The valid values are from .1 (10%) to 8 (800%) on Mac OS or 6.92 (692%) on Windows.
	<code>box</code>	String	Lets you request a single box.
	<code>spread</code>	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
	<code>layout</code>	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
Response	A JPEG file.		
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/jpeg/sample.qxp?jpegquality=1</code>		
Example, object model	<pre> Request object name: JPEGRenderRequest // STEP1: Create the QuarkXPress Server Request // Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); // STEP2: Create the JPEG renderer request and attach it // to the request context. JPEGRenderRequest jpreq = new JPEGRenderRequest(); jpreq.setJPEGQuality(request.getParameter("jpegQuality")); jpreq.setLayout(request.getParameter("Layout")); requestCtx.setRequest(jpreq); // STEP3: Create the service and // call the processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx); </pre>		

kindle

The `kindle` render type returns a rendering of a layout that can be viewed on Amazon Kindle readers.

Namespace	kindle		
Render modifier parameters	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	outputstyle	String	Lets you specify a Kindle output style by name or ID.
Response	A Kindle (.mobi) file.		
Alerts	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a render request with the <code>pages</code> or <code>box</code> parameter.	
	Kindle not created. There is no reflow layout in the document.	HTTP Error #10543 This error appears if there is no reflow layout.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/kindle/sample.qxp?outputstyle=kindle&layout=2</code>		
Example, object model	<pre>Request object name: KindleRenderRequest //STEP1: Create the QuarkXPress Server Request //Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); //STEP 2(SPECIFIC TO REQUESTS): //Create the Kindle renderer //request and embed it in the request context. KindleRenderRequest kindlreq = new KindleRenderRequest(); kindlreq.setKindleData(request.getParameter("KindleData")); kindlreq.setCreateTOC(request.getParameter("CreateTOC")); kindlreq.setLayout(request.getParameter("Layout")); requestCtx.setRequest(kindlreq); //STEP3: Create the service and call the //processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>		
Notes	You can only create a Kindle file from a project that includes a reflow article.		

literal

The `literal` render type returns the contents of a file without any attempt to process it as a template. Depending on the file's MIME type, the requested project can be displayed within the browser (for example, if the response is a JPEG file) or saved to disk (for example, if the response is a Microsoft Word document).

Namespace	<code>literal</code>
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Response	The requested file returned in the HTTP response.	
Alerts	Incorrect administration realm username and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the Authentication pane of the General Preferences dialog box (Administration > Preferences > General) in the QuarkXPress Server Web interface.</p>
Logs	See Understanding logging	
Example, GET URL	http://localhost:8080/literal/Story.doc	
Example, object model	<pre> Request object name: LiteralRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new LiteralRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>	

pdf

The [pdf](#) render type returns a PDF rendering of a project.

Namespace	PDF		
Parameters	outputstyle	stylename, document	<p>Lets you specify an output style. To use a named output style, use the name of that output style. For example:</p> <p>http://localhost:8080/pdf/sample.qxp?outputstyle=stylename</p> <p>To use settings that have been captured with the Capture Settings in the QuarkXPress Export as PDF dialog box, use document. For example:</p> <p>http://localhost:8080/pdf/sample.qxp?outputstyle=document</p>
	title	String	Lets you specify the title of the PDF file.
	subject	String	Lets you specify the subject of the PDF file.
	author	String	Lets you specify the author of the PDF file.
	keywords	String	Lets you specify keywords for the PDF file.
	includehyperlinks	1 0 true false yes no	Lets you specify whether to include hyperlinks in the PDF file.
	exportlistsashyperlinks	1 0 true false yes no	Lets you specify whether to export lists as hyperlinks. To use this parameter, you must set includehyperlinks to true.
	exportindexesashyperlinks	1 0 true false yes no	Lets you specify whether to export the index as hyperlinks. To use this parameter, you must set includehyperlinks to true.

<code>exportlistsasbookmarks</code>	1 0 true false yes no	Lets you specify whether to export lists as bookmarks. To use this parameter, you must set <code>includehyperlinks</code> to true.
<code>mode</code>	composite or separations	Lets you specify whether the PDF file is a composite or includes separations.
<code>printcolors</code>	cmyk, rgb, grayscale, cmykandspot, asis	Lets you specify the color space of the PDF file. This option is available only when <code>mode</code> is set to <code>composite</code> .
<code>plates</code>	inripseps	Lets you specify a separation method. This option is available only when <code>mode</code> is set to <code>separations</code> .
<code>produceblankpages</code>	1 0 true false yes no	Lets you specify whether to include blank pages. This option is available only when <code>mode</code> is set to <code>composite</code> .
<code>useopi</code>	1 0 true false yes no	Lets you specify whether to use OPI.
<code>images</code>	includeimages, omittifff, omittifffandeps	Lets you specify whether to include TIFF and EPS images from an OPI server.
<code>registration</code>	off, centered, offcenter	Lets you include, omit, and configure registration marks.
<code>offset</code>	0–30 (in points)	Lets you specify the offset of registration marks.
<code>bleed</code>	pageitemsonly, symmetric	Lets you specify a bleed type.
<code>offsetbleed</code>	0–6 (in inches)	Lets you specify a bleed offset to use. This option is available only when <code>bleed</code> is set to <code>symmetric</code> .
<code>spreads</code>	1 0 true false yes no	Lets you specify whether to output spreads.
<code>lowresolution</code>	1 0 true false yes no	Lets you request a low-resolution (36 dpi) PDF.
<code>colorimagedownsample</code>	9–2400	Lets you specify the resolution of color images.
<code>grayscaleimagedownsample</code>	9–2400	Lets you specify the resolution of grayscale images.
<code>monochromeimagedownsample</code>	9–2400	Lets you specify the resolution of monochrome images.
<code>colorcompression</code>	true false	Lets you specify whether medium-quality manual JPEG compression should be applied to color images.
<code>grayscalecompression</code>	true false	Lets you specify whether medium-quality manual JPEG compression should be applied to grayscale images.
<code>monochromecompression</code>	true false	Lets you specify whether ZIP compression should be applied to monochrome images.

<code>pdffile</code>	String	Lets you specify the PDF name. This option is available only when PDF to Folder is selected in QuarkXPress Server PDF preferences.
<code>psfile</code>	String	Lets you specify the PostScript file name. This option is available only when PostScript for later Distilling is selected in QuarkXPress Server PDF preferences.
<code>thumbnail</code>	bw color	Lets you embed a thumbnail in the PDF file.
<code>mode</code>	composite separations	Lets you specify the PDF file's color mode.
<code>fontdownload</code>	yes no	Lets you turn font download on or off. You cannot specify which fonts are downloaded.
<code>layers</code>	String	Lets you specify which layers should be included, as a comma-separated list.
<code>verification</code>	pdfx1a pdfx3	Lets you use PDF/X-1a or PDF/X-3 verification.
<code>separate</code>	yes no	Lets you specify whether to output each page as a separate file.
<code>produceblankplates</code>	yes no	Lets you specify whether to include blank plates.
<code>download</code>	1 0 true false	<p>When <code>download</code> is true, the browser always displays a dialog box that lets the end user save the returned file, even if the browser can display it.</p> <p>When <code>download</code> is false, the browser attempts to display the returned file. If the browser cannot display the file, it lets the end user save the returned file.</p> <p>The default value is false.</p>
<code>layoutstart</code>	1 0 true false yes no	<p>Lets you specify the number of the first layout to render when you render multiple layouts as separate PDF files. PDF files are saved at the location specified in QuarkXPress Server preferences (Administration > Preference > General > Server > Document Root Folder).</p> <p>The first layout in a project is layout 0. For example:</p> <p>http://localhost:8080/pdf/multilayout.qxp?layoutstart=0&layoutend=3</p>
<code>layoutend</code>	Integer	<p>Lets you specify the number of the last layout to render when you render multiple layouts as separate PDF files. PDF files are saved at the location specified in QuarkXPress Server preferences (Administration > Preference > General > Server > Document Root Folder).</p> <p>The first layout in a project is layout 0. For example:</p> <p>http://localhost:8080/pdf/multilayout.qxp?layoutstart=0&layoutend=3</p>
<code>updateimage</code>	true false	Lets you specify whether to update imported pictures.

	updateflow	true false	Lets you specify whether to update the text flow version of a project to the current version.
Render modifier parameters	page	Integer	Lets you specify a single page.
	pages	String (page range)	Lets you specify a range of pages.
	spread	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	spreads	Boolean 1 0 true false yes no	Lets you specify that the output use spreads.
Response	A PDF file.		
Alerts	This page range is invalid	HTTP Error #500 QuarkXPress Server Error #147 This alert displays if you try to render an invalid page range.	
	No file produced. The project requested contains only blank pages.	HTTP Error #500 This alert displays if you try to render a a project that contains only blank pages.	
	This Output Style does not exist.	This alert displays if you specify a nonexistent output style.	
	This Output Style cannot be used with this render type.	This alert displays if you specify an output style that is incompatible with this render type.	
Logs	See Understanding logging		
Example, GET URL	This URL renders "sample.qxp" as a PDF with a symmetric bleed: <code>http://localhost:8080/pdf/sample.qxp?bleed=symmetric&offsetbleed=2</code> This URL renders a PDF in which color images are downsampled to a resolution of 300 dpi and manual medium-quality JPEG compression is applied: <code>http://localhost:8080/pdf/sample.qxp?colorimagedownsample=300&colorcompression=true</code>		
Example, object model	Request object name: <code>PDFRenderRequest</code> <pre>// STEP1: Create the QuarkXPress Server Request Context // and set the nescessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); // STEP 2(SPECIFIC TO REQUESTS): // Create the PDF renderer request // and embed it in the request context. PDFRenderRequest pdfreq = new PDFRenderRequest(); pdfreq.setAuthor(request.getParameter("Author")); pdfreq.setTitle(request.getParameter("Title")); pdfreq.setLayout(request.getParameter("Layout")); pdfreq.setSpread(request.getParameter("Spread")); pdfreq.setPage(request.getParameter("mPage")); pdfreq.setPages(request.getParameter("Pages"));</pre>		

	<pre>if(strLowResolution !=null && strLowResolution.equals("True")) pdfreq.setLowResolution("true"); requestCtx.setRequest(pdfreq); // STEP3: Create the service and // call the processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre> <p>For more information about the object model, see the samples.</p>
Notes	<p>There are three ways to generate PDF files with QuarkXPress Server. You can generate a PDF file in QuarkXPress Server and return it to the end user, generate the PDF in QuarkXPress server and save it to a folder on the server computer, or generate a PostScript file for later distilling and save it to a folder on the server computer. To choose one of these output methods in QuarkXPress Server, choose Administration > Preferences > Renderer > PDF) and then click DirectPDF, PDFtoFolder, or PS4D (PostScript for Later Distilling). If you choose either of the last two options, click Browse and navigate to the target folder, then choose an option from the Default Name drop-down menu.</p> <p>You can specify an output style and set additional local parameters of that output style. For example, if no bleed setting is specified in the output style named "mystylename", you can specify a bleed setting with a URL like the following:</p> <pre>http://localhost:8080/pdf/sample.qxp? outputstyle=mystylename&bleed=symmetric</pre> <p>You can override settings in an output style. For example, if an asymmetric bleed is specified in the output style named "mystylename," you could override it with the same URL.</p> <p>If you do not specify a PDF output style, the default PDF output style is used. The default PD output style is Screen - Low Quality/Low Resolution.</p> <p>You can still obtain a high resolution PDF by specifying the output style. Output style names are case-sensitive and should be precise.</p> <p>The following will return a list of output styles from the server:</p> <pre>http://<server><port>/getserverinfo</pre> <pre><OUTPUTSTYLES> <OUTPUTSTYLE TYPE = "PDF">Default PDF Output Style</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">Press - High Quality/High Resolution</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">Print - Medium Quality/Medium Resolution</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">Screen - Medium Quality/Low Resolution</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">Screen - Low Quality/Low Resolution</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">PDF/X-3:2002</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">PDF/X-1a:2001</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "Print">Default Print Output Style</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "EPS">Default EPS Output Style</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "ePub">Default ePub Output Style</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "Kindle">Default Kindle Output Style</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "PDF">Default PDF For AVE</OUTPUTSTYLE> <OUTPUTSTYLE TYPE = "AVE">Default AVE Output Style</OUTPUTSTYLE> </OUTPUTSTYLES ></pre>

png

The **png** render type returns a PNG rendering of a page or spread.

Namespace	PNG		
Parameters	pngcompression	1 2 3 4	Lets you specify the compression of a PNG response. The valid values are: 1 (lowest compression), 2 (medium compression), 3 (high compression), and 4 (highest compression). The default value is 1.

	<code>transparentpng</code>	true false	Lets you specify whether to generate a PNG file that uses transparency.
	<code>updateimage</code>	true false	Lets you specify whether to update imported pictures.
	<code>updateflow</code>	true false	Lets you specify whether to update the text flow version of a project to the current version.
Render modifier parameters	<code>boxes</code>	String	Lets you request multiple boxes.
	<code>page</code>	Integer	Lets you specify a single page.
	<code>scale</code>	Float .1 to 6.92 for Windows .1 to 8 on Mac OS	Lets you specify a scaling percentage. The valid values are from .1 (10%) to 8 (800%) on Mac OS or 6.92 (692%) on Windows.
	<code>box</code>	String	Lets you request a single box.
	<code>spread</code>	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
	<code>layout</code>	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
Response	A PNG file.		
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/png/sample.qxp?pngcompression=1</code>		
Example, object model	<pre> Request object name: PNGRenderRequest // STEP1: Create the QuarkXPress Server Request // Context and set the necessary properties com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; rc.setDocumentName(docName); // STEP 2(SPECIFIC TO REQUESTS):Create the PNG renderer // request and embed it in the request context. PNGRenderRequest pngreq = new PNGRenderRequest(); pngreq.setPNGCompression(request.getParameter("PNGCompression")); pngreq.setLayout(request.getParameter("Layout")); pngreq.setSpread(request.getParameter("Spread")); pngreq.setPage(request.getParameter("mPage")); rc.setRequest(pngreq); // STEP3: Create the service and // call the processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(rc); </pre>		

postscript

The `postscript` render type returns a PostScript rendering of a project.

Namespace	<code>PostScript</code>		
Parameters	<code>prntbleed</code>	Page asym, clip<Boolean>	Lets you specify bleed values for a page.

		<p>top<float>, bottom<float>, left<float>, right<float> sym, clip<Boolean>, amount<float></p>	<p>To specify an asymmetric bleed, use the following format:</p> <pre>prntbleed=asym,clip,top,bottom, left, right</pre> <p>The <code>clip</code> value is Boolean (yes/no). The <code>top</code>, <code>bottom</code>, <code>left</code>, and <code>right</code> values are float values. For example:</p> <pre>http://localhost:8080/ postscript/Sample.qxp? prntbleed=asym,true,1,2,2,1</pre> <p>The above example results in an asymmetric bleed of 1 on the top, 2 on the bottom, 2 on the left, and 1 on the right.</p> <p>To specify a symmetric bleed, use the following format:</p> <pre>prntbleed=sym,clip,amount</pre> <p>The <code>clip</code> value is Boolean (yes/no). The <code>amount</code> value is a float value. For example:</p> <pre>http://localhost:8080/ postscript/Sample.qxp? prntbleed=sym,true,1</pre> <p>The above example results in a symmetric bleed of 1 on all sides. Default: <code>prntbleed=sym,yes,0</code></p>
	<code>outputstyle</code>	stylename, document	<p>Lets you specify an output style. To use a named output style, use the name of that output style. For example:</p> <pre>http://localhost:8080/ postscript/ sample.qxp?outputstyle=stylename</pre> <p>To use settings that have been captured with the Capture Settings in the QuarkXPress Print dialog box, use <code>document</code>. For example:</p> <pre>http://localhost:8080/ postscript/ sample.qxp?outputstyle=document</pre>
	<code>updateimage</code>	true false	Lets you specify whether to update imported pictures.
	<code>updateflow</code>	true false	Lets you specify whether to update the text flow version of a project to the current version.
Render modifier parameters	<code>page</code>	Integer	Lets you specify a single page.
	<code>pages</code>	String (page range)	Lets you specify a range of pages.
	<code>spread</code>	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
	<code>layout</code>	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
Response	A PostScript file.		
Alerts	This page range is invalid.	<p>HTTP Error #500 QuarkXPress Server Error #147</p> <p>This alert displays if you try to render an invalid page range.</p>	
	No file produced. The document requested	<p>HTTP Error #500</p> <p>This alert displays if you try to render a a project that contains only blank pages.</p>	

	contains only blank pages.	
	PostScript printer mapped to file not found	HTTP Error #500 This alert displays if the PostScript printer or driver is not set to Print to File .
	This Output Style does not exist.	This alert displays if you specify a nonexistent output style.
	This Output Style cannot be used with this render type.	This alert displays if you specify an output style that is incompatible with this render type.
Logs	See Understanding logging	
Example, GET URL	http://localhost:8080/postscript/Sample.qxp	
Example, object model	<pre> Request object name: PostScriptRenderRequest // STEP1: Create the QuarkXPress Server Request // Context and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); // STEP 2(SPECIFIC TO REQUESTS): // Create the Post Script renderer // request and embed it in the request context. PostScriptRenderRequest pscreq = new PostScriptRenderRequest(); pscreq.setPrintBleed(request.getParameter("PrintBleed")); pscreq.setPrintPPD(request.getParameter("PrintPPD")); pscreq.setPages(request.getParameter("Pages")); requestCtx.setRequest(pscreq); // STEP3: Create the service and call the // processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx); </pre>	
Notes	<p>To create a PostScript file, you must have a PostScript driver on the server computer.</p> <p>You can specify an output style and set additional local parameters of that output style. For example, if no bleed setting is specified in the output style named "mystylename", you can specify a bleed setting with a URL like the following:</p> <pre> http://localhost:8080/eps/sample.qxp?outputstyle=mystylename&bleed=symmetric </pre> <p>You can override settings in an output style. For example, if an asymmetric bleed is specified in the output style named "mystylename," you could override it with the same URL.</p> <p>If you do not specify a PostScript-compatible output style, the default PostScript-compatible output style is used.</p>	

qcddoc

The `qcddoc` render type returns a QuarkCopyDesk article.

Namespace	<code>qcddoc</code>
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Parameters	article	String	Lets you specify which article in a project to render. For example: http://localhost:8080/qcddoc/abc.qxp?article=article1
	component	String	Lets you specify which component in an article to render. For example: http://localhost:8080/copydesk/abc.qcd?component=comp1
	format	lightweight fullfeatured	Lets you render an article in lightweight or full-featured format. For example: http://localhost:8080/qcddoc/abc.qxp?article=article1&format=fullfeatured
	saveastemplate	true false	Lets you save a copy of an article that was created in QuarkCopyDesk as a template. The default value is true. For example: http://QXPServer8:8080/saveas/qcddoc/article.qcd?saveastemplate=true You can also use this parameter to save a copy of a template as an article. For example: http://QXPServer8:8080/saveas/qcddoc/template.qct?saveastemplate=false
	includepagepicture	true false 1 0	Lets you include a page picture when you export an article from a QuarkXPress layout. Valid options are: picformat (embedded or separate) quality (blackandwhite or color) picdpi (72, 144, or 200) spreadrange (all or first) For example: http://localhost:8080/saveas/qcddoc/4.qxp?includepagepicture=1&quality=blackandwhite&picdpi=144&spreadrange=first http://localhost:8080/saveas/qcddoc/PagePicture.qxp?includepagepicture=true
Render modifier parameters	modify	XML	Lets you modify the article with XML. For more information, see "Using XML modify."
Response	A QuarkCopyDesk article.		
Alerts	There is no box with the specified identifier.	This alert displays if the box corresoponding to a referenced component does not exist.	
	The number of characters in the article name can't be greater than max limit.	This alert displays if an article name is longer than 32 characters.	
	The article/component name is not unique.	This alert displays if you create or change the name of an article or component so that it is the same as the name of an existing article or component.	
Logs	See Understanding logging		

Example, GET URL	<code>http://localhost:8080/qcddoc/copydesk/sample.qcd</code>
Example, object model	Request object name: <code>CopyDeskDocRequest</code>

qxpdoc

The `qxpdoc` render type returns a QuarkXPress project.

Namespace	qxpdoc		
Parameters	qxpdocver	8 9	Indicates the QuarkXPress version format to use. For example: http://localhost:8080/qxpdoc/construct/project1.qxp?qxpdocver=8
	updateimage	true false	Lets you specify whether to return modified pictures in the response or not. If set to false, modified pictures are not returned. If set to true, modified pictures are returned. The default value is true.
	saveastemplate	true false	Lets you save a copy of a project as a template. The default value is true. For example: http://localhost:8080/saveas/qxpdoc/project.qxp?saveastemplate=true You can also use this parameter to save a copy of a template as a project. For example: http://localhost:8080/saveas/qxpdoc/template.qpt?saveastemplate=false
Render modifier parameters	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
Response	A QuarkXPress project.		
Alerts	QuarkXPress document return is disabled.	HTTP Error #500 This alert displays if Disable QXD Return is checked in the QuarkXPress Server administration interface (Administration > Preferences > General > Server).	
	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you submit a qxpdoc render request with the page, pages, box, or spread parameter.	
	Cannot save a QuarkXPress Project down to an earlier version.	HTTP Error #500 This alert displays if you attempt to save a QuarkXPress 6.x project to an earlier version of QuarkXPress with the qxpdocver parameter.	
Logs	See Understanding logging		
Example, GET URL	http://localhost:8080/qxpdoc/sample.qxp		
Example, object model	<pre>Request object name: QuarkXPressRenderRequest // STEP1: Create the QuarkXPress Server Request // Context and set the nescessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false;</pre>		

```
requestCtx.setDocumentName(docName);

// STEP 2(SPECIFIC TO REQUESTS):Create the QuarkXPress
// renderer request and embed it in the request context.
QuarkXPressRenderRequest qxpreq = new
    QuarkXPressRenderRequest();
qxpreq.setDocumentVersion(request.getParameter(
    "XpressDocVersion"));
qxpreq.setLayout(request.getParameter("Layout"));
requestCtx.setRequest(qxpreq);

// STEP3: Create the service and
call the processRequest() API
RequestService service = new RequestServiceStub();
com.quark.qxpsm.QContentData data =
    service.processRequest(requestCtx);
```

screenpdf

The **screenpdf** render type returns a low-resolution PDF rendering of a project. This render type overrides the **PDF Workflow** setting in the QuarkXPress Server administration interface (**Administration > Preferences > Renderer > PDF**) and always sends the PDF file to the browser.

Namespace	Screenpdf		
Parameters	outputstyle	stylename	Lets you specify an output style. To use a named output style, use the name of that output style. For example: <code>http://localhost:8080/screenpdf/sample.qxp?outputstyle=stylename</code> To use settings that have been captured with the Capture Settings in the QuarkXPress Print dialog box, use document . For example: <code>http://localhost:8080/screenpdf/sample.qxp?outputstyle=document</code>
	title	String	Lets you specify the title of the PDF file.
	subject	String	Lets you specify the subject of the PDF file.
	author	String	Lets you specify the author of the PDF file.
	keywords	String	Lets you specify keywords of the PDF file.
	includehyperlinks	1 0 true false yes no	Lets you specify whether to include hyperlinks in the PDF file.
	exportlistsashyperlinks	1 0 true false yes no	Lets you specify whether to export lists as hyperlinks. To use this parameter, you must set includehyperlinks to true.
	exportindexesashyperlinks	1 0 true false yes no	Lets you specify whether to export the index as hyperlinks. To use this parameter, you must set includehyperlinks to true.
	exportlistsasbookmarks	1 0 true false yes no	Lets you specify whether to export lists as bookmarks. To use this parameter, you must set includehyperlinks to true.
	mode	composite or separations	Lets you specify whether the PDF file is a composite or includes separations.

<code>printcolors</code>	cmyk, rgb, grayscale, cmykandspot, asis	Lets you specify the color space of the PDF file. This option is available only when <code>mode</code> is set to <code>composite</code> .
<code>plates</code>	inripseps	Lets you specify a separation method. This option is available only when <code>mode</code> is set to <code>separations</code> .
<code>produceblankpages</code>	1 0 true false yes no	Lets you specify whether to include blank pages. This option is available only when <code>mode</code> is set to <code>composite</code> .
<code>useopi</code>	1 0 true false yes no	Lets you specify whether to use OPI.
<code>images</code>	includeimages, omit TIFF, omit TIFF and EPS	Lets you specify whether to include TIFF and EPS images from an OPI server.
<code>registration</code>	off, centered, offcenter	Lets you include, omit, and configure registration marks.
<code>offset</code>	0–30 (in points)	Lets you specify the offset of registration marks.
<code>bleed</code>	pageitemsonly, symmetric	Lets you specify a bleed type.
<code>offsetbleed</code>	0–6 (in inches)	Lets you specify a bleed offset to use. This option is available only when <code>bleed</code> is set to <code>symmetric</code> .
<code>spreads</code>	1 0 true false yes no	Lets you specify whether to output spreads.
<code>lowresolution</code>	1 0 true false yes no	Lets you request a low-resolution (36 dpi) PDF.
<code>colorimagedownsample</code>	9–2400	Lets you specify the resolution of color images.
<code>grayscaleimagedownsample</code>	9–2400	Lets you specify the resolution of grayscale images.
<code>monochromeimagedownsample</code>	9–2400	Lets you specify the resolution of monochrome images.
<code>colorcompression</code>	true false	Lets you specify whether medium-quality manual JPEG compression should be applied to color images.
<code>grayscalecompression</code>	true false	Lets you specify whether medium-quality manual JPEG compression should be applied to grayscale images.
<code>monochromecompression</code>	true false	Lets you specify whether ZIP compression should be applied to monochrome images.
<code>pdffile</code>	String	Lets you specify the PDF name. This option is available only when PDF to Folder is selected in QuarkXPress Server PDF preferences.
<code>psfile</code>	String	Lets you specify the PostScript file name. This option is available only when PostScript for later Distilling is selected in QuarkXPress Server PDF preferences.

	thumbnail	bw color	Lets you embed a thumbnail in the PDF file.
	mode	composite separations	Lets you specify the PDF file's color mode.
	fontdownload	yes no	Lets you turn font download on or off. You cannot specify which fonts are downloaded.
	layers	String	Lets you specify which layers should be included, as a comma-separated list.
	transparencycles	Integer value from 36 to 3600	Lets you specify the resolution for flattened content.
	verification	pdfx1a pdfx3	Lets you use PDF/X-1a or PDF/X-3 verification.
	separate	yes no	Lets you specify whether to output each page as a separate file.
	produceblankplates	yes no	Lets you specify whether to include blank plates.
	updateimage	true false	Lets you specify whether to update imported pictures.
	updateflow	true false	Lets you specify whether to update the text flow version of a project to the current version.
Render modifier parameters	page	Integer	Lets you specify a single page.
	pages	String (page range)	Lets you specify a range of pages.
	spread	Integer	Lets you specify a spread. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
	layout	String	Lets you specify a layout by name or ID. The first layout is Layout 1.
	spreads	Boolean (1 0 true false yes no)	Lets you specify that the output use spreads.
Response	A screen-resolution PDF file		
Alerts	This page range is invalid.	HTTP Error #500 QuarkXPress Server Error #147	This alert displays if you try to render an invalid page range.
	No file produced. The document requested contains only blank pages.	HTTP Error #500	This alert displays if you try to render a a project that contains only blank pages.
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/screenpdf/sample.qxp?colorimagedownsampling=72&colorcompression=0</code>		
Example, object model	<pre> Request object name: ScreenPDFRenderRequest // STEP1: Create the QuarkXPress Server Request Context // and set the necessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); String docName = request.getParameter("documentName"); requestCtx.setDocumentName(docName); </pre>		


```
// STEP 2(SPECIFIC TO REQUESTS):
// Create the QuarkXPress renderer
// request and embed it in the request context.
ScreenPDFRenderRequest screenpdfRequest = new
    ScreenPDFRenderRequest();
screenpdfRequest.setColorImageDownSample(
    request.getParameter("ColorImageDownSample"));
screenpdfRequest.setCompression(request.getParameter(
    "Compression"));
requestCtx.setRequest(screenpdfRequest);

// STEP3: Create the service and
// call the processRequest() API
RequestService service = new RequestServiceStub();
com.quark.qxpsm.QContentData data =
    service.processRequest(requestCtx);
```

Understanding render modifiers

Render modifiers let you control which parts of a project are rendered and set the scale of the returned renderings. The topics covered here include the following:

Property	Description
<i>box</i>	The box render modifier lets you render a single box.
<i>boxes</i>	The boxes render modifier lets you render multiple boxes.
<i>layer</i>	The layer render modifier lets you show and hide layers prior to rendering. This render modifier also lets you add and remove layers from a project on the server.
<i>layout</i>	The layout render modifier lets you render a particular layout.
<i>movepages</i>	The movepages render modifier lets you move pages prior to rendering.
<i>page</i>	The page render modifier lets you render a single page.
<i>pages</i>	The pages render modifier lets you render multiple pages.
<i>scale</i>	The scale render modifier lets you specify the scale at which content is rendered.
<i>spread</i>	The spread render modifier lets you render a single spread.
<i>spreads</i>	The spreads render modifier lets you render multiple spreads.

Additional render-type-specific parameters are listed on each render type's page.

➡ In the QuarkXPress Server Manager API, render modifiers are properties of render request classes.

➡ Render modifier names are not case-sensitive.

Annotate and append errors

The annotate and append errors feature allows PDF output to be generated regardless of the errors in the modifier xml.

Errors recorded by this feature are:

- Missing image file.
- Missing text file.
- Box/table node referenced by `ANCHOREDBOXREF` isn't available in the modifier XML
- Anchored box/table is created but is not referenced in the parent box.
- Invalid `ROWCOUNT/COLUMNCOUNT/MERGE`.
- Invalid `TABLEBREAK`.
- Applying `INVALID` Gridline attribute to row/column.
- Table creation of incorrect rows and columns.
- Invalid Cell Attributes
- Invalid paragraph/character/conditional/Bullet numbering styles.
- Invalid Box attributes.
- Invalid geometry.
- Invalid Text attributes.
- While applying invalid picture attributes.

Renderer preferences **Annotate errors in the Output Document** and **Append errors into the Output Document** can be specified under the **Modifier** pane of the QXPS **Renderer** preferences:

- If **Annotate errors in the Output Document** preference is checked, the errors are annotated as notes inline in the PDF output.
- If **Append errors into the Output Document** preference is checked, the errors are appended at the end of the PDF output.

Annotation can also be done through the URL modify request params `annotateerrors` and `appenderrors` that can be set to true or false.

`http://localhost:8080/pdf/template.qxp?modify=file:InvalidImage.xml?appenderrors=true`

annotateerrors

The `annotateerrors` render modifier lets you include descriptions of rendering errors as notes in the layout itself. In rendered QuarkXPress files, errors are displayed as notes. In rendered PDFs, errors are displayed as comments. In XML output, errors are displayed as notes XML markup.

Parameters	<code>annotateerrors</code>	String	Includes descriptions of rendering errors as notes in the layout.
Compatible with	<code>pdf, qxpdoc, xml, postscript</code>		
Logs	See Understanding logging		
Example GET URL	<code>http://localhost:8080/png/sample.qxp?box=annotateerrors</code>		
Notes	Descriptions of rendering errors are formatted with the default character style sheet.		


appenderrors

The `appenderrors` render modifier lets you include descriptions of rendering errors after the last page in the layout. Descriptions of rendering errors are formatted in 10-point magenta Arial.

Parameters	<code>appenderrors</code>	String	Includes descriptions of rendering errors after the last page in the layout.
Compatible with	<code>pdf, qxpdoc, xml, postscript</code>		
Logs	See Understanding logging		
Example GET URL	<code>http://localhost:8080/png/sample.qxp?box=appenderrors</code>		
Notes	Descriptions of rendering errors are formatted in 10-point magenta Arial.		

box

The `box` render modifier lets you render a single box.

Parameters	box	String	Lets you specify which box to render.
	overlap	String	Lets you specify whether to show the area overlapped by the specified box.
Compatible with	jpeg, png, raw		
Alerts	There is no box with the specified identifier.	HTTP Error #500 This alert displays if you request a box that does not exist.	
	Cannot render box. The box must be within the page boundaries.	HTTP Error #500 This alert displays if you request a box that is outside the page boundary.	
	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you try to use the box parameter with the eps, pdf, or qxpdoc render types.	
Logs	See Understanding logging		
Example GET URL	http://localhost:8080/png/sample.qxp?box=pictbox		
Notes	To render a box in a particular layout, use a URL like the following: http://localhost:8080/png/sample.qxp?layout=2&page=3&box=textbox		
		When you render using the box parameter, the box ID has a higher priority than the box name.	

boxes

The `boxes` render modifier lets you render multiple boxes.

Parameters	<code>boxes</code>	String	Lets you specify which boxes to render.
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	<code>overlap</code>	String	Lets you specify whether to show the area overlapped by the specified boxes.
Compatible with	<code>jpeg, png, raw</code>		
Alerts	There is no box with the specified identifier.	HTTP Error #500	This alert displays if you request a box that does not exist.
	Cannot render box. The box must be within the page boundaries.	HTTP Error #500	This alert displays if you request a box that is outside the page boundary. .
	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406	This alert displays if you try to use the <code>boxes</code> parameter with the <code>eps</code> , <code>pdf</code> , or <code>qxpdoc</code> render types.
Logs	See Understanding logging		
Example GET URL	<code>http://server:port/jpeg/doc.qxp?boxes=box1,box2</code>		
Notes	To render boxes in a particular layout, use a URL like the following: <code>http://localhost:8080/png/sample.qxp?layout=2&page=3&box=textbox</code>		
	➡ When you render using the <code>box</code> parameter, the box ID has a higher priority than the box name.		

compositionzone

The `compositionzone` parameter lets you return an XML representation of one or more Composition Zones items.

Parameters	<code>compositionzone</code>	String	Lets you specify which Composition Zones item to return. For example: <code>http://localhost:8080/xml/sample.qxp?compositionzone=czbox</code>
	<code>compositionzones</code>	String	Lets you specify which Composition Zones items to return. For example: <code>http://localhost:8080/xml/sample.qxp?compositionzones=czbox1, czbox2</code>
Compatible with	<code>xml</code>		
Alerts	Invalid box given in Box Param.	Error #10401	This alert displays if you request a box that is not a Composition Zones item.
Logs	See Understanding logging		

layer

The `layer` render modifier lets you show and hide layers prior to rendering. This render modifier also lets you add and remove layers from a project on the server.

Parameters	<code>layer</code>	String	Lets you specify which layer to render. You can specify multiple layer names in one request.
	<code>addlayer</code>	String	Lets you add a new layer. You can add one layer per request.
	<code>deletelayer</code>	String	Lets you delete a layer and the items on that layer. You can delete one layer per request.
	<code>alllayers</code>	Boolean (1 0 true false yes no)	Lets you render every layer in the project, including hidden and suppressed layers.
	<code>layerattribute</code>	String	Lets you modify the attributes of a layer. You can modify one layer per request.
	<code>name</code>	String	Lets you specify a new name for a layer. You must use this parameter in conjunction with the <code>layerattribute</code> parameter.
	<code>visible</code>	Boolean (1 0 true false yes no)	Lets you make a layer visible or invisible. You can use this parameter in conjunction with the <code>addlayer</code> and <code>layerattribute</code> parameters. This parameter overrides QuarkXPress layer visibility preferences.
	<code>suppressoutput</code>	Boolean (1 0 true false yes no)	Lets you suppress or allow the output of a layer. You can use this parameter in conjunction with the <code>addlayer</code> and <code>layerattribute</code> parameters. This parameter overrides QuarkXPress suppress output preferences.
	<code>locked</code>	Boolean (1 0 true false yes no)	Lets you lock or unlock a layer. You can use this parameter in conjunction with the <code>addlayer</code> and <code>layerattribute</code> parameters. This parameter overrides QuarkXPress layer locking preferences.
	<code>keeprunaround</code>	Boolean (1 0 true false yes no)	Lets you set or change a layer's Keep Runaround setting. You can use this parameter in conjunction with the <code>addlayer</code> and <code>layerattribute</code> parameters. This parameter overrides QuarkXPress Keep Runaround preferences.
Compatible with	<code>eps, jpeg, png, postscript, qcddoc, qxpdoc, raw, pdf, screenpdf, swf, xml</code>		
Alerts	This layer does not exist. Please verify the layer name.	HTTP Error #500 This alert displays if you specify an invalid layer name with the <code>layer</code> , <code>layerattribute</code> , or <code>deletelayer</code> parameter.	
	Specify a layer name.	HTTP Error #500 This alert displays if you do not specify a layer name with the <code>layer</code> , <code>layerattribute</code> , <code>addlayer</code> , or <code>deletelayer</code> parameter.	
	A layer with the same name already exists.	HTTP Error #500 This alert displays if you try to add a layer that already exists or change the name of a layer to a name is already used in the project.	
	Cannot change the name of the default layer.	HTTP Error #500 This alert displays if you try to change the name of the default layer.	
	Cannot delete the default layer.	HTTP Error #500 This alert displays if you try to delete the default layer.	

	Invalid parameter value.	HTTP Error #500 This alert displays if you do not specify additional attributes or specify attributes with invalid values in an <code>addlayer</code> or <code>layerattribute</code> request.
	This layer has been locked and cannot be modified.	HTTP Error #500 This alert displays if you try to add or modify an item on a locked layer.
Logs	See Understanding logging	
Example GET URL	<p>To render a single layer, use a URL like the following:</p> <pre>http://localhost:8080/doc.qxp?layer=layer1</pre> <p>To add a layer, use a URL like the following:</p> <pre>http://localhost:8080/qxpdoc/doc.qxp?addlayer=NewLayer&visible=yes&suppressoutput=yes&locked=no</pre> <p>To delete a layer, use a URL like the following:</p> <pre>http://localhost:8080/qxpdoc/doc.qxp?deletelayer=Layer1</pre> <p>To render all layers in a project, use a URL like the following:</p> <pre>http://localhost:8080/qxpdoc/doc.qxp?alllayers=true</pre> <p>To set layer attributes, use a URL like the following:</p> <pre>http://localhost:8080/qxpdoc/doc.qxp?layerattribute=Layer1&name=Layer2&visible=true&keeprunaround=true</pre>	
Example, object model	<p>To add a new layer to a project, use code like the following:</p> <pre>Layer layer = new Layer(); layer.name = "New Layer"; layer.operation = "CREATE"; RGBColor rgbcolor = new RGBColor(); layer.RGBColor = rgbcolor; layout.layer = new Layer[]{layer};</pre> <p>To edit the properties of an existing layer, use the following object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Layer</pre> <p>To delete a layer, set its <code>operation</code> attribute to "DELETE".</p>	
Notes	<p>You cannot add, modify, or delete multiple layers in a single request.</p> <p>You cannot print layers whose <code>visible</code> and <code>suppressoutput</code> properties are set to <code>false</code>.</p> <p>You can render a hidden or suppressed layer by referencing it with the <code>layer</code> parameter.</p> <p>Suppressed layers are rendered for the <code>jpeg</code>, <code>png</code>, and <code>qxpdoc</code> render types, but not for the <code>pdf</code>, <code>postscript</code>, and <code>eps</code> render types.</p> <p>You can use the <code>deconstruct</code> and <code>getdocinfo</code> request handlers to view information about the layers in a project.</p> <p>When you add a layer using <code>addlayer</code>, any unspecified attributes use the settings in the QuarkXPress Server layer preferences (Administration > Preferences > Renderer > Layers).</p> <p>If the <code>visible</code> property is set to <code>false</code>, the <code>suppressoutput</code> property is automatically set to <code>true</code>.</p>	

layout

The `layout` render modifier lets you render a specific layout.

Parameters	<code>layout</code>	String	Lets you specify which layout to render. The first layout is layout 1.
Compatible with	<code>eps</code> , <code>jpeg</code> , <code>png</code> , <code>postscript</code> , <code>raw</code> , <code>pdf</code> , <code>screenpdf</code>		

Alerts	The requested layout does not exist.	HTTP Error #500 This alert displays if you supply an invalid layout value.
Logs	See Understanding logging	
Example GET URL	<p>To render a layout by its layer ID, use a URL like the following:</p> <pre>http://localhost:8080/png/sample.qxp?layout=2</pre> <p>To render a layout by its name, use a URL like the following:</p> <pre>http://localhost:8080/png/sample.qxp?layout=Layout 2</pre>	

movepages

The `movepages` render modifier lets you move pages prior to rendering.

Parameters	<code>movepages</code>	String	Lets you specify which pages to move. You can use a single page number (for example, <code>2</code>) or a range of pages with the starting and ending page numbers separated by a hyphen (for example, <code>2-5</code>).
	<code>afterpage</code>	String	Lets you specify the page after which the page or pages should be moved. To move pages to the beginning of a layout, use <code>afterpage=start</code> . To move pages to the end of a layout, use <code>afterpage=end</code> .
Compatible with	<code>eps, jpeg, png, postscript, qcddoc, qxpdoc, raw, pdf, screenpdf, xml</code>		
Alerts	This page does not exist.	QuarkXPress Server Error #61	
	Invalid page range.	QuarkXPress Server Error #62	
	The specified page range cannot be moved there.	QuarkXPress Server Error #51	
	This page range is invalid.	QuarkXPress Server Error #146	
	Invalid parameter value.	QuarkXPress Server Error #10108	
Logs	See Understanding logging		
Example GET URL	To move pages 2-3 to after page 5, use a URL like the following: <code>http://localhost:8080/abc.qxp?movepages=2-3&afterpage=5</code> To move page 7 to the beginning of a layout, use a URL like the following: <code>http://localhost:8080/abc.qxp?movepages=7&afterpage=start</code>		
Example, object model	To move pages before rendering a layout, use code like the following: <pre>// STEP1: Create the QuarkXPress Server Request Context // and set the nescessary properties com.quark.qxpsm.QRequestContext requestCtx = new com.quark.qxpsm.QRequestContext(); Boolean responseAsURL = false; requestCtx.setDocumentName(docName); // STEP 2(SPECIFIC TO REQUESTS):Create the PDF // renderer request and embed it in the request context. the request context. PDFRenderRequest pdfreq = new PDFRenderRequest();</pre>		

	<pre>pdfreq.setMovePages("2-4"); pdfreq.setAfterPage("7"); requestCtx.setRequest(pdfreq); // STEP3: Create the service and call the // processRequest() API RequestService service = new RequestServiceStub(); com.quark.qxpsm.QContentData data = service.processRequest(requestCtx);</pre>
Notes	The <code>movepages</code> operation executes only after all other modifications are complete. For example, if you use <code>movepages</code> in a modify request, the pages are moved only after the modify request is complete.

page

The `page` render modifier lets you render a single page.

Parameters	<code>page</code>	Integer	Lets you specify which page to render.
Compatible with	<code>eps</code> , <code>jpeg</code> , <code>png</code> , <code>postscript</code> , <code>qcdoc</code> , <code>raw</code> , <code>pdf</code> , <code>screenpdf</code>		
Alerts	The requested page does not exist.	HTTP Error #500	This alert displays if you attempt to render a page that does not exist.
	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406	This alert displays if you use a <code>page</code> parameter with the <code>qxpdoc</code> render type.
Logs	See Understanding logging		
Example GET URL	<code>http://localhost:8080/png/sample.qxp?page=2</code>		
Example, object model	<p>To add a new page to an existing spread in a project, use code like the following:</p> <pre>Spread spread = new Spread(); Page page = new Page(); page.UID = "5"; page.operation = "CREATE"; spread.page = new Page[]{page};</pre> <p>To edit the properties of an existing page, use the following object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Spread < Page</pre> <p>To delete a page, set its <code>operation</code> attribute to "DELETE".</p>		
Notes	<p>To render a page in a particular layout, use a URL like the following:</p> <pre>http://localhost:8080/png/sample.qxp?layout=2&page=3</pre>		

pages

The `pages` render modifier lets you render multiple pages. The `pdf` and `postscript` namespaces support this parameter.

Parameters	<code>pages</code>	String (page range)	Lets you specify which pages to render.
Compatible with	<code>eps</code> , <code>jpeg</code> , <code>png</code> , <code>postscript</code> , <code>raw</code> , <code>pdf</code> , <code>screenpdf</code>		
Alerts	This page range is invalid.	HTTP Error #500 QuarkXPress Server Error #147	

		This alert displays if you try to render a page range that exceeds the number of pages in the project.
	The renderer for this image type has no way of rendering the desired objects.	HTTP Error #406 This alert displays if you use the <code>pages</code> parameter with the <code>jpeg</code> , <code>eps</code> , <code>png</code> , or <code>qxdoc</code> render type.
Logs	See Understanding logging	
Example, GET URL	<code>http://localhost:8080/pdf/sample.qxp?pages=2-4</code>	
Notes	To render pages in a particular layout, use a URL like the following: <code>http://localhost:8080/pdf/sample.qxp?layout=2&pages=2,3</code>	

scale

The `scale` render modifier lets you specify the scale at which content is rendered.

Parameters	<code>scale</code>	Float	Lets you specify a scaling percentage. The valid values are from .1 (10%) to 8 (800%) on Mac OS or 6.92 (692%) on Windows.
Compatible with	<code>eps</code> , <code>jpeg</code> , <code>png</code> , <code>raw</code>		
Alerts	Invalid scale parameter.	HTTP Error #500 This alert displays if an invalid scale value is provided. <i>What to do:</i> Enter a valid scale value.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/png/sample.qxp?scale=2</code>		

spread

The `spread` render modifier lets you render a single spread.

Parameters	<code>spread</code>	Integer	Lets you specify which spread to render. Spread numbers start with 1. The first spread is spread 1. In a facing-page document, spread 1 consists of the first page.
Compatible with	<code>eps</code> , <code>jpeg</code> , <code>png</code> , <code>postscript</code> , <code>raw</code> , <code>pdf</code> , <code>screenpdf</code>		
Alerts	The requested spread does not exist.	HTTP Error #500 This alert displays if you specify an invalid spread.	
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/png/sample.qxp?spread=2</code>		
Example, Object Model	To add a spread to a project, use code like the following: <pre>Spread spread = new Spread(); spread.UID = "5"; spread.operation = "CREATE"; layout.spread = new Spread[] {spread};</pre>		

	<p>Spread is located at the following place in the object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Spread</pre> <p>To delete a spread, set its <code>operation</code> attribute to "DELETE".</p>
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spreads

The `spreads` render modifier lets you render layouts in spreads mode, so that pages in spreads are rendered side-by-side rather than as individual pages.

Parameters	<code>spreads</code>	Boolean (1 0 true false yes no)	Lets you specify whether to render spreads (true) or individual pages (false).
Compatible with	<code>eps, jpeg, png, postscript, raw, pdf, screenpdf</code>		
Logs	See Understanding logging		
Example, GET URL	<code>http://localhost:8080/pdf/sample.qxp?spreads=true</code>		

suppresserrors

The `suppresserrors` render modifier forces QuarkXPress Server to render as much of a layout as it can, despite any errors that occur.

Parameters	<code>suppresserrors</code>	String	Forces the layout to render despite any errors that may occur.
Compatible with	<code>pdf, qxpdoc, xml, postscript</code>		
Logs	See "Understanding logging."		
Example GET URL	<code>http://localhost:8080/png/sample.qxp?box=suppresserrors</code>		

Using content modifiers

Content modifiers let you alter the content and formatting of boxes in layouts without using the XML modify parameter.

Inserting text

This topic explains how to import text into a box. Any existing text in the box is replaced.

Parameters	<code>[box name]</code>	String	<p>The name of the target box.</p> <p>Specify the name and location of the imported file with the <code>file:</code> prefix. The imported file must be available to QuarkXPress Server.</p> <p>To import a file that is in a subfolder of the document pool on Mac OS, use a path like the following:</p> <pre>file:subfolder:MyFile.ext</pre> <p>To import a file that is in a subfolder of the document pool on Windows, use a path like the following:</p> <pre>file:subfolder\MyFile.ext</pre>
Response	A preview of the project with the imported text.		
Alerts	File not found.	HTTP Error #404	

	<p>QuarkXPress Server Error #-43</p> <p>This alert displays if the imported file is not available to QuarkXPress Server.</p>
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1</p> <p>If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:</p> <p>8/10/2005 10:32:57 — Error — Error Code: -43 — File not found.</p>
Example, GET URL	<p>http://localhost:8080/sample.qxp?Author=NewText</p> <p>http://localhost:8080/sample.qxp?TopStory=file:TopStory.doc</p>
Example, object model	<pre>Request object name: RequestParameters com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS):Create the Box Param // renderer request and embed it in RequestParameters request = new RequestParameters(); NameValueParam nameValue1 = new NameValueParam(); nameValue1.paramName = this.boxname1.Text; if(!this.boxvalue1.Text.Equals("")) nameValue1.textValue = this.boxvalue1.Text; request.params = new NameValueParam[] {nameValue1}; rc.request = request; // Create the service and // call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>
Notes	<p>Box names are case-sensitive.</p> <p>Use "&" to change the contents of multiple boxes in one request. The general URL for the multiple-box request is:http://localhost:8080/sample.qxp?text1=NewText1&text2=NewText2 where text1 and text2 are the names of the two different boxes.</p> <p>You can use "&" to change the contents of multiple boxes in one request. For example:</p> <p>http://localhost:8080/sample.qxp?Headline=headline.txt&Story=file:Story.doc</p> <p>You can import an XTags file generated by QuarkXPress.</p>

Applying a font at import

This topic explains how to apply a font to a new text flow. When you use this method, QuarkXPress Server ignores the original font of the target text box and inserts the new text with the font specified by the parameter.

Parameters	fontname	String	The name of the font to be applied.
Response	A preview of the project with the font applied to the imported text.		
Alerts	The specified font is not available.	This alert displays if you specify a font that is unavailable.	
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 12/2/2005 16:24:13 — project2.qxp — Type: image/jpeg — Size: 11380 — Client: 127.0.0.1		

	<p>If an error occurs, the error message is written to the QuarkXPress Server Error Log. The transaction entry in the error log contains the date and time of the request, the error code, and the error message. The following is a sample of an error transaction log entry:</p> <p>12/2/2005 16:16:26 — Error — Error Code: -43 — File not found.</p>
Example, GET URL	<p>To apply Comic Sans MS to text in the box named "HeadBox," use a URL like the following:</p> <p><code>http://localhost:8080/png/sample.qxp?HeadBox=Headline&fontname=Comic Sans MS</code></p>
Example, object model	<pre>Request object name: RequestParameters com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2(SPECIFIC TO REQUESTS):Create the fontname // render request and embed it in RequestParameters request = new RequestParameters(); NameValueParam nameValue1 = new NameValueParam(); nameValue1.paramName = this.boxname.Text; if(!this.boxvalue1.Text.Equals("")) nameValue1.textValue = this.fontname.Text; request.params = new NameValueParam[]{nameValue1}; rc.request = request; // Create the service and // call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>

Inserting a picture

This topic explains how to import a picture into an empty box or replace an existing picture with a new one.

Parameters	[box name]	String	<p>The name of the target box.</p> <p>Specify the name and location of the imported file with the <code>file:</code> prefix. The imported file must be available to QuarkXPress Server.</p> <p>To import a file that is in a subfolder of the document pool on Mac OS, use a path like the following:</p> <p><code>file:subfolder:MyFile.ext</code></p> <p>To import a file that is in a subfolder of the document pool on Windows, use a path like the following:</p> <p><code>file:subfolder\MyFile.ext</code></p>
Response	A preview of the project with the imported picture.		
Alerts	File not found.	HTTP Error #404	QuarkXPress Server Error #-43
	The specified file failed to load in the picture box.	HTTP Error #500	This alert displays if the imported file is not available to QuarkXPress Server.
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1</p> <p>If an alert is displayed, an error message is written to the QuarkXPress Server error log. The following is a sample of the error log entry:</p>		

	8/10/2005 10:39:07 — Error — Error Code: 10339 — The specified file failed to load in the picture box.
Example, GET URL	<code>http://localhost:8080/sample.qxp?PictureBox=file:FrenchOpen.pdf</code>
Example, object model	<pre> Request object name: RequestParameters com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; //STEP 2(SPECIFIC TO REQUESTS):Create the Box Param //render request and embed it in RequestParameters request = new RequestParameters(); NameValueParam nameValue1 = new NameValueParam(); nameValue1.paramName = this.boxname1.Text; if(!this.boxvalue1.Text.Equals("")) nameValue1.textValue = this.boxvalue1.Text; request.params = new NameValueParam[]{nameValue1}; rc.request = request; //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>
Notes	<p>Box names are case-sensitive.</p> <p>You can use "&" to change the contents of multiple boxes in one request. For example:</p> <pre> http://localhost:8080/sample.qxp? Logo=file:logo.jpeg&TopPicture=file:TopPicture.eps </pre>

Saving a projects with a new name

The `saveas` content modifier lets you save modified QuarkXPress projects in any supported format to the document pool or to any network location accessible to QuarkXPress Server.

If you send a `saveas` request to QuarkXPress Server Manager using HTTP or the Web services interface while the common doc pool switch is set to off in the QuarkXPress Server Manager client, the file is saved to all registered QuarkXPress Server instances. If the common doc pool is enabled, the file can be saved to any one registered QuarkXPress server instance.

Parameters	<code>newname</code>	String	Lets you specify a name for the saved-as project.
	<code>path</code>	String	Lets you specify a location for the saved-as project (other than the document pool).
	<code>savetopool</code>	true false	<p>Lets you specify whether the project should be saved to the document pool.</p> <p>The default value for this paramter is true. However, if you specify a <code>path</code> value, the default value changes to false, which means if you want the project saved to the document pool, you must explicitly set <code>savetopool</code> to true.</p>
	<code>replace</code>	true false	Lets you specify whether the saved project should replace a project with the same name. The default value is true.
Response	The message "Document successfully saved."		
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43	

		This alert displays if you supply an incorrect file name or the file is not available to QuarkXPress Server.
	Bad filename/ pathname.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you supply an incorrect file name or the file is not available to QuarkXPress Server.
	The file path is invalid.	HTTP Error #500 This alert displays if you supply an invalid <code>path</code> parameter. <i>What to do:</i> Specify the correct file path with the <i>path</i> parameter.
	The specified folder is Read-Only.	HTTP Error #500 This alert displays if you try to save a project to a folder with read-only access.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 11/16/2005 15:41:42 — saveas/5mb.qxp — Type: — Size: 28 — Client: 127.0.0.1 If an alert displays, an error message is written to the QuarkXPress Server error log file. For example: 11/16/2005 15:42:12 — Error — Error Code: 10371 — The file path is invalid.	
Example, GET URL	To save a PDF file named "Customer1.pdf" in the folder <code>HDD:temp</code> and also in the document pool, use a URL like the following. Note that this URL will cause the saved-as file to replace any existing file with the same name. <code>http://localhost:8080/saveas/pdf/sample.qxp? newname=Customer1&path=HDD:temp&savetopool=true</code>	
Example, object model	Request object name: <code>SaveAsRequest</code> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS): // Create the Save as request and chain it to the document context SaveAsRequest saveasreq = new SaveAsRequest(); saveasreq.newName = this.newname.Text; if((this.path.Text != null) && (!this.path.Text.Equals(""))) saveasreq.newFilePath = this.path.Text; saveasreq.replaceFile = this.replace.Checked.ToString(); saveasreq.saveToPool = this.savetopool.Checked.ToString(); rc.request = saveasreq; // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>	

Importing XML with placeholders

This topic explains how to import XML data into boxes using QuarkXPress placeholders.

To use this feature, you must have a QuarkXPress project that has been set up with placeholders that correspond to the element types in a source XML file. For more information, see *A Guide to XML Import*.

Parameters	<code>thexmldoc</code>	XML	Lets you specify the XML file containing the data to import. The path can be absolute or relative to the location of the XML file. You can also supply XML as a string.
	<code>layout</code>	String	Lets you specify which layout to render. The first layout is layout 1. You can also specify a layout by name.
	<code>paginate</code>	XML	<p>Lets you specify the XML file containing the data to import. The <code>paginate</code> parameter reates enough pages in the target layout to accommodate the records in the XML.</p> <p>This parameter works only with the <code>pdf</code>, <code>postscript</code>, and <code>qxp</code> render types. If you use it with any other render type, the server returns only the first page of the paginated layout.</p> <p>If you do not supply an XML string or file (for example: <code>http://localhost:8080/pdf/Sample.qxp?paginate</code>), QuarkXPress Server attempts to use the XML file that was associated with the layout in QuarkXPress.</p>
Response	The layout with the imported XML.		
Alerts	Invalid XML String	HTTP Error #500	This alert displays if you supply an invalid XML string in the <code>thexmldoc</code> parameter.
Logs	<p>If the project is successfully rendered, a transaction success message is written to the QuarkXPress Server transaction log file. The transaction entry consists of the date and time of the request, the render type, the project name, the type of response produced by the server, the size of the response returned in bytes, and the client IP address. The following is a sample of a transaction entry:</p> <p>8/5/2005 18:11:54 — sample.qxp — Type: image/jpeg — Size: 65982 — Client: 127.0.0.1</p> <p>If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:</p> <p>8/9/2005 12:38:42 — Error — Error Code: 10396 — Invalid XML String.</p>		
Example, GET URL	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/Sample.qxp?thexmldoc=<?xml version="1.0"?> <BookReview><Book><Title>C:\Autumn.jpg</Title> <Author> Brian Kernighan and Dennis Ritchie</Author> </Book></BookReview></pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/Sample.qxp?thexmldoc=<?xml version= "1.0"?> <BookReview><Book><Title>/Volumes/MacHD/Pictures/abc.tiff</ Title> <Author> Brian Kernighan and Dennis Ritchie</Author> </Book></BookReview></pre> <p>Alternatively, you can specify a path to a file containing the XML:</p> <pre>http://localhost:8080/Sample.qxp?paginate= file:MacHD:Sample.xml</pre>		
Example, object model	<p>Request object names: <code>XMLImportRequest</code></p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1. documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS): Create the XML Import request XMLImportRequest xmlimportreq = new XMLImportRequest(); xmlimportreq.XMLDocument = this.thexmldoc.Text;</pre>		

```
rc.request = xmlimportreq;

// STEP 3(SPECIFIC TO REQUESTS): Create the JPEG renderer request
JPEGRenderRequest jpreq = new JPEGRenderRequest();
xmlimportreq.request = jpreq;

// Create the service and call it with QRequestContext object
RequestService svc = new RequestService();
com.quark.qxpsm.QContentData qc = svc.processRequest(rc);
```

Updating article geometry and content

This topic explains how to update the geometry and contents of a QuarkCopyDesk article using another article file or an article in a QuarkXPress project.

Parameter	updategeometry	String	If you use this parameter with updatefromfile, this lets you specify the file in which you want to update the geometry. If you use this parameter with updatetofile, this lets you specify the QuarkXPress project with which you want to update the geometry of an article.
	updatecontent	String	Lets you specify the file in which you want to update the content. Can be used only with updatefromfile.
Response	WHAT DOES THIS RETURN?		
Alerts	WHAT ERRORS APPLY?		
Logs	<p>If the project is successfully rendered, a transaction success message is written to the QuarkXPress Server transaction log file. The transaction entry consists of the date and time of the request, the render type, the project name, the type of response produced by the server, the size of the response returned in bytes, and the client IP address. The following is a sample of a transaction entry:</p> <p>8/5/2005 18:11:54 — sample.qxp — Type: image/jpeg — Size: 65982 — Client: 127.0.0.1</p> <p>If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:</p> <p>8/9/2005 12:38:42 — Error — Error Code: 10396 — Invalid XML String.</p>		
Example, GET URL	<p>To update the geometry of an article using the geometry of another article, use a URL like the following:</p> <p>http://localhost:8080/updategeometry/destination.qcd?updatefromfile=source.qcd</p> <p>To update the geometry of an article in a QuarkXPress file using the geometry of a QuarkCopyDesk article file, use a URL like the following:</p> <p>http://localhost:8080/updatecontent/destination.qxp?updatefromfile=source.qcd&articleid=1</p> <p>To update the geometry of a QuarkCopyDesk article file using the geometry of an article in a QuarkXPress project, use a URL like the following:</p> <p>http://localhost:8080/updategeometry/source.qxp?updatetofile=destination.qcd&articleid=1</p>		
Example, object model	<p>CAN YOU DO THIS WITH QXPSM? IF SO, HOW?</p> <p>Request object names: XMLImportRequest</p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1. documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS): Create the XML Import request XMLImportRequest xmlimportreq = new XMLImportRequest(); xmlimportreq.XMLDocument = this.thexml.doc.Text;</pre>		


```
rc.request = xmlimportreq;

// STEP 3(SPECIFIC TO REQUESTS): Create the JPEG renderer request
JPEGRenderRequest jpreq = new JPEGRenderRequest();
xmlimportreq.request = jpreq;

// Create the service and call it with QRequestContext object
RequestService svc = new RequestService();
com.quark.qxpsm.QContentData qc = svc.processRequest(rc);
```

Highlighting text in rendered output

To apply highlighting to text in rendered output, use XML like the following.

```
<RICHTEXT BACKGROUNDColor="Yellow">This text is highlighted.</RICHTEXT>
```

- ➡ Highlighting is applied only to rendered output. It is not retained in the QuarkXPress project.

Using XML modify

The `modify` parameter lets you modify a QuarkXPress project using XML.

- ➡ This topic covers the `modify` parameter when it is used without the `construct` namespace. You can also use the `modify` parameter to specify an XML file to use when constructing a project; for more information, see "[Constructing a project](#)".

The `xml` namespace takes two arguments: the name of the project to be modified, and a `modify` parameter with the string or the path of the XML file that describes how to create the project:

```
http://QXPServer8:8080/project1.qxp?modify=
file:path to XML file on server http://QXPServer8:8080/
project1.qxp?modify=XML string
```

You can also modify QuarkCopyDesk articles. To modify a QuarkCopyDesk article:

```
http://localhost:8080/copydesk/abc.qcd?modify=
file:XMLfile.xml
```

DTD	Modifier DTD		
Parameters	<code>modify</code>	String	Lets you specify an XML file or string that describes how to create a project. The path can be absolute or a relative path in the document pool. Use the <code>file:</code> indicator to specify the path. Note that you can also include an XML file as part of a multipart HTTP request.
Example GET URL	<code>http://QXPServer8:8080/project1.qxp?modify=file:sample.xml</code>		
Example XML	<p>This XML deletes page 2 of a QuarkXPress layout:</p> <pre><PROJECT> <LAYOUT> <ID NAME="Layout 1" /> <SPREAD> <ID UID="1" /> <PAGE OPERATION="DELETE"> <ID UID="2" /> </PAGE> </SPREAD> </LAYOUT> </PROJECT></pre>		

Response	The updated QuarkXPress project.
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1</p> <p>If an alert is displayed, an error message is written to the QuarkXPress Server error log. The following is a sample of the error log entry:</p> <p>8/10/2005 10:39:07 — Error — Error Code: 10339 — The specified file failed to load in the picture box.</p>

Modifying box properties and content

To modify box properties and content, use the following parameters in the Modifier DTD:

- *"BOX (Modifier schema)"*
- *"ID (Modifier schema)"*
- *"TEXT (Modifier schema)"*
- *"PICTURE (Modifier schema)"*
- *"GEOMETRY (Modifier schema)"*
- *"CONTENT (Modifier schema)"*
- *"SHADOW (Modifier schema)"*
- *"FRAME (Modifier schema)"*
- *"PLACEHOLDER (Modifier schema)"*
- *"METADATA (Modifier schema)"*

The following XML shows how some of these parameters work.

```
<?xml version="1.0" encoding="UTF-8"?>
<PROJECT>
  <LAYOUT>
    <ID NAME="Layout 1" />
    <SPREAD>
      <ID UID="1" />
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="SERVICES" />
        <GEOMETRY>
          <MOVEUP>50</MOVEUP>
          <MOVELEFT>30</MOVELEFT>
          <ALLOWBOXONTOPASTEBOARD>true</ALLOWBOXONTOPASTEBOARD>
        </GEOMETRY>
        <CONTENT CONVERTQUOTES="true">
          HD:QuarkXPress:DocPool:Services.txt</CONTENT>
      </BOX>
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="FAMILY" />
        <GEOMETRY>
          <MOVERIGHT>20</MOVERIGHT>
          <MOVEDOWN>30</MOVEDOWN>
          <ALLOWBOXONTOPASTEBOARD>true</ALLOWBOXONTOPASTEBOARD>
          <ALLOWBOXOFFPAGE>true</ALLOWBOXOFFPAGE>
        </GEOMETRY>
      </BOX>
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="PRODUCTS" />
        <GEOMETRY>
          <GROWACROSS>44</GROWACROSS>
          <GROWDOWN>30</GROWDOWN>
          <ALLOWBOXONTOPASTEBOARD>false</ALLOWBOXONTOPASTEBOARD>
        </GEOMETRY>
      </BOX>
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="MAP" />
```

```

    <GEOMETRY>
      <SHRINKACROSS>30</SHRINKACROSS>
      <SHRINKDOWN>30</SHRINKDOWN>
    </GEOMETRY>
  </BOX>
  <BOX COLOR="Blue" BOXTYPE="CT_PICT">
    <ID NAME="CONTACT" />
    <GEOMETRY>
      <STACKINGORDER>BRINGTOFRONT</STACKINGORDER>
      <RUNAROUND TYPE="ITEM" TOP="4" RIGHT="4"
        LEFT="4" BOTTOM="4"/>
      <ALLOWBOXOFFPAGE>>false</ALLOWBOXOFFPAGE>
    </GEOMETRY>
  </BOX>
</SPREAD>
</LAYOUT>
</PROJECT>

```

If you know the `UID` attribute of a `<CONTENT>` element, you can insert content into that `<CONTENT>` element without having to specify where it is. For example:

```

<PROJECT>
  <CONTENT UID="0">NewPicture.jpg</CONTENT>
</PROJECT>

```

You can also use a `<CONTENT>` element to insert additional text between two `<RICHTEXT>` elements, like so:

```

<PROJECT>
  <STORY>
    <ID UID="0" />
    <PARAGRAPH PARASTYLE="Normal">
      <RICHTEXT>Text before external file</RICHTEXT>
      <CONTENT>file:NewText.doc</CONTENT>
      <RICHTEXT>Text after external file</RICHTEXT>
    </PARAGRAPH>
  </STORY>
</PROJECT>

```

Response	A preview of the QuarkXPress project with a new box created in the specified position.	
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.
	Bad filename/pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.
	The XML document is not valid or well formed.	HTTP Error #500 This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.
	The XML document contains an invalid tag value.	HTTP Error #500 This alert displays if you supply an invalid value in the XML.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1 If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:	
Example GET URL	When QuarkXPress Server is running on Windows, use a URL like the following: <pre>http://localhost:8080/sample.qxp?modify= file:C:\updateBox.xml</pre>	

	<p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:MacHD:xml:updateBox.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify= <PROJECT><LAYOUT><ID UID="Layout1"/><SPREAD><ID UID="1"/> <BOX BOXTYPE="CT_PICT" COLOR="Blue" SHADE="50" OPACITY="50"> <ID NAME="MOUNTAINS"/><CONTENT> file:Services.eps</CONTENT> </BOX></SPREAD></LAYOUT></PROJECT></pre>
<p>Example 1, object model</p>	<p>Request object names:</p> <pre>ModifierRequest ModifierRequestContents Layout ID Box Geometry Runaround ModifierFileRequest</pre> <p>➡ For <code>ModifierFileRequest</code>, the member contents are used to set the file path or send the XML itself.</p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; //STEP 2(SPECIFIC TO REQUESTS): //Create the BOX modifier renderer request and //embed it in request context ModifierRequest request = new ModifierRequest(); Project contents = new Project(); Geometry geo = new Geometry(); geo.moveUp = this.moveup.Text; geo.color = this.color.Text; geo.growDown = this.growdown.Text; geo.shrinkAcross = this.shrinkacross.Text; Box box = new Box(); box.UID = this.Boxid.Text; box.geometry = geo; Layout layout1 = new Layout(); layout1.name = this.layout.Text; layout1.bboxes = new Box[]{box}; if(this.runaround.Checked == true) { Runaround runaround = new Runaround(); runaround.type = this.runaroundtype.Text; runaround.top = this.top.Text; runaround.left = this.left.Text; runaround.right = this.right.Text; geo.runaround = runaround; } contents.layouts = new Layout[]{layout1}; request.project = contents; rc.request = request; //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>
<p>Example 2, object model</p>	<p>To edit the geometrical properties of an existing box in a QuarkXPress project, use the following object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Spread < Box < Geometry</pre>

The `Geometry` object has the following properties:

```
allowBoxOffPage
allowBoxOnToPasteBoard
angle
growAcross
growDown
layer
linestyle (of type 'Linestyle')
moveDown
moveLeft
moveRight
moveUp
page
position (of type 'Position')
runaround (of type 'Runaround')
shape
shrinkAcross
shrinkDown
stackingOrder
suppressOutput
```

The `Runaround` object has the following properties:

```
bottom
edited
invert
left
noise
outset
outsideOnly
pathName
restrictToBox
right
smoothness
threshold
top
type
```

Creating boxes

To create a new box, use the following parameters in the Modifier DTD:

- `"BOX (Modifier schema)"`
- `"ID (Modifier schema)"`
- `"TEXT (Modifier schema)"`
- `"PICTURE (Modifier schema)"`
- `"GEOMETRY (Modifier schema)"`
- `"CONTENT (Modifier schema)"`
- `"SHADOW (Modifier schema)"`
- `"FRAME (Modifier schema)"`

The following XML shows how some of these parameters work.

```
<PROJECT>
  <LAYOUT>
    <ID UID="layout 1"/>
    <SPREAD>
      <ID UID="1"/>
      <ID/>
      <BOX OPERATION="CREATE" BOXTYPE="CT_PICT">
        <ID NAME="PRODUCTS"/>
        <GEOMETRY PAGE="2" SHAPE="SH_RECT">
          <POSITION>
            <TOP>5</TOP>
```

```
<LEFT>5</LEFT>
<BOTTOM>10</BOTTOM>
<RIGHT>10</RIGHT>
</POSITION>
</GEOMETRY>
</BOX>
</SPREAD>
</LAYOUT>
</PROJECT>
```

Response	A preview of the QuarkXPress project with new box created in specified position.	
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.
	Bad filename/pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.
	The XML document is not valid or well formed.	HTTP Error #500 This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.
	The XML document contains an invalid tag value.	HTTP Error #500 This alert displays if you supply an invalid value in the XML.
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>The following is a sample of a transaction entry: 8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1</p> <p>If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:</p> <p>4/12/2007 14:51:50 — Error — Error Code: 10207 — The XML document is not valid or well formed. Project: /table.qxp</p>	
Example, GET URL	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:C:\createBox.xml</pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:MacHD:xml:createBox.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify=<PROJECT><LAYOUT> <ID UID="layout 1"/><SPREAD><ID UID="1"/><ID/> <BOX OPERATION="CREATE" BOXTYPE="CT_PICT"><ID NAME="PRODUCTS"/> <GEOMETRY PAGE="2" SHAPE="SH_RECT"><POSITION><TOP>5</TOP> <LEFT>5</LEFT><BOTTOM>10</BOTTOM><RIGHT>10</RIGHT></POSITION> </GEOMETRY></BOX></SPREAD></LAYOUT></PROJECT></pre>	
Example, object model	<p>To create a new box, use code like the following:</p> <pre>Spread spread = new Spread(); Box box = new Box(); box.name = "textbox1"; Geometry geometry = new Geometry(); Position position = new Position(); position.top = "110"; position.left = "89"; position.bottom = "220"; position.right = "300";</pre>	

```

geometry.position = position;
geometry.shape = "SH_RECT";
geometry.page = "1";
geometry.layer = "Default";

box.geometry = geometry;
box.boxType = "CT_TEXT";

box.operation = "CREATE";
spread.box = new Box[] {box};
Use the following object hierarchy:
ModifierRequest < Project < Layout < Spread < Box < Geometry

```

Deleting boxes

To delete a box, use the following parameters in the Modifier DTD:

- *"BOX (Modifier schema)"*
- *"ID (Modifier schema)"*

The following XML shows how these parameters work.

```

<PROJECT>
  <LAYOUT>
    <ID UID="Layout 1"/>
    <SPREAD>
      <ID UID="1"/>
      <BOX OPERATION="DELETE">
        <ID NAME="SERVICES"/>
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>

```

Response	A preview of the QuarkXPress project with the box deleted.	
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.
	Bad filename/ pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.
	The XML document is not valid or well formed.	HTTP Error #500 This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.
	The XML document contains an invalid tag value.	HTTP Error #500 This alert displays if you supply an invalid value in the XML.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1 If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:	

Example GET URL	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:C:\deleteBox.xml</pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:MacHD:xml:deleteBox.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify= <PROJECT><LAYOUT><ID UID="Layout1"/><SPREAD> <ID UID="1"/><BOX OPERATION="DELETE"> <ID NAME="HISTORY"/></BOX></SPREAD> </LAYOUT></PROJECT></pre>
Notes	You can use the <code>xml</code> namespace or Telegraph XTensions software to determine the ID or name of the box you want to delete.

Grouping and ungrouping items

To group boxes using XML modify, use XML like the following:

```
<BOX BOXTYPE="CT_TEXT" COLOR="White">
  <ID NAME="MainStoryText" UID="217"/>
</BOX>

<BOX BOXTYPE="CT_PICT">
  <ID NAME="MainStoryPhoto" UID="218"/>
</BOX>

<GROUP>
  <ID NAME="MainStoryGroup" UID="300" OPERATION="CREATE"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218"/>
</GROUP>
```

To add a box to an existing group, use XML like the following:

```
<GROUP>
  <ID NAME="MainStoryGroup" UID="300"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218" OPERATION="CREATE"/>
</GROUP>
```

To remove a box from an existing group, use XML like the following:

```
<GROUP>
  <ID NAME="MainStoryGroup" UID="300"/>
  <BOXREF NAME="MainStoryHead" UID="216"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218" OPERATION="DELETE"/>
</GROUP>
```

To ungroup an existing group, use XML like the following:

```
<GROUP>
  <ID NAME="MainStoryGroup" UID="300" OPERATION="DELETE"/>
</GROUP>
```

To proportionally scale all of the items in a group, add a `<GEOMETRY>` element that indicates the new size of the group, like so:

```
<GROUP>
  <ID NAME="MainStoryGroup" UID="300"/>
  <GEOMETRY>
    <POSITION>
      <TOP>10.0</TOP>
      <LEFT>10.0</LEFT>
      <BOTTOM>50.0</BOTTOM>
      <RIGHT>70.0</RIGHT>
    </POSITION>
  </GEOMETRY>
</GROUP>
```


- ➡ The order of the `<BOXREF>` elements in a `<GROUP>` indicates the order in which the boxes were selected prior to grouping. The z-order of boxes in the layout is determined by the order of the `<BOX>` elements in the XML, from rearmost to frontmost.
- ➡ XML representations of groups created by versions of QuarkXPress Server prior to 8.1 are ignored during construct and modify calls, as they were in earlier versions of QuarkXPress Server.

Modifying text attributes

You can use the modify parameter to change the attributes of text in a QuarkXPress project. All modifications are done on a text box basis. To modify text properties, use the following parameters in the Modifier DTD:

- `"BOX (Modifier schema)"`
- `"ID (Modifier schema)"`
- `"TEXT (Modifier schema)"`
- `"STORY (Modifier schema)"`
- `"PARAGRAPH (Modifier schema)"`
- `"FORMAT (Modifier schema)"`
- `"DROPCAP (Modifier schema)"`
- `"TABSPEC (Modifier schema)"`
- `"TAB (Modifier schema)"`
- `"RULE (Modifier schema)"`
- `"RICHTEXT (Modifier schema)"`

The following XML shows how some of these parameters work.

```
<PROJECT>
  <LAYOUT>
    <ID UID="Layout 1" />
    <SPREAD>
      <ID UID="1" />
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="ABOUT" />
        <TEXT>
          <STORY CLEAROLDTEXT="true" FITTEXTTOBOX="true"
            CONVERTQUOTES="true">
            <RICHTEXT FONT="Castellar" PLAIN="true" />
          </STORY>
        </TEXT>
      </BOX>
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="HISTORY" />
        <TEXT>
          <STORY>
            <PARAGRAPH>
              <FORMAT ALIGNMENT="RIGHT" />
              <RICHTEXT SIZE="12">This text is 12pt and right
                justified.</RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
      <BOX BOXTYPE="CT_TEXT">
        <ID NAME="PRODUCTS" />
        <TEXT>
          <STORY>
            <RICHTEXT BOLD="true">This is bold text.</RICHTEXT>
            <RICHTEXT BOLD="true" COLOR="Red" ITALIC="true">
```

```

        SIZE="20">This text is bold, red, italic, and 20pt.
    </RICHTEXT>
</STORY>
</TEXT>
</BOX>
</SPREAD>
</LAYOUT>
</PROJECT>

```

Response	A preview of a QuarkXPress project with the values in the ModifierXT tags applied on text boxes.	
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.
	Bad filename/pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.
	The XML document is not valid or well formed.	HTTP Error #500 This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.
	There is no box with the specified identifier.	HTTP Error #500 This alert displays if the box specified by the child text node of an <code><ID></code> element does not exist.
	The text size value is outside the valid range.	HTTP Error #500 This alert displays if the value specified in a <code><SIZE></code> element is invalid. <i>What to do:</i> Specify a value between 2 and 720 points.
	The specified color is not available to the document	HTTP Error #500 This alert displays if the value specified in a <code><COLOR></code> element is invalid.
	The specified font is not available	HTTP Error #500 This alert displays if the value specified in a <code></code> element is invalid or the specified font is not present on the server.
	The XML document contains an invalid tag value.	HTTP Error #500 This alert displays if you supply an invalid value in the XML.
	The specified box cannot be modified.	HTTP Error #500 This alert displays if you try to modify text properties on a box that is not a text box.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1 If an alert displays, an error message is written to the QuarkXPress Server error log file. For example: 8/5/2005 13:32:10 — Error — Error Code: 10006 — There is no box with the specified identifier.	

<p>Example GET URL</p>	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:C:\modifier.xml</pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:MacHD:xml:modifier.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify= <PROJECT><LAYOUT><ID UID="1"/><SPREAD><ID UID="1"/> <BOX BOXTYPE="CT_TEXT"><ID NAME="BACKGROUND"/> <TEXT><STORY><RICHTEXT FONT="Castella" PLAIN="true"> This is text.</RICHTEXT></STORY></TEXT></BOX> </SPREAD></LAYOUT></PROJECT></pre>
<p>Example 1, object model</p>	<p>Request object names:</p> <pre>ModifierRequest ModifierStreamRequest Project RichText Text ID Box Layout ModifierFileRequest</pre> <p>➔ For <code>ModifierFileRequest</code>, the member contents are used to set the file path or send the XML itself.</p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS):Create the Text Modifier // renderer request and embed it in request context ModifierRequest textReq = new ModifierRequest(); Project contents = new Project(); RichText richText1 = new RichText(); richText1.value = this.text1.Text; richText1.color = this.color1.Text; Text boxText1 = new Text(); Story story = new Story(); story.richText = new RichText[]{richText1}; boxText1.story = story; if(this.fittextbox1.Checked) boxText1.fitTextToBox = "true"; if(this.clearoldtext1.Checked) boxText1.clearOldText = "true"; Box box1 = new Box(); box1.UID = txtBox1; box1.text = boxText1; Layout layout1 = new Layout(); layout1.name = layoutText; layout1.bboxes = new Box[]{box1}; contents.layouts = new Layout[]{layout1}; textReq.contents = contents; rc.request = textReq; // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>

Example 2, object model	<p>To edit the properties of an existing text box in a QuarkXPress project, use the following object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Spread < Box < Text < Story < Paragraph < RichText</pre> <p>For a list of the <code>RichText</code> object's properties, see the JavaDoc installed with QuarkXPress Manager.</p> <p>The <code>Story</code> object also contains some text-related properties: <code>fitTextToBox</code>, <code>includeStylesheets</code>, <code>convertQuotes</code>, and <code>clearOldText</code>.</p>
Notes	<p>The <code><FITTEXTTOBOX></code> attribute depends on two preferences: Allow Text to Grow and Font Size. To set these preferences in QuarkXPress Server, choose QuarkXPress > Server > Preferences and then click Modifier in the list on the left.</p>

Modifying picture properties

You can modify the properties (such as origin, scale, angle, skew, and orientation) of pictures in a QuarkXPress project with XML. To modify picture properties, use the following parameters in the Modifier DTD:

- *"BOX (Modifier schema)"*
- *"ID (Modifier schema)"*
- *"PICTURE (Modifier schema)"*

The following XML shows how some of these parameters work.

```
<PROJECT>
  <LAYOUT>
    <ID UID="1" />
    <SPREAD>
      <ID UID="1" />
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="PEOPLE" />
        <PICTURE SCALEACROSS="50" SCALEDOWN="50" OFFSETACROSS="20"
          OFFSETDOWN="20" />
      </BOX>
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="MOUNTAINS" />
        <PICTURE FIT="CENTERPICTURE" ANGLE="30" SKEW="30"
          FLIPHORIZONTAL="false" />
      </BOX>
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="OFFICES" />
        <PICTURE FIT="FITPICTURETOBOX" ANGLE="30" SKEW="30"
          FLIPHORIZONTAL="false" />
      </BOX>
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="PRODUCTS" />
        <PICTURE FIT="FITPICTURETOBOX" ANGLE="30" SKEW="30"
          FLIPHORIZONTAL="false" />
      </BOX>
      <BOX BOXTYPE="CT_PICT">
        <ID NAME="SERVICES" />
        <PICTURE FIT="FITPICTURETOBOXPRO" />
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

Response	A preview of the QuarkXPress project with image modifier tags applied to the picture boxes.	
Alerts	File not found.	<p>HTTP Error #404</p> <p>QuarkXPress Server Error #-43</p> <p>This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.</p>

Bad filename/ pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.
The XML document is not valid or well formed.	HTTP Error #500 This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.
There is no box with the specified identifier.	HTTP Error #500 This alert displays if the box specified by the child text node of the <ID> element does not exist.
The value of Scale Across should be between 10% and 1000%.	HTTP Error #500 This alert displays if the value of the child text node of a <SCALEACROSS> element is invalid.
The Value of Scale Down should be between 10% and 1000%.	HTTP Error #500 This alert displays if the value of the child text node of a <SCALEDOWN> element is invalid.
The value of Offset Across is in invalid range.	HTTP Error #500 This alert displays if the value of the child text node of the <OFFSETACROSS> element is invalid.
The value of Offset Down is in invalid range	HTTP Error #500 This alert displays if the value of the child text node of the <OFFSETDOWN> element is invalid.
The value of Picture Angle must be between -360 and 360 degrees.	HTTP Error #500 This alert displays if the value of the child text node of the <ANGLE> element is invalid.
The value of Picture Skew must be between -75 and 75 degrees.	HTTP Error #500 This alert displays if the value of the child text node of the <SKEW> element is invalid.
The XML document contains an invalid tag value.	HTTP Error #500 This alert displays if you supply an invalid value in the XML.
The specified box cannot be modified.	HTTP Error #500 This alert displays if you try to modify picture properties on a box that is not a picture box.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 8/3/2005 11:27:42 — jpeg/sample.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1 If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:

	8/10/2005 10:39:07 — Error — Error Code: 10339 — The specified file failed to load in the picture box.
Example GET URL	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:C:\imageProperties.xml</pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/sample.qxp?modify= file:MacHD:xml:imageProperties.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify= <PROJECT><LAYOUT><ID UID="1"/><SPREAD> <ID UID="1"/><BOX BOXTYPE="CT_PICT"> <ID NAME="EVEREST"/> <PICTURE SCALEACROSS="50" OFFSETDOWN="20" ANGLE="30" FIT="CENTERPICTURE" SKEW="30" FLIPHORIZONTAL="false"/></BOX></SPREAD> </LAYOUT></PROJECT></pre>
Example 1, object model	<p>Request object names:</p> <pre>ModifierRequest ModifierStreamRequest Project Box Picture Layout ModifierFileRequest</pre> <p>➡ For <code>ModifierFileRequest</code>, the member contents are used to set the file path or send the XML itself.</p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2(SPECIFIC TO REQUESTS):Create the Image // Modifier renderer request and embed it in ModifierRequest imgReq = new ModifierRequest(); Project contents = new Project(); Picture picture1 = new Picture(); picture1.scaleAcross = this.scaleacross1.Text; picture1.scaleDown = this.scaledown1.Text; if(this.fitpicturebox1.Checked == true) picture1.fitPictureToBox = "true"; if(this.flipvertical1.Checked == true) picture1.flipVertical = "true"; if(this.fliphorizontal1.Checked == true) picture1.flipHorizontal = "true"; Box box1 = new Box(); box1.UID = txtBox1; box1.picture = picture1; Layout layout1 = new Layout(); layout1.name = layoutText; imgReq.contents = contents; contents.layouts = new Layout[]{layout1}; layout1.bboxes = new Box[]{box1}; rc.request = imgReq; // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>

Example 2, object model	<p>To edit the properties of an existing text box in a QuarkXPress project, use the following object hierarchy:</p> <pre>ModifierRequest < Project < Layout < Spread < Box < Picture</pre> <p>For a list of the <code>Picture</code> object's properties, see the JavaDoc installed with QuarkXPress Manager.</p>
Notes	<p>You cannot replace an image with the Modifier XTensions software.</p> <p>If you specify <code><FITPICTURETOBOX></code>, <code><FITBOXTOPICTURE></code>, and <code><FITPICTURETOBOXPRO></code> for a picture, only the first of these elements will be applied.</p>

Importing data

Imports text or image data into a project. You can use import any text or picture file format supported by QuarkXPress, including XPress Tags files.

➡ You can import .doc, .docx, .dot, .dotx, and .docm files.

To import text or image data into a project, use the following parameters in the Modifier DTD:

- `"BOX (Modifier schema)"`
- `"ID (Modifier schema)"`
- `"PICTURE (Modifier schema)"` (this is not a required element when importing data)
- `"TEXT (Modifier schema)"`
- `"STORY (Modifier schema)"`
- `"CONTENT (Modifier schema)"`

The following XML shows how some of these parameters work.

```
<PROJECT>
  <ID NAME="Layout 1" />
  <SPREAD>
    <ID UID="1" />
    <BOX BOXTYPE="CT_PICT">
      <ID NAME="ABOUT" />
      <PICTURE/>
      <CONTENT>C:\docs\file1.jpg</CONTENT>
    </BOX>
    <BOX BOXTYPE="CT_TEXT">
      <ID NAME="PRODUCTS" />
      <CONTENT>file:C:\docs\file2.txt</CONTENT>
    </BOX>
    <BOX BOXTYPE="CT_TEXT">
      <ID NAME="SERVICES" />
      <TEXT>
        <STORY FILE="file:C:\docs\file3.doc" CONVERTQUOTES="true"
          INCLUDESTYLESHEETS="true" />
      </TEXT>
    </BOX>
  </SPREAD>
</LAYOUT>
</PROJECT>
```

Response	A preview of a QuarkXPress project with a value in the data import XML tags applied to the text boxes.	
Alerts	File not found.	<p>HTTP Error #404</p> <p>QuarkXPress Server Error #-43</p> <p>This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server.</p>

	<p>The XML document is not valid or well formed.</p> <p>HTTP Error #500</p> <p>This alert displays if the XML you supply is not well-formed or does not adhere to the Modifier DTD.</p>
	<p>There is no box with the specified identifier.</p> <p>HTTP Error #500</p> <p>This alert displays if the box specified by the child text node of the <code><ID></code> element does not exist.</p>
	<p>The specified box is not a picture or text box.</p> <p>HTTP Error #500</p> <p>This alert displays if you request a box that is not a text box or a picture box.</p>
	<p>A locked layer cannot be manipulated.</p> <p>HTTP Error #500</p> <p>This alert displays if you request data from a box on a locked layer.</p> <p><i>What to do:</i> Open the project in QuarkXPress, display the Layers palette, and unlock the box's layer.</p>
	<p>Unable to read picture (#106)</p> <p>HTTP Error #500</p> <p>QuarkXPress Server Error #-109</p> <p>This alert displays if you try to import a text file into a picture box.</p>
	<p>Bad filename/pathname</p> <p>HTTP Error #404</p> <p>QuarkXPress Server Error #-37</p> <p>This alert displays if you try to import an invalid or nonexistent file into a box.</p>
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/5/2005 18:11:54 — sample.qxp — Type: image/jpeg — Size: 65982 — Client: 127.0.0.1</p> <p>If an alert displays, an error message is written to the QuarkXPress Server error log file. For example:</p> <p>8/5/2005 18:01:59 — Error — Error Code: 10343 — A locked Layer cannot be manipulated.</p>
Example GET URL	<p>When QuarkXPress Server is running on Windows, use a URL like the following:</p> <pre>http://localhost:8080/Sample.qxp?modify= file:c:\file.xml</pre> <p>When QuarkXPress Server is running on Mac OS, use a URL like the following:</p> <pre>http://localhost:8080/Sample.qxp?modify= file:HDD:file.xml</pre> <p>You can also supply a string that consists of valid XML commands. For example:</p> <pre>http://localhost:8080/sample.qxp?modify= <PROJECT><LAYOUT><ID UID="Layout1"/><SPREAD><ID UID="1"/> <BOXBOXTYPE="CT_TEXT"><ID NAME="TREES"/> <CONTENT>C:\docs\file1.jpg</CONTENT> </BOX></SPREAD></LAYOUT></PROJECT></pre> <p>When specifying a path, use URLs like the following:</p> <pre>http://localhost:8080/Sample.qxp? textboxname@dataimport=file:c:\file.txt</pre> <pre>http://localhost:8080/Sample.qxp? pictureboxname@dataimport=c:\file.jpg</pre> <p>You can import text directly into a box from the URL string. For example:</p> <pre>http://localhost:8080/Sample.qxp? textboxname@dataimport=Newdata</pre>

	<p>When you import a file that uses style sheets, you can control how those style sheets are handled. For example:</p> <pre>http://localhost:8080/Documentname? textboxname@dataimport=file:c:\file.doc& textboxnameincludestylesheets@dataimport=yes</pre> <p>You can control how quotation marks are handled at import. For example:</p> <pre>http://localhost:8080/Documentname? textboxname@dataimport=file:c:\file.doc& textboxnameconvertquotes@dataimport=yes</pre>
Example, object model	<p>Request object names:</p> <pre>ModifierRequest ModifierStreamRequest Project RichText Text ID Box Layout ModifierFileRequest</pre> <p>➔ For <code>ModifierFileRequest</code>, the member contents are used to set the file path or send the XML itself.</p> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; // STEP 2 (SPECIFIC TO REQUESTS):Create the data import // request and embed it in request context ModifierRequest request = new ModifierRequest(); Project requestContents = new Project(); Content boxContent1 = new Content(); Box box1 = new Box(); box1.UID = txtBox1; box1.content = boxContent1; Layout layout1 = new Layout(); layout1.name = layoutText; if(!this.content1.Text.Equals("")) { boxContent1.value = this.content1.Text; Text text1 = new Text(); text1.font = this.fontname1.Text; box1.text = text1; if(this.includestylesheets1.Checked == false) boxContent1.includeStylesheets = "false"; if(this.convertquotes1.Checked == false) boxContent1.convertQuotes = "false"; } else if (null != uplTheFile.PostedFile) { Stream theStream = uplTheFile.PostedFile.InputStream; StreamReader reader = new StreamReader(theStream); boxContent1.value = reader.ReadToEnd(); } layout1.boxes = new Box[]{box1}; requestContents.layouts = new Layout[]{layout1}; request.contents = requestContents; rc.request = request; // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>

Notes	BoxParam XTensions software lets you import only files in the document pool. Modifier XTensions software, however, lets you import files that are located anywhere on the server computer, at any accessible network location, or supplied as part of a multipart HTTP request.
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Exporting Job Jackets files during deconstruction

While using the `xml` namespace to deconstruct a QuarkXPress project, you can specify the `jjname` parameter in the same request to output the Job Jackets file to the document pool. For example:

```
http://localhost:8080/xml/project.qxp?jjname=jjfilename.xml
```

You can then use the `construct` namespace to create new QuarkXPress projects that are based on that Job Jackets file's resources and layout specifications.

- ➡ The `jjname` parameter exports QuarkXPress project resources and layout specifications to a Job Ticket. Resources defined at the Job Jackets level are not exported to the Job Ticket.

Using XML deconstruct and construct

The `xml` namespace deconstructs a project according to the Modifier DTD. The `construct` namespace lets you turn an XML representation of a QuarkXPress project back into a QuarkXPress project.

This means you can deconstruct a project into an XML representation, change the XML in accordance with the Modifier DTD, and then have the server generate an updated version of the QuarkXPress project. You can even create new QuarkXPress projects from scratch using XML.

In addition, you can use the `construct` namespace to:

- Create a page based on a master page
- Create a project from XML, using a Job Jackets file as the basis for the project
- Modify text font and style, including OpenType styles
- Apply style sheets and local formatting to text
- Create and populate tables
- Import pictures into picture boxes and specify picture attributes

The DTD used for XML construction and deconstruction is completely Unicode-compliant, making it ideal for use in international publishing. Furthermore, the use of this DTD ensures that the schema of XML output created by Constructor does not change when server preferences change. For more information, see "[Modifier schema \(annotated\)](#)."

- ➡ Some minor QuarkXPress features are not available through the Modifier DTD. However, this DTD represents the majority of all user-editable aspects of a QuarkXPress project.
- ➡ The `deconstruct` namespace/request no longer exists. If you try to use it in this version of QuarkXPress Server, an error is returned.

Deconstructing a project

The `xml` namespace returns an XML representation of the target project. To use this namespace, use a URL like the following:

```
http://QXPServer8:8080/xml/project1.qxp
```

When you use the `xml` namespace, QuarkXPress Server returns an XML file that represents the deconstructed project. This XML file adheres to the Modifier DTD (see "*Modifier schema (annotated)*").

An XML file that represents a deconstructed project does not contain all of the information necessary to reconstruct the project. The definitions of the project's resources (such as style sheets, colors, and master page definitions) are stored in a Job Jackets file. For example, you can apply a style sheet to a paragraph by indicating the style sheet's name, like so:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICHTEXT>The sun has risen.</RICHTEXT>
</PARAGRAPH>
```

The above information is included in the deconstructed project's XML file. The *definition* of the "BodyText" style sheet, however, is stored in the Job Jackets file.

The URL of a deconstructed Job Jackets file is indicated by the `PROJECT@JOBJACKET` attribute. If you need access to new colors, style sheets, master pages, or other resources, add them to the Job Jackets file indicated by this URL.

➡ Projects can also refer to resources defined with the QuarkXPress Server **Document Controls** submenu (**Server/QuarkXPress Server** menu). QuarkXPress Server looks for resources first in the Job Jackets file and then in the server-defined resources.

XML

Creates an XML file from a QuarkXPress project. The XML is returned in a fixed format that adheres to the Modifier DTD. You can use the returned XML to create or modify a QuarkXPress document using the `construct` namespace or `modify` parameter.

Namespace	<code>xml</code>	
DTD	Modifier DTD	
Parameters	<code>box</code>	Returns XML only for the box with the given ID or name.
	<code>boxes</code>	Returns XML only for the boxes with the IDs or names supplied as a comma -separated list.
	<code>XSL</code>	Specifies the path of an XSL file for transforming the returned XML. Use the <code>file:</code> indicator to specify the path.
	<code>layout</code>	Specifies the name or number of the layout containing the box to render. The first layout is layout 1. Note that this parameter works only with the <code>box</code> parameter.
	<code>relativegeometry</code>	Tells the <code>xml</code> namespace to describe <code><GEOMETRY></code> elements using <code><RELPOSITION></code> rather than <code><POSITION></code> . This allows an item's position to be defined either in relation to the page or in relation to the entire spread.
	<code>relativetopage</code>	Use only with the <code>relativegeometry</code> parameter. Tells the <code>xml</code> namespace to describe <code><GEOMETRY></code> elements using <code><RELPOSITION></code>

		elements in which <code>ORIGIN@RELATIVETO="page"</code> (as opposed to <code>"spread"</code>).
	<code>copyfitinfo</code>	<p>QuarkXPress Server returns copyfitting information for QuarkCopyDesk articles by default. To retrieve copyfitting information when deconstructing a QuarkXPress project, include <code>copyfitinfo=true</code> in the <code>xml</code> request. For example:</p> <p><code>http://localhost:8080/xml/sample.qxp?copyfitinfo=true</code></p>
	Refer to the Modifier DTD	
Response	<p>Sample response:</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="no"?> <PROJECT JOBJACKET="Macintosh HD:QuarkXPress DocPool: default job jackets:New Job Jacket.xml" JOBTICKET="Default Job Ticket" PROJECTNAME="project1.qxp"> <LAYOUT MEDIATYPE="PRINT"> <ID NAME="Layout 1" UID="1"/> <LAYER KEEPRUNAROUND="false" LOCKED="false" SUPPRESS="false" VISIBLE="true"> <ID NAME="Default" UID="-1"/> <RGBCOLOR BLUE="231" GREEN="231" RED="231"/> </LAYER> <SPREAD> <ID UID="1"/> <PAGE MASTER="3" POSITION="RIGHTOFSPINE" FORMATTEDNAME="1"> <ID UID="1"/> </PAGE> <BOX BOXTYPE="CT_TEXT" COLOR="None" OPACITY="100%" SHADE="100%"> <ID NAME="Introduction" UID="5"/> <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT"> <POSITION> <TOP>39.064</TOP> <LEFT>39.026</LEFT> <BOTTOM>63.951</BOTTOM> <RIGHT>214.611</RIGHT> </POSITION> <SUPPRESSOUTPUT>>false</SUPPRESSOUTPUT> <RUNAROUND TYPE="NONE"/> </GEOMETRY>pre <FRAME GAPCOLOR="White" GAPOPCACITY="100%" GAPSHADE="100%"OPACITY="100%" SHADE="100%" STYLE="Solid" WIDTH="0 pt"/> <TEXT> <STORY> <COPYFIT FITAMOUNT="0.033"> NUMBEROFCHARACTERS="6" NUMBEROFLINES="1" NUMBEROFWORDS="1" STATE="underFit"/> <PARAGRAPH PARASTYLE="launch"> <RICHTEXT CHARSTYLE="launch">LAUNCH</RICHTEXT> </PARAGRAPH> </STORY> </TEXT> </BOX> <BOX BOXTYPE="CT_PICT" COLOR="None" OPACITY="100%" SHADE="100%"> <ID NAME="Sunrise" UID="6"/> <PICTURE SCALEACROSS="100%" SCALEDOWN="100%"> <CONTENT> Macintosh HD:QuarkXPress Server Documents:sunrise.tif </CONTENT> </BOX> </LAYOUT> </PROJECT></pre>	

	<pre> <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT"> <POSITION> <TOP>0</TOP> <LEFT>0</LEFT> <BOTTOM>800</BOTTOM> <RIGHT>600</RIGHT> </POSITION> <SUPPRESSOUTPUT>>false</SUPPRESSOUTPUT> <RUNAROUND BOTTOM="0" LEFT="0" RIGHT="0" TOP="0" TYPE="ITEM"/> </GEOMETRY> <FRAME GAPCOLOR="White" GAPOPACITY="100%" GAPSHADE="100%" OPACITY="100%" SHADE="100%" STYLE="Solid" WIDTH="0" /> <PICTURE/> </BOX> </SPREAD> </LAYOUT> </PROJECT> </pre>
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/3/2004 17:16:11 — xml/sample.qxp — Type: text/xml — Size: 2364 — Client: 127.0.0.1</p>
Example GET URL	<p>http://localhost:8080/xml/sample.qxp</p> <p>You can also deconstruct QuarkCopyDesk articles. To deconstruct a QuarkCopyDesk article, use the following:</p> <p>http://localhost:8080/xml/copydesk/abc.qcd</p>
Example, Object Model	<p>Request object name: <code>XMLRequest</code></p> <pre> XMLRequest xmlRequest = new XMLRequest(); QRequestContext context = new QRequestContext(); context.setDocumentName("SAMPLE_DOCUMENT.qxp"); context.setResponseAsURL(false); context.setRequest(xmlRequest); QContentData response = new RequestServiceStub().processRequest(context); System.out.println(response.getTextData()); </pre>

Constructing a project

The `construct` namespace takes two arguments: The name of the project to be created, and a `modify` parameter that points to the XML file or string that describes how to create the project. For example:

```

http://QXPServer8:8080/construct/project1.qxp?
modify=file:path to XML file on server

```

or:

```

http://QXPServer8:8080/construct/project1.qxp?modify=XML string

```

➡ There is a length limitation of 4096 characters on URLs, so you will probably want to use an XML file rather than an XML string.

➡ If you are using QuarkXPress Server Manager, you can send a similar command with a QuarkXPress Server Manager URL or through Web services.

Every project created with the `construct` namespace must be based on a Job Ticket in a Job Jackets file. Using `construct` to create a project is roughly equivalent to using the **File > New > Project from Ticket** command in QuarkXPress.

When you create a project using the `construct` namespace, you must supply the path to the Job Jackets file that will supply the project's resources. To do so, indicate the URL of the Job Jackets file in the `PROJECT@JOBJACKET` attribute and the name of the Job Ticket in the `PROJECT@JOBTICKET` attribute. (`<PROJECT>` is the root element of the Modifier DTD. For more information, see "[Modifier schema \(annotated\)](#)".)

For example, to create a project from a Job Ticket named "Tall US Brochure Ticket" in a Job Jackets file named "BrochureJJ.xml," use XML like the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<PROJECT JOBJACKET="MacintoshHD:brochures:BrochureJJ.xml"
        JOBTICKET="Tall US Brochure Ticket"
        PROJECTNAME="project1.qxp">
```

Construct

The `construct` namespace lets you create a QuarkXPress project using XML.

Namespace	<code>construct</code>		
DTD	Modifier DTD		
Parameters	<code>modify</code>	String	The string or the path of the XML file that describes how to create the project. Use the <code>file:</code> indicator to specify the path.
	<code>qxpdocver</code>	8 9	Indicates the QuarkXPress version format to use. For example: <code>http://QXPServer8:8080/construct/qxpdoc/project1.qxp?qxpdocver=8</code>
Example GET URL	<code>http://QXPServer8:8080/construct/project1.qxp?modify=file:sample.xml</code>		
Example XML	<pre><?xml version="1.0" encoding="UTF-8"?> <PROJECT JOBJACKET="C:\XML\New Job Jacket 3.xml" JOBTICKET="Default Job Ticket" PROJECTNAME="project1.qxp"> <LAYOUT> <ID NAME="Layout 1"/> <SPREAD> <ID UID="1"/> <PAGE> <ID UID="1"/> </PAGE> </SPREAD> </LAYOUT> </PROJECT></pre>		
Response	A new QuarkXPress project.		
Alerts	File not found.	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you specify an invalid XML file or request a document that is not available to QuarkXPress Server. For example, this error can occur if an image or text file mentioned in a <code><CONTENT></code> element is invalid or missing.	
	Bad filename/pathname.	HTTP Error #404 QuarkXPress Server Error #-37 This alert displays if you specify an invalid file name or path.	

	<p>The XML document is not valid or well formed.</p> <p>HTTP Error #500</p> <p>This alert displays if the XML you supply is not well-formed or do not adhere to the Modifier DTD.</p>
	<p>The XML document contains an invalid tag value.</p> <p>HTTP Error #500</p> <p>This alert displays if you supply an invalid value in the XML.</p>
Logs	<p>If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example:</p> <p>8/3/2005 11:27:42 — jpeg/construct/table.qxp — Type: image/jpeg — Size: 31715 — Client: 127.0.0.1</p> <p>If an alert is displayed, an error message is written to the QuarkXPress Server error log. The following is a sample of the error log entry:</p> <p>8/10/2005 10:39:07 — Error — Error Code: 10339 — The specified file failed to load in the picture box.</p>
Example, object model	<p>Request Object Names:</p> <pre>XMLRequest ConstructRequest ConstructFileRequest ConstructStreamRequest</pre> <p>To construct a new QuarkXPress project by editing an existing document, first deconstruct a QuarkXPress project using code like the following:</p> <pre>XMLRequest dcnsrqr = new XMLRequest(); rc.request = dcnsrqr;</pre> <p>Next, alter the project by manipulating the XML. When you're done, pass the modified XML document to <code>ConstructStreamRequest</code> to create a new QuarkXPress project. For example:</p> <pre>ConstructStreamRequest cnstrqr = new ConstructStreamRequest(); cnstrqr.modify = Buffer; // Byte[] for the modified XML rc.request = cnstrqr;</pre> <pre>QuarkXPressRenderRequest qxprqr = new QuarkXPressRenderRequest(); cnstrqr.request = qxprqr;</pre> <p>Alternatively, you can deconstruct a QuarkXPress project using code like the following:</p> <pre>RequestServiceService svc = new RequestServiceService() Project proj = svc.getDOM("document.qxp");</pre> <p>Next, alter the project by manipulating the XML. When you're done, pass the modified <code>Project</code> instance to <code>ConstructRequest</code> to create a new QuarkXPress project. For example:</p> <pre>ConstructRequest cnstrqr = new ConstructRequest(); cnstrqr.project = proj; QRequestContext rc = new QRequestContext(); rc.request = cnstrqr; QuarkXPressRenderRequest qxprqr = new QuarkXPressRenderRequest(); cnstrqr.request = qxprqr;</pre>
Notes	<p>The <code>construct</code> namespace takes two arguments: The name of the project to be created and a <code>modify</code> parameter with the string or the path of the XML file that describes how to create the project:</p> <pre>http://localhost:8080/qxpdoc/construct/project1.qxp? modify=file:path to XML file on server</pre> <pre>http://localhost:8080/qxpdoc/construct/project1.qxp? modify=<xml-string></pre>

Construct and modify

The `modify` parameter lets you modify existing projects. For example:

```
http://QXPServer8:8080/project1.qxp?
modify=file:path to XML file on server
```

or:

```
http://QXPServer8:8080/project1.qxp?modify=XML string
```

It's important to understand that although the `construct` namespace uses the same DTD that you use when you modify an existing project, the `construct` namespace uses it differently. When you use the `construct` namespace, the XML you pass simply contains a description of everything in the document you want to create — much as an HTML file describes a page you want to display in a browser. There is no need to use a command and create elements such as `ADDCELLS`, `OPERATION`, and `MOVERIGHT`; you simply describe each item in the layout with elements such as `<BOX>` and `<TABLE>`, and specify each item's position with the `<POSITION>` element type. When you use the `modify` attribute without the `construct` namespace, however, the XML you pass must contain commands that show how you want QuarkXPress Server to modify the project.

For more information, see "[Modifier schema \(annotated\)](#)."

Working with pages and spreads

The root element of a deconstructed QuarkXPress project is `<PROJECT>`. Within each `<PROJECT>` element are one or more `<LAYOUT>` elements. Each layout contains one or more `<SPREAD>` elements, and each `<SPREAD>` contains one or more `<PAGE>` elements. Each layout, spread, and page has a unique name, indicated by its `<ID>` element.

Each layout can have a unique name, indicated by its `<ID>` element's `NAME` attribute. You can use a layout's name when referring to that layout in a non-construct call that uses the `MODIFY` attribute. The `ID@NAME` attribute is ignored for `<SPREAD>` and `<PAGE>` elements, but you can refer to them numerically with their `<ID>` element's `UID` attribute, with "1" being the first, "2" being the second, and so forth.

➡ With most element types, it is best to assign an `ID@NAME` value to an element and use that to refer to the element, because `ID@UID` values are defined by QuarkXPress Server and thus ignored for `construct` calls. `<PAGE>` and `<SPREAD>` are exceptions to this rule.

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<PROJECT JOBJACKET=" MacintoshHD:brochures:BrochureJJ.xml"
  JOBTICKET="Tall US Brochure Ticket"
  PROJECTNAME="project1.qxp">
  <LAYOUT>
    <ID NAME="Layout 1" />
    <SPREAD>
      <ID UID="1" />
      <PAGE POSITION="RIGHTOFSPINE" MASTER="3">
        <ID UID="2" />
      </PAGE>
    ...
  ...
</PROJECT>
```

Each page has a `POSITION` attribute that indicates which side of the spine it is on. (In single-sided layouts, every page is given a `POSITION` of `RIGHTOFSPINE`).

You can assign items to a page using the **GEOMETRY** element, which is a child of the **BOX** and **TABLE** elements. For example:

```
<BOX BOXTYPE="CT_TEXT" COLOR="White">
  <ID NAME="Title Box" />
  <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT">
    <POSITION>
      <TOP>90</TOP>
      <LEFT>95</LEFT>
      <BOTTOM>190</BOTTOM>
      <RIGHT>195</RIGHT>
    </POSITION>
  </GEOMETRY>
</BOX>
```

Master pages are stored in a deconstructed project's Job Jackets file. To create a page from this master page, insert a **MASTER** attribute into the **PAGE** element and indicate the number of the target master page. Master page numbering is as follows:

1 = blank single page

2 = blank facing-page

3 = the first user-defined master page in the Job Jackets file (by default, the master page named "A-Master A")

For example, to create a master page based on the first user-defined master page in the Job Jackets file, you could use XML like the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<PROJECT JOBJACKET=" file://brochures/BrochureJJ.xml"
  JOBTICKET="Tall US Brochure Ticket"
  PROJECTNAME="project1.qxp">
  <LAYOUT>
    <ID NAME="Layout 1"/>
    <SPREAD>
      <ID UID="1" />
      <PAGE MASTER="3" POSITION="LEFTOFSPINE">
        <ID UID="2" />
      </PAGE>
      ...
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

Note that each page has a **POSITION** attribute that indicates where that page falls with regard to the spine.

Working with layouts

QuarkXPress Server lets you create layouts from scratch in several ways:

- You can create a layout using the default layout properties, as specified in the server Job Jackets file.
- You can create a layout using a layout specification in a template's Job Jackets structure.
- You can create a layout using a specific height and width.

To create a layout using the server Job Jackets file's default settings, use XML like the following:

```
<PROJECT>
  <LAYOUT OPERATION="CREATE">
    <ID NAME="New Layout" />
    <SPREAD>
      <ID UID="1" />
      <BOX>
        <ID NAME="Box5" />
        <TEXT>
          <STORY>
            <PARAGRAPH PARASTYLE="Normal">
              <RICHTEXT>Scrollable Layout</RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

```

        </STORY>
    </TEXT>
</BOX>
</SPREAD>
</LAYOUT>
</PROJECT>

```

To create a layout using a layout specification in the template's Job Jackets structure, use XML like the following:

```

<PROJECT>
  <LAYOUT OPERATION="CREATE" LAYOUTSPECIFICATION="NewLayoutSpec">
    <ID NAME="New Layout" />
    <SPREAD>
      <ID UID="1" />
      <BOX>
        <ID NAME="Box5" />
        <TEXT>
          <STORY>
            <PARAGRAPH PARASTYLE="Normal">
              <RICHTEXT>Scrollable Layout</RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>

```

To create a layout using a specific height and width, use XML like the following:

```

<PROJECT>
  <LAYOUT OPERATION="CREATE" HEIGHT="900" WIDTH="500">
    <ID NAME="New Layout" />
    <SPREAD>
      <ID UID="1" />
      <BOX>
        <ID NAME="Box5" />
        <TEXT>
          <STORY>
            <PARAGRAPH PARASTYLE="Normal">
              <RICHTEXT>Scrollable Layout</RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>

```

To create a layout and flow content into it in one go, without a spread/page context, use XML like the following:

```

<PROJECT>
  <LAYOUT OPERATION="CREATE" HEIGHT="900" WIDTH="500">
    <ID NAME="New Layout" />

    <!--Create a TOC-->
    <BOX>
      <ID NAME="Flow"></ID>
      <TEXT>
        <STORY>
          <LIST LISTSTYLE="TOC" OPERATION="CREATE">
            ...
          </LIST>

          <!-- Insert a page break -->
          <PAGEBREAK></PAGEBREAK>

        </STORY>
      </TEXT>
    </BOX>

    <!-- Add a heading -->
    <INLINEBOX>
      <RICHTEXT>This is the Heading</RICHTEXT>
    </INLINEBOX>

    <!-- Add text -->
    <INLINEBOX>
      <PARAGRAPH INDENTLEVEL="2" PARASTYLE="MyStyle">

```

```

        <RICHTEXT>This is the text</RICHTEXT>
    </PARAGRAPH>
</INLINEBOX>

<!-- Import a picture -->
<INLINEBOX>
    <CONTENT>file:MyFile.jpg</CONTENT>
</INLINEBOX>

<!-- Add a table -->
<INLINETABLE>
    <TBODY>
        <TROW>
            <ENTRY>Column1</ENTRY>
            <ENTRY>Column2</ENTRY>
        </TROW>
    </TBODY>
</INLINETABLE>

</LAYOUT>
</PROJECT>

```

When QuarkXPress Server creates a new layout this way, it adds an automatic text box. If you want to flow content into this automatic text box, address it by any name you like, and QuarkXPress Server will assign that name to the automatic text box on the first page.

Working with layers

To create a layer in XML, use the **LAYER** element. For example:

```

<LAYER KEEPUNAROUND="true" LOCKED="false"
    SUPPRESS="false" VISIBLE="true">
    <ID NAME="Layer 1" />
</LAYER>

```

The **RGBCOLOR** element defines the layer's color as displayed in the **Layers** palette.

You can assign items to a layer using the **GEOMETRY** element, which is a child of the **BOX** and **TABLE** elements. For example:

```

BOX BOXTYPE="CT_TEXT" COLOR="White">
    <ID NAME="Main Layer" />
    <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT">
        <POSITION>
            <TOP>90</TOP>
            <LEFT>95</LEFT>
            <BOTTOM>190</BOTTOM>
            <RIGHT>195</RIGHT>
        </POSITION>
    </GEOMETRY>
</BOX>

```

Working with boxes

To add text and pictures to a project, you must add text boxes and picture boxes to the project's **<SPREAD>** element. Both are represented by **<BOX>** elements, but text boxes have a **BOXTYPE** attribute of **CT_TEXT**, and picture boxes have a **BOXTYPE** attribute of **CT_PICT**. You can read about how **<BOX>** elements are put together in the Modifier DTD, but for purposes of illustration, the sample XML below describes a spread that contains a text box and a picture box.

```

<SPREAD>
    <ID UID="1" />

    <!-- TEXT BOX -->
    <BOX BOXTYPE="CT_TEXT" COLOR="White">
        <ID NAME="Headline Box" />
        <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT">
            <POSITION>
                <TOP>200</TOP>
                <LEFT>80</LEFT>
                <BOTTOM>450</BOTTOM>
            </POSITION>
        </GEOMETRY>
    </BOX>

```

```

        <RIGHT>475</RIGHT>
    </POSITION>
</GEOMETRY>
<TEXT>
    <STORY>
        <PARAGRAPH PARASTYLE="Normal">
            <RICHTEXT>This is text in a box.</RICHTEXT>
        </PARAGRAPH>
    </STORY>
</TEXT>
</BOX>

<!-- PICTURE BOX -->
<BOX BOXTYPE="CT_PICT">
    <ID NAME="Main Story Photo" />
    <GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT">
        <POSITION>
            <TOP>90</TOP>
            <LEFT>95</LEFT>
            <BOTTOM>190</BOTTOM>
            <RIGHT>195</RIGHT>
        </POSITION>
    </GEOMETRY>
    <PICTURE ANGLE="0°" FLIPHORIZONTAL="false"
        FLIPVERTICAL="false" FULLRES="false" MASK="None"
        OFFSETACROSS="0" OFFSETDOWN="0" OPACITY="100%"
        SCALEACROSS="100%" SCALEDOWN="100%" SHADE="100%"
        SKEW="0°" SUPRESSPICT="false"/>
    <CONTENT>Macintosh HD:DocPool:flower1.jpg</CONTENT>
</BOX>

</SPREAD>

```

This example will work for a construct request. For a modify request, add the attribute value `OPERATION="CREATE"` in the `BOX` element.

All `BOX` elements can contain a `GEOMETRY` element that indicates the position and size of the box, a `FRAME` element that describes the box's frame (if any), and a `SHADOW` element that describes the box's drop shadow. Additional `BOX` elements are described in the following sections.

- ➡ The z-order (stacking order) of boxes in the layout is determined by the order of the `<BOX>` elements in the XML, from rearmost to frontmost.

Fitting a box to text or a picture

The `<FIT>` element type lets you automatically adjust the size of a box to fit the text or picture in that box.

The default behavior is to not fix a box to its content. To use this feature, you must supply `<MAX>` and `<MIN>` elements. Each `<MAX>` or `<MIN>` element lets you specify a maximum or minimum size for the box, a maximum or minimum location for the resized box, or a maximum or minimum scale percentage for the box. Note that you can use different types of `<MAX>` and `<MIN>` elements in a `<FIT>` element, but you can use only one `<MAX>` element and one `<MIN>` element per `<FIT>` element.

The `FIT@POINT` attribute lets you indicate the direction in which the box should grow or shrink. The available options are `TOPLEFT`, `BOTTOMLEFT`, `TOPRIGHT`, and `BOTTOMRIGHT`.

The `FIT@AVOIDBOXESBY` attribute lets you specify the distance between the `POINT` side or corner of a resized box and any other items around it. A box will expand only until it is this distance from an adjacent item.

The `FIT@PROPORTIONAL` attribute lets you specify whether the resized box should have the same aspect ratio as the original box.

For example:

```
<BOX>
  <ID UID="5" />
  <GEOMETRY>
    <POSITION>
      <TOP>224.001</TOP>
      <LEFT>110.003</LEFT>
      <BOTTOM>381</BOTTOM>
      <RIGHT>253.253</RIGHT>
    </POSITION>
    <FIT POINT="BOTTOMLEFT" PROPORTIONAL="true">
      <MAX>
        <LOCATION X="320" Y="560"/>
      </MAX>
      <MIN>
        <SIZE HEIGHT="100" WIDTH="10"/>
      </MIN>
    </FIT>
  </GEOMETRY>
</BOX/>
```

- ➡ To use this feature, you must have FitBoxToContent XTensions software loaded.
- ➡ For pictures, <FIT> is equivalent to PICTURE@FIT="FITBOXTOPICTURE". <MAX> and <MIN> have no effect.

Using inline boxes

The Inline Boxes feature makes it easy to create an anchored box. Rather than having to describe every aspect of a box and then reference that box from an <ANCHOREDBOXREF> or <CALLOUTANCHOR> element, you can simply specify the content for a box inline, like so:

```
<PROJECT>
  <LAYOUT>
    <ID UID="123" />
    <BOX COLOR="Cyan" OPACITY="50">
      <ID UID="456" />
      <TEXT>
        <STORY>
          <RICHTEXT>Test before an anchored text box.</RICHTEXT>
          <INLINEBOX>
            <TEXTATTRIBUTE COLUMNS="2" GUTTERWIDTH="10">
              <INSET ALLEDGES="5" />
            </TEXTATTRIBUTE>
            <CONTENT>file:example.docx</CONTENT>
          </INLINEBOX>
          <RICHTEXT>Test between anchored text boxes.</RICHTEXT>
          <INLINEBOX>
            <CONTENT>
              <PARAGRAPH PARASTYLE="Normal">
                <RICHTEXT>Text in the second anchored box.</RICHTEXT>
              </PARAGRAPH>
              <RICHTEXT>More text in the second anchored box.</RICHTEXT>
            </CONTENT>
          </INLINEBOX>
          <RICHTEXT>Test between anchored boxes.</RICHTEXT>
          <INLINEBOX WIDTH="50" SCALEUP="false">
            <SHADOW ANGLE="166" BLUR="6" COLOR="Yellow" DISTANCE="6"
              INHERITOPACITY="true" MULTIPLYSHADOW="true" OPACITY="40%"
              SCALE="100%" SHADE="62%" SKEW="0" />
            <CONTENT>file:example.jpg</CONTENT>
          </INLINEBOX>
          <RICHTEXT>Text after an anchored picture box.</RICHTEXT>
        </STORY>
      </TEXT>
    </BOX>
  </LAYOUT>
</PROJECT>
```

Because an <INLINEBOX> element's content comes in the form of a <CONTENT> element, you can fill such an anchored box with Modifier-formatted text, with text from a text file, or with a picture from a picture file.

The `INLINEBOX@WIDTH` attribute lets you specify the width of the anchored box as a percentage of its parent column or box. If you fill an anchored box with so much text that it expands to the height of its parent box, the text is adjusted to fit in the box.

The `INLINEBOX@SCALEUP` attribute lets you control sizing for picture boxes.

The child `SHADOW` element lets you specify drop shadow effects.

A child `BOXATTRIBUTE` element lets you control the formatting of the boxes. If you're creating an inline text box, a child `TEXTATTRIBUTE` element lets you control the formatting of the boxes.

A child `INTERACTIVITY` element facilitates the application of interactivity on boxes. This allows for the deconstruct and modifiability of App Studio Interactivities, as shown below:

```
<PROJECT>
  <LAYOUT>
    <ID NAME="Layout 1"/>
    <PAGESEQUENCE MASTERREFERENCE="A-Master-A">
      <STORY BOXNAME="Flow">
        <INLINEBOX>
          <!--Preview image-->
          <CONTENT>file:Images/2pdf.PNG</CONTENT>
          <INTERACTIVITY AUTHORXTID="1131430225" NAME="Button 1"
            OWNERXTID="1129333841" TYPE="Button">
            <Settings InitiallyHidden="False">
              <settings>
                <actions>
                  <action>
                    <type>openfile</type>
                    <name/>
                    <sourceettings>
                      <sourcetype>1</sourcetype>
                      <sourcepath>PDF/EconomicResearch.pdf</sourcepath>
                    </sourceettings>
                  </action>
                </actions>
              </settings>
            </Settings>
            <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
          </INTERACTIVITY>
        </INLINEBOX>
      </STORY>
    </PAGESEQUENCE>
  </LAYOUT>
</PROJECT>
```

This applies button interactivity and associates an `Open File` action. The generated App Studio issue, when previewed on a device, would display the "EconomicResearch.pdf". The `Open File` action can open media files as well.

The child `BOXATTRIBUTE` lets you specify an angle of rotation of the box through the use of the `<ANGLE>` element, like so:

```
<INLINEBOX>
  <BOXATTRIBUTE ANGLE="30"/>
  <CONTENT>file:tmp.bmp</CONTENT>
  ...
```

This would rotate the box by 30 degrees.

For more information, see "[INLINEBOX \(Modifier schema\)](#)," "[BOXATTRIBUTE \(Modifier schema\)](#)," and "[TEXTATTRIBUTE \(Modifier schema\)](#)."

- ➡ If you deconstruct an anchored box that was created with an `<INLINEBOX>` element, the resulting XML describes the box as a `<BOX>` element, not an `<INLINEBOX>` element.

Working with groups

To add boxes to a group, create a `<GROUP>` element and then insert `<BOXREF>` elements that refer to the boxes you want in the group. For example, the group described below includes the two boxes described above it:

```
<BOX BOXTYPE="CT_TEXT" COLOR="White">
  <ID NAME="MainStoryText" UID="217"/>
</BOX>

<BOX BOXTYPE="CT_PICT">
  <ID NAME="MainStoryPhoto" UID="218"/>
</BOX>

<GROUP>
  <ID NAME="MainStoryGroup" UID="300"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218"/>
</GROUP>
```

You can nest one group within another by adding a `<BOXREF>` that refers to the child group, like so:

```
<GROUP>
  <ID NAME="MainStoryGroup" UID="300"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218"/>
</GROUP>

<BOX BOXTYPE="CT_PICT">
  <ID NAME="Masthead" UID="001"/>
</BOX>

<GROUP>
  <ID NAME="MainStoryPage" UID="218"/>
  <BOXREF NAME="Masthead" UID="001"/>
  <BOXREF NAME="MainStoryGroup" UID="300"/>
</GROUP>
```

To anchor a group in a text box, use XML like the following. Note that you must set `BOX@ANCHOREDGROUPMEMBER="true"` for all boxes in the group, and set `GROUP@ANCHOREDIN` for the anchored group.

```
<BOX BOXTYPE="CT_TEXT" COLOR="White" ANCHOREDGROUPMEMBER="true" >
  <ID NAME="MainStoryText" UID="217"/>
</BOX>

<BOX BOXTYPE="CT_PICT" ANCHOREDGROUPMEMBER="true" >
  <ID NAME="MainStoryPhoto" UID="218"/>
</BOX>

<GROUP ANCHOREDIN="MainStoryText">
  <ID NAME="MainStoryGroup" UID="300"/>
  <BOXREF NAME="MainStoryText" UID="217"/>
  <BOXREF NAME="MainStoryPhoto" UID="218"/>
</GROUP>

<BOX BOXTYPE="CT_TEXT" COLOR="White">
  <ID NAME="MainStoryText" UID="217"/>
  <TEXT>
    <STORY>
      <PARAGRAPH>
        <ANCHOREDBOXREF OFFSET="0">MainStoryGroup
        </ANCHOREDBOXREF>
      </PARAGRAPH>
    </STORY>
  </TEXT>
</BOX>
```

➡ The order of the `<BOXREF>` elements in a `<GROUP>` indicates the order in which the boxes were selected prior to grouping. The z-order of boxes in the layout is determined by the order of the `<BOX>` elements in the XML, from rearmost to frontmost.

Working with pictures

The `<PICTURE>` element supports a variety of features, including the ability to specify runaround, opacity, and drop shadow characteristics. For more information, see the Modifier schema.

```
<PROJECT>
  <LAYOUT>
    <ID NAME="Layout 1"/>
    <SPREAD>
      <ID UID="1"/>
      <BOX COLOR="Magenta" SHADE="50%" OPACITY="100%">
        <ID NAME="pict1"/>
        <PICTURE MASK="Test Alpha1"/>
        <FRAME STYLE="Triple" WIDTH="5" COLOR="Cyan" SHADE="100%"
          OPACITY="100%" GAPCOLOR="Yellow"
          GAPSHADE="80%" GAPOPAITY="100%"/>
        <CONTENT UID="0">image.jpg</CONTENT>
      </BOX>
      <BOX>
        <ID NAME="pict2"/>
        <PICTURE SUPPRESSPICT="true" FULLRES="true" PICCOLOR="Cyan"
          SHADE="90" OPACITY="90"/>
        <SHADOW COLOR="Cyan" SHADE="90" ANGLE="130" OPACITY="100"
          DISTANCE="5" SKEW="10"
          SCALE="90" BLUR="3"/>
        <CONTENT UID="0">image.jpg</CONTENT>
      </BOX>
      <BOX>
        <ID NAME="pict3"/>
        <GEOMETRY>
          <RUNAROUND TYPE="NONWHITEAREAS" OUTSET="10" NOISE="5"
            SMOOTHNESS="5"
            THRESHOLD="10" INVERT="true" OUTSIDEONLY="true"
            RESTRICTTOBOX="true"/>
        </GEOMETRY>
      </BOX>
      <BOX>
        <ID NAME="pict4"/>
        <PICTURE FIT="FITPICTURETOBOX" SCALEACROSS="40"
          SCALEDOWN="50" FLIPVERTICAL="true"
          FLIPHORIZONTAL="false" ANGLE="40" SKEW="20"/>
        <CONTENT UID="0">image.jpg</CONTENT>
      </BOX>
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

If you know the `UID` attribute of a box, you can insert a picture into that box without having to specify where the `<BOX>` element is. For example:

```
<PROJECT>
  <CONTENT UID="0">ChangedPict.jpg</CONTENT>
</PROJECT>
```

➡ Content IDs are unique across layouts.

Working with text

Every `<BOX>` element for text contains a `<TEXT>` element, and every `<TEXT>` element contains a `<STORY>` element. A `<STORY>` element can contain `<PARAGRAPH>` elements, each of which contains `<RICHTEXT>` elements. A `<STORY>` element can also simply contain `<RICHTEXT>` elements.

A text `<BOX>` element can also contain a `<CONTENT>` element that indicates the origin of the text in that box.

A text `<BOX>` element in a deconstructed project can also contain `<PLACEHOLDER>` elements, which allow XML Import XTensions software to insert text from a different XML source.

➡ **<PLACEHOLDER>** elements are ignored by the **construct** namespace and the **modify** parameter; placeholders must be inserted in QuarkXPress using XML Import XTensions software.

If you know the **UID** attribute of a box or story, you can insert text into that box or story without having to specify where the **<BOX>** or **<STORY>** element is. For example:

```
<PROJECT>
  <BOX>
    <ID UID="4" />
    <STORY>
      <RICTEXT MERGE="false" FONT="20">New text</RICTEXT>
    </STORY>
  </BOX>
</PROJECT>

<PROJECT>
  <STORY UID="0">
    <RICTEXT MERGE="false" FONT="20">New text</RICTEXT>
  </STORY>
</PROJECT>
```

➡ Story IDs are unique across layouts.

Applying style sheets

Like other resources, style sheets are defined in a deconstructed project's Job Jackets file. To apply a paragraph style sheet to text, use the **PARASTYLE** attribute of the **<PARAGRAPH>** element. For example, to apply the paragraph style sheet named "BodyText" to a paragraph, use XML like the following:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICTEXT MERGE="true">The sun has risen.</RICTEXT>
</PARAGRAPH>
```

To apply a character style sheet to text, use the **CHARSTYLE** attribute of the **<RICTEXT>** element. For example, to apply the character style sheet named "Emphasis" to a word, use XML like the following:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICTEXT>The </RICTEXT>
  <RICTEXT CHARSTYLE="Emphasis">sun</RICTEXT>
  <RICTEXT> has risen.</RICTEXT>
</PARAGRAPH>
```

Applying local formatting

To apply local formatting to text, use the attributes of the **<RICTEXT>** element. For example:

```
<PARAGRAPH>
  <RICTEXT
    SIZE="10" COLOR="Magenta" BOLD="true" OPACITY="50%"
  >The sun has risen.</RICTEXT>
</PARAGRAPH>
```

To apply paragraph formatting, use a **<FORMAT>** element. For example:

```
<PARAGRAPH>
  <FORMAT SPACEBEFORE="6" SPACEAFTER="2" LEADING="24"
    ALIGNMENT="LEFT" KEEPWITHNEXT="true">
    <RICTEXT>The sun has risen.</RICTEXT>
  </FORMAT>
</PARAGRAPH>
```

The `MERGE` attribute lets you control whether formatting from one `<RICHTEXT>` or `<PARAGRAPH>` element is carried forward to the next. For example, the following XML would result in "has risen" being italicized:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICHTEXT SIZE="10">The </RICHTEXT>
  <RICHTEXT SIZE="12" ITALIC="TRUE">sun</RICHTEXT>
  <RICHTEXT MERGE="true" SIZE="10"> has risen.</RICHTEXT>
</PARAGRAPH>
```

However, this XML would result in "has risen" being plain:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICHTEXT SIZE="10">The </RICHTEXT>
  <RICHTEXT SIZE="12" ITALIC="TRUE">sun</RICHTEXT>
  <RICHTEXT MERGE="false" SIZE="10"> has risen.</RICHTEXT>
</PARAGRAPH>
```

The default value for `<MERGE>` is "false."

To combine local formatting with style sheets, simply add attributes to the `<RICHTEXT>` elements within a `<PARAGRAPH>` element. For example:

```
<PARAGRAPH PARASTYLE="BodyText">
  <RICHTEXT COLOR="Red">The </RICHTEXT>
  <RICHTEXT COLOR="Yellow" CHARSTYLE="Emphasis">sun</RICHTEXT>
  <RICHTEXT COLOR="Red"> has risen.</RICHTEXT>
</PARAGRAPH>
```

Formatting across paragraph boundaries

You can use two methods to describe a run of formatting that crosses a paragraph boundary. The first is to simply close the first `<PARAGRAPH>` element and then open a new one. For example:

```
<PARAGRAPH>
  <RICHTEXT SIZE="10">The sun has risen.</RICHTEXT>
</PARAGRAPH>
<PARAGRAPH>
  <RICHTEXT SIZE="10">The sun has set.</RICHTEXT>
</PARAGRAPH>
```

The second is to use a `&hardReturn;` entity to create the paragraph break. For example:

```
<PARAGRAPH>
  <RICHTEXT SIZE="10"
  >The sun has risen.&hardReturn;The sun has set.</RICHTEXT>
</PARAGRAPH>
```

Retrieving copyfitting information

In deconstructed projects, a `<BOX>` element can contain a `<LINKEDBOX>` element. The `<LINKEDBOX>` element indicates the point where text has overflowed the current box and identifies the box where the text continues. The `<LINKEDBOX>` element also contains attributes that indicate where in the text the break occurs.

In a `<STORY>` element, the `<OVERMATTER>` element indicates where the current box overflows when there is no subsequent box for text to flow into. A `<STORY>` element also contains a `<COPYFIT>` element indicating how many words, characters, and lines should be allowed to fit in that box and whether the text currently fits in the box, is too short, or is too long. This information can be useful for on-the-fly copyfitting.

- ➡ The elements described in this section occur only in deconstructed project XML generated by the `xml` namespace. Do not use these elements when using the `construct` namespace.

➡ QuarkXPress Server returns copyfitting information for QuarkCopyDesk articles by default. To retrieve copyfitting information when deconstructing a QuarkXPress project, include `copyfitinfo=true` in the `xml` request.

Working with tables

To construct tables in XML, use a structure like the following:

```
<TABLE COLUMNS="2" ROWS="2">
  <ID NAME="MyTable" />
  <GEOMETRY PAGE="1">
    <POSITION>
      <TOP>100</TOP>
      <LEFT>100</LEFT>
      <BOTTOM>600</BOTTOM>
      <RIGHT>400</RIGHT>
    </POSITION>
  </GEOMETRY>
  <COLSPEC>
    <COLUMN AUTOFIT="false" COLUMNCOUNT="1" COLUMNWIDTH="134.667">
      <GRIDLINE COLOR="Black" GAPCOLOR="none" OPACITY="100%"
        SHADE="100%" STYLE="Solid" TYPE="LEFT" WIDTH="1"/>
      <GRIDLINE COLOR="Black" GAPCOLOR="none" OPACITY="100%"
        SHADE="100%" STYLE="Solid" TYPE="RIGHT" WIDTH="1"/>
    </COLUMN>
    <COLUMN AUTOFIT="false" COLUMNCOUNT="2" COLUMNWIDTH="134.667">
      <GRIDLINE COLOR="Black" GAPCOLOR="none" OPACITY="100%"
        SHADE="100%" STYLE="Solid" WIDTH="1"/>
    </COLUMN>
    <COLUMN AUTOFIT="false" COLUMNCOUNT="3" COLUMNWIDTH="134.667">
      <GRIDLINE COLOR="Black" GAPCOLOR="none" OPACITY="100%"
        SHADE="100%" STYLE="Solid" WIDTH="1"/>
    </COLUMN>
  </COLSPEC>
  <ROW ROWCOUNT="1">
    <CELL COLUMNCOUNT="1">
      ...
    </CELL>
    <CELL COLUMNCOUNT="2">
      ...
    </CELL>
  </ROW>
</TABLE>
```

Note that the position of each row and column within the table is indicated by the `ROWCOUNT` and `COLUMNCOUNT` attributes, respectively. `<CELL>` elements can describe text cells or picture cells; see the following sections for details.

To specify horizontal and vertical lines in a table, use XML like the following:

```
<TABLE>
  <GRID TYPE="ALLGRID">
    <LINE COLOR="Black" GAPCOLOR="none"
      OPACITY="100%" SHADE="100%"
      STYLE="Solid" WIDTH="0"/>
  </GRID>
  ...
</TABLE>
```

Creating tables

To create a new table, use the following parameters in the Modifier DTD:

- `"SPREAD (Modifier schema)"`
- `"TABLE (Modifier schema)"`
- `"COLSPEC (Modifier schema)"`
- `"COLUMN (Modifier schema)"`
- `"ROW (Modifier schema)"`

- ["CELL \(Modifier schema\)"](#)

The following XML shows how some of these parameters work.

```
<PROJECT>
  <LAYOUT>
    <ID UID="Layout 1"/>
    <SPREAD>
      <ID UID="1"/>
      <TABLE OPERATION="CREATE" ROWS="5" COLUMNS="3">
        <ID NAME="STATS"/>
        <GEOMETRY PAGE="1"/>
        <POSITION>
          <TOP>5</TOP>
          <LEFT>5</LEFT>
          <BOTTOM>30</BOTTOM>
          <RIGHT>30</RIGHT>
        </POSITION>
      </TABLE>
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

➡ Rather than creating tables manually, you can use the Inline Tables feature, which is much easier to use. For more information see ["Using inline tables."](#)

Response	A preview of the QuarkXPress project with new table created in the specified position.
Logs	If the request succeeds, a transaction success message is written to the QuarkXPress Server transaction log file. For example: 4/10/2007 17:54:37 — tab.qxp — Type: image/jpeg — Size: 9049 — Client: 127.0.0.1
Example GET URL	When QuarkXPress Server is running on Windows, use a URL like the following: <code>http://localhost:8080/sample.qxp?modify=file:C:\createTable.xml</code> When QuarkXPress Server is running on Mac OS, use a URL like the following: <code>http://localhost:8080/sample.qxp?modify=file:MacHD:xml:createTable.xml</code> You can also supply a string that consists of valid XML commands. For example: <code>http://localhost:8080/sample.qxp?modify= <LAYOUT><ID UID="Layout1"/><SPREAD><ID UID="1"/> <TABLE OPERATION="CREATE" ROWS="5" COLUMNS="3"> <ID NAME="STATS"/><GEOMETRY PAGE="1"/><POSITION> <TOP>5</TOP><LEFT>5</LEFT><BOTTOM>30</BOTTOM> <RIGHT>30</RIGHT></POSITION></GEOMETRY> </TABLE><SPREAD></LAYOUT></PROJECT></code>
Example, object model	To add a new table to an existing spread, use code like the following: <pre>Spread spread = new Spread(); Table table = new Table(); table.name = "textbox1"; Geometry geometry = new Geometry(); Position position = new Position(); position.top = "110"; position.left = "89"; position.bottom = "220"; position.right = "300"; geometry.position = position; geometry.shape = "SH_RECT"; geometry.page = "1"; geometry.layer = "Default"; table.geometry = geometry;</pre>

```
table.rows = "2";
table.columns = "4";
table.maintainGeometry = "true";

table.operation = "CREATE";
spread.tables = new Table [{table}];
```

Use the following object hierarchy:

```
ModifierRequest < Project < Layout < Spread < Table
```

To delete a table, provide the table's name or ID and set the `operation` attribute to "DELETE".

Adding text and picture cells to tables

To add a text cell, use XML like the following:

```
<CELL BOXTYPE="CT_TEXT" COLUMNCOUNT="1">
  <TEXT>
    <STORY>
      <RICHTEXT>Text goes here.</RICHTEXT>
    </STORY>
  </TEXT>
</CELL>
```

Note that the `<TEXT>` element must always contain a `<STORY>` element. A `<STORY>` element can contain `<PARAGRAPH>` elements or simply `<RICHTEXT>` elements.

To add a picture cell, use XML like the following:

```
<CELL BOXTYPE="CT_PICT" COLUMNCOUNT="1">
  <CONTENT>MacintoshHD:DocPool:flower1.jpg</CONTENT>
  <PICTURE FIT="CENTERPICTURE" />
</CELL>
```

Merging and splitting table cells

To merge table cells, use XML like the following:

```
<TABLE>
  <ID NAME="table1" />
  <ROW ROWCOUNT="1" MERGEROWSPAN="1" >
    <CELL COLCOUNT="1"><TEXT>...</TEXT></CELL>
    <CELL COLCOUNT="2"><TEXT>...</TEXT></CELL>
  </ROW>
  <ROW ROWCOUNT="2">
    <CELL COLCOUNT="1"><TEXT>...</TEXT></CELL>
    <CELL COLCOUNT="2"><TEXT>...</TEXT></CELL>
  </ROW>
  <ROW ROWCOUNT="3">
    <CELL COLCOUNT="1"><TEXT>...</TEXT></CELL>
    <CELL COLCOUNT="2"><TEXT>...</TEXT></CELL>
  </ROW>
</TABLE>
```

To split table cells, use XML like the following:

```
<TABLE>
  <ID NAME="table1" />
  <ROW AUTOFIT="false" ROWCOUNT="5" ROWHEIGHT="60.9">
    <CELL BOXTYPE="CT_TEXT" COLUMNCOUNT="2" SPLIT="true" />
  </ROW>
</TABLE>
```

Breaking a table across pages

To break a table across pages, use XML like the following:

```
<SPREAD>
  <ID UID="1" />
  <PAGE MASTER="A-Master A" POSITION="RIGHTOFSPINE">
    <ID UID="1" />
  </PAGE>
  <TABLE COLOR="none" COLUMNS="2" MAINTAINGEOMETRY="false"
    ROWS="3" AUTOFIT="rows">
    <ID NAME="Table1" />
    <TABLEBREAK BREAKHEIGHT="140.251" MAINTAINLINK="true">
```

```

        <HEADER>
        <ROW ROWCOUNT="1" ROWHEIGHT="68.625">
        ...
        </ROW>
    </HEADER>
</TABLEBREAK>
<ROW ROWCOUNT="1" ROWHEIGHT="68.625">
    ...
</ROW>
<ROW ROWCOUNT="2" ROWHEIGHT="68.625">
    ...
</ROW>
<FRAME .../>
<GEOMETRY LAYER="Default" PAGE="1" SHAPE="SH_RECT">
    ...
</GEOMETRY>
<COLSPEC>
    ...
</COLSPEC>
</TABLE>
</SPREAD>

```

Using inline tables

The Inline Tables feature makes it easy to create an anchored table. Rather than having to specify every attribute of a table, you can simply specify the content for a table as a series of `<TROW>` and `<ENTRY>` elements in an `<INLINETABLE>` element, like so:

```

<STORY>
  <INLINETABLE>
    <THEAD>
      <TROW>
        <ENTRY>Year</ENTRY>
        <ENTRY>2012</ENTRY>
        <ENTRY>2013</ENTRY>
        <ENTRY>2014</ENTRY>
        <ENTRY>2015</ENTRY>
      </TROW>
    </THEAD>
    <TBODY>
      <TROW>
        <ENTRY>Revenue</ENTRY>
        <ENTRY>000</ENTRY>
        <ENTRY>100</ENTRY>
        <ENTRY>200</ENTRY>
        <ENTRY>300</ENTRY>
      </TROW>
      <TROW>
        <ENTRY>Liabilities</ENTRY>
        <ENTRY>000</ENTRY>
        <ENTRY>100</ENTRY>
        <ENTRY>200</ENTRY>
        <ENTRY>300</ENTRY>
      </TROW>
    </TBODY>
  </INLINETABLE>
  ...
</STORY>

```

The number of rows in such a table is determined by the number of `<TROW>` elements. The number of columns is determined by the maximum number of `<ENTRY>` elements in a `<TROW>`.

In the `<TBODY>` element, each `<TROW>` contains one or more `<ENTRY>` elements. If you don't style the text in an `<ENTRY>` element, it uses the default styling, which can be defined in a `<TROWSTYLE>` or `<TCOLSTYLE>` element (see below).

The `<THEAD>` element lets you create a repeating header for the table. The `<TCONTINUED>` element lets you create a "continued" row for the table. If you don't supply either of these elements, you must create the header row manually as a `<TROW>` in the `<TBODY>`.

For each row and column, you can specify the following things:

- **COLOR**: Cell background color.
- **SHADE**: Cell background shade.
- **STORYDIRECTION**: Story direction.

You can automatically adjust and position pictures in table cells. The **VALIGN@ENTRY** and **ALIGNMENT@ENTRY** attributes lets you specify the alignment of a cell, including picture cells.

An **<INLINETABLE>** can also include optional **<COLGROUP>** elements, which allow you to specify column attributes in the form of **<TCOL>** elements, like so:

```
<INLINETABLE>
  <COLGROUP>
    <TCOL INDEX="1" WIDTH="250">
    </TCOL>
  </COLGROUP>
  ...
```

The **INDEX** value indicates the column number. You can specify the **WIDTH** of a column in points by omitting a unit indicator, or as a percentage of the table width by including a % after the number.

The child attribute **ORIENTATION** lets you specify the orientation of the table, like so:

```
<INLINETABLE> ORIENTATION="LANDSCAPE">
  ...
```

On a portrait page, this would effectively rotate the table in a clock wise direction, while the page itself is not rotated.

The child **PICTUREATTRIBUTES** element lets you specify several picture attributes, including flip horizontal, flip vertical, angle, background and color, on picture cells of the table.

- ➡ This does not create a breakable table. The table will be confined to a single page.
- ➡ If the number of rows is greater than the available rectangular size of the parent box, an error is returned stating the table cannot be fit into the available size.
- ➡ If you deconstruct a table that was created with an **<INLINETABLE>** element, the resulting XML describes the table as a **<TABLE>** element, not an **<INLINETABLE>** element.

Using table styles

Table styles make it easy to style inline tables. Rather than applying formatting directly, you can define a table style, then apply the table style to inline tables like so:

```
<INLINETABLE TABLESTYLEREF="TableStyle1">
```

For example, assume you want to create a table where alternating rows are shaded, the grid is a particular color, the insets are a particular amount, and so forth. Instead of specifying the formatting for such a table manually for every row, you can define the table's qualities in a table style, like so:

```
<PROJECT>
  <TABLESTYLE WIDTH="95">
    <ID NAME="tableStyle10"/>
    <TROWSTYLE INSET="2">
      <TOPGRID COLOR="none"/>
      <BOTTOMGRID COLOR="none"/>
    </TROWSTYLE>
```

```

<HEADTROWSTYLE COLOR="red" SHADE="30">
  <TOPGRID COLOR="red" WIDTH="1"/>
  <BOTTOMGRID COLOR="black" WIDTH="1"/>
</HEADTROWSTYLE>
<ODDTROWSTYLE COLOR="black" SHADE="20">
  <TOPGRID COLOR="none"/>
  <BOTTOMGRID COLOR="none"/>
</ODDTROWSTYLE>
<EVENTROWSTYLE COLOR="magenta" SHADE="60">
  <TOPGRID COLOR="none"/>
  <BOTTOMGRID COLOR="none"/>
</EVENTROWSTYLE>
<TCOLSTYLE>
  <LEFTGRID COLOR="none"/>
  <RIGHTGRID COLOR="none"/>
</TCOLSTYLE>
<FIRSTTCOLSTYLE COLOR="Cyan" SHADE="90"/>
<LASTTCOLSTYLE COLOR="Cyan" SHADE="50"/>
</TABLESTYLE>
...
</PROJECT>

```

A `<TABLESTYLE>` lets you specify the following things:

- `<TROWSTYLE>`: A row style to be applied to every row in the table. One of the two mandatory elements of `<TABLESTYLE>`. Includes the `INSET` attribute, which lets you specify the inset to apply on all four sides.
- `<HEADTROWSTYLE>`: A row style to be applied only to the header row.
- `<ODDTROWSTYLE>` and `<EVENTROWSTYLE>`: Row styles that let you format odd and even rows differently.
- `<TCOLSTYLE>`: A column style. One of the two mandatory elements of `<TABLESTYLE>`. Note that when the table is created, column styles override row styles.
- `<FIRSTTCOLSTYLE>` and `<LASTTCOLSTYLE>`: Column styles that let you style the first and last column of a table differently.
- `<TOPGRID>` and `<BOTTOMGRID>`: A grid line at the top or bottom of a row's cells.
- `<LEFTGRID>` and `<RIGHTGRID>`: A grid line at the left or right edge of a column's cells.

To apply a table style to an inline table, add a `TABLESTYLEREF` attribute to the `<INLINETABLE>` element, like so:

```
<INLINETABLE TABLESTYLEREF="tableStyle10">
```

You can also override `<TABLESTYLE>` attributes by specifying them as part of the table, like so:

```

<TROW>
  <TOPGRID COLOR="black" WIDTH="1"/>
  <BOTTOMGRID COLOR="red" WIDTH="1"/>
  <ENTRY COLSPAN="5">Statements</ENTRY>
</TROW>

```

Here, we've created a cell that spans five columns by supplying only one `<ENTRY>`, and we've specified a black, one-point top line and a red, one-point bottom line for that row only.

Working with sections

The Section feature lets you change the numbering system for a layout or a range of pages in a layout. To use this feature, you create a section start on a particular page.

In that section start, you can specify a number format, a starting page number, and an optional prefix. For example:

```
<PAGE FORMATTEDNAME="A1" MASTER="A-Master A" POSITION="RIGHTOFSPINE">
  <ID UID="1" />
  <SECTION FORMAT="ROMAN" NUMBER="1" PREFIX="A" OPERATION="CREATE"/>
</PAGE>
```

Once you have inserted a `<SECTION>` element, QuarkXPress Server will apply section-specific numbering and formatting to automatic page numbers. To insert automatic page numbers, use the `RICHTEXT@PAGENUMBERCHAR` attribute:

```
<TEXT>
  <STORY STORYDIRECTION="HORIZONTAL">
    <PARAGRAPH MERGE="false" PARASTYLE="Normal">
      <RICHTEXT MERGE="false">This is page </RICHTEXT>
      <RICHTEXT MERGE="false" PAGENUMBERCHAR="CURRENTPAGE"/>
      <RICHTEXT MERGE="false">. The story continues on page
    </RICHTEXT>
    <RICHTEXT MERGE="false" PAGENUMBERCHAR="NEXTPAGE"/>
    <RICHTEXT MERGE="false">. This story is continued from page
    </RICHTEXT>
    <RICHTEXT MERGE="false" PAGENUMBERCHAR="PREVIOUSPAGE"/>
    </PARAGRAPH>
  </STORY>
</TEXT>
```

To remove a section break, use XML like the following:

```
<PAGE FORMATTEDNAME="A1" MASTER="A-Master A" POSITION="RIGHTOFSPINE">
  <ID UID="1" />
  <SECTION OPERATION="DELETE"/>
</PAGE>
```

Working with Composition Zones

A Composition Zones item in a deconstructed project is represented in XML by a `<COMPOSITIONZONE>` element. Like the `<BOX>` element type, this element type supports the `<GEOMETRY>`, `<SHADOW>`, and `<FRAME>` elements.

The content of each Composition Zones item is provided by a layout called the *composition layout*, which can be internal or external. Each `<COMPOSITIONZONE>` element includes a `TYPE` attribute that indicates whether its composition layout is internal or external.

- For internal Composition Zones items, each Composition Zones item is represented as an additional `<LAYOUT>` element within the `<PROJECT>` element. The `LAYOUTREF` element within the `<COMPOSITIONZONE>` element indicates the name of the `<LAYOUT>` that corresponds to that particular Composition Zones item.
- For external Composition Zones items, the `PATH` attribute indicates the location of the project containing the associated composition layout. However, a copy of the layout is also stored within the project as an additional `<LAYOUT>` element.

Composition Zones items must be created in QuarkXPress. `<COMPOSITIONZONE>` elements are ignored by the `construct` namespace and the `modify` parameter.

```
<PROJECT>
  <LAYOUT>
    <ID UID="Layout 1" />
    <SPREAD>
      <ID />
      <COMPOSITIONZONE BLENDSTYLE="SOLID" BOXTYPE="CT_USER" COLOR="none"
        LAYOUTREF="Layout 2" PATH="/projects/ExternalZone1.qxp"
        TYPE="EXTERNAL">
        <ID NAME="Box9" UID="9" />
        ...
      </COMPOSITIONZONE>
    </SPREAD>
```

```
</LAYOUT>
<LAYOUT SHAREDSTATUS="ALLPROJECTS">
  <ID NAME="Layout 2" UID="2"/>
  <SPREAD>...</SPREAD>
</LAYOUT>
</PROJECT>
```

You can create a shared layout for use in a Composition Zones item like so:

```
<PROJECT>
  <LAYOUT OPERATION="CREATE" SHAREDSTATUS="THISPROJECT">
    <ID NAME="ScrollableLayout"/>
    <SPREAD>
      <ID UID="1"/>
      ...
    </SPREAD>
  </LAYOUT>
</PROJECT>
```

If you are creating App Studio issues, you can use this technique to create scrollable layouts on the fly. When doing so, use the `HORIZONTALBINDING` and `VERTICALBINDING` attributes to indicate which direction the layout should scroll.

You can modify the following aspects of an existing `<COMPOSITIONZONE>`:

- `HORIZONTALBINDING` and `VERTICALBINDING`
- `LAYOUTOPACITY`
- `LAYOUTREF`
- `PREVIEWPAGE`

For example:

```
<COMPOSITIONZONE HORIZONTALBINDING="false" LAYOUTOPACITY="100%"
  LAYOUTREF="Layout 6" PREVIEWPAGE="3" VERTICALBINDING="true">
  <PAGEREF ANGLE="0" NUMBER="1" OFFSETACROSS="0" OFFSETDOWN="0"
  SCALE="100%"/>
</COMPOSITIONZONE>
```

Using XSL transformation

You can use an XSLT file to transform the XML returned by the `xml` namespace into other formats. You might find this feature useful if you want the `xml` namespace to return an XML representation that uses a different schema or a subset of the returned data.

To use this feature, use the `XSL` parameter in the request URL. If the XSL parameter specifies the absolute path to an XSLT file on the server, QuarkXPress Server uses that XSLT file to transform the response to that call. For example:

```
http://QXPServer8:8080/xml/project1.qxp?XSL=
path to XSLT file on server
```

➡ When you use this feature, "XSL" must be in all caps.

To make the returned XML use the Modifier DTD, uncheck **Use default XSLT** and do not use the `XSL` parameter in your calls to the `construct` namespace.

➡ QuarkXPress Server currently supports only XML output from XSL transformation.

Working with lists

The `<LISTS>` element allows you to construct and deconstruct QuarkXPress lists. Lists allow a user to automatically create a table of contents (TOC) or list of figures. For more information, see the Modifier DTD .

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<PROJECT JOBJACKET="Project2 Job Jacket"
  JOBTICKET="Default Job Ticket 1:Project2"
  PROJECTNAME="lisl.qxp" XMLVERSION="8.0">
  <LAYOUT POINTSPERINCH="72">
    <ID NAME="Layout 1"/>
    <LAYER>
      <ID NAME="Default"/>
      <RGBCOLOR BLUE="90" GREEN="90" RED="90"/>
    </LAYER>
    <SPREAD>
      <ID UID="1"/>
      <PAGE MASTER="A-Master A" POSITION="RIGHTOFSPINE">
        <ID UID="1"/>
      </PAGE>
      <BOX BOXTYPE="CT_TEXT" COLOR="none">
        <ID NAME="Box5"/>
        <GEOMETRY>
          <POSITION>
            <TOP>56</TOP>
            <LEFT>56</LEFT>
            <BOTTOM>200</BOTTOM>
            <RIGHT>300</RIGHT>
          </POSITION>
        </GEOMETRY>
        <TEXT>
          <STORY>
            <LIST LISTSTYLE="New List" OPERATION="CREATE">
              </LIST>
            </STORY>
          </TEXT>
        </BOX>
      </SPREAD>
    </LAYOUT>
  </PROJECT>
```

`LIST` is a child of the `STORY` element. The value of `LISTSTYLE` will be the name of the list that had been created in QuarkXPress. When a project containing a list is deconstructed in XML, the XML will contain the text of the list, as well as a reference back to the `LIST`.

Working with anchored boxes

To create an anchored box within a text box, use a structure like the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<PROJECT JOBJACKET="Macintosh HD:Server:Project1 Job Jacket"
  JOBTICKET="Default Job Ticket 1:Project2"
  PROJECTNAME="anchor.qxp" XMLVERSION="8.0">
  <LAYOUT POINTSPERINCH="72">
    <ID NAME="Layout 1"></ID>
    <LAYER>
      <ID NAME="Default"/>
      <RGBCOLOR BLUE="90" GREEN="90" RED="90"/>
    </LAYER>
    <SPREAD>
      <ID UID="1"/>
      <PAGE MASTER="A-Master A" POSITION="RIGHTOFSPINE">
        <ID UID="1"/>
      </PAGE>
      <BOX BOXTYPE="CT_TEXT" COLOR="none">
        <ID NAME="Box5"/>
        <GEOMETRY LAYER="Default" PAGE="1">
          <POSITION>
            <TOP>36</TOP>
            <LEFT>36</LEFT>
            <BOTTOM>112</BOTTOM>
            <RIGHT>210</RIGHT>
          </POSITION>
        </GEOMETRY>
        <TEXT>
```

```

        <STORY>
        <PARAGRAPH MERGE="false" PARASTYLE="Normal">
        <RICHTEXT MERGE="false">Hello </RICHTEXT>
        <ANCHOREDBOXREF ALIGNWITHTEXT="BASELINE"
        OFFSET="0">Box7</ANCHOREDBOXREF>
        <RICHTEXT MERGE="false">, world</RICHTEXT>
        </PARAGRAPH>
        </STORY>
    </TEXT>
</BOX>
<BOX ANCHOREDIN="Box5" BOXTYPE="CT_TEXT" COLOR="none">
    <ID NAME="Box7" UID="7" />
    <GEOMETRY PAGE="1" SHAPE="SH_RECT">
        <POSITION>
            <TOP>0</TOP>
            <LEFT>0</LEFT>
            <BOTTOM>50</BOTTOM>
            <RIGHT>75</RIGHT>
        </POSITION>
    </GEOMETRY>
    <TEXT>
        <STORY>
        <PARAGRAPH MERGE="false" PARASTYLE="Normal">
        <RICHTEXT MERGE="false">anchored box
        </RICHTEXT>
        </PARAGRAPH>
        </STORY>
    </TEXT>
</BOX>
</SPREAD>
</LAYOUT>
</PROJECT>

```

Note that there are two **BOX** elements. One is the parent box that has the element **ANCHOREDBOXREF**, which points to the name of the anchored box. The anchored box itself has the attribute **ANCHOREDIN**, which points to the name of the parent box.

Working with placeholders

Placeholders allow a region of text in a QuarkXPress project to hold non-printing metadata. You can use placeholders to store information from other systems, or to provide information to third-party XTensions software or other tools that operate on QuarkXPress projects.

Placeholders are used by technologies within QuarkXPress, such as XML import. Modifier XT allows placeholder data to be added to a QuarkXPress project from your application, and the placeholder data can be read from a project using the `xml` namespace.

➡ Unless a third-party XTensions software module for QuarkXPress is created to manage the placeholders inserted by your application using Modifier XML, a user is not prohibited from deleting placeholders from within the QuarkXPress user interface. In fact, users are not alerted to the presence of placeholders through the QuarkXPress user interface. You can use APIs in the QuarkXPress Server XTensions Software XDK to allow a suitable user interface for managing the placeholders inserted by your application. Contact QuarkAlliance for details about the XTensions software developer program.

There are two types of placeholders supported in Modifier XML: Text placeholders and Text Node placeholders. Text placeholders can be placed around a run of text to identify particular metadata with that text content.

```

<PROJECT>
    <LAYOUT>
        <ID UID="1" />
        <SPREAD>
            <ID UID="1" />

```

```

<BOX>
  <ID NAME="name" />
  <TEXT>
    <STORY CLEAROLDTEXT="true">
      <PARAGRAPH PARASTYLE="Normal" />
      <RICHTEXT>This is text that</RICHTEXT>
      <TEXTPH NAME="SOURCE_UID" OWNER="1347639377">
        <RICHTEXT>has a placeholder</RICHTEXT>
      </TEXTPH>
    </STORY>
  </TEXT>
</BOX>
</SPREAD>
</LAYOUT>
</PROJECT>

```

When a Text placeholder spans multiple paragraphs, the `PARAGRAPH` and `RICHTEXT` hierarchy is flattened. A new paragraph can be started using an empty `PARAGRAPH` element.

Text Node placeholders can represent a hierarchical structure of meta-tagging around text. This can allow more complex meta-tagging of data placed into a QuarkXPress project. Also, it allows some structure to be preserved within the QuarkXPress project format.

```

<PROJECT>
  <LAYOUT>
    <ID UID="1" />
    <SPREAD>
      <ID UID="1" />
      <BOX>
        <ID NAME="name" />
        <TEXT>
          <STORY CLEAROLDTEXT="true">
            <PARAGRAPH PARACHAR="HARDRETURN" />
            <TEXTNODEPH NAME="ARTICLE" OWNER="1347639377">
              <TEXTPH NAME="HEADLINE">
                <PARAGRAPH PARASTYLE="Headline" />
                <RICHTEXT>Text</RICHTEXT>
              </TEXTPH>
              <TEXTPH NAME="STANDFIRST">
                <PARAGRAPH PARACHAR="HARDRETURN"
                  PARASTYLE="1st para" />
                <RICHTEXT>Text</RICHTEXT>
              </TEXTPH>
              <TEXTPH NAME="BODY">
                <PARAGRAPH PARACHAR="HARDRETURN"
                  PARASTYLE="Body" />
                <RICHTEXT>Text</RICHTEXT>
              </TEXTPH>
            <METADATA>
              <VALUE KEY="ARTICLE_ID">1145</VALUE>
              <VALUE KEY="ARTICLE_TYPE">Press Release</VALUE>
              <VALUE KEY="AUTHOR">M.Guthrie</VALUE>
            </METADATA>
          </TEXTNODEPH>
        </STORY>
      </TEXT>
    </BOX>
  </SPREAD>
</LAYOUT>
</PROJECT>

```

- ➡ To avoid hierarchy conflicts between the placeholder hierarchy and the paragraph hierarchy, the paragraph structure is flattened, which means that `PARAGRAPH` and `RICHTEXT` elements become siblings. In this case, the `PARACHAR` attribute is not applied, and the Modifier XML should include the `&hardReturn;` entity to represent paragraph break characters.
- ➡ The `OWNER` attribute of the `TEXTPH` and `TEXTNODEPH` elements refers to the ID of the XTensions software that is responsible for the placeholder. The `xml` namespace returns

all placeholders from all XTensions software. The default value for placeholders is “1347639377” (this is the XTension ID of PlaceholderSXT XT). If you want to create placeholders for your own XTensions software, use that XTensions software ID here.

Working with metadata

You can attach box-level metadata to a QuarkXPress project created from XML using the Modifier DTD. For example, if you import a picture from a content management system into a box, you can store the unique ID of that picture (and other information, such as the last-modified date) with the box containing that picture. When you deconstruct the project, you can read the metadata (for example, to track the usage of licensed pictures).

You can attach metadata to picture boxes, text boxes, tables, lines, and text paths. QuarkXPress Server metadata takes the form of key/value pairs. For more information, see the Modifier DTD.

To create a new box with metadata, use XML like the following. In this example, QuarkXPress Server creates a box named "box1" and associates *Asset*, *Date*, and *Password* key-value pairs with it.

```
<BOX OPERATION="CREATE" BOXTYPE="CT_TEXT">
  <ID NAME="box1" />
  <METADATA>
    <VALUE KEY="Asset" ><![CDATA[1234567890]]>
    </VALUE>
    <VALUE KEY="Date" ><![CDATA[08.06.07]]>
    </VALUE>
    <VALUE KEY="Password" ><![CDATA[Hello World]]>
    </VALUE>
  </METADATA>
  <GEOMETRY SHAPE="SH_RECT" PAGE="1">
    <POSITION>
      <TOP>5</TOP>
      <LEFT>5</LEFT>
      <BOTTOM>10</BOTTOM>
      <RIGHT>10</RIGHT>
    </POSITION>
  </GEOMETRY>
</BOX>
```

To delete metadata that is associated with a box, use XML like the following:

```
<BOX>
<ID NAME="BoxWithMetadata" />
<METADATA>
<VALUE KEY="Asset"></VALUE>
</METADATA>
</BOX>
```

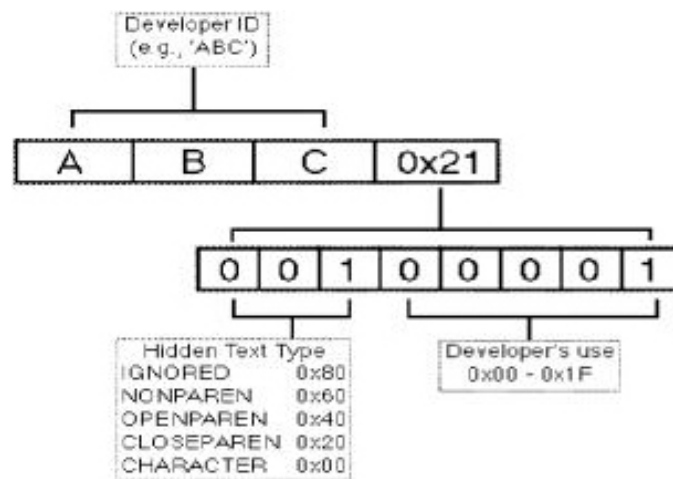
Working with hidden text

In QuarkXPress, hidden text is used by features which need to include information within the flow of text without that information being visible in its raw form, either on screen or at output. XTensions modules for QuarkXPress and QuarkXPress Server can use the data area in hidden text to store their custom data without changing the surrounding text. The custom data in the hidden text is simply invisible when opened in a copy of QuarkXPress that does not have the corresponding XTensions module. You can use hidden text in Modifier XML to interpret information added by a custom QuarkXPress XTension or to send instructions to a QuarkXPress Server XTensions during a *modify* or *construct* request.

Each piece of hidden text is identified by an *opcode*. An opcode is a four-digit hexadecimal number which specifies:

- The developer ID of the developer who created the XTensions module.
- The unique identifier of the hidden text type, as defined by the XTensions developer.
- The type of hidden text entry (`OPENPAREN`, `CLOSEPAREN`, `NONPAREN`, or `IGNORED`)

An opcode is constructed as follows:



The structure of a hidden text marker

In Modifier XML, hidden text is represented by the `HIDDEN` element. By default, hidden text is not output from the `xml` namespace. To output hidden text, specify the `opcode=` parameter in your request, like so:

<http://server:port/xml/projectname.qxp?opcode=51434450>

- ➡ This example URL outputs all of the hidden text inserted by the XTensions software with this ID. To avoid byte order issues when cross-platform rendering is enabled, the XTID is represented decimally, rather than with the usual `char[4]` representation.

If you specify `opcode=*`, QuarkXPress Server returns all hidden text in the XML output. If you want only specific opcodes for a particular developer ID, you must pass the developer ID + the unique ID (more often than not, 1) + the sum of types of paren you wish to see (for example, to see `OPENPAREN` and `CLOSEPAREN`, you would calculate $0x20 + 0x40 = 0x60$). For example, if you wanted to get only hidden text from the Custom Underline XTensions module, you would pass the request with the additional request parameter `opcode=51526B61`. The data you receive in the deconstructed hidden text is a base64 encoded version of the binary data which is stored in the hidden text. To interpret this, you must know the data structure which the XTension uses. Similarly, when you pass data back to an XTensions module through a `modify` or `construct` request, the data passed in the `<HIDDEN>` element must be base-64 encoded, and must be a valid structure in the format which the XTensions module is expecting.

You can use hidden text in different ways by using different hidden text types. For example, the Notes XTensions module uses the `OPENPAREN` and `CLOSEPAREN` hidden text type. This XTensions module lets users embed user comments at particular locations in text and view these comments can in a “sticky note” window. To accomplish this, the XTensions module embeds two hidden text markers in the text, and the text of

the note goes between them. The piece of hidden text at the start of the note has the type `OPENPAREN`, and the piece at the end has the type `CLOSEPAREN`.

```
<PARAGRAPH MERGE="false" PARACHAR="HARDRETURN"
  PARASTYLE="001-TEXT">
  <RICHTEXT MERGE="false">
    The population of Iceland is 500,000,000.
  </RICHTEXT>
  <HIDDEN DATALEN="100" OPCODE="51434450"
    OWNER="514344" TYPE="CHARACTERTYPE">
    <RICHTEXT LANGUAGE="USEnglish" MERGE="false">
      VGhpcyBpcyB0aGUgdGV4dCBvZiBhIENvcHlEZXRrIG5vdGU=
    </RICHTEXT>
  </HIDDEN>
  <RICHTEXT MERGE="false">
    Iceland is located north of the Equator.
  </RICHTEXT>
</PARAGRAPH>
```

The example XML extract above shows the output from the `xml` namespace of text that contains a note inserted by the Notes XT XTensions software. The note contains "This is the text of a CopyDesk note," which is represented as `VGhpcyBpcyB0aGUgdGV4dCBvZiBhIENvcHlEZXRrIG5vdGU=`. If this text is passed back to QuarkXPress Server in a `modify` or `construct` request, the hidden text inserted by the Notes XT XTensions software is preserved and can be read by the Notes XT XTensions software if the project is opened in QuarkXPress.

The Custom Underline XTensions module feature also uses this approach, but also stores the custom underline definitions in a binary data structure within the data of the `CLOSEPAREN` hidden text entry:

```
<PARAGRAPH MERGE="false" PARASTYLE="Normal">
  <RICHTEXT MERGE="false">
    The population of Iceland is 500,000,000.
  </RICHTEXT MERGE="false">regular text</RICHTEXT>
  <HIDDEN DATALEN="0" OPCODE="51526B41"
    OWNER="51526B" TYPE="OPENPAREN">
  </RICHTEXT MERGE="false">text with custom underline</RICHTEXT>
  <HIDDEN DATALEN="20" OPCODE="51526B21"
    OWNER="51526B" TYPE="CLOSEPAREN">
    <RICHTEXT MERGE="false">////wACAAAAAKj2AAIAABqAAU=</RICHTEXT>
  </HIDDEN>
  <RICHTEXT MERGE="false">regular text</RICHTEXT>
</PARAGRAPH>
```

The data within the `RICHTEXT` element inside a `HIDDEN` element is a Base 64-encoded representation of the raw data that is stored within the hidden text. Considering that hidden text in QuarkXPress can contain any type of data, and the structure of that data is specified by the XTensions software that creates it, this method ensures that the data can be safely represented in XML. Also, this data can be converted back into the same raw data structure so that it can be read by the destination XTensions software. If the content is edited, the destination XTensions software may not be able to interpret it. Only XTensions software developers should attempt to interpret data from their own XTensions software.

Using interactivity

The `<INTERACTIVITY>` element describes an asset used as an interactive element for a format such as App Studio and ePUB.

The specific schema for an interactive element is determined by the XTensions module that owns that element, so such schemas are not defined here. The best way to create or modify an `<INTERACTIVITY>` element is to deconstruct it and then use the deconstructed XML as a template. Below are some examples of App Studio interactivity.

Button interactivity

Below is an example of App Studio **Button** interactivity.

```
<ID UID="8"/>
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="Button 2" UID="36"/>
  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841" TYPE="Button">

    <Settings>
      <settings>
        <actions>
          <action>
            <type>gotofirstpage</type>
            <name/>
          </action>
        </actions>
      </settings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
  </INTERACTIVITY>
</BOX>
```

Scroll Zone interactivity

Below is an example of App Studio **Scroll Zone** interactivity.

```
<COMPOSITIONZONE LAYOUTREF="Scroll" OPERATION="CREATE">
  <ID NAME="ScrollZone 1" UID="58"/>
  <GEOMETRY CORNERRADIUS="0" CORNERSTYLE="RECTANGLE" LAYER="Default" PAGE="7"
  SHAPE="SH_RECT" SKEW="0">
    <POSITION LOCKPROPORTIONS="false">
      <TOP>216</TOP>
      <LEFT>149</LEFT>
      <BOTTOM>668</BOTTOM>
      <RIGHT>630</RIGHT>
    </POSITION>
    <SUPPRESSOUTPUT>false</SUPPRESSOUTPUT>
    <RUNAROUND TYPE="NONE"/>
  </GEOMETRY>
  <FRAME COLOR="Black" GAPCOLOR="none" OPACITY="100%" SHADE="100%"
  STYLE="Solid" WIDTH="0"/>
  <PAGEREF ANGLE="0" NUMBER="1" OFFSETACROSS="0" OFFSETDOWN="0" SCALE="100%"/>

  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841"
  TYPE="Scrollable Content">
    <Settings>
      <scrollzonesettings>
        <defaultposition>1</defaultposition>
        <fadeatends>true<fadedistance>60</fadedistance>
      </fadeatends>
      <showscrollbar>true</showscrollbar>
      <automaticarrows>false</automaticarrows>
      <loop>false</loop>
      <docuid>4</docuid>
      <scrollldirection>1</scrollldirection>
    </scrollzonesettings>
  </Settings>
  <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
</INTERACTIVITY>
</COMPOSITIONZONE>
```

➡ <scrollldirection>1</scrollldirection> Applies the Horizontal Scrolling

➡ <scrollldirection>2</scrollldirection> Applies the Vertical Scrolling

Slideshow interactivity

Below is an example of App Studio **Slideshow** interactivity.

```
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="Slideshow 1" UID="18"/>
  <PICTURE ANGLE="0" DPI="144" FLIPHORIZONTAL="false" FLIPVERTICAL="false"
  FULLRES="false" MASK="Composite" OFFSETACROSS="0" OFFSETDOWN="0"
  OPACITY="100%" SCALEACROSS="100%" SCALEDOWN="100%" SKEW="0"
  SUPRESSPICT="false">
    <CLIPPING TYPE="ITEM"/>
```

```

</PICTURE>
<CONTENT PICTURECONTENTLOCK="true" UID="9">Images\Slideshow01.jpg</CONTENT>

<INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841"
TYPE="Slideshow">
  <Settings>
    <slideshowsettings>
      <allowfullscreen>true</allowfullscreen>
      <allowinteraction>true</allowinteraction>
      <uncroppedinfullscreen>false</uncroppedinfullscreen>
      <autoplay>false</autoplay>
      <sourcesettings>
        <sourcetype>1</sourcetype>
      </sourcesettings>
      <animate>true<animationduration>6.000000</animationduration>
      </animate>
      <slides>
        <slide slidetype="imagetype">
          <imagepath>Images\slideshow1.jpg</imagepath>
          <animatesettings>
            <startcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
            <endcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
          </animatesettings>
          <actions/>
        </slide>
        <slide slidetype="imagetype">
          <imagepath>Images\slideshow2.jpg</imagepath>
          <animatesettings>
            <startcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
            <endcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
          </animatesettings>
          <actions/>
        </slide>
        <slide slidetype="imagetype">
          <imagepath>Images\slideshow3.jpg</imagepath>
          <animatesettings>
            <startcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
            <endcrop angle="0" xoffset="0" xscale="65536" yoffset="0"
yscale="65536"/>
          </animatesettings>
          <actions/>
        </slide>
      </slides>
    </slideshowsettings>
  </Settings>
  <DATAPROVIDER DATAPROVIDERXTID="1131430225" />
</INTERACTIVITY>
</BOX>

```

Video interactivity

Below is an example of App Studio Video interactivity.

```

<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="Video 1" UID="21"/>
  <PICTURE/>
  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841" TYPE="Video">

    <Settings>
      <videosettings>
        <autoplay>false</autoplay>
        <fullscreenonly>false</fullscreenonly>
        <loop>false</loop>
        <hidecontroller>false</hidecontroller>
        <sourcesettings>
          <sourcetype>1</sourcetype>
          <sourcepath>Video\abc.mp4</sourcepath>
        </sourcesettings>
        <usevideoframe>false</usevideoframe>
        <useofflineimage>false</useofflineimage>
      </videosettings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225" />
  </INTERACTIVITY>
</BOX>

```

Audio interactivity

Below is an example of App Studio **Audio** interactivity.

```
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="Audio 1" UID="24"/>
  <PICTURE/>
  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841" TYPE="Audio">

    <Settings>
      <audiosettings>
        <autoplay>>false</autoplay>
        <loop>>false</loop>
        <hidecontroller>>false</hidecontroller>
        <stopatpageturn>>true</stopatpageturn>
        <stopatarticleend>>true</stopatarticleend>
        <sourcesettings>
          <sourcetype>l</sourcetype>
          <sourcepath>Audio\abc.mp3</sourcepath>
        </sourcesettings>
        <useofflineimage>>false</useofflineimage>
      </audiosettings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
  </INTERACTIVITY>
</BOX>
```

Go to URL interactivity

Below is an example of App Studio **Go to URL** interactivity.

```
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="Button 1" UID="6"/>
  <PICTURE/>
  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841" TYPE="Button">

    <Settings>
      <settings>
        <actions>
          <action>
            <type>gotourl</type>
            <name/>
            <gotourl>http://www.google.com</gotourl>
            <switchtobrowser>>false</switchtobrowser>
          </action>
        </actions>
      </settings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
  </INTERACTIVITY>
</BOX>
```

Web View interactivity

Below is an example of App Studio **Web View** interactivity.

```
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="WebView 1" UID="27"/>
  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841" TYPE="Embedded HTML">
    <Settings>
      <webviewsettings>
        <allowuserinteraction>>true</allowuserinteraction>
        <scrollable>>false</scrollable>
        <allowzoom>>false</allowzoom>
        <sourcesettings>
          <sourcetype>2</sourcetype>
          <sourcepath>http://www.gsmarena.com</sourcepath>
        </sourcesettings>
        <useofflineimage>>true<offlineimagepath/>
      </webviewsettings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
  </INTERACTIVITY>
</BOX>
```

Picture Zoom interactivity

Below is an example of App Studio **Picture Zoom** interactivity.

```
<BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
  <ID NAME="InteractivePicture 1" UID="39"/>
  <PICTURE ANGLE="0" DPI="144" FLIPHORIZONTAL="false" FLIPVERTICAL="false"
FULLRES="false" MASK="Composite" OFFSETACROSS="0" OFFSETDOWN="27.233"
OPACITY="100%" SCALEACROSS="83.2%" SCALEDOWN="83.2%" SKEW="0"
SUPPRESSPICT="false">
    <CLIPPING TYPE="ITEM"/>
  </PICTURE>
  <CONTENT PICTURECONTENTLOCK="true" UID="9">Images\Slideshow01.jpg</CONTENT>

  <INTERACTIVITY AUTHORXTID="1131430225" OWNERXTID="1129333841"
TYPE="Full-screen Image">
    <Settings>
      <picturezoomsettings>
        <allowfullscreen>true</allowfullscreen>
        <allowpinchzoom>false</allowpinchzoom>
        <allowpanning>true</allowpanning>
        <animatepanandzoom>false</animatepanandzoom>
        <zoomsetting>0</zoomsetting>
      </picturezoomsettings>
    </Settings>
    <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
  </INTERACTIVITY>
</BOX>
```

360 degree interactivity

Below is an example of App Studio **360 degree** interactivity.

```
<ID UID="8"/>
  <BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
    <ID NAME="360Degree 1" UID="31"/>
    <PICTURE/>
    <INTERACTIVITY AUTHORXTID="1131430225" NAME="360° Image 1"
OWNERXTID="1129333841" TYPE="360 degree Image">
      <SettingsInitiallyHidden="False">
        <image360settings>
          <autoplay>true<spincount>2</spincount></autoplay>
          <allowinteraction>true</allowinteraction>
          <frames/>
        </image360settings>
      </Settings>
      <DATAPROVIDER DATAPROVIDERXTID="1131430225"/>
    </INTERACTIVITY>
  </BOX>
```

Animation interactivity

Below is an example of App Studio **Animation** interactivity.

```
<ID UID="8"/>
  <BOX BLENDSTYLE="SOLID" BOXTYPE="CT_PICT" COLOR="none">
    <ID NAME="animation 1" UID="32"/>
    <PICTURE/>
    <INTERACTIVITY AUTHORXTID="1131430225" NAME="Animation 1"
OWNERXTID="1129333841" TYPE="Animation">
      <Settings InitiallyHidden="False">
        <animationsettings>
          <animationtype>1</animationtype>
          <autoplay>true</autoplay>
          <allowinteraction>true</allowinteraction>
          <initiallyhidden>false</initiallyhidden>
          <loop>false<loopcount>1</loopcount></loop>
          <duration>5</duration>
          <delay>0</delay>
          <timingfunc>
            <functype>0</functype>
            <func/>
          </timingfunc>
          <pathname/>
          <direction>0</direction>
        </endsettings>
        <hidden>false</hidden>
        <opacity>65536</opacity>
        <angle>0</angle>
        <xscale>65536</xscale>
      </Settings>
    </INTERACTIVITY>
  </BOX>
```

```
<yscale>65536</yscale>
<scaleproportionally>true</scaleproportionally>
</endsettings>
</animationsettings>
</Settings>
<DATA PROVIDER DATAPROVIDERXTID="1131430225" />
</INTERACTIVITY>
</BOX>
```

Specifying colors

When specifying colors, you can use named Web colors such as "Silver" and "MediumSlateBlue" by name. You can also use RGB colors by specifying their hexadecimal values. For example:

```
<RICHTEXT COLOR="Teal" MERGE="false" BOLD="true">This text is
teal.</RICHTEXT>
<FRAME COLOR="#006699" GAPCOLOR="#996600" WIDTH="7" />
```

Creating and using hyperlinks

There are three types of hyperlink:

- Web ([WWWURL](#)).
- Anchor ([ANCHOR](#)). You must define Anchor hyperlinks at the `<LAYOUT>` level.
- Page ([PAGE](#)). You must define Anchor hyperlinks at the `<LAYOUT>` level.

Web hyperlinks

You must define Web hyperlinks at the `<PROJECT>` level. For example, to create a Web hyperlink named `Quark-dot-com`, you could add the following as a child of the `<PROJECT>` element:

```
<HYPERLINK HLTYPE="WWWURL" NAME="Quark-dot-com"
TARGET="http://www.quark.com" />
```

To add a Web hyperlink to a layout, add `HYPERLINKREF` and `HLTYPE` attributes to a `<BOX>` or `<RICHTEXT>` element. For example, to use the `Quark-dot-com` hyperlink defined above, you could do something like this:

```
<RICHTEXT>this is a hyperlink to </RICHTEXT>
<RICHTEXT COLOR="Cyan" UNDERLINE="true" HYPERLINKREF="Quark-dot-com"
HLTYPE="WWWURL">quark.com</RICHTEXT>
```

➡ You can use a Web hyperlink *without* creating it at the `<PROJECT>` level, but this is not the preferred method.

Anchor hyperlinks

To indicate the target of an Anchor hyperlink, use a `<RICHTEXT>` element like this:

```
<RICHTEXT HLANCHORREF="MyAnchor" />
```

To make sure the Anchor hyperlink works correctly, add something like this to the `<LAYOUT>` element:

```
<HYPERLINK HLTYPE="ANCHOR" TARGET="#somewhere" />
```

To link to this Anchor hyperlink, use something like this:

```
<RICHTEXT HLTYPE="ANCHOR" HYPERLINKREF="#somewhere">link</RICHTEXT>
```

➡ You can use an Anchor hyperlink *without* creating it at the `<PROJECT>` level, but this is not the preferred method.

Page hyperlinks

To make sure a Page hyperlink works correctly, add something like this to the `<LAYOUT>` element:

```
<HYPERLINK HLTYPE="PAGE" NAME="Page 2" TARGET="2" />
```

To link to this Page hyperlink, use something like this:

```
<RICHTEXT HLTYPE="PAGE" HYPERLINKREF="Page 2" >Page2</RICHTEXT>
```

➡ You can use a Page hyperlink *without* creating it at the `<PROJECT>` level, but this is not the preferred method.

Using the Streaming Document Provider

The Streaming Document Provider feature allows all of the assets required for a transaction to be provided as part of a multi-part HTTP request. Assets that can be streamed include:

- QuarkXPress templates.
- Picture files used in the template.
- Modifier XML.
- Picture and text files used in the Modifier XML.
- Assets used by digital publishing enrichments.

➡ The Streaming Document Provider feature also supports `keepdocopen` requests.

QuarkXPress Server searches for assets used in a call in the following order:

- 1 In the HTTP request.
- 2 At the supplied file path (if specified).
- 3 In the document pool.

If QuarkXPress Server does not find the required assets at any of these locations:

- If the image is being changed by the request, a "File not found" error occurs.
- If the image is not being changed by the request, it renders at preview resolution.

To use this feature, include a part in the HTTP request that has the same name as the asset to be streamed. For example:

```
<html>
  <body>
    <form enctype="multipart/form-data"
      action="http://localhost:8082/pdf/pic.qxp" method="post">
      <input type="file" name="picture.jpg"/><br/>
      <input type="file" name="pic.qxp"/><br/>
      <input type="hidden" name="modify" value="<PROJECT><LAYOUT>
        <ID UID=111/><BOX><ID NAME='picbox' /><CONTENT>picture.jpg
        </CONTENT></BOX></LAYOUT></ PROJECT>" />
      <input type="submit"/>
    </form>
  </body>
</html>
```

Using administrative request handlers

Administrative request handlers let you change the behavior of QuarkXPress Server. The built-in administrative request handlers are described in the topics below

- ➔ You can add your own request handlers. During the `DDSSETUPCBCODE` callback, QuarkXPress Server XTensions software registers itself as a request handler via `AddCustomRequestHandler`, using the QuarkXPress Server XTensions API. The first parameter of this API is a pointer to a request handler function implemented in QuarkXPress Server XTensions software. The second parameter is a namespace string that identifies the request. When a user submits a request that has the same namespace string as a suffix to the request URL, QuarkXPress Server calls the request handler function with all the user-specified parameters in the `ServerRequest` structure. The request handler function then processes the request and submits the reply in a `ServerReply` structure, which QuarkXPress Server communicates back to the user agent.

Addfile

Use the `addfile` request handler to put a document or image file in the document pool. An `addfile` request is always a POST request because it uses binary content.

If you send an `addfile` request to QuarkXPress Server Manager using HTTP or the Web services interface while the common doc pool switch is set to off in the QuarkXPress Server Manager client, the file is uploaded to all registered QuarkXPress Server instances. If the common doc pool is enabled, the file can be uploaded to any one registered QuarkXPress server instance.

Namespace	<code>addfile</code>		
Parameters	<code>uploadfile</code>	Binary file or MIME-type file	Contains the actual binary content of the file to be uploaded. This can be a QuarkXPress file, a Word file, a text file, or a file with a MIME-type such as EPS, JPEG, PNG, or PICT.
Response	The message "File upload completed."		
Alerts	The file system document pool is not enabled.	HTTP Error #404 This alert displays if you attempt to upload a document when the file system document pool is not enabled. <i>What to do:</i> Check Enable File System Document Pool in the Server Configuration dialog box.	
	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.	
	Cannot find required volume or folder	HTTP Error #500 QuarkXPress Server Error #120 This alert displays if you attempt to upload a document that is in a subfolder that does not exist in the document pool while Generate Hierarchy on Document Upload is unchecked in the Server Configuration dialog box. <i>What to do:</i> Check Generate Hierarchy on Document Upload in the Server Configuration dialog box.	

Logs	See Understanding logging
Example GET URL	<p>To post a binary file in the root folder:</p> <pre>http://localhost:8080/addfile/abc.qxp</pre> <p>To post a binary file in a subfolder:</p> <pre>http://localhost:8080/addfile/sub1/abc.qxp</pre>
Example, object model	<p>Request object name: AddFileRequest</p> <pre>// STEP 1 (COMMON FOR ALL REQUESTS): com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; Stream theStream = uplTheFile.PostedFile.InputStream; long length = theStream.Length; Byte[] Buffer = new Byte[length]; const int BUFFER_SIZE = 10000; int nBytesRead = 0,iCount = 0; long remainingBytes = length - BUFFER_SIZE; if(remainingBytes > BUFFER_SIZE) { nBytesRead = theStream.Read(Buffer,iCount * BUFFER_SIZE,BUFFER_SIZE); while(0 != nBytesRead) { iCount++; remainingBytes = length - (iCount * BUFFER_SIZE); if(remainingBytes > BUFFER_SIZE) nBytesRead = theStream.Read(Buffer,iCount * BUFFER_SIZE,BUFFER_SIZE); else { nBytesRead = theStream.Read(Buffer,iCount * BUFFER_SIZE,(int)remainingBytes); break; } } } else nBytesRead = theStream.Read(Buffer,iCount * BUFFER_SIZE,(int)remainingBytes); AddFileRequest addfilereq = new AddFileRequest(); addfilereq.fileData = Buffer; rc.request = addfilereq; // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); QContentData qc = svc.processRequest(rc);</pre> <p>The object model uses SOAP to transfer data, and SOAP encoding is not the most efficient way to transfer binary data. If you have to add a file using QuarkXPress Server Manager, the best way is to use a POST request in a QuarkXPress Server Manager URL. You might use QuarkXPress Manager to add a file if you wanted to add the file to all registered QuarkXPress Server instances at one time (assuming the instances are not sharing a single document pool).</p> <p>For more information, see the "AddFileRequest" .NET, Java, and Objective-C samples in the QuarkXPress Server Manager SDK samples.</p>
Notes	<p>The following is a sample of a POST request HTML form.</p> <pre><HTML> <HEAD><TITLE>Test Addfile</TITLE></HEAD> <BODY> File will always be uploaded with name new.qxp <FORM ACTION="http://localhost:8080/addfile/new.qxp" METHOD = "post" ENCTYPE="multipart/form-data"></pre>


```
Please select the file you want to upload:
<INPUT TYPE=file NAME="uploadFile"><br><br>
<INPUT TYPE=submit VALUE="Submit">
</FORM>
</BODY>
</HTML>
```

The following example demonstrates how to use an HTML form to create a POST request that uses the `addfile` request handler. The form looks like this:

To use this form:

- 1 Enter the name or IP address of the computer on which QuarkXPress Server is running.
- 2 Enter the port number in the port number field.
- 3 Enter the file name along with the extension in the file field. Click **Browse** if you need to find the file on your computer. The file will be uploaded with this name.
- 4 Click **Submit**.

The file uploads to the document pool of the specified server. After the file is successfully uploaded, the "File upload completed." alert is displayed.

For example, assume you want to upload a file named "Faces.pdf" (located at the root of the C drive) to an instance of QuarkXPress Server running at IP address 202.201.92.34 and port 8080, and that you want the name of the uploaded file on the server to be "NewFaces.pdf." Here's how you would accomplish this in the HTML form:

The HTML code to generate the above sample file is as follows:

```
<HTML>
<HEAD>
  <TITLE>Test Addfile</TITLE>
  <SCRIPT LANGUAGE="JavaScript">
    function UploadDocument() {
      var URL;
      URL = "http://" + UploadForm.MachineIP.value + ":" +
        UploadForm.Port.value + "/addfile/" + UploadForm.NewName.value;
      UploadForm.action = URL;
    }
  </SCRIPT>
</HEAD>
<BODY>
  <FORM ID="UploadForm" METHOD = "post" ENCTYPE="multipart/form-data"
```

```

        onSubmit="UploadDocument()">
Please enter the name or IP of machine where QuarkXPress Server is running:
<INPUT TYPE="TextBox" NAME="MachineIP"><br><br>
Please enter the port number on which QuarkXPress Server is running:
<INPUT TYPE="TextBox" NAME="Port"><br><br>
Please enter the new name (along with extension) with which file will be
uploaded:
<INPUT TYPE="TextBox" NAME="NewName"><br><br>
Please select the file you want to upload: <INPUT TYPE=file
NAME="uploadFile">
<br><br>
<INPUT TYPE=submit VALUE="Submit">
</FORM>
</BODY>
</HTML>

```

The information entered in the form is created with the following tags:

```

<FORM ID="UploadForm" METHOD = "post"
  ENCTYPE="multipart/form-data" onSubmit="UploadDocument()">
  Please enter the name or IP of machine where QuarkXPress Server is running:
  <INPUT TYPE="TextBox" NAME="MachineIP"><br><br>
  Please enter the port number on which QuarkXPress Server is running:
  <INPUT TYPE="TextBox" NAME="Port"><br><br>
  Please enter the new name (along with extension) with which file will be
  uploaded:
  <INPUT TYPE="TextBox" NAME="NewName"><br><br>
  Please select the file you want to upload:
  <INPUT TYPE=file NAME="uploadFile"><br><br>
  <INPUT TYPE=submit VALUE="Submit">
</FORM>

```

The **FORM** tag specifies that the method of the request is POST. This request is a "Multipart/form-data" request. When you submit the form, the `UploadDocument()` function is called.

Use the **INPUT** tag to create the text box and the **Browse** button.

- **<INPUT TYPE="TextBox">**: To create text boxes only.
- **<INPUT TYPE=file>**: To create a combination of text box and the **Browse** button in the form. When you click **Browse** and choose any file, the file path of the selected file displays in the text box linked with the **Browse** button.

You can use the **INPUT** tag to create the **Submit** button: `<INPUT TYPE=submit VALUE="Submit">`

When you click Submit, the `UploadDocument()` function is called. This function is defined inside a script tag. It combines the information that has been entered in the form to create a URL for the `addfile` request, then sends this URL to QuarkXPress Server for processing. The code for the `UploadDocument()` function is as follows:

```

<SCRIPT LANGUAGE="JavaScript">
  function UploadDocument() {
    var URL;
    URL = "http://" + UploadForm.MachineIP.value + ":"
      + UploadForm.Port.value + "/addfile/" + UploadForm.NewName.value;
    UploadForm.action = URL;
  }
</SCRIPT>

```

Delete

The `delete` request handler removes a specified document or folder from the document pool.

If you send a `delete` request to QuarkXPress Server Manager using HTTP or the Web services interface while the common doc pool switch is set to off in the QuarkXPress Server Manager client, the file or folder is uploaded to all registered QuarkXPress Server instances. If the common doc pool is enabled, the file or folder can be deleted from any one registered QuarkXPress server instance.

Namespace	<code>delete</code>	
Response	The message "File deleted successfully."	
Alerts	File not found	HTTP Error #404 QuarkXPress Server Error #-43 This alert displays if you try to delete a file that does not exist in the document pool.
	Folder cannot be deleted. It may still contain files.	HTTP Error #405 This alert displays if you try to delete a folder that is not empty. <i>What to do:</i> First, delete all the files in the folder, and then resubmit the delete request to delete the folder.
	I/O error trying to read or write to disk.	HTTP Error #500 QuarkXPress Server Error #-36 This alert displays if you try to delete an open file.
	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/delete/sample.qxp</code>	
Example, object model	<pre> Request object name: DeleteRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new DeleteRequest(); // Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>	

Evaluate

The `evaluate` request handler evaluates the document you specify using a rule set in the Job Jackets file you specify, and returns the results as an XML stream.

By default, this request handler evaluates the following rules:

- Platform mismatch
- Missing fonts
- Missing pictures

These rules are defined in the "Default Job Jacket.xml" file, which is generated by QuarkXPress Server in the preferences folder.

You can specify multiple rule sets in a comma-separated list.

To specify which layouts to evaluate, use the `layout` parameter.

To evaluate using an external Job Jackets file, use the `jobjacket` parameter. For example:

`jobjacket=customjj.xml`

Namespace	<code>evaluate</code>	
Response	The default Job Jackets file.	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/evaluate/MyProject.qxp?ruleset="MyRuleSet"</code>	
Example, object model	<pre>Request object name: EvaluateRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new EvaluateRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getdocinfo</code> parameter request.	

Exportprefsasjj

The `exportprefsasjj` request handler returns the default Job Jackets file as an XML stream. If you add `?download=true`, the Job Jackets file is downloaded to the Web browser's default download location as an XML file.

Namespace	<code>exportprefsasjj</code>	
Response	The default Job Jackets file.	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	

Example GET URL	<code>http://localhost:8080/exportprefsasjj</code>
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getdocinfo</code> parameter request.

Fileinfo

The `fileinfo` request handler returns XML that contains the creation date, modification date, and file size of a document.

Namespace	<code>fileinfo</code>	
Parameters	<code>action=get</code>	Lets you retrieve the creation date of a file in UTC format. For example: <code>http://localhost:8080/fileinfo/sample.qxd?action=get&creationdate</code>
	<code>action=set</code>	Lets you set the creation and modification dates of a file in UTC format. For example: <code>http://localhost:8080/fileinfo/sample.qxp?action=set&creationdate=10-06-2007 12:12:37 UTC&modificationdate=10-06-2007 12:12:37 UTC</code>
Response	The following XML code displays the creation date, modification date, and size of the document. <pre><?xml version="1.0" encoding="UTF-8" ?> <FILEINFO> <CREATIONDATE>08-01-2004 06:14:07 UTC </CREATIONDATE> <MODIFICATIONDATE>08-01-2004 11:56:56 UTC </MODIFICATIONDATE> <SIZE>1519616</SIZE> </FILEINFO></pre>	
Alerts	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/fileinfo/sample.qxp</code>	
Example, object model	Request object name: <code>FileInfoRequest</code> <pre>com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new FileInfoRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>fileinfo</code> parameter request.	

Flush

The `flush` request handler flushes a document from the cache.

Namespace	flush	
Response	The message "CACHE FLUSH COMPLETED."	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/flush/sample.qxp	
Example, object model	<p>Request object name: FlushRequest</p> <pre> sdk.QRequestContext rc = new sdk.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new FlushRequest(); //Create the service and call it with QRequestContext object RequestServiceService svc = new RequestServiceService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a flush parameter request.	

Flushall

Flushes all documents from the cache. When this request is sent to Server Manager using either HTTP or Web services, the cache of all registered QuarkXPress servers is flushed.

Namespace	flushall	
Response	The message "CACHE FLUSH COMPLETED."	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/flushall	
Example, object model	<p>Request object name: FlushAllRequest</p> <pre> sdk.QRequestContext rc = new sdk.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new FlushAllRequest(); //Create the service and call it with QRequestContext object RequestServiceService svc = new RequestServiceService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>	

Notes	<p>If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>flushall</code> parameter request.</p> <p>When you issue a <code>flushall</code> request, the memory usage value in the status monitor becomes zero.</p>
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Getdocinfo

The `getdocinfo` request handler returns XML information about a QuarkXPress project that is in the document pool or has been supplied as part of a multipart HTTP request. The returned information includes the project version, the platform on which it was saved, the number of layers, page properties, the length and width of the page in points, the number of pages, the names of imported picture files, the names of any required fonts, the names and IDs of any relevant XTensions modules, and (for documents saved in QuarkXPress 6.0 or later) information about synchronized content.

Namespace	<code>getdocinfo</code>	
Response	<p>The XML response looks like the following:</p> <pre><? xml version="1.0" encoding="UTF-8" ?> <PROJINFO> <PLATFORM>WINDOWS</PLATFORM> <VERSION>7.0</VERSION> <NAME>Sample.qxp</NAME> <REQUIREDXTENSIONS /> <FONTUSAGE> <NAME>ArialMT</NAME> </FONTUSAGE> <LAYOUT> <NAME>Layout 1</NAME> <TYPE>Print</TYPE> <PAGES>4</PAGES> <PAGEPROPERTIES> <WIDTH>432</WIDTH> <LENGTH>756</LENGTH> </PAGEPROPERTIES> <LAYERS> <LAYER> <NAME>Default</NAME> </LAYER> </LAYERS> <HIRESGRAPHICS> <GRAPHICLINK> <FILEPATH>E:\pics\Jpeg\Autumn.jpg</FILEPATH> <USAGE PAGE="1" UNIQUEID="8" X="126.003" Y="116.967" /> </GRAPHICLINK> </HIRESGRAPHICS> </LAYOUT> </PROJINFO></pre>	
Alerts	<p>Incorrect administration realm user name and password.</p>	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	

Example GET URL	<code>http://localhost:8080/getdocinfo/sample.qxp</code>
Example, object model	<pre> Request object name: GetDocInfoRequest sdk.QRequestContext rc = new sdk.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new GetDocInfoRequest(); //Create the service and call it with QRequestContext object RequestServiceService svc = new RequestServiceService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getdocinfo</code> parameter request.

Getdocpoollist

The `getdocpoollist` request handler returns an XML description of all files and folders in the local document pool, including name, size, type, modification date and time, and absolute and relative path.

Namespace	<code>getdocpoollist</code>	
Response	XML description of files and folders in the local document pool.	
Parameters	<code>directory</code>	Use this parameter to get information about a particular directory in the document pool. For example: <code>http://server:port/getdocpoollist?directory=images</code>
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/getdocpoollist</code>	
Example, object model	Request object name: <code>GetDocPoolListRequest</code>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>fileinfo</code> parameter request.	

Getlogs

The `getlogs` request handler returns the current preference settings for QuarkXPress Server in XML format. If you add `?download=true`, the logs are returned in a .zip file.

Namespace	<code>getlogs</code>
Response	The QuarkXPress Server transaction log.

Alerts	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/getlogs	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a getprefs parameter request.	

Getprefs

The [getprefs](#) request handler returns the current preference settings for QuarkXPress Server in XML format.

Namespace	getprefs	
Response	An XML description of QuarkXPress Server preference settings.	
Alerts	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/getprefs	
Example, object model	<pre>// Create the service and call getPreferences method RequestService requestService = new RequestServiceStub(); Preferences preferences= requestService.getPreferences("[host]", [port], "[username]", "[port]");</pre>	
Notes	<p>The getprefs request handler returns preference settings for server configuration and Status Monitor. It does not return other preference settings, such as the settings for Deconstruct and PDF workflow.</p> <p>If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a getprefs parameter request.</p>	

Getprocessid

The [getprocessid](#) request handler returns the process IDs of the master QuarkXPress Server instance and of all subrender processes running on the computer.

Namespace	getprocessid
Response	<p>An XML description of the process IDs of the master QuarkXPress Server instance and of all subrender processes running on the computer. For example:</p> <pre><PROCESSID> <MASTER> <ID>3936</ID> <STATUS>BUSY</STATUS> </MASTER> <SUBRENDERERS> <SUBRENDERER></pre>

	<pre><ID>1736</ID> <STATUS>BUSY</STATUS> </SUBRENDERER> </SUBRENDERERS> </PROCESSID></pre>
Example GET URL	<code>http://localhost:8080/getprocessid</code>

Getprojinfo

The `getprojinfo` request handler returns XML information about a QuarkXPress project that is in the document pool or has been supplied as part of a multipart HTTP request. The returned information identifies the operating system, the version of QuarkXPress in which the project was created, the size of the project, the page properties for the project's layouts, and information about named boxes and synchronized text.

Namespace	<code>getprojinfo</code>	
Response	<p>The XML response looks like the following:</p> <pre><? xml version="1.0" encoding="UTF-8" ?> <PROJINFO> <PLATFORM>WINDOWS</PLATFORM> <VERSION>6.0</VERSION> <NAME>Sample.qxp</NAME> <SIZE>1519616 Bytes</SIZE> <SYNCHRONIZED/> <LAYOUT> <NAME>Layout 1</NAME> <TYPE>Print</TYPE> <PAGES>4</PAGES> <PAGEPROPERTIES> <WIDTH>432</WIDTH> <LENGTH>756</LENGTH> </PAGEPROPERTIES> <NAMEDBOX> <BOX>box2</BOX> <BOX>box1</BOX> </NAMEDBOX> </LAYOUT> </PROJINFO></pre>	
Alerts	The <code>getprojinfo</code> command can only be used for QuarkXPress 6 documents and later.	<p>HTTP Error #500</p> <p>This alert displays if you specify a QuarkXPress 4.0 or 5.0 document.</p>
	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/getprojinfo/sample.qxp</code>	
Example, object model	<p>Request object name: <code>GetProjectInfoRequest</code></p> <pre>sdk.QRequestContext rc = new sdk.QRequestContext();</pre>	

	<pre> if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new GetProjectInfoRequest(); //Create the service and call it with QRequestContext object RequestServiceService svc = new RequestServiceService(); QContentData qc = svc.processRequest(rc); </pre>
Notes	<p>The <code>getprojinfo</code> parameter only works with projects saved in QuarkXPress 6.0 and later.</p> <p>If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getprojinfo</code> parameter request.</p>

Getrendererprefs

The `getrendererprefs` request handler returns the current preference settings for QuarkXPress Server in XML format.

Namespace	<code>getrendererprefs</code>	
Response	An XML description of QuarkXPress Server renderer preference settings.	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/getrendererprefs	
Notes	<p>The schema for the returned XML stream can be found at <code>webapps/ROOT/QuarkXPress Server Renderer/QXPSRendererPreferences.xsd</code>.</p> <p>If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getrendererprefs</code> parameter request.</p>	

Getserverinfo

The `getserverinfo` request handler returns XML information about QuarkXPress Server. The returned information includes the platform on which QuarkXPress Server is running, the version of QuarkXPress Server, a list of installed fonts and server XTensions modules, the relevant XTensions server XTensions module IDs, the startup parameters, and the output styles with which the server is running. Disabled server XTensions modules are not listed in the response.

Namespace	<code>getserverinfo</code>	
Response	XML containing information about this QuarkXPress server instance.	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p>What to do: Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	

Example GET URL	<code>http://localhost:8080/getserverinfo</code>
Example, object model	<pre> Request object name: GetServerInfoRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new GetServerInfoRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getserverinfo</code> parameter request.

Jobjacket

The `jobjacket` request handler returns a Job Jackets file containing copies of all of the resources in the specified project. This is similar to what happens when you use `jjname=` in a modifier XML request, but it returns the Job Jackets file directly, rather than writing it to the document pool.

Namespace	<code>jobjacket</code>	
Response	A Job Jackets file containing copies of all of the resources in the specified project.	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/jobjacket/myproject.qxp</code>	
Example, object model	<pre> Request object name: JobJacketRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new JobJacketRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc); </pre>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>getrendererprefs</code> parameter request.	

Preflight

Use the `preflight` request handler to check a project for missing fonts and missing pictures prior to output. You can also use this request handler to determine if the

platform on which a project was created is different from the platform on which QuarkXPress Server is running.

➡ The `preflight` request handler has been deprecated. Use the `evaluate` request handler instead. For more information, see "[Evaluate](#)."

Namespace	<code>preflight</code>	
Response	<p>The XML response looks like the following:</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="no" ?> <PREFLIGHT> <PLATFORMMISMATCH>TRUE</PLATFORMMISMATCH> <MISSINGFONT>MidashiGoPro-MB31</MISSINGFONT> <MISSINGPICTURE>/QuarkXPress Server Documents/images/illus_eps.eps </MISSINGPICTURE> </PREFLIGHT></pre>	
Alerts	File not found	<p>HTTP Error #404</p> <p>QuarkXPress Server Error #-43</p> <p>This alert displays if you try to delete a file that is not available to QuarkXPress Server.</p>
Logs	See Understanding logging	
Example GET URL	<p>To preflight a project in the root folder:</p> <pre>http://localhost:8080/preflight/abc.qxp</pre> <p>To preflight a binary file in a subfolder:</p> <pre>http://localhost:8080/preflight/sub1/abc.qxp</pre>	
Example, object model	<pre>Request object name: PreflightRequest com.quark.qxpsm.QRequestContext rc = new com.quark.qxpsm.QRequestContext(); if(!this.DocumentSettings1.documentName.Text.Equals("")) rc.documentName = this.DocumentSettings1.documentName.Text; rc.request = new PreflightRequest(); //Create the service and call it with QRequestContext object RequestService svc = new RequestService(); com.quark.qxpsm.QContentData qc = svc.processRequest(rc);</pre>	

Setprefs

The `setprefs` request handler lets you set server preferences. To use this request handler, issue a `getprefs` request, determine the name of the tag that needs to be modified, and then submit a `setprefs` request with the using the name of this tag. For example, to turn off memory caching, you would first submit a `getprefs` request to the server. In the resulting XML, you would note that the name of the tag for memory caching tag is `AllowMemoryCaching`. Finally, you would submit a `setprefs` request to the server, like so:

```
http://localhost:8080/setprefs?AllowMemoryCaching=false
```

➡ For a full list of preferences, see "[General preferences](#)" and "[Renderer preferences](#)."

Namespace	<code>setprefs</code>
Response	The message "Preferences successfully set."

Alerts	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/setprefs?CacheSize=200	
Example, object model	<pre> EmailPreferences emailPrefs = new EmailPreferences(); emailPrefs.emailFrom = "from@email.com"; emailPrefs.emailTo = "to@email.com"; emailPrefs.smtpPort = "25"; emailPrefs.smtpServerIP = "SMTPServerIP"; Preferences prefs = new Preferences(); prefs.setEmailPreferences(emailPrefs); // Create the service and call setPreferences method RequestService svc = new RequestService(); svc.setPreferences("ServerName", "ServerPort", "Username", "Password", prefs); </pre>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>setprefs</code> parameter request.	

General preferences

The `/getprefs` handler lets clients remotely retrieve an XML representation of the current QuarkXPress Server preferences, as described below.

The `/setprefs` handler lets clients remotely control QuarkXPress Server preferences. For example,

`http://<servername>:<port>/setprefs?AddConnectionFilter=action=allow;ipaddr=206.195.80.80;mask=255.255.255.1;pos=0` permits connection filters and specifies the IP address and the subnet mask of the connection.

Attribute	Type	Description
<code>CacheSize</code>	integer	Specifies the memory cache size from 1MB to 1024MB.
<code>DocumentRootFolder</code>	string	Specifies the document root directory.
<code>LogTiming</code>	Boolean	Specifies whether to include timing information (such as processing time and opening time) in the transaction log.
<code>ForceServedDocumentsClosed</code>	Boolean	Causes QuarkXPress Server to close projects that are loaded into cache from the document pool after rendering them.
<code>AllowMemoryCaching</code>	Boolean	Specifies whether to store disk-based projects in a memory-resident cache.
<code>DefaultRenderType</code>	string	Sets the default. Valid values include <code>PNG</code> , <code>PDF</code> , <code>EPS</code> , <code>PSCR</code> , <code>QXPD</code> , <code>RAW</code> , <code>RLER</code> , and <code>JPEG</code> .
<code>LogDocProblems</code>	Boolean	Specifies whether to log any project problems.

Setrendererprefs

The `setrendererprefs` request handler lets you set rendering preferences. To use this request handler, issue a `getrendererprefs` request, determine the name of the

tag that needs to be modified, and then submit a `setrendererprefs` request with the using the name of this tag. For example, set color TIFF and gray TIFF display preferences, you would first submit a `getrendererprefs` request to the server, then update these settings and submit a `setrendererprefs` request to the server, like so:

```
http://server:port/setrendererprefs?modify=<QXPSRENDERERPREFERENCES>
<DISPLAY><ColorTIFFs>8-bit</ColorTIFFs><GrayTIFFs>16
levels</GrayTIFFs></DISPLAY>
</QXPSRENDERERPREFERENCES>
```

➡ This request handler sets the preferences for *all* renderers.

Namespace	setrendererprefs	
Response	The message "Preferences successfully set."	
Alerts	Incorrect administration realm user name and password.	HTTP Error #401 This alert displays if you specify an invalid administrator user name and password. <i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.
Logs	See Understanding logging	
Example GET URL	http://localhost:8080/setrendererprefs?modify=<QXPSRENDERERPREFERENCES><DISPLAY><ColorTIFFs>8-bit</ColorTIFFs><GrayTIFFs>16 levels</GrayTIFFs></DISPLAY></QXPSRENDERERPREFERENCES>	
Notes	The schema for the returned XML stream can be found at <code>webapps/ROOT/QuarkXPress Server Renderer/QXPSRendererPreferences.xsd</code> . If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>setrendererprefs</code> parameter request.	

Renderer preferences

The `/getrendererprefs` handler lets clients remotely retrieve an XML representation of the current QuarkXPress Server renderer preferences, as described below. For a detailed description of each preference, see "General Preferences dialog box" in *A Guide to QuarkXPress Server*.

The `/setrendererprefs` handler lets clients remotely control QuarkXPress Server renderer preferences. For more information, see "[Setrendererprefs](#)."

Attribute	Type	Description
DISPLAY		
ColorTIFFs	string	Set to 8-bit or 24-bit.
GrayTIFFs	string	Set to 16 levels or 256 levels.
MonitorProfile	string	Set to one of the options under MonitorProfileList.
MonitorProfileList	collection	Includes one <MonitorProfile> element for each available monitor profile.
INPUTSETTINGS		
SmartQuotes	Boolean	Set to true or false.

Attribute	Type	Description
<code>SmartQuoteFormat</code>	integer	Set to the zero-based index of the desired format. For the list of available formats, see the Input Settings pane of the Preferences dialog box in the QuarkXPress Server administrative interface.
<code>SequentialPageRangeSeparator</code>	string	Set to one character only.
<code>NonSequentialPageRangeSeparator</code>	string	Set to one character only.
FONTFALLBACK		
<code>ApplyFontFallback</code>	Boolean	Set to <code>true</code> or <code>false</code> .
<code>Search</code>	Boolean	Set to <code>true</code> or <code>false</code> .
<code>SearchType</code>	Boolean	Set to <code>Paragraph</code> or <code>Active Story</code> .
<code>SearchLimit</code>	integer	Set to search limit number.
<code>PreferredFont</code>	string	Includes a <code><PreferredFont></code> element with each of the following attributes: <code>ScriptOrLanguage="Cyrillic"</code> <code>ScriptOrLanguage="Greek"</code> <code>ScriptOrLanguage="Latin"</code> <code>ScriptOrLanguage="Japanese"</code> <code>ScriptOrLanguage="Korean"</code> <code>ScriptOrLanguage="Simplified Chinese"</code> <code>ScriptOrLanguage="Traditional Chinese"</code>
<code>SlugLineFont</code>	string	Set to the name of the slug line font.
OPENANDSAVE		
<code>OpenSaveNonUnicodeEncoding</code>	string	Set to <code>Roman</code> , <code>Central European</code> , <code>Greek</code> , <code>Cyrillic</code> , <code>Turkish</code> , <code>Japanese</code> , <code>Korean</code> , <code>Simplified Chinese</code> , or <code>Traditional Chinese</code> .
FONTS		
<code>SpecifyDefaultFontReplacement</code>	Boolean	Set to <code>true</code> or <code>false</code> .
<code>ReplacementFontRoman</code>	string	Set to the Roman replacement font.
<code>ReplacementFontEastAsian</code>	string	Set to the East Asian replacement font.
<code>HighlightCharacterChanges</code>	Boolean	Set to <code>true</code> or <code>false</code> .
EPS		
<code>EPSPreview</code>	string	Set to <code>Embedded</code> or <code>Generate</code> .
PDF		
<code>PDFWorkflow</code>	string	Set to <code>PS4D</code> , <code>PDFtoFolder</code> , or <code>DirectPDF</code> .
<code>WatchedFolder</code>	string	Set to the path of the watched folder.
DEFAULTPRINTLAYOUGENERAL		
<code>MasterPageItems</code>	string	Set to <code>Keep Changes</code> or <code>Delete Changes</code> .
<code>Framing</code>	string	Set to <code>inside</code> or <code>outside</code> .

Attribute	Type	Description
AutoPageInsertionMode	string	Set to <code>Off</code> , <code>End of Story</code> , <code>End of Section</code> , or <code>End of Document</code> .
DEFAULTTPRINTLAYOUTMEASUREMENTS		
HorizontalUnits	string	Set to <code>Inches</code> , <code>Inches Decimal</code> , <code>Picas</code> , <code>Points</code> , <code>Millimeters</code> , <code>Centimeters</code> , <code>Ciceros</code> , <code>Agates</code> , or <code>Q</code> .
VerticalUnits	string	Set to <code>Inches</code> , <code>Inches Decimal</code> , <code>Picas</code> , <code>Points</code> , <code>Millimeters</code> , <code>Centimeters</code> , <code>Ciceros</code> , <code>Agates</code> , or <code>Q</code> .
PointsPerInch	float	Set to the number of points per inch.
CicerosPerCM	float	Set to the number of ciceros per centimeter.
PARAGRAPH		
AutoLeading	float	Set to the percentage to use for auto leading.
MaintainLeading	Boolean	Set to <code>true</code> or <code>false</code> .
LockToGridOption	string	Set to <code>Ascent and Descent</code> or <code>Font Size (Em Box)</code> .
CHARACTER		
SuperScriptOffset	string	Set to the superscript offset percentage.
SuperScriptHScale	string	Set to the superscript horizontal scale percentage.
SuperScriptVScale	string	Set to the superscript vertical scale percentage.
SubScriptOffset	string	Set to the subscript offset percentage.
SubScriptHScale	string	Set to the subscript horizontal scale percentage.
SubScriptVScale	string	Set to the subscript vertical scale percentage.
SmallCapsHScale	string	Set to the small caps horizontal scale percentage.
SmallCapsVScale	string	Set to the small caps vertical scale percentage.
SuperiorHScale	string	Set to the superior horizontal scale percentage.
SuperiorVScale	string	Set to the superior vertical scale percentage.
LigatureBreakAbove	string	Set to the ligature-break-above value.
NotffiORffl	Boolean	Set to <code>true</code> or <code>false</code> .
AutoKern	Boolean	Set to <code>true</code> or <code>false</code> .
AutoKernAbove	integer	Set to the auto-kern-above value.
StandardEmSpace	Boolean	Set to <code>true</code> or <code>false</code> .
FlexSpaceWidth	string	Set to the flex space width percentage.
AccentsForAllCaps	Boolean	Set to <code>true</code> or <code>false</code> .
SpaceCJKandR	float	Set to the amount of space between East Asian and Roman letters.
TRAPPING		

Attribute	Type	Description
TrappingMethod	string	Set to <code>Absolute</code> , <code>Proportional</code> , or <code>Knockout All</code> .
ProcessTrapping	Boolean	Set to <code>true</code> or <code>false</code> .
IgnoreWhite	Boolean	Set to <code>true</code> or <code>false</code> .
AutoAmount	float	Set to the auto trapping amount value.
Indeterminate	float	Set to the indeterminate trapping value.
KnockoutLimit	float	Set to the knockout limit value.
OverPrintLimit	float	Set to the overprint limit value.
COLORMANAGER		
ColorEngine	string	Set to <code>Automatic</code> , <code>ColorSync</code> , <code>Kodak</code> , or <code>LogoSync</code> .
BlackPointCompensation	Boolean	Set to <code>true</code> or <code>false</code> .
SourceSetup	string	Set to the name of the default color source setup.
EnableAccessToPictureProfiles	Boolean	Set to <code>true</code> or <code>false</code> .
ProofOutPut	string	Set to the name of the default proofing color output setup.
RenderingIntent	string	Set to <code>Perceptual</code> , <code>Relative Colorimetric</code> , <code>Saturation</code> , <code>Absolute Colorimetric</code> , or <code>Defined by Sources</code> .
ColorManageVectorEPSPDF	Boolean	Set to <code>true</code> or <code>false</code> .
IncludeExistingVectorEPSPDF	Boolean	Set to <code>true</code> or <code>false</code> .
LAYERS		
Visible	Boolean	Set to <code>true</code> or <code>false</code> .
SuppressOutput	Boolean	Set to <code>true</code> or <code>false</code> .
Locked	Boolean	Set to <code>true</code> or <code>false</code> .
KeepRunaround	Boolean	Set to <code>true</code> or <code>false</code> .
FULLRESPREVIEW		
MaxCacheFolderSize	integer	Set to the maximum full res preview cache folder size in MB.
DisableFullResPreviewsOnOpen	Boolean	Set to <code>true</code> or <code>false</code> .
INSTALLED FONTS		
FontName	string	Include a <code><FontName></code> element for each font loaded on the server.

updateprefsfromjj

The `updateprefsfromjj` request handler lets you update the rendering preferences for QuarkXPress Server using a file named "QuarkXPressServerJobJacket.xml" that is in the document pool or has been supplied as part of a multipart HTTP request.

To modify QuarkXPress Server renderer preferences, first upload a modified Job Jackets file named "QuarkXPressServerJobJacket.xml" to the document pool using `addfile`, then call this request handler.

➡ This request handler sets the preferences for *all* renderers.

Namespace	<code>updateprefsfromjj</code>	
Response	The message "Preferences successfully set."	
Alerts	Incorrect administration realm user name and password.	<p>HTTP Error #401</p> <p>This alert displays if you specify an invalid administrator user name and password.</p> <p><i>What to do:</i> Use the user name and password set in the QuarkXPress Server Manager client Server Configuration dialog box.</p>
Logs	See Understanding logging	
Example GET URL	<code>http://localhost:8080/updateprefsfromjj</code>	
Notes	If a user name and password have been set in the Server Configuration dialog box, the browser requests that user name and password when you submit a <code>setrendererprefs</code> parameter request.	

Using the QXPSM SDK

The QXPSM (QuarkXPress Server Manager) SDK lets you create applications that communicate with QuarkXPress Server Manager in a variety of languages, including the following:

- .NET
- Java
- Objective-C

The QXPSM SDK includes the following folders:

- Documentation: Includes Javadoc for the classes in the Java SDK.
- Extensibility: Includes the Extensibility tool, for extending QuarkXPress Server Manager. For more information, see "[Extending QuarkXPress Server Manager](#)."
- Samples: Includes sample applications in ASP.NET, C#, Java, JSP, and Objective-C.
- WebServiceStubs: Includes remoting stubs for .NET (C#), Java, and Objective-C.

➡ To use the QXPSM SDK in ASP.NET/Visual C#, you must have the .NET 3.5/4.0 framework and development environment (Visual Studio).

Writing a Java QXPSM client

To write a QuarkXPress Server Manager client in Java:

- 1 Include the QXPSM stub jar file in the project classpath. This jar file can be found at the following location:

```
[QXPSM_Home]/XDK/WebServiceStubs/java/qxpsm-webservicestubs.jar
```

- 2 Include all client-side third-party-dependent jar files in the project classpath. These can be found at the following location:

```
[QXPSM_Home]/XDK/WebServiceStubs/java/dependencies
```

- 3 Get a reference to the RequestService:

```
RequestService requestService = new RequestServiceStub(  
    "http://[server]:[port]/qxpsm/services/RequestService");
```

- 4 Get a reference to the AdminService:

```
AdminService adminService = new AdminServiceStub(  
    "http://[server]:[port]/qxpsm/services/AdminService");
```

- 5 Use these two services to make requests.

For sample code, see the following topics.

- ➡ If QuarkXPress Server Manager is running over SSL, the client-side application must also use SSL. Invoke `NoValidationTrustProvider.install()`, where `install()` is the static method of the Java class `NoValidationTrustProvider` (provided with the Java samples).

Java sample: Deconstructing a project

```
QRequestContext qRequestContext = new QRequestContext();  
qRequestContext.setDocumentName("MyDoc.qxp");  
  
// Create XML Request  
XMLRequest xmlRequest = new XMLRequest();  
qRequestContext.setRequest(xmlRequest);  
  
// Get reference to RequestService  
RequestService service = new RequestServiceStub(  
    "http://<server>:<port>/qxpsm/services/RequestService");  
  
//Process Request using request service  
QContentData data = service.processRequest(qRequestContext);  
String deconstructXml = data.getTextData();
```

Java sample: Rendering a PDF

```
QRequestContext qRequestContext = new QRequestContext();  
qRequestContext.setDocumentName("MyDoc.qxp");  
  
// Setting responseAsURL to true generates the response as a URL  
qRequestContext.setResponseAsURL(true);  
  
// Create the PDFRenderRequest  
PDFRenderRequest pdfRenderRequest = new PDFRenderRequest();  
qRequestContext.setRequest(pdfRenderRequest);  
  
// Get reference to RequestService  
RequestService service = new RequestServiceStub(  
    "http://<server>:<port>/qxpsm/services/RequestService");  
  
// Process request using RequestService  
QContentData data = service.processRequest(qRequestContext);  
  
// Get URL from which resulting PDF can be fetched  
String pdfUrl = data.getResponseURL();
```

Java sample: Chained request

```
QRequestContext qRequestContext = new QRequestContext();  
qRequestContext.setDocumentName("Project.qxp");
```

```
// QXP doc render request
QuarkXPressRenderRequest qxpreq = new QuarkXPressRenderRequest();

// Save as request that saves the file
SaveAsRequest saveAsRequest= new SaveAsRequest();
saveAsRequest.setNewName("NewDoc.qxp");

qxpreq.setRequest(saveAsRequest);

qRequestContext.setRequest(qxpreq);

// Get reference to RequestService
RequestService service = new RequestServiceStub(
    "http://[server]:[port]/qxpsm/services/RequestService");

//Process the request
service.processRequest(qRequestContext);
```

If made from QuarkXPress Server, this request would look like this:

```
http://[server]:[port]/saveas/qxpdoc/Project.qxp?newname="NewDoc.qxp"
```

Java sample: AddFile request

This code snippet shows how to upload a file using a QuarkXPress Server Manager servlet request that uses the Apache HttpClient 3.1 library.

```
File file = new File("C:/FileToUpload.qxp");

// Create a post method to add file through QXPSM servlet request
PostMethod method = new PostMethod(
    "http://[server]:[port]/qxpsm/request/addfile/"+ file.getName());
try {

    // File stream passed as 'uploadFile' parameter to QXPSM
    FilePart part = new FilePart("uploadFile", file);
    part.setContentType("multipart/form-data");
    Part[] parts = { part };
    method.setRequestEntity(new MultipartRequestEntity(parts,
method.getParams()));

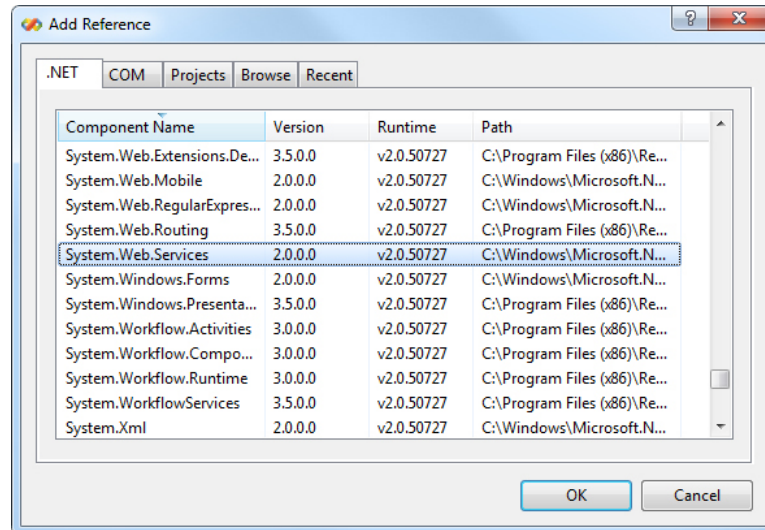
    HttpClient client = new HttpClient();
    int status = client.executeMethod(method);

    if (status == HttpStatus.SC_OK) {
        System.err.println("Upload complete..");
    } else {
        System.err.println("Upload failed, response=" +
HttpStatus.getStatusText(status));
    }
} catch (Exception ex) {
    System.err.println("Error: " + ex.getMessage());
} finally {
    method.releaseConnection();
}
```

Writing a .NET QXPSM client

To write a QuarkXPress Server Manager client in .NET:

- 1 Add a reference to the QuarkXPress Server Manager .NET Web service stubs. The "QXPSMWebServiceStubs.dll" file can be found at the following location:
[QXPSM_Home]/XDK/WebServiceStubs/dotnet/QXPSMWebServiceStubs.dll
- 2 Add a reference to Microsoft's `System.Web.Services` library.



Add Reference dialog box

- 3 Get a reference to the RequestService:

```
RequestService requestService = new RequestService();
requestService.Url = "http://<server>:<port>/qxpsm/services/RequestService";
```

- 4 Get a reference to the AdminService:

```
AdminService adminService = new AdminService();
adminService.Url = "http://<server>:<port>/qxpsm/services/AdminService";
```

- 5 Use these two services to make requests.

For sample code, see the following topics.

- ➔ If QuarkXPRESS Server Manager is running over SSL, the client-side application must also use SSL. Define a server certificate validation callback during application initialization using code like the following:

```
Imports System.Net
Imports System.Net.Security
Imports System.Security.Cryptography.X509Certificates
...
ServicePointManager.ServerCertificateValidationCallback += delegate(
    object senders,
    X509Certificate certificate,
    X509Chain chain,
    SslPolicyErrors sslPolicyErrors)
{
    return true;
}
```

.NET sample: Deconstructing a project

```
QRequestContext qRequestContext = new QRequestContext();
qRequestContext.documentName = "MyDoc.qxp";

// Create XML Request
XMLRequest xmlRequest = new XMLRequest();
qRequestContext.request = xmlRequest;

// Get reference to RequestService
RequestService service = new RequestService();
service.Url = "http://[server]:[port]/qxpsm/services/RequestService";

// Process request using RequestService
QContentData data = service.processRequest(qRequestContext);
String deconstructXml = data.textData;
```

.NET sample: Rendering a PDF

```

QRequestContext qRequestContext = new QRequestContext();
qRequestContext.documentName = "MyDoc.qxp";

// Setting responseAsURL to true generates the response as a URL
qRequestContext.responseAsURL = true;

// Create the PDFRenderRequest
PDFRenderRequest pdfRenderRequest = new PDFRenderRequest();
qRequestContext.request = pdfRenderRequest;

// Get reference to RequestService
RequestService service = new RequestService();
service.Url = "http://[server]:[port]/qxpsm/services/RequestService";

// Process request using RequestService
QContentData data = service.processRequest(qRequestContext);

// URL from which resulting PDF can be fetched
String pdfUrl = data.responseURL;

```

.NET sample: Chained request

```

QRequestContext qRequestContext = new QRequestContext();
qRequestContext.documentName = "Project.qxp";

// QXP doc render request
QuarkXPressRenderRequest qxpreq = new QuarkXPressRenderRequest();

// Save as request that saves the file
SaveAsRequest saveAsRequest = new SaveAsRequest();
saveAsRequest.newName = "NewDoc.qxp";

qxpreq.request = saveAsRequest;
qRequestContext.request = qxpreq;

// Get reference to RequestService
RequestService service = new RequestService();
service.Url = "http://[server]:[port]/qxpsm/services/RequestService";

// Process the request
service.processRequest(qRequestContext);

```

If made from QuarkXPress Server, this request would look like this:

```
http://[server]:[port]/saveas/qxpdoc/Project.qxp?newname="NewDoc.qxp"
```

Writing an Objective-C client for Mac OS or iOS

To write a QuarkXPress Server Manager client in objective C for Mac OS or iOS:

- 1 Include the QuarkXPress Server Manager stub header files path in the header search paths. These files can be found at the following location:

```
[QXPSM_Home]/XDK/WebServiceStubs/objective-c/include
```

- 2 Include the Axis2c header files path in the header search paths. These header files can be found at the following location:

- Mac OS:

```
[QXPSM_Home]/XDK/WebServiceStubs/objective-c/lib/i86_64/axis2c/include
```

- iOS:

```
[QXPSM_Home]/XDK/WebServiceStubs/objective-c/lib/arm/axis2c/include
```

- 3 Include the QuarkXPress Server Manager stub libraries in the library search paths. These libraries can be found at the following locations:

Mac OS:

```
[QXPSM_Home]/XDK/WebServiceStubs/objective-c/lib/i86_64/
c/libQXPSMSoapCBindings.a
```

```
cpp/libQXPSMSoapCppBindings.a
objc/libQXPSMSoapObjCBindings.a
```

iOS:

```
[QXPSM_Home]/XDK/WebServiceStubs/objective-c/lib/i86_64/
c/libQXPSMSoapCBindings.a
cpp/libQXPSMSoapCppBindings.a
objc/libQXPSMSoapObjCBindings.a
```

- 4 Create an instance of `QXPSMServiceManager`. (`QXPSMServiceManager` is an Axis2c-based factory for QXPSM Web services stubs. It maintains shared instances of stubs corresponding to different QXPSM Web services.)

Initialise `QXPSMServiceManager` using `setupForHost`, with the required parameters:

- `Host`: Host name of QXPSM server.
- `port`: Web port configured at the server for HTTP (or HTTPS) communication.
- `logFilePath`: Location where Axis2 can generate a log file.
- `logLevel`: Number specifying log level for Web service communication (0 = critical, 1 = error, 2 = warning, 3 = info, 4 = debug, 5 = user-level debug message, 6 = trace).
- `axis2Home`: Client side Axis2 home folder location.
- `useHttps`: Set to `true` for secure API communication with QXPSM server
- `serverCertificatePath`: Certificate file path . For a non-secured connection, this argument is ignored.

For example:

```
[[QXPSMServiceManager sharedInstance]
 setupForHost:server port:port
 logFilePath:axisLogFile logLevel:axisLogLevel axis2Path:axis2Home
 useHttps:usehttps serverCertificatePath:certFilePath];
```

- 5 Initialise `QXPSMServiceManager` using `setupForHostWithProxy`, with the required parameters:

- `Host`: Host name of QXPSM server.
- `port`: Web port configured at server for HTTP (or HTTPS) communication.
- `logFilePath`: Location where Axis2 can generate a log file.
- `logLevel`: Number specifying log level for Web service communication.
- `axis2Home`: Client side Axis2 home folder location.
- `useHttps`: Set to `true` for secure API communication with QXPSM server.
- `serverCertificatePath`: Certificate file path. For a non-secured connection, this argument is ignored.
- `proxyHost`: Host name of HTTP proxy. If null, proxy is not used.
- `proxyPort`: HTTP proxy port number.
- `username`: User name for proxy authentication. If null, no authentication is performed.
- `password`: Password for HTTP proxy authentication.

For example:

```
[[QXPSMServiceManager sharedInstance]
 setupForHost:server port:port
```



```
logFilePath:axisLogFile logLevel:axisLogLevel axis2Path:axis2Home
useHttps:usehttps serverCertificatePath:certFilePath
proxyHost:proxyHost proxyPort:proxyPort
username:proxyUserName password:proxyPassword];
```

- 6 Get a reference to the RequestService using `QXPSMServiceManager` and perform the required API invocations on the referenced RequestService. For example:

```
[[QXPSMServiceManager requestService]
  getXPressDomForDocumentName:documentName];
```

- 7 To invoke a QXPSM service, get a reference to the AdminService using `QXPSMServiceManager` and perform the required API invocations on the referenced AdminService. For example:

```
[[QXPSMServiceManager requestService]
  getXPressDomForDocumentName:documentName];
```

For sample code, see the following topics.

Objective-C sample: Deconstructing a project

```
QXPSMQRequestContext *qRequestContext =
  [[[QXPSMQRequestContext alloc] init] autorelease];
[qRequestContext setDocumentName:@"MyDoc.qxp"];

// Create XML Request
QXPSMXMLRequest *xmlRequest = [[[QXPSMXMLRequest alloc] init] autorelease];
[qRequestContext setRequest:xmlRequest];

// Get reference to RequestService and process request
QXPSMQContentData *data = [[QXPSMServiceManager requestService]
  processRequestForRequestCmd:qRequestContext];
NSString *deconstructXml = [data getTextData];
```

Objective-C sample: Rendering a PDF

```
QXPSMQRequestContext *qRequestContext =
  [[[QXPSMQRequestContext alloc] init] autorelease];
[qRequestContext setDocumentName:@"MyDoc.qxp"];

// Setting responseAsURL to true generates the response as a URL
[qRequestContext setResponseAsURL:YES];

// Create the PDFRenderRequest
QXPSMPDFRenderRequest *pdfRenderRequest =
  [[[QXPSMPDFRenderRequest alloc] init] autorelease];
[qRequestContext setRequest:pdfRenderRequest];

// Get reference to RequestService and process request
QXPSMQContentData *data = [[QXPSMServiceManager requestService]
  processRequestForRequestCmd:qRequestContext];

// URL from which resulting PDF can be fetched
NSString *pdfUrl = [data getResponseURL];
```

Objective-C sample: Chained request

```
QXPSMQRequestContext *qRequestContext =
  [[[QXPSMQRequestContext alloc] init] autorelease];
[qRequestContext setDocumentName:@"MyDoc.qxp"];

//QXP doc render request
QXPSMQuarkXPressRenderRequest *qxpReq =
  [[[QXPSMQuarkXPressRenderRequest alloc] init] autorelease];

//Save as request that saves the file.
QXPSMSaveAsRequest *saveAsRequest = [[[QXPSMSaveAsRequest alloc] init]
  autorelease];
[saveAsRequest setNewname:@"NewDoc.qxp"];

[qxpReq setRequest:saveAsRequest];
[qRequestContext setRequest:qxpReq];

//Get reference to RequestService and process request
```

```
[[QXPSServiceManager requestService]  
processRequestForRequestCmd:qRequestContext];
```

If made from QuarkXPress Server, this request would look like this:

```
http://[server>]:[port]/saveas/qxpdoc/MyDoc.qxp?newname="NewDoc.qxp"
```

Extending QuarkXPress Server Manager

Custom XTensions written for XPressServer can be used in the QuarkXPress Server Manager Web service interface in two ways:

- Using the Extensibility tool in the QXPSM SDK. With this tool, you can easily update QXPSM Web service objects to include objects corresponding to custom request handlers and their parameters.
- Using the RequestParameters class. This is a generic request class that can be used in lieu of any class, existing or otherwise.

The prerequisites for using the Extensibility tool are as follows:

- JDK 1.6
- Apache ANT 1.6.5 or later
- Perl 5.8.4 or later with the XML::DOM module
- Third-party libraries (available at [QXPSM application folder]\Server\dependencies)
- QXPSM libraries (available at [QXPSM application folder]\Server\lib)
- Microsoft .NET Framework 3.5 or later (required only for generating .NET stubs)

The Extensibility tool is located in the **SDK/Extensibility** folder. For instructions on how to use it, see the following topics.

Writing special request handlers

If you need to perform custom actions on specific flags, you need to define special flags and write handlers for them. These flags can then be passed as GET parameters to the servlet, as additional `QParam` parameters in `QCommand` (executed using `QManagerSvc.executeCommand`), or as additional `NameValueParam` parameters in a derived class of `QRequest` using `RequestService.processRequest`. The servlet will automatically create parameters out of these flags and set these in the command before sending it for execution.

To handle these special flags, you can write your request handler derived from the class `QRequestHandler`. You can then insert this new handler class anywhere in the chain of responsibility pattern, starting with `QDocProviderImpl` and ending with `QHostRequestHandler`.

- ➡ Try not to change end points. In your handler implementation, handle your special flags, then either return a response after handling or pass the control to the successor for further handling.

Implementing a custom load balancer

To implement a custom load balancer, first implement the `com.quark.manager.lb.QLoadBalancer` interface. To use this interface, add a reference to "managerengine.jar" to your project.

This interface method contains the following methods:

<code>getLoadBalancerAlgorithm</code>	
Signature	<code>public String getLoadBalancerAlgorithm();</code>
Description	Returns the name of the algorithm that is mapped to the current load balancer while loading the server.
Returns	The algorithm name used to load-balance the list of hosts.
<code>getLoadBalancerDescription</code>	
Signature	<code>public String getLoadBalancerDescription();</code>
Description	Gets the description of the load-balancing algorithm so it can be displayed in the QuarkXPress Server Manager client.
Returns	Description of the load balancer.
<code>useFileInfo</code>	
Signature	<code>public Boolean useFileInfo();</code>
Description	Gets a flag that indicates whether the load balancer uses file information to decide on which host to use.
Returns	True if the <code>fileinfo</code> command should be fired before rendering, otherwise false.
<code>getAvailableHost</code>	
Signature	<code>public QHostProxy getAvailableHost(QHostProxy[] hosts, QCommand command);</code>
Description	Gets an available host out of the provided list of hosts to execute the specified command.
Parameters	<code>hosts</code> : List of hosts that should be scanned for the most eligible host. <code>command</code> : Command for which host is being searched.
Returns	Available host. Can be used for next request.

Next:

- 1 Make a jar for the load balancer.
- 2 Deploy the jar to the following folder: `[QXPSM_HOME]/dependencies`
- 3 To configure "ManagerContainerConfig.xml" for bean mapping, first navigate to `[QXPSM_HOME]/conf` .
- 4 Open the "ManagerContainerConfig.xml" file and look for the XML tag bean whose `id` has the value `ConfigurationManager`.
- 5 Within that tag find the property name `availableLoadBalancers`.
- 6 In the `<list>` tag, add the following: `<ref bean=[your newbeanID]/>`

- 7 Above this `ConfigureManager` tag, define the bean ID as your new bean ID: `<bean id=[your newbeanID] class=[yourLoadBalancerClass]/>`
- 8 Restart the Tomcat server.
- 9 Log on with the QuarkXPress Server Manager client and choose **Global Setting > Load Balancer Method > Choose Load Balancer**.
- 10 Locate your new load balancer method, then click **Save**.

Keep document open (sessions)

In early versions of QuarkXPress Server Manager, the software opened a QuarkXPress project, performed a function, and then closed the project. To avoid the delays involved in repeatedly opening and closing a QuarkXPress project, QuarkXPress Server Manager can now keep QuarkXPress projects open until they need to be closed.

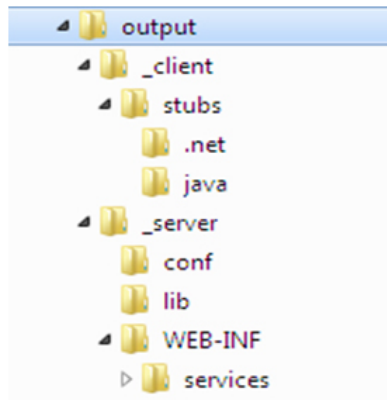
To keep projects open for a set period of time, create a session and then open one or more projects in that session. You can specify a timeout interval while creating the session. If the session is not used during the interval, all open projects in that session are closed.

An open project can be modified and saved at any time during the process. An open project can even be saved at another location relative to the QuarkXPress Server document pool. You can also create a new project and keep it open.

Using the Extensibility tool

To compile and generate artifacts of custom objects:

- 1 Update the file `[QXPSM-XDK]/Extensibility/rogenerator/ManagerSDK.xml` by adding the definitions of any custom objects being created by QuarkXPress Server. Make sure you do not use existing class names.
- 2 Open the file "Generate.command"/"Generate.bat" in a text editor and make the following changes:
 - Set the value of `QXPSM_LIB_DIR` to the path of the QXPSM libraries. For example:
`@set QXPSM_LIB_DIR="C:\Quark\QuarkXPressServer Manager\Server\lib"`
 - Set the value of `QXPSM_DEPENDENCIES_DIR` to the path of the third-party libraries. For example: `@set QXPSM_DEPENDENCIES_DIR="C:\Quark\QuarkXPressServer Manager\Server\dependencies"`
 - Set the value of `VS_COMMON_TOOLS` to the path of the Visual Studio common tools. For example: `@set VS_COMMON_TOOLS="C:\Program Files\Microsoft Visual Studio 9.0\Common7\Tools\"`
 - Set the value of `QXPSM_OUTPUT_DIR` to the output location. For example:
`QXPSM_OUTPUT_DIR= "c:\output"`
- 3 Execute the file "Generate.command"/"Generate.bat". The resulting output uses the following structure.



4 To use the generated artifacts:

- Copy the contents of [output location]/_server/conf to [QXPSM application folder]/Server/conf.
- Copy the contents of [output location]/_server/lib to [QXPSM application folder]/Server/lib.
- Restart QuarkXPress Server Manager.

Compatible client side web-service stubs, for both Java and .NET can be found at [output location]/_client/stubs

Understanding ManagerSDK.xml

"ManagerSDK.xml" is used to generate client SDK classes for QuarkXPress Server requests. Each element in "ManagerSDK.xml" corresponds to a request handler, a render type, or an element in the DTD.

A client SDK class is generated for each element in the XML. Each property in the DTD and each parameter of the request handler or render type also corresponds to a unique element in the XML.

A Class variable is generated for each property, as follows.

- **<Class>**: One element for each SDK class generated. The class generated is derived from `QRequest`. Attributes are:
 - **name**: The name of the generated class.
 - **namespace**: The namespace recognized by QuarkXPress Server when this request class is translated into a QuarkXPress Server request.
 - **description**: A description of the class. Unless this value is null, the description forms the header of the generated class and is included in the generated API docs.
 - **alias**: The alias to be used as an element name if this request class is serialized to XML. For example, when the `Project` class is serialized to XML, the element used is `Project`.
 - **serializeAs**: Determines how the class is serialized. The valid values are:

- `nameValue` indicates that all members of the class should be handled as name-value pairs in the request to QuarkXPress Server. (This is the default option in `JPEGRenderRequest` and `ModifierStreamRequest`.)
 - `xml` indicates that the class should be serialized as XML with the class name or alias as the element value. All of the fields of the class are serialized as child elements. If the field is a subclass of `QRequest`, it is processed recursively. If the field is an array, it must be an array of `QRequest`-derived classes.
 - `mixed` indicates that the class should be serialized as XML with the class name or alias as the element. All the primitive fields of the class are serialized as attributes. If the field is a subclass of `QRequest`, it is serialized as a child element and processed recursively. If the field is an array, it must be an array of `QRequest`-derived classes.
 - `attribute` indicates that the class should be serialized as XML with the class name or alias as the element. The class must be primitive. All such fields must be serialized as attributes of the element. Also, "value" fields must be serialized as values of the element. Valid only if the parent class has a `serializeAs` value of "xml" or "mixed."
- `<Attribute>`: One element for each class field.
 - `name`: The name of the generated class variable.
 - `accessor`: The name of the accessor that gets the property. If this value is null, the default accessor name is used. The default name is "get" + CamelCase(name) (for example, if the name of the property is "quality," the default accessor method is `getQuality`).
 - `mutator`: The name of the accessor that sets the property. If this value is null, the default mutator name is used. The default name is "set" + CamelCase(name) (for example, if the name of the property is "quality," the default mutator method is `setQuality`).
 - `description`: A description of the attribute. Unless this value is null, the description is included in variable headers and accessor and mutator headers and is included in generated API docs.
 - `type`: The type of the class variable. If this value is null, the default type (`string`) is used. If this is not a primitive data type, it should be defined as a separate `Class` element. If this attribute has a value of "reference," it means the class defined by `name` is a reference that will be used by a `reference` attribute in the same `Class` element. Before serialization, the referring values are set in this instance.
 - `reference`: Unless this attribute has a null value, during serialization the value of the field should be set in the reference class provided. Note that the reference class should be declared using "type=reference" as explained above.
 - `readonly`: If this value is `true`, this field is for read-only purposes and should be ignored during serialization.
 - `hidden`: If this value is `true`, this field should be generated as a private variable. As such, it would not be included in WSDL.

- **deprecated**: If this value is `true`, this field has been deprecated, should not be used, is not supported, and will be removed in a future version of QuarkXPress Server.
- **cdata**: If this value is `true`, the value of this field is to be wrapped in a `cdata` section before being sent to QuarkXPress Server. This is valid only if the field is "value", that is value of the element in modifier XML.
- **<others>**: If any other attributes are defined, a class field with the name as `<name>_<others>` is created, and you can write your own implementation for it.

Using the RequestParameters class

RequestParameters is a generic request class that can be used in lieu of any class, existing or otherwise.

RequestParameters has a namespace property, which can be used to send any request. For example:

```
RequestParameters requestParameters = new RequestParameters();
requestParameters.setRequestNamespace("jpeg");
```

It also has an array of dynamic parameters, which can be used to parameterize the request. For example:

```
NameValuePair param = new NameValuePair();
param.setParamName("scale");
param.setTextValue("1");
requestParameters.setParams(new NameValuePair[] {param });
```

It can also be executed using the QuarkXPress Server Manager Web service API. For example:

```
QRequestContext qRequestContext = new QRequestContext();
qRequestContext.setRequest(requestParameters);
```

Sample applications

The topics below describe the sample applications distributed with QuarkXPress Server.

Sample applications: QXP Server Manager

These sample applications are available in the QuarkXPress Server installation package.

ASP.NET samples

This sample application consists of Web pages that demonstrate different ways the object model can be used to post QuarkXPress Server requests for various operations. To use this application:

- 1 Create a virtual directory (for example, "ClientSDKSamplesSite") in IIS.
- 2 Copy the sample from [QuarkXPress Server Manager application folder]\XDK\samples\asp.net\clientsdksamples and set the home path of the Web demo to the virtual directory.
- 3 Set the endpoint address for Web services calls in the "web.config" file like so:

```
configuration - >appSettings - >add
key="com.quark.qxpsm.RequestService" value="End Point Address"
```

- 4 Restart IIS.
- 5 In a browser, enter the following URL: `http://<IIS Server Name>:<Port>/ClientSDKSamplesSite/Index.htm`

C# samples

These samples show how to use C# to take advantage of bullets and numbering, callouts, and conditional styles with QuarkXPress Server requests transmitted via the QuarkXPress Server Manager Web services interface. They use .NET Web service stubs provided by the QuarkXPress Server Manager SDK.

- ➔ The "AddFileRequest" sample shows how to make servlet requests to QuarkXPress Server Manager, instead of using QuarkXPress Server Manager Web service stubs. Web services use SOAP to pass data, and SOAP is not designed to transfer large amounts of data, so Quark recommends using the servlet interface to upload and download files in a production environment.

Java samples

These samples show how to use Java to take advantage of bullets and numbering, callouts, and conditional styles with QuarkXPress Server requests transmitted via the QuarkXPress Server Manager Web services interface. They use Java Web service stubs provided by the QuarkXPress Server Manager SDK.

- ➔ The "AddFileRequest" sample shows how to use the Apache HttpClient library to make servlet requests to QuarkXPress Server Manager, instead of using QuarkXPress Server Manager Web service stubs. Web services use SOAP to pass data, and SOAP is not designed to transfer large amounts of data, so Quark recommends using the servlet interface to upload and download files in a production environment.

JSP samples

These samples have been developed using JSP, for deployment in the same Web server as that of QuarkXPress Server Manager. They show how to make local calls to QuarkXPress Server Manager's `RequestService` to perform various tasks.

By default, these samples are deployed as a separate webapp named "clientsdksamples". You can access this webapp from the QuarkXPress Server Manager home page.

Objective-C samples

These samples show how to use Objective-C to make QuarkXPress Server requests via the Web services interface provided by QuarkXPress Server Manager. They demonstrate document rendering and modification under both Mac OS and iOS.

- ➔ The "AddFileRequest" sample shows how to make servlet requests to QuarkXPress Server Manager, instead of using QuarkXPress Server Manager Web service stubs. Web services use SOAP to pass data, and SOAP is not designed to transfer large amounts of data, so Quark recommends using the servlet interface to upload and download files in a production environment.

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QuarkXPress Server Features

Dynamic Pagination and Flow

- ➡ The *Evolved Mechanics* sample, demonstrating the flow automation constructs, can be downloaded from the QXPS Administration home page, using the **Download SDK and Samples** link.

There are three main division in the structure of any document:

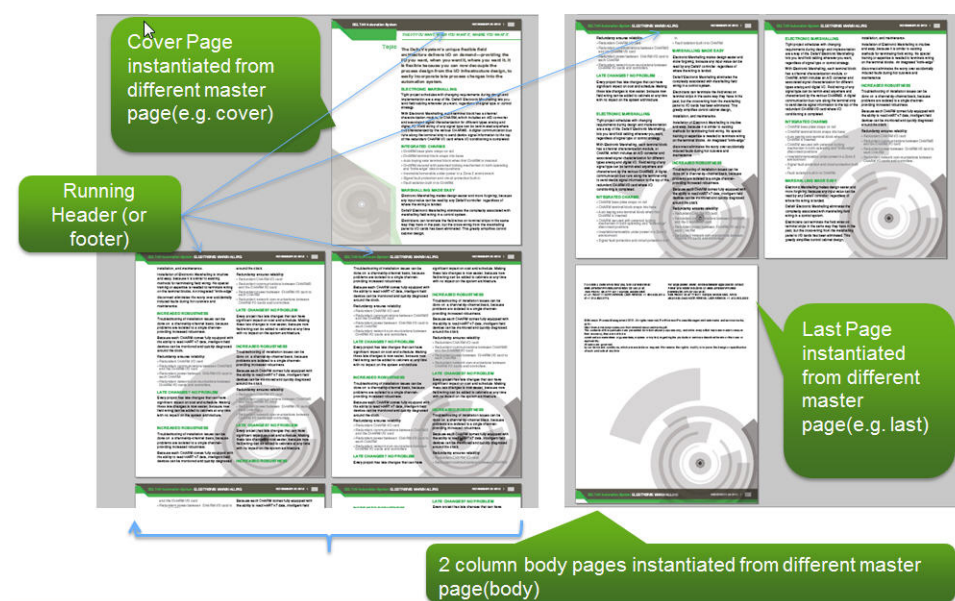
- 1 the front page content
- 2 the body content
- 3 the back page content

The Dynamic Pagination and Flow feature gives you the ability to define multiple page layouts in a single flow. The Page Sequences can be a logical section or a chapter comprised of a single flow. Different pages of a Page Sequence can be based on different master pages. Pages will be organized while adhering to defined constraints.

The following is a list of customer use cases that can be fulfilled using the new modifier XML markup:

- The ability to specify running headers and running footers.
- The ability to pre-define the sequence of the application of the available master pages on the various pages being created dynamically.
- The ability to express/segment the flow content into logical sections.
 - Bulleted text, Section numbering, Text Styling, colors etc
 - Components that are re-usable across multiple document types. For example, disclaimers and copy right notices.
- The ability to impose constraints on the page count (odd or even) per section, enabling you to automatically insert blank pages for print versions of documentation.
- The ability to specify the desired page numbering formats for various sections (for example, index or glossary pages having roman numerals).
- The ability to have repeatable interactivity aspects.
- The ability to present tabular content in various ways:
 - inline
 - spanned across columns

- full width spanned
- full page - rotated / un-rotated.
- The ability to format tables in the following various ways:
 - horizontal and vertical
 - gridlines
 - grouping headers
 - shading rows and columns
 - the inclusion of table notes with the table
- The ability to break content across pages along with headers.
- The ability to specify the placement of images and charts in the following scenarios:
 - inline
 - spanned across columns
 - full page
- The ability to specify a different Table of Contents for digital and print issues.



Example User Pagination Requirement

Dynamic Pagination and Flow Problem

Consider the following pagination requirement.

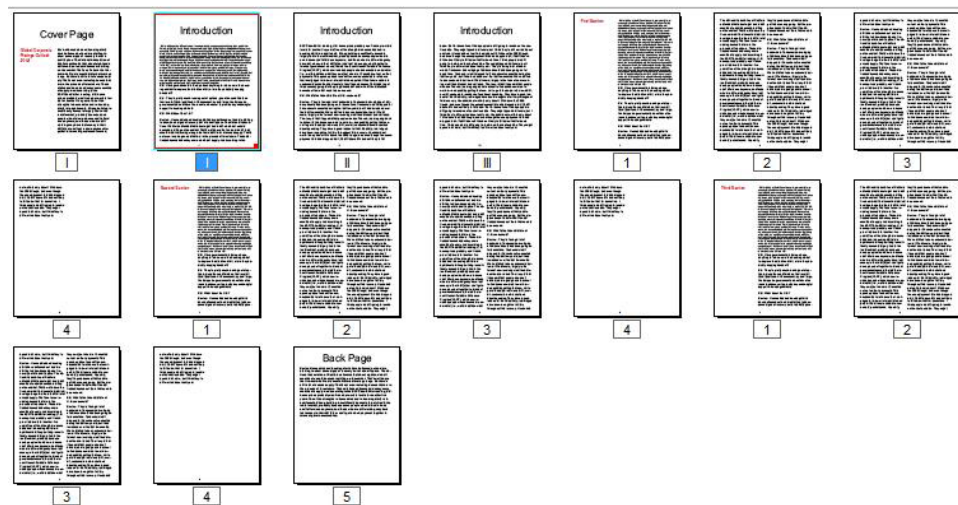
The template has 5 master pages:

- Cover - a master page for the cover page
- Introduction - a master page for introduction page(s)
- Section First Page - a master page for the first page of each section (a section's cover page)
- Section Content - a master page to be used for each page that has body content

- Back Page - a master page for the back page (a back cover)

The pagination requirement is:

- 1 Cover
- 2 Introduction
- 3 Multiple sections
 - Section First Page
 - Section Content
- 4 Back Page



Example User Pagination Requirement

Previously, when a desktop user created this document, he accomplished this manually by dragging and dropping the desired master pages onto each page. The user was not able to achieve the desired pagination using the automated dynamic publishing workflows (XML--> PDF or XML-->iPad).

Dynamic Pagination and Flow Solution

The Dynamic Pagination and Flow feature introduced in the 9.5.1 release of QuarkXPress Server, solves this problem.

New Parts of the **ModifierXML**:

- 1 The **MASTERPAGESEQUENCE** element gives you the ability to describe the use and application of master pages by the QuarkXPress Server Modifier XML processor and further by its layout engine. It also allows the user to define the pagination pattern with a name.
- 2 The **PAGESEQUENCE** element contains the actual flow content with reference to the **MASTERPAGESEQUENCE** via a **@MASTERPAGESEQUENCEREF** and a **@MASTERPAGEREF** respectively. Each **PAGESEQUENCE** element will have a certain non-variable static content segment (represented by **STATICCONTENT**) containing the content that is intended to be repeated across multiple flow pages. Each **PAGESEQUENCE** has a child object **STORY** which acts as a container for the flow content containing multiple **PARAGRAPH** elements.

Each **PARAGRAPH** object holds **RICHTEXT** giving you the ability to apply a wide variety of styling.

- 3 The **SINGLEMASTERPAGEREFERENCE** element defines a sequence in which a particular master page will be applied to a single page in a page sequence. It contains the name of the master page in the QuarkXPress template to be used. The given master page is applied to one page of a page sequence. This is useful for front matter, back matter and section start pages.

The following is an example of the use of the **SINGLEMASTERPAGEREFERENCE**

```
<MASTERPAGESEQUENCE NAME="SingleMaster">
  <SINGLEMASTERPAGEREFERENCE NAME="A-MasterA"></SINGLEMASTERPAGEREFERENCE>

  <SINGLEMASTERPAGEREFERENCE NAME="B-MasterB"></SINGLEMASTERPAGEREFERENCE>

  <SINGLEMASTERPAGEREFERENCE NAME="C-MasterC"></SINGLEMASTERPAGEREFERENCE>
</MASTERPAGESEQUENCE>
```

This applies the **A-MasterA** master page to the first page, **B-MasterB** master page to the second page, and the **C-MasterC** master page to the third page and onwards.

- 4 The **REPEATABLEMASTERPAGEREFERENCE** element defines a sequence in which a master page will be applied to multiple pages in a page sequence. It contains the name of the master page in the QuarkXPress template to be used. This is useful for constructing runs of identical pages and causes a bounded or unbounded sequence of pages to be generated using the same master page.

This element is a super set of the **SINGLEMASTERPAGEREFERENCE** element. It allows an application of a particular master page upto **n** number of pages using the **MAXREPEATS** attribute.

The following is an example of the use of the **REPEATABLEMASTERPAGEREFERENCE**.

```
<MASTERPAGESEQUENCE NAME="RepeatableMaster">
  <REPEATABLEMASTERPAGEREFERENCE MAXREPEATS="5" NAME="B-MasterB"/>
  <REPEATABLEMASTERPAGEREFERENCE NAME="C-MasterC"/>
</MASTERPAGESEQUENCE>
```

This applies the **B-MasterB** master page to the first 5 pages. From the sixth page onward, the **C-MasterC** master page will be applied.

- 5 The **REPEATABLEMASTERPAGEALTERNATIVES** element defines a master page along with conditions that must be satisfied to apply the given master page on a page. It contains one or more **CONDITIONALMASTERPAGEREFERENCE** elements that define the conditions.

This is a super set of the first two master page sequences. It allows an application of a particular master page on even pages, a different master page on odd pages and a different master page on first and last pages.

The following is an example of the use of the **REPEATABLEMASTERPAGEALTERNATIVES**.

```
<MASTERPAGESEQUENCE NAME="ConditionalMaster">
  <REPEATABLEMASTERPAGEALTERNATIVES>
    <CONDITIONALMASTERPAGEREFERENCE NAME="D-MasterD" POSITION="FIRST"/>
    <CONDITIONALMASTERPAGEREFERENCE NAME="A-MasterA" ODDOREVEN="EVEN"
POSITION="REST" />
    <CONDITIONALMASTERPAGEREFERENCE NAME="C-MasterC" ODDOREVEN="ODD"
POSITION="REST" />
    <CONDITIONALMASTERPAGEREFERENCE NAME="B-MasterB" POSITION="LAST" />
  </REPEATABLEMASTERPAGEALTERNATIVES>
</MASTERPAGESEQUENCE>
```

This applies the **D-MasterD** master page to the first page, the **A-MasterA** master page to all even numbered pages, the **C-MasterC** master page to all odd numbered pages, and the **B-MasterB** master page to the last page.

- 6 The `CONDITIONALMASTERPAGEREFERENCE` element gives you the ability to specify the master page along with the conditions that must be satisfied to apply the given master page on a page. The following conditions may be specified:

- a page's position within a sequence
- the odd or even page number property
- whether or not a particular page is blank

contains the actual flow content with reference to the `MASTERPAGESEQUENCE` via a `@MASTERPAGESEQUENCEREF` and a `@MASTERPAGEREF` respectively. Each `PAGESEQUENCE` element will have a certain non-variable static content segment (represented by `STATICCONTENT`) containing the content that is intended to be repeated across multiple flow pages.

- 7 The `STATICCONTENT` element gives you the ability to specify content chunks that are intended to be repeated across multiple flow pages. For example, running headers or footers.
- 8 The `SECTIONNUMBERFORMAT` element gives you the ability to specify the page number format.

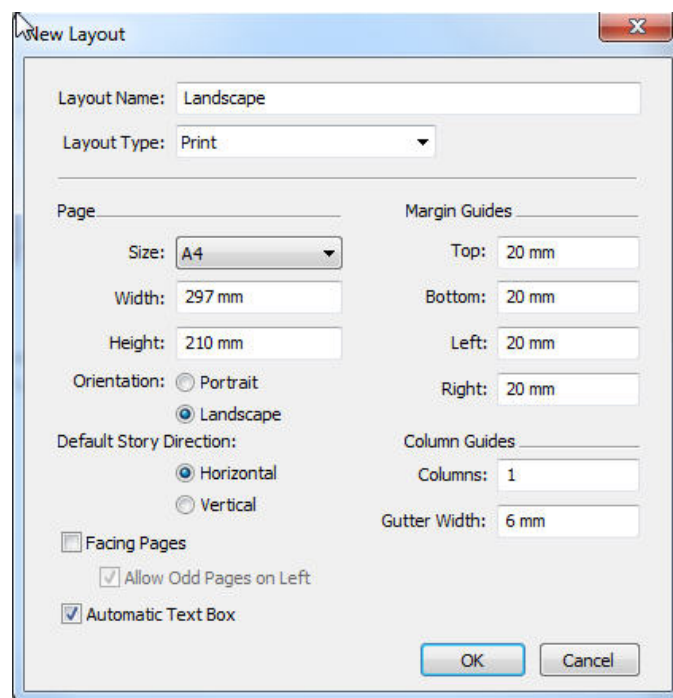
```
<PROJECT>
<LAYOUT>
  <ID UID="1" />
  <MASTERPAGESEQUENCE NAME="APSMasterPages">
    <REPEATABLEMASTERPAGEALTERNATIVES>
      <CONDITIONALMASTERPAGEREFERENCE POSITION="FIRST"
NAME="C-ArticleFirst" />
      <CONDITIONALMASTERPAGEREFERENCE POSITION="REST" NAME="D-ArticleRest" />
      <CONDITIONALMASTERPAGEREFERENCE POSITION="LAST" NAME="E-ArticleLast" />
      <CONDITIONALMASTERPAGEREFERENCE BLANKORNOTBLANK="BLANK"
NAME="F-BlankMaster" />
    </REPEATABLEMASTERPAGEALTERNATIVES>
  </MASTERPAGESEQUENCE>
  <PAGESEQUENCE MASTERPAGESEQUENCEREF="APSMasterPages"
FORCEPAGECOUNT="ENDONEVEN">
    <SECTIONNUMBERFORMAT FORMAT="NUMERIC" INITIALPAGENUMBER="1" />
    <STATICCONTENT>
      <BOX>
        <ID NAME="logo" />
        <TEXT>
          <STORY>
            <PARAGRAPH PARASTYLE="Article SubHead">
              <RICHTEXT BOLD="true">Article Sub heading goes here </RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
      <BOX>
        <ID NAME="title" />
        <TEXT>
          <STORY>
            <PARAGRAPH MERGE="FALSE" PARASTYLE="NORMAL">
              <FORMAT ALIGNMENT="RIGHT" />
              <RICHTEXT BOLD="true" COLOR="White" SIZE="14">
                Automation System</RICHTEXT>
            </PARAGRAPH>
          </STORY>
        </TEXT>
      </BOX>
    </STATICCONTENT>
    <STORY BOXNAME="flow">
      <PARAGRAPH PARASTYLE="Article Opening Paragraph">
      <PARAGRAPH PARASTYLE="Article Section Start">
      <PARAGRAPH PARASTYLE="Article Body Copy">
      <PARAGRAPH PARASTYLE="Article Body Copy">
      <PARAGRAPH PARASTYLE="Article Body Copy">
      <PARAGRAPH PARASTYLE="Article Section Start">
      <PARAGRAPH PARASTYLE="Article Body Copy">
```

```
<PARAGRAPH PARASTYLE="Article Body Copy">
</STORY>
</PAGESEQUENCE>
</LAYOUT>
</PROJECT>
```

Landscape pagination

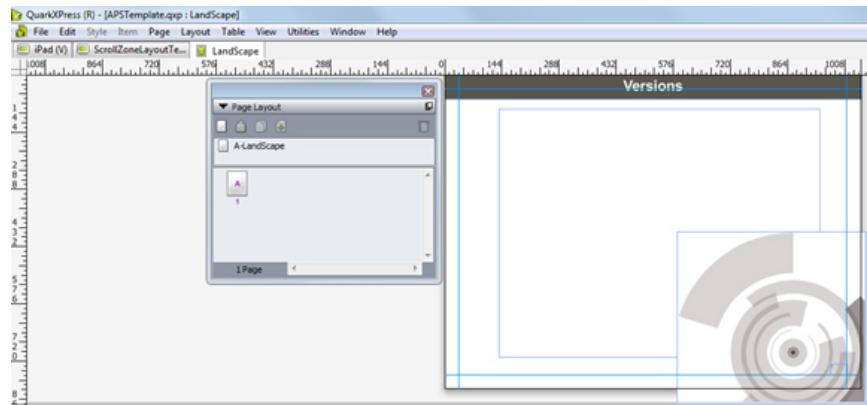
The support for mixed orientation in the PDF output gives you the ability to define different page orientations in a single flow. This can be accomplished by using the `PAGESEQUENCE` element of the `ModifierXML`. The `PAGESEQUENCE` element contains a new attribute `ORIENTATION` which allows you to specify a page orientation for each page in the flow. Setting the value of `ORIENTATION` to *Landscape* would cause the contents of the `STORY` element of the page sequence to flow into a Landscape layout made available in the template. The following steps allow you to achieve mixed orientation pages in the PDF output:

- 1 Add a landscape layout in the template, giving the page width and height as:
 - Page Height = The width of a page in portrait mode
 - Page Width = The height of a page in portrait mode



Adding a Landscape layout

- 2 Designate the new layout as the Landscape layout by giving it the name *Landscape*.
- 3 Use this new layout to create pages with the Landscape orientation.



Creating pages with the Landscape layout

The following is an example of the `MASTERPAGESEQUENCE` to be used for Landscape mode.

```
<MASTERPAGESEQUENCE NAME="Landscape">
  <SINGLEMASTERPAGEREFERENCE NAME="A-Landscape"></SINGLEMASTERPAGEREFERENCE>
</MASTERPAGESEQUENCE>
```

The following is an example of the `PARAGRAPH` element with the `PARASTYLE` attribute set to flow. This cause the landscape flow content under the `PAGESEQUENCE` that has `ORIENTATION` set to `LANDSCAPE` to be flown into the flow boxes in the layout with the name *Landscape*.

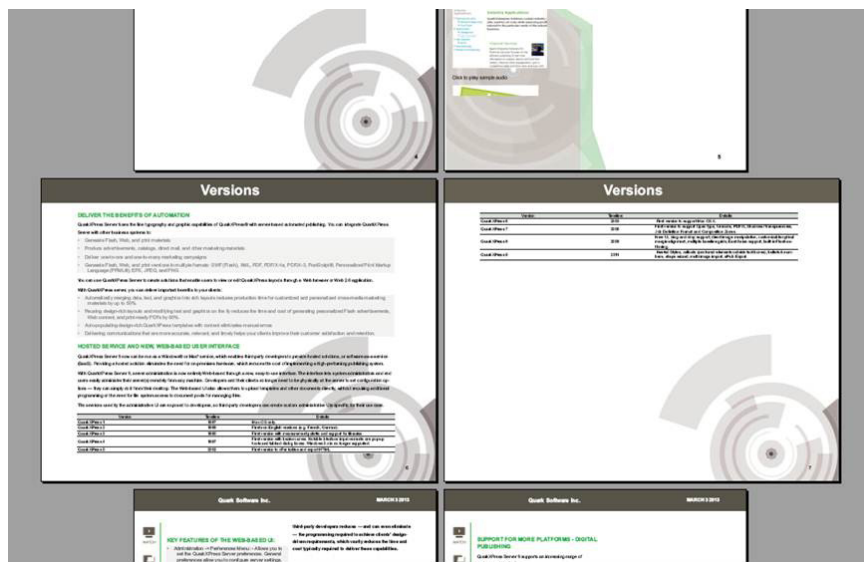
```
<PARAGRAPH PARASTYLE="Flow">
  <RICHTEXT BACKGROUND="yellow">Text here</RICHTEXT>
</PARAGRAPH>
```

The following is an example of a nested `PAGESEQUENCE` depicting Landscape mode. The landscape flow content under the `PAGESEQUENCE` that has `ORIENTATION` set to `LANDSCAPE` is flown into the flow boxes in the layout with the name *Landscape*.

```
<PAGESEQUENCE ORIENTATION="LANDSCAPE"MASTERREFERENCE="Landscape">
  <STORY BOXNAME="flow">
    <PARAGRAPH PARASTYLE="Title">
      <RICHTEXT>Deliver the Benefits of Automation</RICHTEXT>
    </PARAGRAPH>
    <PARAGRAPH PARASTYLE="Flow">
      <RICHTEXT>Text Here</RICHTEXT>
    </PARAGRAPH>
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Flow">
    <PARAGRAPH PARASTYLE="Flow">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <PARAGRAPH PARASTYLE="Title">
    <PARAGRAPH PARASTYLE="Flow">
    <PARAGRAPH PARASTYLE="Flow">
    <PARAGRAPH PARASTYLE="Flow">
    </PARAGRAPH/>
    <PARAGRAPH/>
    <INLINETABLE TABLESTYLEREf= "quark">
      <COLGROUP>
        <THREAD>
          <TROW>
            <ENTRY>
              <PARAGRAPH PARASTYLE="TableContent">
                <FORMAT ALIGNMENT= "CENTERED"/>
                <RICHTEXT>Text Here</RICHTEXT>
              </PARAGRAPH>
            </ENTRY>
            <ENTRY>
              <PARAGRAPH PARASTYLE="TableContent">
                <FORMAT ALIGNMENT= "CENTERED"/>
                <RICHTEXT>Text Here</RICHTEXT>
              </PARAGRAPH>
            </ENTRY>
```


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```
</PARAGRAPH>
</ENTRY>
</THROW>
</THREAD>
</INLINETABLE>
</STORY>
</PAGESEQUENCE>
<!--Portrait Mode Resumed-->
<PARAGRAPH PARASTYLE="Title">
  <RICHTEXT>Text here</RICHTEXT>
</PARAGRAPH>
```



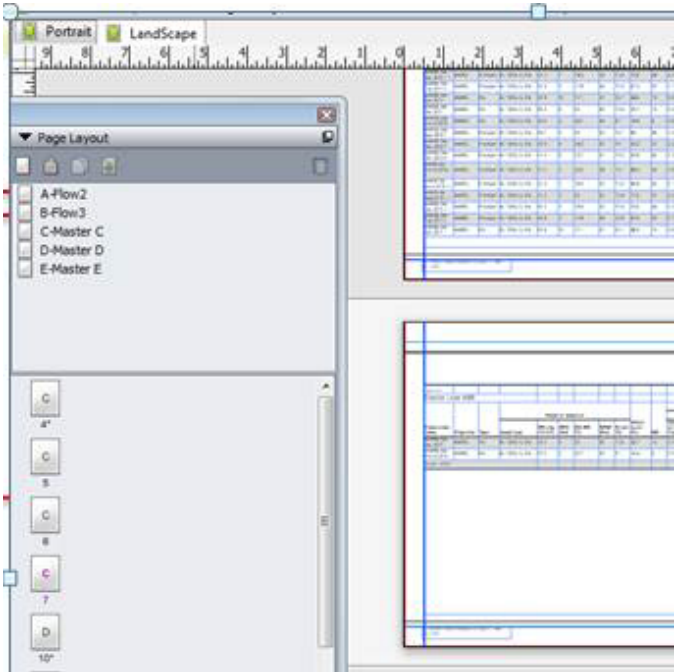
Flowing content onto pages created with the Landscape layout

The following is an example of a **PROJECT** element. The landscape flow content under the **PAGESEQUENCE** that has **ORIENTATION** set to **LANDSCAPE** is flown into the flow boxes in the layout with the name *Landscape*.

```
<PROJECT>
  <TABLESTYLE>
  <TABLESTYLE>
  <LAYOUT>
    <ID UID="1"/>
    <MASTERPAGESEQUENCE NAME= "Cover">
    <MASTERPAGESEQUENCE NAME= "Flow">
    <MASTERPAGESEQUENCE NAME= "Flow2">
      <SINGLEMASTERPAGEREFERENCE NAME= "A-Flow2"/>
    </MASTERPAGESEQUENCE>
    <MASTERPAGESEQUENCE NAME= "Flow3">
      <SINGLEMASTERPAGEREFERENCE NAME= "B-Flow3"/>
    </MASTERPAGESEQUENCE>
    <PARAGRAPH PARASTYLE="Bulletstyle">
    <MASTERPAGESEQUENCE NAME= "Disclaimer">
    <PAGESEQUENCE MASTERREFERENCE="Cover">
    <PAGESEQUENCE MASTERREFERENCE="Flow">
    <PAGESEQUENCE MASTERREFERENCE="Flow">
    <PAGESEQUENCE MASTERREFERENCE="Flow2" ORIENTATION= "LANDSCAPE">
      <STORY BOXNAME= "StoryFlow2">
        <INLINETABLE TABLESTYLERE= "Rating">
        </STORY>
      </PAGESEQUENCE>
    <PAGESEQUENCE MASTERREFERENCE="Flow">
    <PAGESEQUENCE MASTERREFERENCE="Flow">
    <PAGESEQUENCE MASTERREFERENCE="Flow3" ORIENTATION= "LANDSCAPE">
      <STATICCONTENT>
      <STORY BOXNAME= "StoryFlow2">
        <INLINETABLE TABLESTYLERE= "NoGrids">
        </STORY>
      </PAGESEQUENCE>
    <PAGESEQUENCE MASTERREFERENCE="Flow3" ORIENTATION= "LANDSCAPE">
      <STATICCONTENT>
      <STORY BOXNAME= "StoryFlow2">
        <INLINETABLE TABLESTYLERE= "NoGrids">
        </STORY>
      </PAGESEQUENCE>
    <PAGESEQUENCE MASTERREFERENCE="Disclaimer">
```

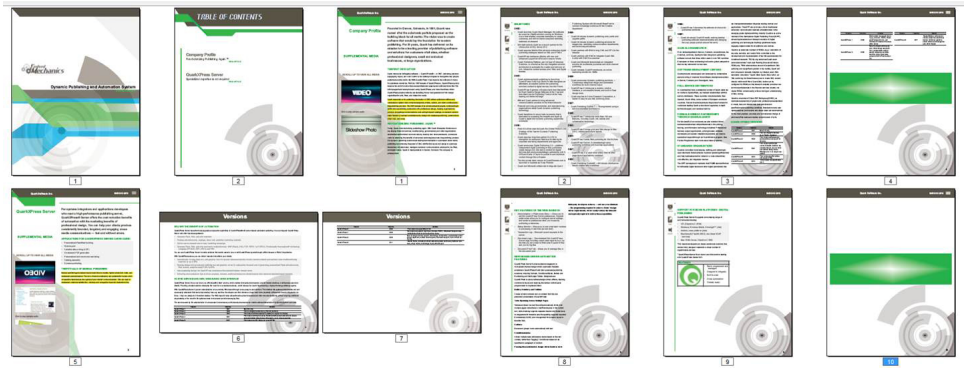


```
</LAYOUT>  
</PROJECT>
```



The landscape flow content under the **PAGESEQUENCE** that has **ORIENTATION = LANDSCAPE** is flown into the flow boxes in the layout with the name *Landscape*.

The following is the resultant PDF from the above example:



A PDF with a mixed orientation.

Modifier schema (annotated)

The topics below provide an annotated version of the Modifier schema, which is available both as a DTD and in XML Schema format. Details are provided for how to form XML code that uses the `construct` namespace, `modify` parameter, and `xml` namespace. The XML sent to or from these functions is case-sensitive and validated by the Modifier schema, thereby providing well-formed XML code that is compatible between each function.

In the following topics:

- The "Construct" column refers to constructing a QuarkXPress project using the `construct` namespace.
- The "Modify" column refers to modifying a QuarkXPress project using the `modify` parameter.
- The "Deconstruct" column refers to deconstructing a QuarkXPress project using the `xml` namespace.

To conserve space, the notation used in the following topics is DTD notation. See the "Modifier.xsd" file for XML Schema definitions.

➡ Measurement values do not require units. For example, "25pt" should be submitted as "25".

Entities (Modifier DTD)

Element type	Construct	Modify	Deconstruct
<code><!ENTITY sot</code> <code>"&#38;#x0002;"></code> <code><!ENTITY etx</code> <code>"&#38;#x0003;"></code> <code><!ENTITY eot</code> <code>"&#38;#x0004;"></code> <code><!ENTITY enq</code> <code>"&#38;#x0005;"></code> <code><!ENTITY ack</code> <code>"&#38;#x0006;"></code> <code><!ENTITY softReturn</code> <code>"&#38;#x0007;"></code>	Entities that represent QuarkXPress special characters. Note: Some entities, such as <code>softreturn</code> , are different for QuarkXPress than they are in the Unicode® specification.	Entities that represent QuarkXPress special characters. Note: Some entities, such as <code>softreturn</code> , are different for QuarkXPress than they are in the Unicode specification.	Entities that represent QuarkXPress special characters. Note: Some entities, such as <code>softreturn</code> , are different for QuarkXPress than they are in the Unicode specification.

Element type	Construct	Modify	Deconstruct
<pre> <!ENTITY bs "#38;#x0008;"> <!ENTITY hTab "#38;#x0009;"> <!ENTITY lineFeed "#38;#x000A;"> <!ENTITY vTab "#38;#x000B;"> <!ENTITY boxBreak "#38;#x000C;"> <!ENTITY hardReturn "#38;#x000D;"> <!ENTITY so "#38;#x000E;"> <!ENTITY flexSpace "#38;#x000F;"> <!ENTITY dle "#38;#x0010;"> <!ENTITY dcOne "#38;#x0011;"> <!ENTITY dcTwo "#38;#x0012;"> <!ENTITY dcThree "#38;#x0013;"> <!ENTITY dcFour "#38;#x0014;"> <!ENTITY nak "#38;#x0015;"> <!ENTITY syn "#38;#x0016;"> <!ENTITY etb "#38;#x0017;"> <!ENTITY can "#38;#x0018;"> <!ENTITY em "#38;#x0019;"> <!ENTITY sub "#38;#x001A;"> <!ENTITY esc "#38;#x001B;"> <!ENTITY csMarker "#38;#x001C;"> <!ENTITY discReturn "#38;#x001D;"> <!ENTITY indentHere "#38;#x001E;"> <!ENTITY discHyphen "#38;#x00AD;"> <!ENTITY shy "#38;#x001F;"> <!ENTITY ensp "#38;#x2002;"> <!ENTITY emsp "#38;#x2003;"> </pre>			

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<pre><!ENTITY threePerEmSpace "&#38;#x2004;"> <!ENTITY fourPerEmSpace "&#38;#x2005;"> <!ENTITY sixPerEmSpace "&#38;#x2006;"> <!ENTITY figureSpace "&#38;#x2007;"> <!ENTITY punctSpace "&#38;#x2008;"> <!ENTITY thinsp "&#38;#x2009;"> <!ENTITY hairSpace "&#38;#x200A;"> <!ENTITY zeroWidthSpace "&#38;#x200B;"> <!ENTITY hyphen "&#38;#x2010;"> <!ENTITY ndash "&#38;#x2013;"> <!ENTITY mdash "&#38;#x2014;"> <!ENTITY wordJoiner "&#38;#x2060;"> <!ENTITY nbsp "&#38;#x00A0;"> <!ENTITY ideographicSpace "&#38;#x3000;"></pre>			

ADDCELLS (Modifier schema)

Element type	Construct	Modify	Deconstruct
ADDCELLS (empty)	Not applicable.	Adds cells to an existing table. Note: If you add a column, you must also define every ROW and CELL element in that column.	Not applicable.
Attributes			
TYPE (ROW COLUMN HEADER FOOTER) #REQUIRED	Not applicable.	Specifies whether to add rows, columns, headers, or footers.	Not applicable.
BASEINDEX CDATA #REQUIRED	Not applicable.	Specifies the index number of the cell before or after which the new cells should	Not applicable.

Element type	Construct	Modify	Deconstruct
		be inserted. See the <code>INSERTPOSITION</code> attribute.	
<code>INSERTCOUNT CDATA #REQUIRED</code>	Not applicable.	Specifies how many cells to add.	Not applicable.
<code>INSERTPOSITION (AFTER BEFORE) "AFTER"</code>	Not applicable.	Specifies whether to add the new cells before or after the cell indicated in the <code>BASEINDEX</code> attribute.	Not applicable.
<code>KEEPATTRIBUTE (true false) "false"</code>	Not applicable.	Specifies whether an inserted row or column should adopt the same attributes as the <code>BASEINDEX</code> cell.	Not applicable.

ALIGNHORSETTINGS (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>ALIGNHORSETTINGS</code> (empty)	Specifies horizontal alignment settings for a callout.	Specifies horizontal alignment settings for a callout.	Specifies horizontal alignment settings for a callout.
Attributes			
<code>ALIGNRELATIVETO (ANCHOR PARAGRAPH BOXCELL PAGE SPREAD) #IMPLIED</code>	Indicates what a callout should be aligned relative to.	Indicates what a callout should be aligned relative to.	Indicates what a callout should be aligned relative to.
<code>ALIGNCALLOUTS (CENTER LEFTEDGE RIGHTEDGE INSIDEEDGE OUTSIDEEDGE) #IMPLIED</code>	Indicates which part of a callout to align.	Indicates which part of a callout to align.	Indicates which part of a callout to align.
<code>ALIGNWITH (ANCHORPOSITION LEFTEDGE RIGHTEDGE INSIDEEDGE OUTSIDEEDGE CENTER CENTERMARGIN LEFTMARGIN RIGHTMARGIN INSIDEMARGIN OUTSIDEMARGIN) #IMPLIED</code>	Indicates how a callout should be aligned.	Indicates how a callout should be aligned.	Indicates how a callout should be aligned.
<code>OFFSET CDATA #IMPLIED</code>	Indicates a callout's horizontal offset.	Indicates a callout's horizontal offset.	Indicates a callout's horizontal offset.

ALIGNVERSESETTINGS (Modifier schema)

Element type	Construct	Modify	Deconstruct
ALIGNVERSESETTINGS (empty)	Specifies vertical alignment settings for a callout.	Specifies vertical alignment settings for a callout.	Specifies vertical alignment settings for a callout.
Attributes			
ALIGNRELATIVETO (ANCHOR PARAGRAPH BOXCELL PAGE SPREAD) #IMPLIED	Indicates what a callout should be aligned relative to.	Indicates what a callout should be aligned relative to.	Indicates what a callout should be aligned relative to.
ALIGNCALLOUTS (CENTER TOPEdge BOTTOMEDGE) #IMPLIED	Indicates which part of a callout to align.	Indicates which part of a callout to align.	Indicates which part of a callout to align.
ALIGNWITH (ANCHORPOSITION CENTER TOPEdge BOTTOMEDGE CENTERMARGIN TOPMARGIN BOTTOMMARGIN TOP BOTTOM TEXTASCENT TEXTBASELINE EMBOXTOP EMBOXBOTTOM) #IMPLIED	Indicates how a callout should be aligned.	Indicates how a callout should be aligned.	Indicates how a callout should be aligned.
OFFSET CDATA #IMPLIED	Indicates a callout's vertical offset.	Indicates a callout's vertical offset.	Indicates a callout's vertical offset.

ALLOWBOXOFFPAGE (Modifier schema)

Element type	Construct	Modify	Deconstruct
ALLOWBOXOFFPAGE (#PCDATA)	Not applicable.	Specifies whether a box is allowed to be moved completely off of a page and onto the pasteboard by, for example, a MOVERIGHT element. Only accepts true or false values; default value is true.	Not applicable.

ALLOWBOXONTOPASTEBOARD (Modifier schema)

Element type	Construct	Modify	Deconstruct
ALLOWBOXONTOPASTEBOARD (#PCDATA)	Not applicable.	Specifies whether a box is allowed to be moved partially off of a page and onto the pasteboard by, for example, a MOVERIGHT element. Only accepts true or false values; default value is true.	Not applicable.

ANCHOREDBOXREF (Modifier schema)

Element type	Construct	Modify	Deconstruct
ANCHOREDBOXREF (#PCDATA)	Specifies id of anchored box that is part of the story.	Specifies id of anchored box that is part of the story.	Specifies id of anchored box that is part of the story.
Attributes			
ALIGNWITHTEXT (ASCENT BASELINE) "BASELINE"	Determines whether the top of the anchored box will align with the top of the text (ascent) or the bottom of the text (baseline). Note that if you want to anchor the table and have it continue in the next box or column, this value must be set to BASELINE .	Determines whether the top of the anchored box will align with the top of the text (ascent) or the bottom of the text (baseline). Note that if you want to anchor the table and have it continue in the next box or column, this value must be set to BASELINE . The <code>alignwithtext</code> attribute should be set to <code>baseline</code> when the <code>breakwhenanchored</code> attribute is set to <code>true</code> for an anchored table.	Determines whether the top of the anchored box will align with the top of the text (ascent) or the bottom of the text (baseline). Note that if you want to anchor the table and have it continue in the next box or column, this value must be set to BASELINE .
OFFSET CDATA #IMPLIED	Determines the offset when ALIGNWITHTEXT is set to BASELINE . Default is 0.	Determines the offset when ALIGNWITHTEXT is set to BASELINE . Default is 0.	Determines the offset when ALIGNWITHTEXT is set to BASELINE . Default is 0.
BASELINESHIFT CDATA #IMPLIED	Shifts the anchored box up or down without affecting paragraph line spacing. A positive value raises the anchored box, and a negative value lowers it.	Shifts the anchored box up or down without affecting paragraph line spacing. A positive value raises the anchored box, and a negative value lowers it.	The baseline shift value applied to the anchored box.
TRACKAMOUNT CDATA #IMPLIED	Adjusts the amount of space between the anchored box and surrounding characters and words.	Adjusts the amount of space between the anchored box and surrounding characters and words.	The tracking value applied to the anchored box and surrounding characters and words.
SENDING CDATA #IMPLIED	A character spacing attribute used in East Asian typography. Similar to kerning, but applicable as a fixed value over a range of text containing the anchored box.	A character spacing attribute used in East Asian typography. Similar to kerning, but applicable as a fixed value over a range of text containing the anchored box.	A character spacing attribute used in East Asian typography. Similar to kerning, but applicable as a fixed value over a range of text containing the anchored box.
BOXUID CDATA #IMPLIED	The ID of the anchored box.	The ID of the anchored box.	The ID of the anchored box.

ARTICLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
ARTICLE (ID, RGBCOLOR?, COMPONENT+)	Describes an article (a series of one or more COMPONENT elements). New articles should not be created in a QuarkXPress project in systems working directly with QPS. Instead, create an article only within a QuarkCopyDesk® file. To assign an article in QPS®, use the QPS SDK.	Describes an article (a series of one or more COMPONENT elements).	Describes an article (a series of one or more COMPONENT elements).
Attributes			
OPERATION (CREATE DELETE) #IMPLIED DOCFORMAT (LIGHTWEIGHT FULLFEATURED) "LIGHTWEIGHT" EXPORTARTICLE (true false) "false" ARTICLETEMPLATENAME CDATA #IMPLIED	Describes the type of Article.	Not applicable.	Describes the type of Article. "LIGHTWEIGHT" and "FULLFEATURED" articles are forms of QuarkCopyDesk articles that can be constructed/modified through QuarkXPress Server.

AUTHOR (Modifier schema)

Element type	Construct	Modify	Deconstruct
AUTHOR (#PCDATA)	Not applicable.	Part of the <EBOOKMETADATA> element. Specifies the author of an e-book.	Specifies the author of an e-book.

BNSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
BNSTYLE (empty)	Describes a bullet, numbering, or outline style	Describes a bullet, numbering, or outline style	Describes a bullet, numbering, or outline style
Attributes			
TYPE (BULLET NUMBERING OUTLINE) #IMPLIED	Specifies whether this is a bullet, numbering, or outline style.	Specifies whether this is a bullet, numbering, or outline style.	Specifies whether LOCKTOGRID is enabled.
NAME CDATA #IMPLIED	Specifies the name of the style.	Specifies the name of the style.	Specifies the name of the style.
MINDISTFROMTEXT CDATA #IMPLIED	Specifies the minimum distance between the bullet or number and the text.	Specifies the minimum distance between the bullet or number and the text.	Specifies the minimum distance between the bullet or number and the text.

Element type	Construct	Modify	Deconstruct
RESTARTNUMBERING (true false) #IMPLIED	Specifies whether renumbering should restart with this style.	Specifies whether renumbering should restart with this style.	Specifies whether renumbering should restart with this style.
STARTAT CDATA #IMPLIED	Specifies the first number for numbering.	Specifies the first number for numbering.	Specifies the first number for numbering.

BOTTOM (Modifier schema)

Element type	Construct	Modify	Deconstruct
BOTTOM (#PCDATA)	The distance between the box or line's bottom edge and the bottom of the page, in points.	The distance between the box or line's bottom edge and the bottom of the page, in points.	The distance between the box or line's bottom edge and the bottom of the page, in points.

BOTTOMGRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
BOTTOMGRID (empty)	Describes a grid line on the bottom edge of a row in an <INLINETABLE>.	Describes a grid line on the bottom edge of a row in an <INLINETABLE>.	Not applicable.
Attributes			
TYPE (TOP LEFT BOTTOM RIGHT) #IMPLIED	Specifies the location of the grid line.	Specifies the location of the grid line.	Not applicable.
STYLE CDATA #IMPLIED	Identifies the <TABLESTYLE> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <TABLESTYLE> values.	Identifies the <TABLESTYLE> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <TABLESTYLE> values.	Not applicable.
WIDTH CDATA #IMPLIED	Specifies the width of the grid line in points.	Specifies the width of the grid line in points.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the color of the grid line.	Specifies the color of the grid line.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the shade of the grid line.	Specifies the shade of the grid line.	Not applicable.
OPACITY CDATA #IMPLIED	Specifies the opacity of the grid line.	Specifies the opacity of the grid line.	Not applicable.
GAPCOLOR CDATA #IMPLIED	Specifies the color of the gap (if any) between the lines that make up the grid line.	Specifies the color of the gap (if any) between the lines that make up the grid line.	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
GAPSHADE CDATA #IMPLIED	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Not applicable.
GAPOPACITY CDATA #IMPLIED	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Not applicable.

BOX (Modifier schema)

Element type	Construct	Modify	Deconstruct
BOX (ID, METADATA?, (TEXT PICTURE GEOMETRY CONTENT SHADOW FRAME PLACEHOLDER CONTENTPH STATICCONTENT)*, INTERACTIVITY?)	Describes a text box or picture box. Note: On construct, you must provide a box name in the ID@NAME attribute; QuarkXPress Server assigns an ID@UID to each BOX you create. Note: When a box is created, its page number is inferred from the GEOMETRY@PAGE attribute.	Identifies a text box or picture box to be modified. You can use either the ID@UID or ID@NAME value to identify the box. Note: Named boxes can be easily identified by an XPath search for <code>//BOX[@NAME]</code> .	Describes a text box or picture box. If a NAME value exists, the NAME displays in the content of the ID element: <code><ID UID=456 NAME=Name of box>Name of box</ID></code> If a NAME value does not exist, the UID displays in the content of the ID element: <code><ID UID=457>457</ID></code>
Attributes			
OPERATION (CREATE DELETE) #IMPLIED	Not applicable.	Specifies whether to create or delete the indicated box.	Not applicable.
BOXTYPE (CT_NONE CT_TEXT CT_PICT) #IMPLIED	The box type: CT_NONE = No box type specified. CT_TEXT = Text box CT_PICT = Picture box	The box type: CT_NONE = No box type specified. CT_TEXT = Text box CT_PICT = Picture box	The box type: CT_NONE = No box type specified. CT_TEXT = Text box CT_PICT = Picture box
COLOR CDATA #IMPLIED	Identifies the background color of a box. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the project's Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the background color of a box. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the project's Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server. The color definition can also be based on an existing color created and saved in the project.	Identifies the background color of a box. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the project's Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server. The color definition can also be based on an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Specifies the shade of a box's background color,	Specifies the shade of a box's background color,	Specifies the shade of a box's background color,

Element type	Construct	Modify	Deconstruct
	specified as a float value from 0 to 100.	specified as an integer percentage from 0 to 100.	specified as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of a box's background color, specified as a float value from 0 to 100.	Specifies the opacity of a box's background color, specified as an integer percentage from 0 to 100.	Indicates the opacity of a box's background color, specified as an integer percentage from 0 to 100.
BLENDSTYLE (SOLID LINEAR MIDLINEAR RECTANGULAR DIAMOND CIRCULAR FULLCIRCULAR none) "none"	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).
BLENDANGLE CDATA #IMPLIED	Specifies the angle of the blend.	Specifies the angle of the blend.	Specifies the angle of the blend.
BLENDCOLOR CDATA #IMPLIED	Specifies the second color of the blend. The first color of the blend is the color applied to the box.	Specifies the second color of the blend. The first color of the blend is the color applied to the box.	Specifies the second color of the blend. The first color of the blend is the color applied to the box.
BLENDSHADE CDATA #IMPLIED	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the box.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the box.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the box.
BLENDOPACITY CDATA #IMPLIED	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the box.	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the box.	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the box.
ANCHOREDIN CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates an anchored box and identifies its parent box.
ANCHOREDGROUPMEMBER CDATA #IMPLIED	Specifies that this box is a member of the indicated anchored group.	Specifies that this box is a member of the indicated anchored group.	Specifies that this box is a member of the indicated anchored group.
HYPERLINKREF CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies that this box is a hyperlink by referring to a HYPERLINK .
HLTYPE (WWWURL PAGE ANCHOR) #IMPLIED	Not applicable.	Not applicable.	Specifies the type of hyperlink this box hyperlinks to. Options include WWWURL (a URL on the Web), PAGE (the top of a page in the same layout), and ANCHOR (an anchor). WWWURL is global to all layouts in the project and is specified directly under the project node.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
HLANCHORREF CDATA #IMPLIED	Not applicable.	Not applicable.	If this box is a hyperlink of the HLTYPE ANCHOR , this attribute identifies the anchor by name.
ADDTOREFLOW (true false) #IMPLIED	Not applicable.	If true , adds this box to the project's reflow article. Equivalent to the Digital Publishing > Add to Reflow command in QuarkXPress.	Not applicable.
ARTICLENAME CDATA #IMPLIED	Not applicable.	Specifies the name of the project's reflow article (to which this box is being added as a component). If no reflow article exists and you do not include this attribute, the default reflow article name is used.	Not applicable.

BOXATTRIBUTE (Modifier schema)

Element type	Construct	Modify	Deconstruct
BOXATTRIBUTE (empty)	Specifies the attributes of a box created with the INLINEBOX element type.	Specifies the attributes of a box created with the INLINEBOX element type.	Not applicable.
Attributes			
COLOR CDATA #IMPLIED	Identifies the background color of a box. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the project's Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the background color of a box. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the project's Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the shade of a box's background color, specified as a float value from 0 to 100.	Specifies the shade of a box's background color, specified as a float value from 0 to 100.	Not applicable.
OPACITY CDATA #IMPLIED	Specifies the opacity of a box's background color, specified as a float value from 0 to 100.	Specifies the opacity of a box's background color, specified as a float value from 0 to 100.	Not applicable.
BLENDSTYLE (SOLID LINEAR MIDLINEAR RECTANGULAR DIAMOND CIRCULAR FULLCIRCULAR none) "none"	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).	Not applicable.

Element type	Construct	Modify	Deconstruct
BLENDANGLE CDATA #IMPLIED	Specifies the angle of the blend.	Specifies the angle of the blend.	Not applicable.
BLENDCOLOR CDATA #IMPLIED	Specifies the second color of the blend. The first color of the blend is the color applied to the box.	Specifies the second color of the blend. The first color of the blend is the color applied to the box.	Not applicable.
BLENDSHADE CDATA #IMPLIED	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the box.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the box.	Not applicable.
BLENDOPACITY CDATA #IMPLIED	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the box.	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the box.	Not applicable.
CORNERRADIUS CDATA #IMPLIED	Specifies the radius of the corner style of the box.	Specifies the radius of the corner style of the box.	Not applicable.
CORNERSTYLE (ROUNDED CONCAVE RECTANGLE BEVELED) #IMPLIED	Specifies the style of the corners of the box.	Specifies the style of the corners of the box.	Not applicable.
ANGLE CDATA #IMPLIED	Specifies a rotation angle for a box as a floating-point value between -360 degrees and 360 degrees.	Specifies a rotation angle for a box as a floating-point value between -360 degrees and 360 degrees.	Not applicable.

BOXREF (Modifier schema)

Element type	Construct	Modify	Deconstruct
BOXREF (empty)	Identifies a box that is a member of a <GROUP>.	Identifies a box that is a member of a <GROUP>.	Identifies a box that is a member of a <GROUP>.
Attributes			
UID CDATA #IMPLIED	The ID@UID of a <BOX> that is part of a group.	The ID@UID of a <BOX> that is part of a group.	The ID@UID of a <BOX> that is part of a group.
NAME CDATA #IMPLIED	The ID@NAME of a <BOX> that is part of a group.	The ID@NAME of a <BOX> that is part of a group.	The ID@NAME of a <BOX> that is part of a group.
OPERATION (CREATE DELETE) #IMPLIED	Creates or deletes the link that makes the target box part of a group. Note that deleting a <BOXREF> does not remove the corresponding box from the layout.	Creates or deletes the link that makes the target box part of a group. Note that deleting a <BOXREF> does not remove the corresponding box from the layout.	Not applicable.

CALLOUTANCHOR (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CALLOUTANCHOR</code> (<code>(CALLOUTBOXREF?</code> <code>INLINETABLE?</code> <code>INLINEBOX?)</code> , <code>ALIGNHORSETTINGS?</code> , <code>ALIGNVERSETTINGS?</code>)	Identifies a callout anchor.	Identifies a callout anchor.	Identifies a callout anchor.
Attributes			
<code>UID</code> CDATA #IMPLIED	Unique identifier for a callout anchor.	Unique identifier for a callout anchor.	Unique identifier for a callout anchor.
<code>CALLOUTSTYLE</code> CDATA #IMPLIED	Identifies the callout style to be associated with a callout anchor.	Identifies the callout style to be associated with a callout anchor.	Identifies the callout style associated with a callout anchor.
<code>OPERATION</code> (<code>RELEASE</code> <code>DELETE</code>) #IMPLIED	Lets you release a callout anchor's callout or delete the callout anchor.	Lets you release a callout anchor's callout or delete the callout anchor.	Not applicable.
<code>ALLOWMANUALPOS</code> (<code>true</code> <code>false</code>) #IMPLIED	Indicates whether the callout associated with this callout anchor can be manually repositioned.	Indicates whether the callout associated with this callout anchor can be manually repositioned.	Indicates whether the callout associated with this callout anchor can be manually repositioned.
<code>KEEPWITHINMARGINS</code> (<code>true</code> <code>false</code>) #IMPLIED	Indicates whether the callout associated with this callout anchor can be positioned outside the margin.	Indicates whether the callout associated with this callout anchor can be positioned outside the margin.	Indicates whether the callout associated with this callout anchor can be positioned outside the margin.

CALLOUTBOXREF (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CALLOUTBOXREF</code> (empty)	Identifies an item or group as a callout.	Identifies an item or group as a callout.	Identifies an item or group as a callout.
Attributes			
<code>UID</code> CDATA #IMPLIED	Unique identifier for a callout box reference.	Unique identifier for a callout box reference.	Unique identifier for a callout box reference.
<code>NAME</code> CDATA #IMPLIED	Name for a callout box reference.	Name for a callout box reference.	Name for a callout box reference.

CELL (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CELL</code> (<code>ID?</code> (<code>CONTENT</code> <code>CONTENTPH</code> <code>TEXT</code> <code>PICTURE</code> <code>PLACEHOLDER</code>)*)	Describes a table cell.	Describes a table cell.	Describes a table cell.

Element type	Construct	Modify	Deconstruct
Attributes			
COLUMNCOUNT CDATA #REQUIRED	Specifies the column index position of a cell, with the first cell being cell 1.	Specifies the column index position of a cell, with the first cell being cell 1.	Specifies the column index position of a cell, with the first cell being cell 1.
BOXTYPE (CT_NONE CT_TEXT CT_PICT) #IMPLIED	Specifies a cells type: CT_NONE = No-content cell CT_TEXT = Text cell CT_PICT = Picture cell	Specifies a cells type: CT_NONE = No-content cell CT_TEXT = Text cell CT_PICT = Picture cell	Specifies a cells type: CT_NONE = No-content cell CT_TEXT = Text cell CT_PICT = Picture cell
COLOR CDATA #IMPLIED	Identifies the color of a cell. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a cell. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a cell. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Specifies the shade of the color applied to a cell, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a cell, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a cell, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of the color applied to a cell, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a cell, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a cell, specified as an integer percentage from 0 to 100.
BLENDSTYLE (SOLID LINEAR MIDLINEAR RECTANGULAR DIAMOND CIRCULAR FULLCIRCULAR none) "none"	Specifies the type of blend applied to this cell (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this cell (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this cell (linear, circular, rectangular, etc.).
BLENDANGLE CDATA #IMPLIED	Specifies the angle of the blend.	Specifies the angle of the blend.	Specifies the angle of the blend.
BLENDCOLOR CDATA #IMPLIED	Specifies the second color of the blend. The first color of the blend is the color applied to the cell, as in QuarkXPress.	Specifies the second color of the blend. The first color of the blend is the color applied to the cell, as in QuarkXPress.	Specifies the second color of the blend. The first color of the blend is the color applied to the cell, as in QuarkXPress.
BLENDSHADE CDATA #IMPLIED	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the cell.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the cell.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the cell.
BLENDOPACITY CDATA #IMPLIED	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	blend is the opacity of the color applied to the cell.	blend is the opacity of the color applied to the cell.	is the opacity of the color applied to the cell.
MERGEROWSPAN CDATA #IMPLIED	Attribute used for merging cells and rows.	Attribute used for merging cells and rows.	If a table includes merged cells, then the MERGECOLSPAN value is shown in the xml output.
MERGECOLSPAN CDATA #IMPLIED	Attribute used for merging cells and columns.	Attribute used for merging cells and columns.	Not applicable.
SPLIT (true false) #IMPLIED	Not applicable.	Attribute used for splitting rows and columns.	Not applicable.
ADDTOREFLOW (true false) #IMPLIED	Not applicable.	If true, adds the contents of this cell to the project's reflow article. Equivalent to the Digital Publishing > Add to Reflow command in QuarkXPress.	Not applicable.
ARTICLENAME CDATA #IMPLIED	Not applicable.	Specifies the name of the project's reflow article (to which the contents of this cell is being added as a component). If no reflow article exists and you do not include this attribute, the default reflow article name is used.	Not applicable.

CHILDIR (Modifier schema)

Element type	Construct	Modify	Deconstruct
CHILDIR (empty)	Specifies a child of a parent TABLE element.	Specifies a child of a parent TABLE element.	Specifies a child of a parent TABLE element.
Attributes			
NAME CDATA #IMPLIED	Indicates the user-assigned name of the CHILDIR element of the parent table.	Not applicable.	Indicates the user-assigned name of the CHILDIR element of the parent table.
UID CDATA #IMPLIED	Not applicable.	Indicates the ID of the CHILDIR element of the parent table assigned from QuarkXPress Server.	Indicates the ID of the CHILDIR element of the parent table assigned from QuarkXPress Server.

CLIPPING (Modifier schema)

Element type	Construct	Modify	Deconstruct
CLIPPING (empty)	Describes a clipping path.	Describes a clipping path.	Describes a clipping path.
Attributes			

Element type	Construct	Modify	Deconstruct
TYPE (ITEM EMBEDDEDPATH ALPHACHANNEL NONWHITEAREAS PICTUREBOUNDS) "ITEM"	<p>Specifies the type of clipping applied to a picture item:</p> <p>ITEM = Runs along the edges of the item.</p> <p>EMBEDDEDPATH = Runs along a path embedded in the picture file.</p> <p>ALPHACHANNEL = Runs along an alpha channel embedded in the picture file.</p> <p>NONWHITEAREAS = Runs along a path based on the dark and light areas of the picture file. See the THRESHOLD attribute.</p> <p>PICTUREBOUNDS = Runs along the rectangular canvas area of the picture, regardless of the size and shape of the picture box.</p>	<p>Specifies the type of clipping applied to a picture item:</p> <p>ITEM = Runs along the edges of the item.</p> <p>EMBEDDEDPATH = Runs along a path embedded in the picture file.</p> <p>ALPHACHANNEL = Runs along an alpha channel embedded in the picture file.</p> <p>NONWHITEAREAS = Runs along a path based on the dark and light areas of the picture file. See the THRESHOLD attribute.</p> <p>PICTUREBOUNDS = Runs along the rectangular canvas area of the picture, regardless of the size and shape of the picture box.</p>	<p>Specifies the type of clipping applied to a picture item:</p> <p>ITEM = Runs along the edges of the item.</p> <p>EMBEDDEDPATH = Runs along a path embedded in the picture file.</p> <p>ALPHACHANNEL = Runs along an alpha channel embedded in the picture file.</p> <p>NONWHITEAREAS = Runs along a path based on the dark and light areas of the picture file. See the THRESHOLD attribute.</p> <p>PICTUREBOUNDS = Runs along the rectangular canvas area of the picture, regardless of the size and shape of the picture box.</p>
TOP CDATA #IMPLIED	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the top edge of the clipping path by the specified number of points (positive=up, negative=down).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the top edge of the clipping path by the specified number of points (positive=up, negative=down).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the top edge of the clipping path by the specified number of points (positive=up, negative=down).
RIGHT CDATA #IMPLIED	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the right edge of the clipping path by the specified number of points (positive=right, negative=left).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the right edge of the clipping path by the specified number of points (positive=right, negative=left).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the right edge of the clipping path by the specified number of points (positive=right, negative=left).
LEFT CDATA #IMPLIED	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the left edge of the clipping path by the specified number of points (positive=left, negative=right).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the left edge of the clipping path by the specified number of points (positive=left, negative=right).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the left edge of the clipping path by the specified number of points (positive=left, negative=right).
BOTTOM CDATA #IMPLIED	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the bottom edge of the clipping path by the specified number of points (positive=down, negative=up).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the bottom edge of the clipping path by the specified number of points (positive=down, negative=up).	Valid when CLIPPING@TYPE = ITEM or PICTUREBOUNDS. Moves the bottom edge of the clipping path by the specified number of points (positive=down, negative=up).

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>PATHNAME CDATA #IMPLIED</code>	Identifies a path embedded in a picture for use as the clipping path.	Identifies a path embedded in a picture for use as the clipping path.	Identifies a path embedded in a picture for use as the clipping path.
<code>OUTSET CDATA #IMPLIED</code>	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Specifies a single outset or inset integer value in points to be used on all sides.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Specifies a single outset or inset integer value in points to be used on all sides.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Specifies a single outset or inset integer value in points to be used on all sides.
<code>NOISE CDATA #IMPLIED</code>	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies that areas smaller than this number of points should be ignored when creating a clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies that areas smaller than this number of points should be ignored when creating a clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies that areas smaller than this number of points should be ignored when creating a clipping path.
<code>THRESHOLD CDATA #IMPLIED</code>	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the maximum integer percentage of darkness that should be considered white when creating a clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the maximum integer percentage of darkness that should be considered white when creating a clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the maximum integer percentage of darkness that should be considered white when creating a clipping path.
<code>SMOOTHNESS CDATA #IMPLIED</code>	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the smoothness, in points, of an automatically created clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the smoothness, in points, of an automatically created clipping path.	Valid when <code>CLIPPING@TYPE = ALPHACHANNEL</code> or <code>NONWHITEAREAS</code> . Specifies the smoothness, in points, of an automatically created clipping path.
<code>OUTSIDEONLY (true false none) "none"</code>	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates that only the outer edges of the clipping path should be used.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates that only the outer edges of the clipping path should be used.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates that only the outer edges of the clipping path should be used.
<code>RESTRICTTOBOX (true false none) "none"</code>	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates whether the clipping path is restricted to the inside of the box.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates whether the clipping path is restricted to the inside of the box.	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> , <code>ALPHACHANNEL</code> , or <code>NONWHITEAREAS</code> . Indicates whether the clipping path is restricted to the inside of the box.
<code>INVERT (true false none) "none"</code>	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> ,	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> ,	Valid when <code>CLIPPING@TYPE = EMBEDDEDPATH</code> ,

Element type	Construct	Modify	Deconstruct
	ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the clipping path.	ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the clipping path.	ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the clipping path.
EDITED (true false none) "none"	Not applicable.	Not applicable.	Indicates whether the clipping path has been manually edited in QuarkXPress.

COLGROUP (Modifier schema)

Element type	Construct	Modify	Deconstruct
COLGROUP (TCOL+)	Identifies a group of columns in an <INLINETABLE>.	Identifies a group of columns in an <INLINETABLE>.	Not applicable.

COLSPEC (Modifier schema)

Element type	Construct	Modify	Deconstruct
COLSPEC (COLUMN+)	Describes the columns in a table. Note: If the COLSPEC element is missing for a table, then the table is created using columns of equal width, based on the number of columns in the row with the most columns.	Describes the columns in a table. Note: If the COLSPEC element is missing for a new table, then the table is created using columns of equal width, based on the number of columns in the row with the most columns.	Describes the columns in a table.

COLUMN (Modifier schema)

Element type	Construct	Modify	Deconstruct
COLUMN (LINE*)	Describes a column in a table.	Describes a column in a table.	Describes a column in a table.
Attributes			
COLUMNCOUNT CDATA #REQUIRED	Specifies the index position of a column beginning from the left. For example, COLUMNCOUNT = 1 indicates the first column from the left, and COLUMNCOUNT = 2 indicates the second column from the left.	Specifies the index position of a column beginning from the left. For example, COLUMNCOUNT = 1 indicates the first column from the left, and COLUMNCOUNT = 2 indicates the second column from the left.	Specifies the index position of a column beginning from the left. For example, COLUMNCOUNT = 1 indicates the first column from the left, and COLUMNCOUNT = 2 indicates the second column from the left.
COLUMNWIDTH CDATA #IMPLIED	Specifies the width of a column.	Specifies the width of a column.	Specifies the width of a column.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>COLOR CDATA #IMPLIED</code>	Identifies the color of a column. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a column. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a column. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
<code>SHADE CDATA #IMPLIED</code>	Specifies the shade of the color applied to a column, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a column, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a column, as an integer percentage from 0 to 100.
<code>OPACITY CDATA #IMPLIED</code>	Specifies the opacity of the color applied to a column, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a column, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a column, specified as an integer percentage from 0 to 100.
<code>MERGECOLSPAN CDATA #IMPLIED</code>	Attribute used for merging cells, rows, and columns.	Attribute used for merging cells, rows, and columns.	If a table includes merged cells, then the <code>MERGECOLSPAN</code> value is shown in the xml output.
<code>SPLIT (true false) #IMPLIED</code>	Not applicable.	Attribute used for splitting merged cells.	Not applicable.
<code>AUTOFIT (true false none) "none"</code>	Specifies whether the rows or columns will adjust size to fit the content.	Specifies whether the rows or columns will adjust size to fit the content.	Indicates whether the rows or columns will adjust size to fit the content.
<code>AUTOFITMAXLIMIT CDATA #IMPLIED</code>	Max limit for autofit.	Max limit for autofit.	Max limit for autofit.

COMPONENT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>COMPONENT</code> (empty)	The component(s) that make up an article. Required for <code>ARTICLE</code> element.	The component(s) that make up an article. Required for <code>ARTICLE</code> element.	The component(s) that make up an article.
Attributes			
<code>OPERATION (CREATE DELETE) #IMPLIED</code>	Not applicable.	Specifies whether to create or delete the specified component from the <code>ARTICLE</code> .	Not applicable.

Element type	Construct	Modify	Deconstruct
NAME CDATA #IMPLIED	The name given to a specific component in an ARTICLE . Required for COMPONENT .	The name given to a specific component in an ARTICLE . Required for COMPONENT .	Specifies the name of the component in the ARTICLE .
UID CDATA #IMPLIED	QuarkXPress Server automatically assigns a unique ID to components.	The unique ID of the COMPONENT to be modified.	Specifies the unique ID of the COMPONENT to be modified.
BOXNAME CDATA #IMPLIED	Specifies the name of the user-assigned box to which the COMPONENT belongs.	Specifies the name of the user-assigned box to which the COMPONENT belongs.	Specifies the name of the user-assigned box to which the COMPONENT belongs.
BOXUID CDATA #IMPLIED	Not applicable.	Specifies the ID of the QuarkXPress Server-assigned box to which the COMPONENT belongs.	Specifies the ID of the QuarkXPress Server-assigned box to which the COMPONENT belongs.
COMPONENTCLASS (CT_TEXT CT_PICT CT_GROUP) "CT_TEXT"	Describes whether the component resides in a text box, picture box, or group.	Describes whether the component resides in a text box, picture box, or group.	Describes whether the component resides in a text box, picture box, or group.
COMPONENTTYPE CDATA #IMPLIED	Not applicable.	Indicates the label applied to a component. Valid only for reflow articles and QuarkCopyDesk articles. Valid values include: Body Byline FigureCaption FigureCredit Headline Headline2 IndentedParagraph Pullquote SectionChapterName Title Title2 OrderedList UnorderedList	Indicates the label applied to a component. Valid only for reflow articles and QuarkCopyDesk articles. Valid values include: Body Byline FigureCaption FigureCredit Headline Headline2 IndentedParagraph Pullquote SectionChapterName Title Title2 OrderedList UnorderedList
ROWNUM CDATA #IMPLIED	If the component resides in a Table cell, the value will describe the row number.	If the component resides in a Table cell, the value will describe the row number.	If the component resides in a Table cell, the value will describe the row number.
COLNUM CDATA #IMPLIED	If the component resides in a Table cell, the value will describe the column number.	If the component resides in a Table cell, the value will describe the column number.	If the component resides in a Table cell, the value will describe the column number.
COMPONENTINDEX CDATA #IMPLIED	Not applicable.	Specifies the index (position) of this component in the project's reflow article. The first component has a value of zero. If you specify an invalid value, the component is placed at the end.	Specifies the index (position) of this component in the project's reflow article. The first component has a value of zero. If you specify an invalid value, the component is placed at the end.

COMPOSITIONZONE (Modifier schema)

Element type	Construct	Modify	Deconstruct
COMPOSITIONZONE (ID, (FRAME GEOMETRY SHADOW PAGeref)*, INTERACTIVITY?)	Not applicable.	Not applicable.	Describes a Composition Zones item. (Applies only to the <code>xml</code> namespace.)
Attributes			
LAYOUTREF CDATA #IMPLIED	Not applicable.	Not applicable.	Identifies the layout referenced by this Composition Zones item.
BOXTYPE (CT_TEXT CT_PICT CT_USER) #IMPLIED	Not applicable.	Not applicable.	Indicates CT_USER as the box type for a Composition Zones item.
TYPE (INTERNAL EXTERNAL) #IMPLIED	Not applicable.	Not applicable.	Indicates the Composition Zones items type. <code>INTERNAL</code> = A Composition Zones item that uses a layout within the same project. <code>EXTERNAL</code> = A Composition Zones item that uses a layout in a different project.
PATH CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates the absolute path to an external composition layout.
COLOR CDATA #IMPLIED	Not applicable.	Not applicable.	Identifies a color applied to a Composition Zones item. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the shade of a color applied to a Composition Zones object, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the opacity of a color applied to a Composition Zones item, as an integer percentage from 0 to 100.
ANCHOREDIN CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates an anchored Composition Zones and

Element type	Construct	Modify	Deconstruct
			identifies its parent Composition Zones.
BLENDSTYLE (SOLID LINEAR MIDLINEAR RECTANGULAR DIAMOND CIRCULAR FULLCIRCULAR none) "none"	Not applicable.	Not applicable.	Specifies the type of blend applied to this box (linear, circular, rectangular, etc.).
BLENDANGLE CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the angle of the blend.
BLENDCOLOR CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the second color of the blend. The first color of the blend is the color applied to the box.
BLENDSHADE CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the shade applied to the second color of the blend, as an integer percentage from 0 to 100. The shade of the first color of the blend is the shade of the color applied to the box.
BLENDOPACITY CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the opacity applied to the second color of the blend, as an integer percentage from 0 to 100. The opacity of the first color of the blend is the opacity of the color applied to the box.
HORIZONTALBINDING (true false) #IMPLIED	Not applicable.	Not applicable.	If <code>true</code> , specifies that the Composition Zones item is constrained only horizontally to the size of its composition layout.
VERTICALBINDING (true false) #IMPLIED	Not applicable.	Not applicable.	If <code>true</code> , specifies that the Composition Zones item is constrained only vertically to the size of its composition layout.
LAYOUTOPACITY CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the opacity of a Composition Zones item, as an integer percentage from 0 to 100.
SUPPRESSEDOUTPUT (true false) #IMPLIED	Not applicable.	Not applicable.	If <code>true</code> , specifies that this Composition Zones item should not be included in output.
PREVIEWPAGE CDATA #IMPLIED	Not applicable.	Not applicable.	Identifies the page shown by default in the layout.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>OPERATION (CREATE DELETE) #IMPLIED</code>	Lets you create or delete a Composition Zones item.	Lets you create or delete a Composition Zones item.	Not applicable.

CONDITIONALMASTERPAGEREFERENCE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CONDITIONALMASTERPAGEREFERENCE ()</code>	Not applicable.	Lets you specify the master page along with the conditions that must be satisfied to apply the given master page on a page.	Not applicable.
Attributes			
<code>NAME</code>	Not applicable.	Specifies the name of the master page in QuarkXPress template to be used.	Not applicable.
<code>POSITION</code>	Not applicable.	Specifies the position of the page to which this master page will be applied. <code>FIRST</code> , <code>LAST</code> , <code>REST</code> , <code>ANY</code>	Not applicable.
<code>ODDOREVEN</code>	Not applicable.		Not applicable.
<code>BLANKORNOTBLANK</code>	Not applicable.	Specifies if the master page to be applied on the page should be blank or not blank. <code>BLANKORNOTBLANK</code>	Not applicable.

CONTENT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CONTENT (#PCDATA)</code>	Specifies the path of an image or text file that you want to associate with the parent box. The <code>CONTENT</code> element also supports relative paths for images or text files.	Specifies the path of an image or text file that you want to import into the parent box. Note: If you use the <code>CONTENT</code> element to import text, the imported text is appended to the end of any existing text in the box.	Specifies the path of the image or text file (if any) associated with the parent box.
Attributes			
<code>PICTURECONTENTLOCK (true false) "true"</code>	Specifies whether picture content is locked.	Specifies whether picture content is locked.	Specifies whether picture content is locked.
<code>CONVERTQUOTES (true false) "true"</code>	If true, straight quotation marks in an imported text file are converted to typesetter's quotation marks and double hyphens are converted to em dashes.	If true, straight quotation marks in an imported text file are converted to typesetter's quotation marks and double hyphens are converted to em dashes.	Not applicable.

Element type	Construct	Modify	Deconstruct
<code>INCLUDESTYLESHEETS</code> (true false) "true"	If true, any style sheets in an imported text file are added to the QuarkXPress project.	If true, any style sheets in an imported text file or document are added to the QuarkXPress project.	Not applicable.
<code>FONTNAME</code> CDATA #IMPLIED	Specifies a font to apply to imported text.	Specifies a font to apply to imported text.	Not applicable.
<code>PAGETOIMPORT</code> CDATA #IMPLIED	Indicates the page number of an imported PDF.	Indicates the page number of an imported PDF.	Indicates the page number of an imported PDF.
<code>BOUNDINGBOX</code> (<code>MEDIABOX</code> <code>CROPBOX</code> <code>BLEEDBOX</code> <code>TRIMBOX</code>) #IMPLIED	Identifies the bounding box type for an imported PDF. <code>MEDIABOX</code> includes the full imageable area. <code>CROPBOX</code> is the portion of the page that should be visible (not typically used for prepress). <code>BLEEDBOX</code> is the area defined by the crop marks, plus 3-5 additional millimeters. <code>TRIMBOX</code> is the area defined by the crop marks (in other words, the finished page size).	Identifies the bounding box type for an imported PDF. <code>MEDIABOX</code> includes the full imageable area. <code>CROPBOX</code> is the portion of the page that should be visible (not typically used for prepress). <code>BLEEDBOX</code> is the area defined by the crop marks, plus 3-5 additional millimeters. <code>TRIMBOX</code> is the area defined by the crop marks (in other words, the finished page size).	Identifies the bounding box type for an imported PDF. <code>MEDIABOX</code> includes the full imageable area. <code>CROPBOX</code> is the portion of the page that should be visible (not typically used for prepress). <code>BLEEDBOX</code> is the area defined by the crop marks, plus 3-5 additional millimeters. <code>TRIMBOX</code> is the area defined by the crop marks (in other words, the finished page size).
<code>MAINTAINPICTUREATTRIBUTES</code> (true false) #IMPLIED	Not applicable.	If <code>true</code> , maintains the picture attributes when importing a new picture.	Not applicable.
<code>MAINTAINCLIPPINGANDRUNAROUND</code> (true false) #IMPLIED	Not applicable.	If <code>true</code> , maintains the runaround and clipping applied to a picture when reimporting the picture. Default value is <code>false</code> . Clipping and runaround are not maintained if you do not specify this attribute in the <code>CONTENT</code> element.	Not applicable.
<code>CONDITIONALSTYLE</code> CDATA #IMPLIED	Identifies the conditional style (if any) to be associated with the content specified in the <code>CONTENT</code> node.	Identifies the conditional style (if any) to be associated with the content specified in the <code>CONTENT</code> node.	Not applicable.

CONTENTPH (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>CONTENTPH</code> ((<code>CONTENT</code>) , <code>METADATA?</code>)	Placeholder that will contain either text or picture data from a linked file.	Placeholder that will contain either text or picture data from a linked file.	Placeholder that will contain either text or picture data from a linked file.
Attributes			
<code>NAME</code> CDATA #REQUIRED	The name of the content placeholder (<code>CONTENTPH</code>).	The name of the content placeholder (<code>CONTENTPH</code>).	The name of the content placeholder (<code>CONTENTPH</code>).

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
OWNER (1347639377) "1347639377"	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute.	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute.	The XTensions ID of the XTensions that created this placeholder.

CONTINUEDHEADER (Modifier schema)

Element type	Construct	Modify	Deconstruct
CONTINUEDHEADER (ROW*)	Identifies a continued table header.	Identifies a continued table header.	Identifies a continued table header.
Attributes			
APPLIEDTO (NOHEADERROW FIRSTHEADERROW ALLHEADERROWS) #IMPLIED	Specifies which header rows are continued header rows.	Specifies whether only the first header row or all header rows should be considered a continued header.	Specifies which header rows are continued header rows.

CONTINUEDTROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
CONTINUEDTROWSTYLE (TOPGRID?, BOTTOMGRID?)	Defines a style for "continued" rows in an <INLINETABLE>.	Defines a style for "continued" rows in an <INLINETABLE>.	Not applicable.
Attributes			
PARASTYLE CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
ALIGNMENT (LEFT RIGHT CENTER JUSTIFIED FORCED) #IMPLIED	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.

Element type	Construct	Modify	Deconstruct
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset of the row style.	Specifies the text inset of the row style.	Not applicable.

CONTOUR (Modifier schema)

Element type	Construct	Modify	Deconstruct
CONTOUR (VERTICES)	A single contour within a spline shape.	A single contour within a spline shape.	A single contour within a spline shape.
Attributes			
CURVEDEGES (true false) "false"	Specifies whether there are any curved edges in the contour.	Specifies whether there are any curved edges in the contour.	Specifies whether there are any curved edges in the contour.
RECTCONTOUR (true false) "false"	Specifies whether this contour is rectangular.	Specifies whether this contour is rectangular.	Specifies whether this contour is rectangular.
INVERTEDCONTOUR (true false) "false"	Specifies whether the points describe a hole instead of an outside contour.	Specifies whether the points describe a hole instead of an outside contour.	Specifies whether the points describe a hole instead of an outside contour.
TOPELVEL (true false) "false"	Specifies whether the contour has no containing contours.	Specifies whether the contour has no containing contours.	Specifies whether the contour has no containing contours.
SELFINTERSECTED (true false) "false"	Specifies whether the contour intersects itself.	Specifies whether the contour intersects itself.	Specifies whether the contour intersects itself.
POLYCONTOUR (true false) "false"	Specifies whether this is a polycontour (as opposed to a spline contour).	Specifies whether this is a polycontour (as opposed to a spline contour).	Specifies whether this is a polycontour (as opposed to a spline contour).
VERTEXTAGEXISTS (true false) "false"	Specifies whether there are vertex tags associated with the contour.	Specifies whether there are vertex tags associated with the contour.	Specifies whether there are vertex tags associated with the contour.

CONTOURS (Modifier schema)

Element type	Construct	Modify	Deconstruct
CONTOURS (CONTOUR+)	A group of contours which, combined, make a spline shape.	A group of contours which, combined, make a spline shape.	A group of contours which, combined, make a spline shape.

COPYFIT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>COPYFIT</code> (empty)	Not applicable.	Not applicable.	Indicates whether the copy in this text box or chain fits the available space.
Attributes			
<code>STATE</code> (<code>fit</code> <code>overFit</code> <code>underFit</code>) "fit"	Not applicable.	Not applicable.	Indicates whether the text currently fits in the box (<code>fit</code>), is too long (<code>overFit</code>), or is too short (<code>underFit</code>).
<code>FITAMOUNT</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates the vertical distance in points by which text in a text box is <code>overFit</code> or <code>underFit</code> . See the <code>STATE</code> element.
<code>NUMBEROFCHARACTERS</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates how many characters are included in the story.
<code>NUMBEROFWORDS</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates how many words are included in the story.
<code>NUMBEROFLINES</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates how many lines are included in the story.
<code>FITLINEAMOUNT</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates how many lines the text is overfit or underfit.
<code>STORYDEPTHAMOUNT</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Not applicable.

COPYRIGHT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>COPYRIGHT</code> (#PCDATA)	Not applicable.	Part of the <code><EBOOKMETADATA></code> element. Specifies copyright information for an e-book.	Specifies copyright information for an e-book.

DATAPROVIDER (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>DATAPROVIDER</code> (empty)	Not applicable.	Not applicable.	Provides information about the XTensions module through which interactivity is applied to a box.
Attributes			

Element type	Construct	Modify	Deconstruct
DATA PROVIDER XTID CDATA #IMPLIED	Not applicable.	Not applicable.	Provides information about the XTensions module through which interactivity is applied to a box. For example, if interactivity is provided through a built-in QuarkXPress XTensions module, this value is QDPC (Quark Digital Publishing Core).

DEL (Modifier schema)

Element type	Construct	Modify	Deconstruct
DEL (#PCDATA)	Describes a tracked deletion in text.	Describes a tracked deletion in text.	Describes a tracked deletion in text.
Attributes			
CREATEDBY CDATA #IMPLIED	Not applicable.	Not applicable.	The username of the deleter.
CREATEDON CDATA #IMPLIED	Not applicable.	Not applicable.	The deletion date.

DELETECELLS (Modifier schema)

Element type	Construct	Modify	Deconstruct
DELETECELLS (empty)	Not applicable.	Deletes cells from an existing table.	Not applicable.
<!ATTLIST DELETECELLS			
TYPE (ROW COLUMN HEADER FOOTER) #REQUIRED	Not applicable.	Specifies whether to delete rows, columns, headers, or footers.	Not applicable.
BASEINDEX CDATA #REQUIRED	Not applicable.	Specifies the index number of the first cell to be deleted.	Not applicable.
DELETECOUNT CDATA #REQUIRED	Not applicable.	Specifies how many cells to delete.	Not applicable.

DESCRIPTION (Modifier schema)

Element type	Construct	Modify	Deconstruct
DESCRIPTION (#PCDATA)	Not applicable.	Part of the <EBOOKMETADATA> element. Specifies a description for an e-book.	Specifies a description for an e-book.

DROPCAP (Modifier schema)

Element type	Construct	Modify	Deconstruct
DROPCAP (empty)	Describes a drop-capital effect at the beginning of a paragraph, which is when initial characters display at a large size and hang two or more lines below the first line of a paragraph.	Describes a drop-capital effect at the beginning of a paragraph, which is when initial characters display at a large size and hang two or more lines below the first line of a paragraph.	Describes a drop-capital effect at the beginning of a paragraph, which is when initial characters display at a large size and hang two or more lines below the first line of a paragraph.
Attributes			
CHARCOUNT CDATA #REQUIRED	Specifies how many characters should be included in a drop-cap effect.	Specifies how many characters should be included in a drop-cap effect.	Specifies how many characters are included in a drop-cap effect.
LINECOUNT CDATA #REQUIRED	Specifies the number of lines a drop-caps should hang in the paragraph.	Specifies the number of lines a drop-caps should hang in the paragraph.	Specifies the number of lines drop-caps hang in the paragraph.

EBOOKMETADATA (Modifier schema)

Element type	Construct	Modify	Deconstruct
EBOOKMETADATA (TITLE AUTHOR PUBLISHER COPYRIGHT ISBN DESCRIPTION KEYWORDS SPINEIMAGE) *	Not applicable.	Defines a variety of metadata for a layout to be exported as an e-book.	Defines a variety of metadata for a layout to be exported as an e-book.

ENTRY (Modifier schema)

Element type	Construct	Modify	Deconstruct
ENTRY (#PCDATA RICHTEXT PARAGRAPH CONTENT PICTURE) *	Describes a cell in an <INLINETABLE>.	Describes a cell in an <INLINETABLE>.	Not applicable.
Attributes			
WIDTH CDATA #IMPLIED	Specifies the width of the cell, either as an absolute measurement or as a percentage of the table width. To specify a percentage, use %. If you do not specify a width, cell widths are distributed evenly.	Specifies the width of the cell, either as an absolute measurement or as a percentage of the table width. To specify a percentage, use %. If you do not specify a width, cell widths are distributed evenly.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the cell.	Specifies the background color of the cell.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the cell.	Specifies the background shade of the cell.	Not applicable.

Element type	Construct	Modify	Deconstruct
<code>COLSPAN</code> CDATA #IMPLIED	If specified, indicates that this cell is merged with the following number of cells. For example, <code>COLSPAN="2"</code> merges this cell with the next one.	If specified, indicates that this cell is merged with the following number of cells. For example, <code>COLSPAN="2"</code> merges this cell with the next one.	Not applicable.
<code>ROWSPAN</code> CDATA #IMPLIED	If specified, indicates that this cell is merged with the following number of cells. For example, <code>ROWSPAN="2"</code> merges this cell with the one below it.	If specified, indicates that this cell is merged with the following number of cells. For example, <code>ROWSPAN="2"</code> merges this cell with the one below it.	Not applicable.
<code>ANGLE</code>	Specifies the angle of the cell.	Specifies the angle of the cell.	Not applicable.
<code>VALIGN</code>	Specifies the vertical alignment of the cell.	Specifies the vertical alignment of the cell.	Not applicable.
<code>ALIGNMENT</code>	Specifies the alignment of the cell.	Specifies the alignment of the cell.	Not applicable.

EVENTCOLSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>EVENTCOLSTYLE</code> (<code>LEFTGRID?</code> , <code>RIGHTGRID?</code>)	Defines a style for even columns in an <code><INLINETABLE></code> .	Defines a style for even columns in an <code><INLINETABLE></code> .	Not applicable.
Attributes			
<code>WIDTH</code> CDATA #IMPLIED	Specifies the width of the column style.	Specifies the width of the column style.	Not applicable.
<code>COLOR</code> CDATA #IMPLIED	Specifies the background color of the column style.	Specifies the background color of the column style.	Not applicable.
<code>SHADE</code> CDATA #IMPLIED	Specifies the background shade of the column style.	Specifies the background shade of the column style.	Not applicable.

EVENTROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>EVENTROWSTYLE</code> (<code>TOPGRID?</code> , <code>BOTTOMGRID?</code>)	Defines a style for even rows in an <code><INLINETABLE></code> .	Defines a style for even rows in an <code><INLINETABLE></code>	Not applicable.
Attributes			
<code>PARASTYLE</code> CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
<code>ALIGNMENT</code> (<code>LEFT</code> <code>RIGHT</code> <code>CENTER</code>	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
JUSTIFIED FORCED) #IMPLIED			
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset of the row style.	Specifies the text inset of the row style.	Not applicable.

FIRSTTCOLSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
FIRSTTCOLSTYLE (LEFTGRID?, RIGHTGRID?)	Defines a style for the first column in an <INLINETABLE>.	Defines a style for the first column in an <INLINETABLE>.	Not applicable.
Attributes			
WIDTH CDATA #IMPLIED	Specifies the width of the column style.	Specifies the width of the column style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the column style.	Specifies the background color of the column style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the column style.	Specifies the background shade of the column style.	Not applicable.

FIT (Modifier schema)

Element type	Construct	Modify	Deconstruct
FIT (MAX, MIN)	Lets you resize a box to fit its text or picture, within the limitations specified by the <MAX> and <MIN> elements. A box will expand or shrink only until it reaches the <MIN> or <MAX> size.	Lets you resize a box to fit its text or picture, within the limitations specified by the <MAX> and <MIN> elements. A box will expand or shrink only until it reaches the <MIN> or <MAX> size.	Not applicable.
Attributes			
POINT (TOPLEFT TOP TOPRIGHT RIGHT BOTTOMRIGHT BOTTOM BOTTOMLEFT LEFT CENTER) #REQUIRED	Lets you specify the direction in which the box should be resized. To resize the box from the center, use "CENTER".	Lets you specify the direction in which the box should be resized. To resize the box from the center, use "CENTER".	Not applicable.

Element type	Construct	Modify	Deconstruct
<code>AVOIDBOXESBY CDATA #IMPLIED</code>	Lets you specify the distance between the <code>POINT</code> side or corner of a resized box and any other items around it. A box will expand only until it is this distance from an adjacent item.	Lets you specify the distance between the <code>POINT</code> side or corner of a resized box and any other items around it. A box will expand only until it is this distance from an adjacent item.	Not applicable.
<code>PROPORTIONAL (true false) "false"</code>	Lets you specify whether the resized box should have the same aspect ratio as the original box.	Lets you specify whether the resized box should have the same aspect ratio as the original box.	Not applicable.

FITTEXT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>FITTEXT (EMPTY)</code>	Lets you control text-fitting options at the story level, rather than using application-level text-fitting options. Note: The <code>FITTEXTTOBOX</code> attribute fits text to a box with the application-level text fitting defaults.	Lets you control text-fitting options at the story level, rather than using application-level text-fitting options. Note: The <code>FITTEXTTOBOX</code> attribute fits text to a box with the application-level text fitting defaults.	Not applicable.
Attributes			
<code>ALLOWTEXTTOGROW (true false) "false"</code>	If true, text will grow if the box is underfit and shrink if the box is overfit. If false, text can shrink but cannot grow.	If true, text will grow if the box is underfit and shrink if the box is overfit. If false, text can shrink but cannot grow.	Not applicable.
<code>SCALINGINCREMENT CDATA "5"</code>	Indicates the percentage by which text size, baseline shift, tracking, and so forth will be incremented or decremented until the text fits.	Indicates the percentage by which text size, baseline shift, tracking, and so forth will be incremented or decremented until the text fits.	Not applicable.
<code>MAXFONTSIZE CDATA #IMPLIED</code>	Indicates the maximum font size that can be used for text fitting. The default value is the maximum text size allowed by QuarkXPress (3184 pt).	Indicates the maximum font size that can be used for text fitting. The default value is the maximum text size allowed by QuarkXPress (3184 pt).	Not applicable.
<code>MINFONTSIZE CDATA #IMPLIED</code>	Indicates the minimum font size that can be used for text fitting. The default value is the minimum text size allowed by QuarkXPress (2 pt).	Indicates the minimum font size that can be used for text fitting. The default value is the minimum text size allowed by QuarkXPress (2 pt).	Not applicable.
<code>SCALETRACKING (true false) "false"</code>	If true, tracking can be changed during text fitting	If true, tracking can be changed during text fitting	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	operations. If <code>false</code> , tracking cannot be changed during text fitting operations.	operations. If <code>false</code> , tracking cannot be changed during text fitting operations.	
<code>SCALEBASELINESHIFT</code> (<code>true</code> <code>false</code>) "false"	If <code>true</code> , baseline shift can be changed during text fitting operations. If <code>false</code> , baseline shift cannot be changed during text fitting operations.	If <code>true</code> , baseline shift can be changed during text fitting operations. If <code>false</code> , baseline shift cannot be changed during text fitting operations.	Not applicable.
<code>SCALETEXTSCALING</code> (<code>true</code> <code>false</code>) "false"	If <code>true</code> , horizontal/vertical scale can be changed during text fitting operations. If <code>false</code> , horizontal/vertical scale cannot be changed during text fitting operations. If horizontal scaling has been applied to text, only horizontal scaling will be changed. The same is true for vertical scaling. Horizontal and vertical scaling cannot be adjusted simultaneously.	If <code>true</code> , horizontal/vertical scale can be changed during text fitting operations. If <code>false</code> , horizontal/vertical scale cannot be changed during text fitting operations. If horizontal scaling has been applied to text, only horizontal scaling will be changed. The same is true for vertical scaling. Horizontal and vertical scaling cannot be adjusted simultaneously.	Not applicable.

FOOTER (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>FOOTER</code> (<code>ROW*</code>)	Specifies if the row is to be a footer row.	Specifies if the row is to be a footer row.	Indicates if the row is to be a footer row.
Attributes			
<code>FOOTERROWS</code> CDATA #IMPLIED	Specifies number of footer row.	Specifies number of footer row.	Specifies number of footer row.

FOOTERTROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>FOOTERTROWSTYLE</code> (<code>TOPGRID?</code> , <code>BOTTOMGRID?</code>)	Defines a style for footer rows in an <INLINETABLE>.	Defines a style for footer rows in an <INLINETABLE>.	Not applicable.
Attributes			
<code>PARASTYLE</code> CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
<code>ALIGNMENT</code> (<code>LEFT</code> <code>RIGHT</code> <code>CENTER</code>	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.

Element type	Construct	Modify	Deconstruct
JUSTIFIED FORCED) #IMPLIED			
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset of the row style.	Specifies the text inset of the row style.	Not applicable.

FORMAT (Modifier schema)

Element type	Construct	Modify	Deconstruct
FORMAT (KEEPLINETOGETHER?, DROPCAP?, LOCKTOGRID?, BNSTYLE?)	Describes formatting for a PARAGRAPH element.	Describes formatting for a PARAGRAPH element.	Describes formatting for a PARAGRAPH element.
Attributes			
SPACEBEFORE CDATA #IMPLIED	Describes the amount of space before a paragraph.	Describes the amount of space before a paragraph.	Describes the amount of space before a paragraph.
SPACEAFTER CDATA #IMPLIED	Describes the amount of space after a paragraph.	Describes the amount of space after a paragraph.	Describes the amount of space after a paragraph.
LEFTINDENT CDATA #IMPLIED	Describes the amount of space in a paragraphs left indent.	Describes the amount of space in a paragraphs left indent.	Describes the amount of space in a paragraphs left indent.
RIGHTINDENT CDATA #IMPLIED	Describes the amount of space in a paragraphs right indent.	Describes the amount of space in a paragraphs right indent.	Describes the amount of space in a paragraphs right indent.
FIRSTLINE CDATA #IMPLIED	Describes the amount of space in a paragraphs first-line indent.	Describes the amount of space in a paragraphs first-line indent.	Describes the amount of space in a paragraphs first-line indent.
LEADING CDATA #IMPLIED	Describes a paragraphs line spacing.	Describes a paragraphs line spacing.	Describes a paragraphs line spacing.
ALIGNMENT (LEFT RIGHT CENTERED JUSTIFIED FORCED) "LEFT"	Indicates whether a paragraph should be left-aligned, right-aligned, centered, justified, or force-justified.	Indicates whether a paragraph should be left-aligned, right-aligned, centered, justified, or force-justified.	Indicates whether a paragraph is left-aligned, right-aligned, centered, justified, or force-justified.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	Note: JUSTIFIED aligns the text in a paragraph to the left and right indentations, except for the last line. FORCED justifies every line, including the last line.	Note: JUSTIFIED aligns the text in a paragraph to the left and right indentations, except for the last line. FORCED justifies every line, including the last line.	Note: JUSTIFIED aligns the text in a paragraph to the left and right indentations, except for the last line. FORCED justifies every line, including the last line.
HANDJ CDATA #IMPLIED	Identifies a hyphenation and justification specification to be applied to a paragraph. Note: Only the name of an H&J specification is included in this attribute. The definition of the H&J specification is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies a hyphenation and justification specification to be applied to a paragraph. Note: Only the name of an H&J specification is included in this attribute. The definition of the H&J specification is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the hyphenation and justification specification applied to a paragraph. Note: Only the name of an H&J specification is included in this attribute. The definition of the H&J specification is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.
KEEPWITHNEXT (true false none) "none"	Specifies whether the last lines of a paragraph should always appear on the same page as the next paragraph.	Specifies whether the last lines of a paragraph should always appear on the same page as the next paragraph.	Specifies whether the last lines of a paragraph should always appear on the same page as the next paragraph.
HANGINGCHARACTERS CDATA #IMPLIED	Describes the hanging character set used by this paragraph.	Describes the hanging character set used by this paragraph.	Describes the hanging character set used by this paragraph.
CHARACTERALIGNMENT (ROMANBASELINE EMBOXTOP EMBOXCENTER EMBOXBOTTOM ICFBOXTOP ICFBOXBOTTOM) "ROMANBASELINE"	Defines the character alignment used by this paragraph. For a story with horizontal direction, EMBOXTOP , EMBOXBOTTOM , ICFBOXTOP , ICFBOXBOTTOM are applicable. For a story with vertical direction, EMBOXRIGHT , EMBOXLEFT , ICFBOXRIGHT , ICFBOXLEFT are applicable.	Defines the character alignment used by this paragraph. For a story with horizontal direction, EMBOXTOP , EMBOXBOTTOM , ICFBOXTOP , ICFBOXBOTTOM are applicable. For a story with vertical direction, EMBOXRIGHT , EMBOXLEFT , ICFBOXRIGHT , ICFBOXLEFT are applicable.	Defines the character alignment used by this paragraph. For a story with horizontal direction, EMBOXTOP , EMBOXBOTTOM , ICFBOXTOP , ICFBOXBOTTOM are applicable. For a story with vertical direction, EMBOXRIGHT , EMBOXLEFT , ICFBOXRIGHT , ICFBOXLEFT are applicable.
MOJIGUMISET CDATA #IMPLIED	Identifies the mojigumi set (if any) applied to this paragraph.	Identifies the mojigumi set applied to this paragraph.	Identifies the mojigumi set (if any) applied to this paragraph.
BACKGROUNDCOLOR CDATA #IMPLIED	Specifies a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Specifies a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Not applicable.
OPACITY CDATA #IMPLIED	Specifies the opacity of a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Specifies the opacity of a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Not applicable.

FRAME (Modifier schema)

Element type	Construct	Modify	Deconstruct
FRAME (empty)	Describes a box frame.	Describes a box frame.	Describes a box frame.
Attributes			
STYLE CDATA #IMPLIED	Specifies a Dashes & Stripes style for a frame.	Specifies a Dashes & Stripes style for a frame.	Specifies a Dashes & Stripes style for a frame.
WIDTH CDATA #IMPLIED	Specifies the thickness of a frame in points as a floating point value.	Specifies the thickness of a frame in points as a floating point value.	Specifies the thickness of a frame in points as a floating point value.
COLOR CDATA #IMPLIED	Identifies the color of a frame. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a frame. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a frame. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Specifies the shade of the color applied to a frame, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a frame, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a frame, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of a frame, specified as an integer percentage from 0 to 100.	Specifies the opacity of a frame, specified as an integer percentage from 0 to 100.	Specifies the opacity of a frame, specified as an integer percentage from 0 to 100.
GAPCOLOR CDATA #IMPLIED	Identifies the color of a frame gap. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a frame gap. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a frame gap. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.
GAPSHADE CDATA #IMPLIED	Specifies the shade of the color applied to a frame gap, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a frame gap, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a frame gap, as an integer percentage from 0 to 100.
GAPOPACITY CDATA #IMPLIED	Specifies the opacity of the gap color of a frame, specified as an integer percentage from 0 to 100.	Specifies the opacity of the gap color of a frame, specified as an integer percentage from 0 to 100.	Specifies the opacity of the gap color of a frame, specified as an integer percentage from 0 to 100.

GEOMETRY (Modifier schema)

Element type	Construct	Modify	Deconstruct
GEOMETRY ((POSITION RELPOSITION)? MOVEUP MOVEDOWN MOVELEFT MOVERIGHT GROWACROSS GROWDOWN SHRINKACROSS SHRINKDOWN ALLOWBOXONTOPASTEBOARD ALLOWBOXOFFPAGE STACKINGORDER SUPPRESSOUTPUT RUNAROUND LINESTYLE SPLINESHAPE FIT) *)	Describes the geometric characteristics of a box or line.	Describes the geometric characteristics of a box or line, and allows you to change its position and size.	Describes the geometric characteristics of a box or line.
Attributes			
SHAPE (SH_RECT SH_CONVEXRRECT SH_CONCAVERRECT SH_STRAIGHTRRECT SH_OVAL SH_LINE SH_ORTHLINE SH_SPLINEBOX SH_NONE SH_ORTHPOLYLINE SH_SPLINELINE SH_ORTHPOLYBOX SH_USER) "SH_RECT"	Describes the shape of a box or line. SH_RECT = Rectangular box SH_CONVEXRRECT = Box with convex corners SH_CONCAVERRECT = Box with concave corners SH_STRAIGHTRRECT = Box with beveled corners SH_OVAL = Elliptical box SH_LINE = Line SH_ORTHLINE = Orthogonal line (restricted to 45-degree angles) SH_SPLINEBOX = Freehand shape SH_NONE = Available to define in XDK API SH_ORTHPOLYLINE = Can be defined in XDK SH_SPLINELINE = Freehand line SH_ORTHPOLYBOX = Available to define in XDK API Note: You cannot specify PICTURE content for a box if its SHAPE attribute is set to SH_LINE .	Describes the shape of a box or line. SH_RECT = Rectangular box SH_CONVEXRRECT = Box with convex corners SH_CONCAVERRECT = Box with concave corners SH_STRAIGHTRRECT = Box with beveled corners SH_OVAL = Elliptical box SH_LINE = Line SH_ORTHLINE = Orthogonal line (restricted to 45-degree angles) SH_SPLINEBOX = Freehand shape SH_NONE = Available to define in XDK API SH_ORTHPOLYLINE = Can be defined in XDK SH_SPLINELINE = Freehand line SH_ORTHPOLYBOX = Available to define in XDK API Note: You cannot specify PICTURE content for a box if its SHAPE attribute is set to SH_LINE .	Describes the shape of a box or line. SH_RECT = Rectangular box SH_CONVEXRRECT = Box with convex corners SH_CONCAVERRECT = Box with concave corners SH_STRAIGHTRRECT = Box with beveled corners SH_OVAL = Elliptical box SH_LINE = Line SH_ORTHLINE = Orthogonal line (restricted to 90-degree angles) SH_SPLINEBOX = Freehand shape SH_NONE = Available to define in XDK API SH_ORTHPOLYLINE = Can be defined in XDK SH_SPLINELINE = Freehand line SH_ORTHPOLYBOX = Available to define in XDK API SH_USER = Available to define in XDK API
PAGE CDATA #IMPLIED	Specifies the number of the page where the upper left corner of this box or line should be created. If the page number is followed by *, the box origin is on the left pasteboard. If the page number is followed by **, the box origin is on the right pasteboard.	Specifies the number of the page where the upper left corner of this box or line is located. If the page number is followed by *, the box origin is on the left pasteboard. If the page number is followed by **, the box origin is on the right pasteboard.	Specifies the number of the page where the upper left corner of this box or line is located. If the page number is followed by *, the box origin is on the left pasteboard. If the page number is followed by **, the box origin is on the right pasteboard.

Element type	Construct	Modify	Deconstruct
	the box origin is on the right pasteboard. Note: This attribute determines where to create a box or line, regardless of which PAGE element the box or line occurs within.	the box origin is on the right pasteboard. Note: This attribute determines where a box or line is, regardless of which PAGE element the box or line occurs within.	the box origin is on the right pasteboard. Note: This attribute determines where a box or line is, regardless of which PAGE element the box or line occurs within.
ANGLE CDATA #IMPLIED	Specifies a rotation angle for a box or line as a floating-point value between –360 degrees and 360 degrees.	Specifies a rotation angle for a box or line as a floating-point value between –360 degrees and 360 degrees.	Specifies a rotation angle for a box or line as a floating-point value between –360 degrees and 360 degrees.
LAYER CDATA #IMPLIED	Identifies the layer where a box or line should be created.	Identifies the layer where a box or line is located.	Identifies the layer that a box resides on. Note: Boxes on non-displayed layers are not included. This means you can use the LAYER URL parameter as a filter when a layout contains multiple layers.
CORNERSTYLE (ROUNDED CONCAVE RECTANGLE BEVELED) #IMPLIED	Identifies the corner style (if any) applied to this box.	Identifies the corner style (if any) applied to this box.	Identifies the corner style (if any) applied to this box.
SKEW CDATA #IMPLIED	Specifies a skew value for the contents of this box or line as a floating-point value between –75 degrees and 75 degrees.	Specifies a skew value for the contents of this box or line as a floating-point value between –75 degrees and 75 degrees.	Specifies a skew value for the contents of this box or line as a floating-point value between –75 degrees and 75 degrees.

GRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
GRID (GRIDLINE)	Element used for specifying a grid in a table.	Element used for specifying a grid in a table.	Element used for specifying a grid in a table.
Attributes			
TYPE (HGRID VGRID ALLGRID) #IMPLIED	Not applicable.	Attribute used for selecting a horizontal or vertical grid (or both).	Not applicable.

GRIDLINE (Modifier schema)

Element type	Construct	Modify	Deconstruct
GRIDLINE (empty)	Element used to define line attributes.	Element used to define line attributes.	Element used to define line attributes.
Attributes			

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
STYLE CDATA #IMPLIED	Identifies a Dashes & Stripes style (LINESTYLE) for a rule. Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies a Dashes & Stripes style (LINESTYLE) for a rule. Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies a Dashes & Stripes style (LINESTYLE) for a rule. Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.
WIDTH CDATA #IMPLIED	Specifies the thickness of a line as a floating point value (measured in points).	Specifies the thickness of a line as a floating point value (measured in points).	Specifies the thickness of a line as a floating point value (measured in points).
COLOR CDATA #IMPLIED	Identifies the color of a line.	Identifies the color of a line.	Identifies the color of a line.
SHADE CDATA #IMPLIED	Specifies the shade of the color applied to a line, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a line, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a line, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of a line, specified as an integer percentage from 0 to 100.	Specifies the opacity of a line, specified as an integer percentage from 0 to 100.	Specifies the opacity of a line, specified as an integer percentage from 0 to 100.
GAPCOLOR CDATA #IMPLIED	Identifies the color of a line gap.	Identifies the color of a line gap.	Identifies the color of a line gap.
GAPSHADE CDATA #IMPLIED	Specifies the shade of the color applied to a line gap, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a line gap, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a line gap, as an integer percentage from 0 to 100.
GAPOPACITY CDATA #IMPLIED	Specifies the opacity of the gap color of a line, specified as an integer percentage from 0 to 100.	Specifies the opacity of the gap color of a line, specified as an integer percentage from 0 to 100.	Specifies the opacity of the gap color of a line, specified as an integer percentage from 0 to 100.

GROUP (Modifier schema)

Element type	Construct	Modify	Deconstruct
GROUP (ID , BOXREF* , GEOMETRY? , SHADOW?)	Not applicable.	Not applicable.	Describes a group of items.
Attributes			
OPERATION (CREATE DELETE) #IMPLIED	Creates or deletes the group in the layout.	Creates or deletes the group in the layout.	Not applicable.
ANCHOREDIN CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates an anchored box in a text box and identifies its parent box.

Element type	Construct	Modify	Deconstruct
ANCHOREDGROUPMEMBER CDATA #IMPLIED	Specifies that this group is a member of the indicated anchored group.	Specifies that this group is a member of the indicated anchored group.	Specifies that this group is a member of the indicated anchored group.
GROUPOPACITY CDATA #IMPLIED	Specifies the opacity of the group as a whole.	Specifies the opacity of the group as a whole.	Specifies the opacity of the group as a whole.
ADDTOREFLOW (true false) #IMPLIED	Not applicable.	If true , adds this group (of text and/or picture boxes) to the project's reflow article. Equivalent to the Digital Publishing > Add to Reflow command in QuarkXPress.	Not applicable.
ARTICLENAME CDATA #IMPLIED	Not applicable.	Specifies the name of the project's reflow article (to which this group is being added as a component). If no reflow article exists and you do not include this attribute, the default reflow article name is used.	Not applicable.

GROUPCHARACTERS (Modifier schema)

Element type	Construct	Modify	Deconstruct
GROUPCHARACTERS ((RICHTEXT HIDDEN)+)	Combines a series of characters into a unit always runs horizontally even if the story direction is vertical. Grouped characters do not break at the end of a line.	Combines a series of characters into a unit always runs horizontally even if the story direction is vertical. Grouped characters do not break at the end of a line.	Combines a series of characters into a unit always runs horizontally even if the story direction is vertical. Grouped characters do not break at the end of a line.
Attributes			
SCALEDIRECTION (HORIZONTAL VERTICAL) #IMPLIED	Specifies the direction in which text is scaled. Works only when the story direction is vertical.	Specifies the direction in which text is scaled. Works only when the story direction is vertical.	Specifies the direction in which text is scaled. Works only when the story direction is vertical.
SCALEAMOUNT CDATA #IMPLIED	Specifies the scaling percentage. Works only when the story direction is vertical.	Specifies the scaling percentage. Works only when the story direction is vertical.	Specifies the scaling percentage. Works only when the story direction is vertical.
SENDING CDATA #IMPLIED	Specifies the sending amount. (Sending is similar to kerning, but applicable as a fixed value over a range of text.)	Specifies the sending amount. (Sending is similar to kerning, but applicable as a fixed value over a range of text.)	Specifies the sending amount. (Sending is similar to kerning, but applicable as a fixed value over a range of text.)
TRACKAMOUNT CDATA #IMPLIED	Specifies the amount of tracking applied to text, in 1/200ths of an em space.	Specifies the amount of tracking applied to text, in 1/200ths of an em space.	Specifies the amount of tracking applied to text, in 1/200ths of an em space.

GROWACROSS (Modifier schema)

Element type	Construct	Modify	Deconstruct
GROWACROSS (#PCDATA)	Not applicable.	Expands a box horizontally to the right by the specified number of points. Note: A box can be expanded on the same page or on other spreads and pages.	Not applicable.

GROWDOWN (Modifier schema)

Element type	Construct	Modify	Deconstruct
GROWDOWN (#PCDATA)	Not applicable.	Expands a box vertically toward the bottom of the page by the specified number of points. Note: A box can be expanded on the same page or on other spreads and pages.	Not applicable.

HEADER (Modifier schema)

Element type	Construct	Modify	Deconstruct
HEADER (ROW*, CONTINUEDHEADER)	Specifies if the row is to be a header row.	Specifies if the row is to be a header row.	Indicates if the row is to be a header row.
Attributes			
HEADERROWS CDATA #IMPLIED	Specifies number of header row.	Specifies number of header row.	Specifies number of header row.

HEADTROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
HEADTROWSTYLE (TOPGRID?, BOTTOMGRID?)	Defines a style for header rows in an <INLINETABLE>.	Defines a style for header rows in an <INLINETABLE>.	Not applicable.
Attributes			
PARASTYLE CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
ALIGNMENT (LEFT RIGHT CENTER JUSTIFIED FORCED) #IMPLIED	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.

Element type	Construct	Modify	Deconstruct
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset of the row style.	Specifies the text inset of the row style.	Not applicable.

HEIGHT(Modifier schema)

Element type	Construct	Modify	Deconstruct
HEIGHT (#PCDATA)	Indicates the height of an item.	Indicates the height of an item.	Indicates the height of an item.

HIDDEN (Modifier schema)

➡ For more information, see "[Working with hidden text.](#)"

Element type	Construct	Modify	Deconstruct
HIDDEN (RICHTEXT) *	Given the <code>OPCODE</code> and <code>OWNER</code> , this will specify hidden text within the project.	Given the <code>OPCODE</code> and <code>OWNER</code> , this will specify hidden text within the project.	Given the <code>OPCODE</code> and <code>OWNER</code> , this will specify hidden text within the project.
Attributes			
DATALEN CDATA #IMPLIED	Not applicable.	Not applicable.	Number of characters the hidden text spans. Note that if the <code>DATALEN</code> attribute does not match the length of the hidden data provided as a <code>RICHTEXT</code> child of <code>HIDDEN</code> , then the text in subsequent <code>RICHTEXT</code> elements will be included within the hidden text created in QuarkXPress, up to the length specified for <code>DATALEN</code> . This can result in data intended for the page being included in the hidden text data, and therefore being hidden from view in QuarkXPress and in output. It is critical to ensure that the length of

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
			data intended as hidden text matches the value of the <code>DATALEN</code> attribute to avoid data loss.
<code>OPCODE CDATA #REQUIRED</code>	Hidden text <code>opcode</code> is a four-byte field that contains <code>ownerId</code> , <code>opcodeId</code> , and <code>hiddenTextType</code> . The Hidden text opcode is usually the originating XTensions ID of the XTensions that owns this hidden text. Note that you MUST be certain that the handling XTensions will correctly understand the data being passed, and handle any errors. XTensions that are not designed to handle inappropriate data may cause QuarkXPress Server to unexpectedly quit.	Hidden text <code>opcode</code> is a four-byte field that contains <code>ownerId</code> , <code>opcodeId</code> , and <code>hiddenTextType</code> . The Hidden text opcode is usually the originating XTensions ID of the XTensions that owns this hidden text. Note that you MUST be certain that the handling XTensions will correctly understand the data being passed, and handle any errors. XTensions that are not designed to handle inappropriate data may cause QuarkXPress Server to unexpectedly quit.	Hidden text <code>opcode</code> is a four-byte field that contains <code>ownerId</code> , <code>opcodeId</code> , and <code>hiddenTextType</code> . The Hidden text opcode is usually the originating XTensions ID of the XTensions that owns this hidden text.
<code>OWNER CDATA #IMPLIED</code>	Represents the XTensions ID of the XTensions software that owns this hidden text.	Represents the XTensions ID of the XTensions software that owns this hidden text.	
<code>TYPE (OPENPAREN CLOSEPAREN NONPAREN CHARACTERTYPE) #IMPLIED</code>	The type of hidden text, as described in the XDK.	The type of hidden text, as described in the XDK.	The type of hidden text, as described in the XDK.

HYPERLINK (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>HYPERLINK</code> (empty)	Not applicable.	Not applicable.	Defines a hyperlink.
Attributes			
<code>NAME CDATA #IMPLIED</code>	Not applicable.	Not applicable.	The name of the hyperlink.
<code>TARGET CDATA #REQUIRED</code>	Not applicable.	Not applicable.	The name of the hyperlink target.
<code>HLTYPE (WWWURL PAGE ANCHOR) #REQUIRED</code>	Not applicable.	Not applicable.	Specifies the type of hyperlink. Options include <code>WWWURL</code> (a URL on the Web), <code>PAGE</code> (the top of a page in the same layout), and <code>ANCHOR</code> (an anchor).

ID (Modifier schema)

Element type	Construct	Modify	Deconstruct
ID (empty)	<p>Lets you specify a name for a <code>LAYOUT</code>, <code>LAYER</code>, <code>BOX</code>, <code>LINKEDBOX</code>, <code>TABLE</code>, <code>GROUP</code>, or <code>COMPOSITIONZONE</code>.</p> <p>Lets you specify a unique ID for a <code>SPREAD</code> or <code>PAGE</code>.</p>	<p>Identifies an object by its <code>UID</code> or <code>NAME</code>.</p> <p>Note: QuarkXPress Server evaluates the ID element for a <code>NAME</code> value first and for a <code>UID</code> second. If a <code>NAME</code> is found, the <code>UID</code> is ignored.</p>	<p>Identifies an object by its unique ID and by its name (if any).</p> <p>If a <code>NAME</code> value exists, the <code>NAME</code> displays in the content of the ID element: <code><ID UID=456 NAME=Name of box>Name of box</ID></code></p> <p>If a <code>NAME</code> value does not exist, the <code>UID</code> displays in the content of the ID element: <code><ID UID=457>457</ID></code></p> <p>Note: If a <code>NAME</code> value does not exist for a box, the word <code>Box</code> and the box <code>UID</code> are concatenated and display in the XML.</p>
Attributes			
<code>NAME</code> CDATA #IMPLIED	<p>The name of the parent element. The <code>NAME</code> is assigned to QuarkXPress elements during document construction. For example, <code>NAME="BOX1"</code> would be assigned to a box after it has been constructed.</p> <p>Required for <code>LAYOUT</code>, <code>LAYER</code>, <code>BOX</code>, <code>TABLE</code>, <code>GROUP</code>, and <code>COMPOSITIONZONE</code> elements.</p> <p>QuarkXPress Server automatically assigns a <code>UID</code> to such elements.</p> <p>Ignored for spreads and pages.</p>	The name of the <code>LAYOUT</code> , <code>LAYER</code> , <code>SPREAD</code> , <code>BOX</code> , <code>TABLE</code> , <code>GROUP</code> , or element to be modified.	The name of the parent element.
<code>UID</code> CDATA #IMPLIED	Required for <code>PAGE</code> and <code>SPREAD</code> elements. Ignored for all other element types.	The unique ID of the element to be modified.	Specifies the unique ID of an element in the QuarkXPress project.

INLINEBOX (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>INLINEBOX</code> (<code>BOXATTRIBUTE?</code> , <code>FRAME?</code> , <code>RUNAROUND?</code> , <code>SHADOW?</code> , <code>TEXTATTRIBUTE?</code> , <code>PICTURE?</code> , (<code>CONTENT?</code> (<code>PARAGRAPH</code>	Lets you create an anchored text or picture box inline rather than referencing it.	Lets you create an anchored text or picture box inline rather than referencing it.	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>RIGHTTEXT)*), INTERACTIVITY?)</code>			
Attributes			
<code>WIDTH</code> CDATA #IMPLIED	Specifies the width of the box as a percentage of the width of the parent column or text box, in all supported measurement units. The default <code>WIDTH</code> value is 100%. The default height for a picture box is the height of the picture it contains at a scale of 100% (or after <code>SCALEUP</code> is applied, if specified). The default width is the width of the picture at that scale. If <code>SCALEUP="false"</code> and the picture is too big to fit the <code>WIDTH</code> value, the picture is scaled down until it fits. The height of a text box is determined by the amount of content it contains after text-fitting (if any).	Specifies the width of the box as a percentage of the width of the parent column or text box, in all supported measurement units. The default <code>WIDTH</code> value is 100%. The default height for a picture box is the height of the picture it contains at a scale of 100% (or after <code>SCALEUP</code> is applied, if specified). The default width is the width of the picture at that scale. If <code>SCALEUP="false"</code> and the picture is too big to fit the <code>WIDTH</code> value, the picture is scaled down until it fits. The height of a text box is determined by the amount of content it contains after text-fitting (if any).	Not applicable.
<code>SCALEUP</code> CDATA (<code>true</code> <code>false</code>) #IMPLIED	Applicable only if you are inserting a picture into the box, and only if the picture is narrower in width than the box. If <code>SCALEUP="true"</code> , the picture is sized up to fill the full width of the box. If <code>SCALEUP="false"</code> , the picture is not resized. In both cases, the height of the box is adjusted to match the height of the picture.	Applicable only if you are inserting a picture into the box, and only if the picture is narrower in width than the box. If <code>SCALEUP="true"</code> , the picture is sized up to fill the full width of the box. If <code>SCALEUP="false"</code> , the picture is not resized. In both cases, the height of the box is adjusted to match the height of the picture.	Not applicable.
<code>ALIGNWITHTEXT</code> (<code>ASCENT</code> <code>BASELINE</code>) "BASELINE"	Specifies whether the anchored box is aligned with the ascent or the baseline of the line in which it occurs.	Specifies whether the anchored box is aligned with the ascent or the baseline of the line in which it occurs.	Not applicable.
<code>OFFSET</code> CDATA #IMPLIED	Specifies the offset of the anchored box from the ascent or baseline.	Specifies the offset of the anchored box from the ascent or baseline.	Not applicable.

INLINETABLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>INLINETABLE (FRAME?, COLGROUP?, THEAD?, TBODY, TFOOT?, SHADOW RUNAROUND)</code>	Describes a table that is anchored in a text box.	Describes a table that is anchored in a text box.	Not applicable.
Attributes			
<code>WIDTH CDATA #IMPLIED</code>	Specifies the width of the table, in all supported measurement units. Can be specified as a percentage of the width of the parent text box.	Specifies the width of the table, in all supported measurement units. Can be specified as a percentage of the width of the parent text box.	Not applicable.
<code>TABLESTYLEREF CDATA #IMPLIED</code>	Identifies the <code><TABLESTYLE></code> that should be used to style the table.	Identifies the <code><TABLESTYLE></code> that should be used to style the table.	Not applicable.
<code>ORIENTATION (LANDSCAPE PORTRAIT) #IMPLIED</code>	Specifies the orientation of the table.	Specifies the orientation of the table.	Not applicable.

INS (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>INS (empty)</code>	Describes the beginning or end of a tracked insertion in text.	Describes the beginning or end of a tracked insertion in text.	Describes the beginning or end of a tracked insertion in text.
Attributes			
<code>CREATEDBY CDATA #IMPLIED</code>	Not applicable.	Not applicable.	The username of the creator of the insertion.
<code>CREATEDON CDATA #IMPLIED</code>	Not applicable.	Not applicable.	The creation date of the insertion.
<code>STATUS (BEGIN END) #IMPLIED</code>	If <code>BEGIN</code> , this is the beginning of an insertion. If <code>END</code> , this is the end of an insertion.	If <code>BEGIN</code> , this is the beginning of an insertion. If <code>END</code> , this is the end of an insertion.	If <code>BEGIN</code> , this is the beginning of an insertion. If <code>END</code> , this is the end of an insertion.

INSET (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>INSET (empty)</code>	Specifies the distance between the inside border of a text box and the text.	Specifies the distance between the inside border of a text box and the text.	Indicates the distance between the inside border of a text box and the text.
Attributes			

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>MULTIPLEINSETS (true false none)</code> <code>"none"</code>	Specifies multiple insets.	Specifies multiple insets.	Indicates multiple insets.
<code>TOP CDATA #IMPLIED</code>	Specifies the distance between the top inside border of a text box and the text.	Specifies the distance between the top inside border of a text box and the text.	Indicates the distance between the top inside border of a text box and the text.
<code>BOTTOM CDATA #IMPLIED</code>	Specifies the distance between the bottom inside border of a text box and the text.	Specifies the distance between the bottom inside border of a text box and the text.	Indicates the distance between the bottom inside border of a text box and the text.
<code>RIGHT CDATA #IMPLIED</code>	Specifies the distance between the right inside border of a text box and the text.	Specifies the distance between the right inside border of a text box and the text.	Indicates the distance between the right inside border of a text box and the text.
<code>LEFT CDATA #IMPLIED</code>	Specifies the distance between the left inside border of a text box and the text.	Specifies the distance between the left inside border of a text box and the text.	Indicates the distance between the left inside border of a text box and the text.
<code>ALLEDGES CDATA #IMPLIED</code>	Specifies the distance between the inside border of all sides of a text box and the text.	Specifies the distance between the inside border of all sides of a text box and the text.	Indicates the distance between the inside border of all sides of a text box and the text.

INTERACTIVITY (Modifier schema)

Note that the content of an `<INTERACTIVITY>` element is defined by the XTensions module that owns it. Consequently, no schema for that content is presented here.

Element type	Construct	Modify	Deconstruct
<code>INTERACTIVITY (DATAPROVIDER?)</code>	Describes AVE interactivity added to an App Studio layout or Print layout.	Describes AVE interactivity added to an App Studio layout or Print layout.	Describes AVE interactivity added to an App Studio layout or Print layout.
Attributes			
<code>OWNERXTID CDATA #IMPLIED</code>	Identifies the XTensions module that enables this type of interactivity.	Identifies the XTensions module that enables this type of interactivity.	Identifies the XTensions module that enables this type of interactivity.
<code>TYPE CDATA #IMPLIED</code>	Identifies the type of interactivity.	Identifies the type of interactivity.	Identifies the type of interactivity.

ISBN (Modifier schema)

Element type	Construct	Modify	Deconstruct
ISBN (#PCDATA)	Not applicable.	Part of the <code><EBOOKMETADATA></code> element. Specifies the ISBN code of an e-book.	Specifies the ISBN code of an e-book.

KEEPLINESTOGETHER (Modifier schema)

Element type	Construct	Modify	Deconstruct
KEEPLINESTOGETHER (empty)	The Keep Lines Together feature specifies whether lines in paragraphs flow together or are separated when they reach the bottoms of columns.	The Keep Lines Together feature specifies whether lines in paragraphs flow together or are separated when they reach the bottoms of columns.	The Keep Lines Together feature specifies whether lines in paragraphs flow together or are separated when they reach the bottoms of columns.
Attributes			
ENABLED (true false none) "none"	Specifies whether or not this feature is enabled.	Specifies whether or not this feature is enabled.	Specifies whether or not this feature is enabled.
ALLLINESINPARA (true false none) "none"	Specifies whether this is for all lines in the paragraph or has a specific start and end.	Specifies whether this is for all lines in the paragraph or has a specific start and end.	Specifies whether this is for all lines in the paragraph or has a specific start and end.
STARTLINE CDATA #IMPLIED	Specifies the number of lines at the beginning of a paragraph before wrapping text to keep lines together.	Specifies the number of lines at the beginning of a paragraph before wrapping text to keep lines together.	Specifies the number of lines at the beginning of a paragraph before wrapping text to keep lines together.
ENDLINE CDATA #IMPLIED	Specifies the number of lines at the end of a paragraph before wrapping text to keep lines together.	Specifies the number of lines at the end of a paragraph before wrapping text to keep lines together.	Specifies the number of lines at the end of a paragraph before wrapping text to keep lines together.

KEYWORDS (Modifier schema)

Element type	Construct	Modify	Deconstruct
KEYWORDS (#PCDATA)	Not applicable.	Part of the <code><EBOOKMETADATA></code> element. Specifies a comma-separated list of keywords for an e-book.	Specifies a list of keywords for an e-book.

LASTTCOLSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
LASTTCOLSTYLE (LEFTGRID?, RIGHTGRID?)	Defines a style for the last column in an <code><INLINETABLE></code> .	Defines a style for the last column in an <code><INLINETABLE></code> .	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
Attributes			
<code>WIDTH CDATA #IMPLIED</code>	Specifies the width of the column style.	Specifies the width of the column style.	Not applicable.
<code>COLOR CDATA #IMPLIED</code>	Specifies the background color of the column style.	Specifies the background color of the column style.	Not applicable.
<code>SHADE CDATA #IMPLIED</code>	Specifies the background shade of the column style.	Specifies the background shade of the column style.	Not applicable.

LAYER (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LAYER (ID, RGBCOLOR)</code>	Describes a layer.	Describes a layer.	Describes a layer.
Attributes			
<code>OPERATION (CREATE DELETE) #IMPLIED</code>	Not applicable.	Specifies whether to create or delete the indicated layer. Note that when you delete a layer, all items on the layer are deleted.	Not applicable.
<code>VISIBLE (true false none) "none"</code>	Specifies whether a layer is visible. Note: In QuarkXPress, this parameter overrides the Visible setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether a layer is visible. Note: In QuarkXPress, this parameter overrides the Visible setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether a layer should be visible. Note: In QuarkXPress, this parameter overrides the Visible setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).
<code>KEEPRUNAROUND (true false none) "none"</code>	Specifies whether text on visible layers runs around text on hidden layers. Note: In QuarkXPress, this parameter overrides the Keep Runaround setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether text on visible layers runs around text on hidden layers. Note: In QuarkXPress, this parameter overrides the Keep Runaround setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether text on visible layers runs around text on hidden layers. Note: In QuarkXPress, this parameter overrides the Keep Runaround setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).
<code>LOCKED (true false none) "none"</code>	Specifies whether a layer is locked. Note: In QuarkXPress, this parameter overrides the Locked setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether a layer is locked. Note: In QuarkXPress, this parameter overrides the Locked setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	Specifies whether a layer is locked. Note: In QuarkXPress, this parameter overrides the Locked setting in the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).
<code>SUPPRESS (true false none) "none"</code>	Specifies whether output of a layer is suppressed. Note: In QuarkXPress, this parameter overrides the Suppress Output setting in	Specifies whether output of a layer is suppressed. Note: In QuarkXPress, this parameter overrides the Suppress Output setting in	Specifies whether output of a layer is suppressed. Note: In QuarkXPress, this parameter overrides the Suppress Output setting in

Element type	Construct	Modify	Deconstruct
	the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).	the Layers pane of the Preferences dialog box (QuarkXPress/Edit menu).

LAYOUT (Modifier schema)

Element type	Construct	Modify	Deconstruct
LAYOUT (ID, ARTICLE*, LAYER*, EBOOKMETADATA?, HYPERLINK*, (SPREAD BOX TABLE INLINETABLE INLINEBOX MASTERPAGESEQUENCE PAGESEQUENCE)*)	Describes a layout in a project.	Identifies a layout to be modified. Use the ID@NAME or ID@UID attribute to indicate the target layout. Layout numbers start with 1; layout=1 refers to the first layout in the project. If you want to modify existing boxes, regardless of where the boxes appear in the project, boxes to modify can be specified as direct children of the LAYOUT element, rather than being enclosed within a specific SPREAD.	Specifies the layout number in the ID@UID element and the layout name in the ID@NAME element.
Attributes			
POINTSPERINCH CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies how many points to use per inch for measurements.
MATHSUPERSET CDATA #IMPLIED	Identifies the XPressMath superset (if any) used by this project.	Identifies the XPressMath superset (if any) used by this project.	Identifies the XPressMath superset (if any) used by this project.
MEDIATYPE (PRINT DIGITAL) #IMPLIED	Not applicable.	Not applicable.	Specifies whether the layout is a Print or App Studio layout.
SHAREDSTATUS (LAYOUT ALLPROJECTS THISPROJECT) #IMPLIED	Not applicable.	Not applicable.	Specifies the sharing status of the layout, as specified in the Layout > Advanced Layout Properties dialog box in QuarkXPress.
REFLOWVIEWLAYOUTUID CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the UID of the Print layout for this Reflow layout. This attribute is valid only for reflow views for Print layouts.
LAYOUTHIDDEN (true false) #IMPLIED	Not applicable.	Not applicable.	If true, the layout is hidden. If false, the layout is visible.
REFLOWVIEWLAYOUT (true false) #IMPLIED	Not applicable.	Not applicable.	If true, this layout is a Reflow layout. If false, this layout is not a Reflow layout.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>LAYOUT_ID</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the internal layout <code>UID</code> value for the layout. This value does not change when the project gets modified — unlike the <code>UID</code> value, which is reset when, for example, an intermediate layout is deleted. Note that the <code>LAYOUT/ID@UID</code> attribute represents the index of the layout, rather than the internal <code>UID</code> used by QuarkXPress.
<code>OPERATION</code> (CREATE DELETE) #IMPLIED	Allows you to create or delete a layout.	Allows you to create or delete a layout.	Not applicable.
<code>LAYOUTSPECIFICATION</code> CDATA #IMPLIED	Lets you specify a specification to be used when you create a layout with the <code>OPERATION</code> attribute.	Lets you specify a specification to be used when you create a layout with the <code>OPERATION</code> attribute.	Not applicable.
<code>WIDTH</code> CDATA #IMPLIED	Valid only when you are creating a layout with the <code>OPERATION</code> attribute and you are not using a layout specification. Lets you specify the width of the layout.	Valid only when you are creating a layout with the <code>OPERATION</code> attribute and you are not using a layout specification. Lets you specify the width of the layout.	Not applicable.
<code>HEIGHT</code> CDATA #IMPLIED	Valid only when you are creating a layout with the <code>OPERATION</code> attribute and you are not using a layout specification. Lets you specify the height of the layout.	Valid only when you are creating a layout with the <code>OPERATION</code> attribute and you are not using a layout specification. Lets you specify the height of the layout.	Not applicable.
<code>DUPLICATEFROMLAYOUT</code> CDATA #IMPLIED	Creates a duplicate of the layout with this name. For example: <pre><LAYOUT OPERATION="CREATE" DUPLICATEFROMLAYOUT="Layout 1"> <ID NAME="new" /> </LAYOUT></pre>	Creates a duplicate of the layout with this name. For example: <pre><LAYOUT OPERATION="CREATE" DUPLICATEFROMLAYOUT="Layout 1"> <ID NAME="new" /> </LAYOUT></pre>	Not applicable.

LAYOUTREF (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LAYOUTREF</code> (ID)	Not applicable.	Not applicable.	Identifies a layout that is a member of a layout family (a <code>PUBLICATIONCHANNEL</code>).
Attributes			

Element type	Construct	Modify	Deconstruct
ORIENTATION (HORIZONTAL VERTICAL) #IMPLIED	Not applicable.	Not applicable.	Identifies the orientation of the layout.

LEFT (Modifier schema)

Element type	Construct	Modify	Deconstruct
LEFT (#PCDATA)	The distance between the box or lines left edge and the left edge of the page, in points.	The distance between the box or lines left edge and the left edge of the page, in points.	The distance between the box or lines left edge and the left edge of the page, in points.

LEFTCONTROLPOINT (Modifier schema)

Element type	Construct	Modify	Deconstruct
LEFTCONTROLPOINT (empty)	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .

LEFTGRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
LEFTGRID (empty)	Describes a grid line on the left edge of a cell in an <code><INLINETABLE></code> .	Describes a grid line on the left edge of a cell in an <code><INLINETABLE></code> .	Not applicable.
Attributes			
TYPE (TOP LEFT BOTTOM RIGHT) #IMPLIED	Specifies the location of the grid line.	Specifies the location of the grid line.	Not applicable.
STYLE CDATA #IMPLIED	Identifies the <code><TABLESTYLE></code> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the	Identifies the <code><TABLESTYLE></code> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	remaining attributes, those attribute values override the corresponding <code><TABLESTYLE></code> values.	remaining attributes, those attribute values override the corresponding <code><TABLESTYLE></code> values.	
<code>WIDTH CDATA #IMPLIED</code>	Specifies the width of the grid line in points.	Specifies the width of the grid line in points	Not applicable.
<code>COLOR CDATA #IMPLIED</code>	Specifies the color of the grid line.	Specifies the color of the grid line.	Not applicable.
<code>SHADE CDATA #IMPLIED</code>	Specifies the shade of the grid line.	Specifies the shade of the grid line.	Not applicable.
<code>OPACITY CDATA #IMPLIED</code>	Specifies the opacity of the grid line.	Specifies the opacity of the grid line.	Not applicable.
<code>GAPCOLOR CDATA #IMPLIED</code>	Specifies the color of the gap (if any) between the lines that make up the grid line.	Specifies the color of the gap (if any) between the lines that make up the grid line.	Not applicable.
<code>GAPSHADE CDATA #IMPLIED</code>	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Not applicable.
<code>GAPOPACITY CDATA #IMPLIED</code>	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Not applicable.

LINESTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LINESTYLE</code> (empty)	Describes a Dashes & Stripes style that can be applied to lines or frames.	Describes a Dashes & Stripes style that can be applied to lines or frames.	Describes a Dashes & Stripes style that can be applied to lines or frames.
Attributes			
<code>ARROWHEADS (PLAINLINE LEFTARROW RIGHTARROW LEFTFARROW RIGHTFARROW DOUBLEARROW) "PLAINLINE"</code>	<p>Specifies whether a line should have arrows on its ends:</p> <p><code>PLAINLINE</code> = No arrows</p> <p><code>LEFTARROW</code> = Arrow head on left end</p> <p><code>RIGHTARROW</code> = Arrow head on right end</p> <p><code>LEFTFARROW</code> = Arrow head on left end, arrow tail on right end</p> <p><code>RIGHTFARROW</code> = Arrow head on right end, arrow tail on left end</p>	<p>Specifies whether a line should have arrows on its ends:</p> <p><code>PLAINLINE</code> = No arrows</p> <p><code>LEFTARROW</code> = Arrow head on left end</p> <p><code>RIGHTARROW</code> = Arrow head on right end</p> <p><code>LEFTFARROW</code> = Arrow head on left end, arrow tail on right end</p> <p><code>RIGHTFARROW</code> = Arrow head on right end, arrow tail on left end</p>	<p>Specifies whether a line has arrows on its ends:</p> <p><code>PLAINLINE</code> = No arrows</p> <p><code>LEFTARROW</code> = Arrow head on left end</p> <p><code>RIGHTARROW</code> = Arrow head on right end</p> <p><code>LEFTFARROW</code> = Arrow head on left end, arrow tail on right end</p> <p><code>RIGHTFARROW</code> = Arrow head on right end, arrow tail on left end</p> <p><code>DOUBLEARROW</code> = Arrow heads on both ends</p>

Element type	Construct	Modify	Deconstruct
	<code>DOUBLEARROW</code> = Arrow heads on both ends	<code>DOUBLEARROW</code> = Arrow heads on both ends	

LINKEDBOX (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LINKEDBOX</code> (<code>ID</code>)	Represents a box or table cell into which text flows from the parent box. The child <code>ID</code> element identifies the box or table. To force text to run into the next box or cell in a chain, insert the <code>boxbreak</code> character entity where you want the text to break.	Represents a box or table cell into which text flows from the parent box. The child <code>ID</code> element identifies the box or table. To force text to run into the next box or cell in a chain, insert the <code>boxbreak</code> character entity where you want the text to break.	Identifies the point where the text has overflowed the current box and identifies the box or table cell where the text continues. Example: <pre> <BOX> <ID NAME="Box5" UID="5" /> <TEXT> <STORY STORYDIRECTION="HORIZONTAL"> <LINKEDBOX ENDOFFSET="94" STARTOFFSET="55"> <ID NAME="Box6" UID="6" /> </LINKEDBOX> <LINKEDBOX ENDOFFSET="108" STARTOFFSET="95"> <ID NAME="Box7" UID="7" /> </LINKEDBOX> <PARAGRAPH MERGE="false" PARASTYLE="Normal"> <RICHTEXT MERGE="false"> Text is here.</RICHTEXT> </PARAGRAPH> </STORY> </TEXT> </BOX> </pre>
Attributes			
<code>STARTOFFSET</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Offset of the first character in the next box or cell in the chain.
<code>ENDOFFSET</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Offset of the last character in the next box or cell in the chain.
<code>ROWCOUNT</code> CDATA #IMPLIED	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the row of the cell. Otherwise, not applicable.	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the row of the cell. Otherwise, not applicable.	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the row of the cell. Otherwise, not applicable.
<code>COLUMNCOUNT</code> CDATA #IMPLIED	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the column of the cell. Otherwise, not applicable.	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the column of the cell. Otherwise, not applicable.	If a <code>LINKEDBOX</code> is a table cell, this attribute identifies the column of the cell. Otherwise, not applicable.

LIST (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LIST ((PARAGRAPH RICHTEXT)*, OVERMATTER?)</code>	Specifies a List in a QuarkXPress project.	Specifies a List in a QuarkXPress project.	Identifies a List in a QuarkXPress project.
Attributes			
<code>OPERATION (CREATE DELETE) #IMPLIED</code>	Not applicable.	Specifies whether to create a list or delete a list.	Not applicable.
<code>LISTSTYLE CDATA #REQUIRED</code>	Name of the List as defined in QuarkXPress.	Name of the List as defined in QuarkXPress.	Name of the List as defined in QuarkXPress.

LOCATION (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LOCATION</code> (empty)	Lets you specify the maximum or minimum location on the page of a box's upper-left corner for a fit-box-to-content operation.	Lets you specify the maximum or minimum location on the page of a box's upper-left corner for a fit-box-to-content operation.	Not applicable.
Attributes			
<code>X CDATA #REQUIRED</code>	The largest or smallest allowable coordinate for the left side of the resized box.	The largest or smallest allowable coordinate for the left side of the resized box.	Not applicable.
<code>Y CDATA #REQUIRED</code>	The largest or smallest allowable coordinate for the top side of the resized box.	The largest or smallest allowable coordinate for the top side of the resized box.	Not applicable.

LOCKTOGRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>LOCKTOGRID</code> (empty)	Specifies whether this paragraph is locked to the baseline grid. You can choose to lock to the page grid or the text box grid.	Specifies whether this paragraph is locked to the baseline grid. You can choose to lock to the page grid or the text box grid.	Specifies whether this paragraph is locked to the baseline grid. You can choose to lock to the page grid or the text box grid.
Attributes			
<code>ENABLED (true false none) "none"</code>	Specifies whether LOCKTOGRID is enabled.	Specifies whether LOCKTOGRID is enabled.	Specifies whether LOCKTOGRID is enabled.
<code>GRIDLEVEL (PAGE TEXTBOX) "PAGE"</code>	Specifies whether GRID applies on page level or text box level.	Specifies whether GRID applies on page level or text box level.	Specifies whether GRID applies on page level or text box level.

Element type	Construct	Modify	Deconstruct
GRIDTYPE (TOPLINE BOTTOMLINE LEFTLINE RIGHTLINE CENTERLINE BASELINE) "BASELINE"	Specifies grid type applied on page level or text box level grid.	Specifies grid type applied on page level or text box level grid.	Specifies grid type applied on page level or text box level grid.

MASTERPAGESEQUENCE (Modifier schema)

Element type	Construct	Modify	Deconstruct
MASTERPAGESEQUENCE (NAME (SINGLEMASTERPAGEREFERENCE REPEATABLEMASTERPAGEREFERENCE REPEATABLEMASTERPAGEALTERNATIVES)	Not applicable.	Enables you to define the application of master pages during the pagination process. It is identified by a unique name and can be referenced by name as many times as needed. The children of MASTERPAGESEQUENCE are termed sub-sequences.	Not applicable.
Attributes			
NAME	Not applicable.	Specifies the unique name of the MASTERPAGESEQUENCE	Not applicable.

MAX (Modifier schema)

Element type	Construct	Modify	Deconstruct
MAX (LOCATION SIZE SCALETO)	Lets you specify the maximum location, size, or scale of a box for a fit-box-to-content operation.	Lets you specify the maximum location, size, or scale of a box for a fit-box-to-content operation.	Not applicable.

METADATA (Modifier schema)

Element type	Construct	Modify	Deconstruct
METADATA (VALUE+)	Specifies if the box will have metadata associated with it. Metadata takes the form of key/value pairs.	Specifies if the box will have metadata associated with it. Metadata takes the form of key/value pairs.	Describes the metadata associated with the box.

MIN (Modifier schema)

Element type	Construct	Modify	Deconstruct
MIN (LOCATION SIZE SCALETO)	Lets you specify the minimum location, size, or scale of a box for a	Lets you specify the minimum location, size, or scale of a box for a	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	fit-box-to-content operation.	fit-box-to-content operation.	

MOVEDOWN (Modifier schema)

Element type	Construct	Modify	Deconstruct
MOVEDOWN (#PCDATA)	Not applicable.	Moves a box down by the specified number of points. Note: You can move a box or line onto another page.	Not applicable.

MOVELEFT (Modifier schema)

Element type	Construct	Modify	Deconstruct
MOVELEFT (#PCDATA)	Not applicable.	Moves a box to the left by the specified number of points. Note: You can move a box or line onto another page.	Not applicable.

MOVERIGHT (Modifier schema)

Element type	Construct	Modify	Deconstruct
MOVERIGHT (#PCDATA)	Not applicable.	Moves a box to the right by the specified number of points. Note: You can move a box or line onto another page.	Not applicable.

MOVEUP (Modifier schema)

Element type	Construct	Modify	Deconstruct
MOVEUP (#PCDATA)	Not applicable.	Moves a box up by the specified number of points. Note: You can move a box or line onto another page.	Not applicable.

NOTE (Modifier schema)

Element type	Construct	Modify	Deconstruct
NOTE (#PCDATA)	Describes a note in text.	Describes a note in text.	Describes a note in text.
Attributes			

Element type	Construct	Modify	Deconstruct
CREATEDBY CDATA #IMPLIED	Not applicable.	Not applicable.	The username of the creator of the note.
CREATEDON CDATA #IMPLIED	Not applicable.	Not applicable.	The creation date of the note.
BACKGROUNDCOLOR CDATA #IMPLIED	The background color of the note.	The background color of the note.	The background color of the note.

ODDTROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
ODDTROWSTYLE (TOPGRID? , BOTTOMGRID?)	Defines a style for odd rows in an <INLINETABLE>.	Defines a style for odd rows in an <INLINETABLE>	Not applicable.
Attributes			
PARASTYLE CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
ALIGNMENT (LEFT RIGHT CENTER JUSTIFIED FORCED) #IMPLIED	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset of the row style.	Specifies the text inset of the row style.	Not applicable.

ODDTCOLSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
ODDTCOLSTYLE (LEFTGRID? , RIGHTGRID?)	Defines a style for odd columns in an <INLINETABLE>.	Defines a style for odd columns in an <INLINETABLE>.	Not applicable.
Attributes			
WIDTH CDATA #IMPLIED	Specifies the width of the column style.	Specifies the width of the column style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the column style.	Specifies the background color of the column style.	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
SHADE CDATA #IMPLIED	Specifies the background shade of the column style.	Specifies the background shade of the column style.	Not applicable.

ORIGIN (Modifier schema)

Element type	Construct	Modify	Deconstruct
ORIGIN (empty)	Specifies an item's size and its position relative to the upper left corner of its page or spread.	Specifies an item's size and its position relative to the upper left corner of its page or spread.	Specifies an item's size and its position relative to the upper left corner of its page or spread.
Attributes			
X CDATA #REQUIRED	The distance between the left side of the item and the left edge of the page or spread.	The distance between the left side of the item and the left edge of the page or spread.	The distance between the left side of the item and the left edge of the page or spread.
Y CDATA #REQUIRED	The distance between the top side of the item and the top edge of the page or spread.	The distance between the top side of the item and the top edge of the page or spread.	The distance between the top side of the item and the top edge of the page or spread.
RELATIVETO (PAGE SPREAD) "SPREAD"	Indicates whether the item's position is relative to the page or to the spread.	Indicates whether the item's position is relative to the page or to the spread.	Indicates whether the item's position is relative to the page or to the spread.

OVERMATTER (Modifier schema)

Element type	Construct	Modify	Deconstruct
OVERMATTER (PARAGRAPH RICHTEXT ANCHOREDBOXREF GROUPCHARACTERS HIDDEN RUBI CALLOUTANCHOR INLINEBOX) *	Not applicable.	Not applicable.	Identifies where the current box overflows when there is no subsequence box for text to flow into.

PAGE (Modifier schema)

Element type	Construct	Modify	Deconstruct
PAGE (ID, SECTION?)	A page to be created.	The page to be created or deleted. Note: To locate a page, for example, for creating a box, you use the GEOMETRY@PAGE attribute in the BOX element.	Indicates a page's absolute page number (in the ID@UID element) Note: Page names are not returned.
Attributes			

Element type	Construct	Modify	Deconstruct
OPERATION (CREATE DELETE) #IMPLIED	Not applicable.	Specifies whether to create or delete the indicated page.	Not applicable.
MASTER CDATA #IMPLIED	Identifies the master page from which to create a page. This value should be specified as a number, with 3 indicating the first master page. Note: Only the number of a master page is included in this attribute. The definition of the master page is stored in the project's Job Jackets file.	Identifies the master page from which to create a page. This value should be specified as a number, with 3 indicating the first master page.	Identifies the master page that is applied to a page. Specified as a number, with "1" indicating the first master page. Note: Only the number of a master page is included in this attribute. The definition of the master page is stored in the project's Job Jackets file.
POSITION (LEFTOFSPINE RIGHTOFSPINE) "RIGHTOFSPINE"	Specifies whether a page should be on the left or right side of the spine.	Specifies whether a page should be on the left or right side of the spine.	Specifies whether a page is on the left or right of the spine.
FORMATTEDNAME CDATA #IMPLIED	Not applicable.	Not applicable.	The string that displays in automatically created page numbers. A combination of the PREFIX, FORMAT, and NUMBER for this page's <SECTION> element.

PAGEBREAK (Modifier schema)

Element type	Construct	Modify	Deconstruct
PAGEBREAK (empty)	Allows you to change the master page applied to the next page. You can also control whether the next page is on the left or right, and specify a master page to be inserted if necessary.	Allows you to change the master page applied to the next page. You can also control whether the next page is on the left or right, and specify a master page to be inserted if necessary.	Not applicable.
Attributes			
NEXTPAGE (RECTO VERSO) "RECTO"	Specifies whether the next page should be right-facing (recto) or left-facing (verso).	Specifies whether the next page should be right-facing (recto) or left-facing (verso).	Not applicable.
BLANKPAGE (YES NO) "NO"	Indicates whether to insert a blank page between this page and the next page. Applicable only if this page and the next page are both recto or both verso.	Indicates whether to insert a blank page between this page and the next page. Applicable only if this page and the next page are both recto or both verso.	Not applicable.
BLANKMASTER CDATA #IMPLIED	Specifies the name of the master page to be applied to the inserted blank page (if any).	Specifies the name of the master page to be applied to the inserted blank page (if any).	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>NEXTMASTER</code> CDATA #IMPLIED	Specifies the name of the master page to be applied to the next page.	Specifies the name of the master page to be applied to the next page.	Not applicable.

PAGEREF (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>PAGEREF</code> (empty)	Not applicable.	Not applicable.	Identifies a page within the layout corresponding to a multi-page Composition Zones item.
Attributes			
<code>NUMBER</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the number of the page currently displayed. You can set this value using the <code>COMPOSITIONZONE</code> element's <code>PREVIEWPAGE</code> attribute.
<code>ANGLE</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the angle applied to the Composition Zones item.
<code>OFFSETACROSS</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the horizontal offset applied to the Composition Zones item.
<code>OFFSETDOWN</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the vertical offset applied to the Composition Zones item.
<code>SCALE</code> CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies the scale applied to the Composition Zones item.

PAGESEQUENCE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>PAGESEQUENCE</code> (<code>MASTERREFERENCE*</code> , <code>FORCEPAGECOUNT*</code> (<code>SECTIONNUMBERFORMAT</code> <code>STATICCONTENT</code> <code>STORY</code>))	Not applicable.	Enables you to define a sequence of pages which can be a logical section, chapter, article etc. <code>@MASTERREFERENCE</code> allows you to refer to <code>MASTERPAGESEQUENCE</code> or a master page in template.	Not applicable.
Attributes			
<code>MASTERREFERENCE</code>	Not applicable.	Unique name of the <code>MASTERPAGESEQUENCE</code> .	Not applicable.

Element type	Construct	Modify	Deconstruct
FORCEPAGECOUNT	Not applicable.	<p>Imposes a condition on the number of pages in a PAGESEQUENCE. In the event that this constraint is not satisfied, an additional blank page will be added to the end of the sequence. Valid values include:</p> <ul style="list-style-type: none"> • AUTO (Default) The action taken depends on the existence of a succeeding PAGESEQUENCE and the value of the INITIALPAGENUMBER property specified within the SECTIONNUMBERFORMAT element. • Even Forces an even page count for the page sequence • Odd Forces an odd page count for the page sequence • ENDONEVEN Forces the last page to have an even page number • ENDONODD forces the last page to have an odd page number • NOFORCE Does not force any page count 	Not applicable.
ORIENTATION	Not applicable.	<p>Specifies the page orientation. The value can be set to LANDSCAPE or PORTRAIT.</p> <p>If the value is set to LANDSCAPE, the project template must already contain a layout with the name Landscape, because the content of the page sequence will flow into a landscape layout made available in the template.</p>	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
		If the value is set to LANDSCAPE , this would result in a mixed mode PDF output.	

PARAGRAPH (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>PARAGRAPH ((TABSPEC RULE FORMAT RICHTEXT ANCHOREDBOXREF HIDDEN GROUPCHARACTERS RUBI CALLOUTANCHOR CONTENT INLINEBOX NOTE INS DEL PAGEBREAK) *)</code>	Describes a paragraph.	Describes a paragraph.	Describes a paragraph.
Attributes			
<code>PARASTYLE CDATA #IMPLIED</code>	Applies a paragraph style sheet to text. Note: Only the name of a paragraph style sheet is included in this attribute. The definition of the style sheet is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Applies a paragraph style sheet to text. Note: Only the name of a paragraph style sheet is included in this attribute. The definition of the style sheet is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the paragraph style sheet applied to a paragraph. Note: Only the name of a paragraph style sheet is included in this attribute. The definition of the style sheet is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.
<code>PARACHAR (HARDRETURN VTAB BOXBREAK) "HARDRETURN"</code>	Defines a breaking character for a paragraph.	Defines a breaking character for a paragraph.	Defines a breaking character for a paragraph.
<code>MERGE (true false) "false"</code>	Specifies whether formatting from a previous <code>PARAGRAPH</code> or <code>RICHTEXT</code> element should be carried over to the next.	Specifies whether formatting from a previous <code>PARAGRAPH</code> or <code>RICHTEXT</code> element should be carried over to the next.	Indicates whether formatting from a previous <code>PARAGRAPH</code> or <code>RICHTEXT</code> element is carried over to the next.
<code>FAUXSTYLE (BOLD ITALIC BOLDITALIC NONE) #IMPLIED</code>	Not applicable.	Not applicable.	Indicates whether a paragraph contains a faux type style (such as a bold face that is constructed by software, as opposed to a bold font).
<code>CONDITIONALSTYLE CDATA #IMPLIED</code>	Applies a conditional style to this paragraph.	Applies a conditional style to this paragraph.	Identifies the conditional style (if any) associated with this paragraph.
<code>INDENTLEVEL CDATA #IMPLIED</code>	Sets the indent level for this paragraph.	Sets the indent level for this paragraph.	Indicates the indent level of this paragraph.

Element type	Construct	Modify	Deconstruct
TEXTTAGTYPE CDATA #IMPLIED	Not applicable.	Indicates the label applied to a paragraph. Valid only for reflow articles and QuarkCoypDesk articles. Valid values include: Body Byline FigureCaption FigureCredit Headline Headline2 IndentedParagraph Pullquote SectionChapterName Title Title2 OrderedList UnorderedList	Indicates the label applied to a paragraph. Valid only for reflow articles and QuarkCopyDesk articles. Valid values include: Body Byline FigureCaption FigureCredit Headline Headline2 IndentedParagraph Pullquote SectionChapterName Title Title2 OrderedList UnorderedList

PARENTTABLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
PARENTTABLE (empty)	Identifies the originating table when a table has been broken.	Identifies the originating table when a table has been broken.	Identifies the originating table when a table has been broken.
Attributes			
NAME CDATA #IMPLIED	Specifies the name of the parent table.	Specifies the name of the parent table.	Specifies the name of the parent table.
UID CDATA #IMPLIED	Not applicable.	Specifies the ID of the parent table assigned from QuarkXPress Server.	Specifies the ID of the parent table assigned from QuarkXPress Server.

PICTURE (Modifier schema)

Element type	Construct	Modify	Deconstruct
PICTURE (empty)	Describes the properties of a picture box.	Describes the properties of a picture box.	Describes the properties of a picture box.
Attributes			
FIT (CENTERPICTURE FITPICTURETOBOX FITBOXTOPICTURE FITPICTURETOBOXPRO NONE) "NONE"	Specifies how a picture should fit within a picture box. CENTERPICTURE = Shifts a picture to the center of the picture box without changing the pictures scale. FITPICTURETOBOX = Scales a picture to fit in its box exactly. The picture cannot be reduced to a size smaller than 10% or increased to a	Specifies how a picture should fit within a picture box. CENTERPICTURE = Shifts a picture to the center of the picture box without changing the pictures scale. FITPICTURETOBOX = Scales a picture to fit in its box exactly. The picture cannot be reduced to a size smaller than 10% or increased to a	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	<p>size larger than 1000%, both horizontally and vertically.</p> <p>FITBOXTOPICTURE = Resizes a box to fit its picture.</p> <p>FITPICTURETOBOXPRO=Scales a picture in a picture box in such a way that the x scale and y scale of a picture remain the same. The picture cannot be reduced to a size smaller than 10% or increased to a size larger than 1000%, both horizontally and vertically.</p>	<p>size larger than 1000%, both horizontally and vertically.</p> <p>FITBOXTOPICTURE = Resizes a box to fit its picture.</p> <p>FITPICTURETOBOXPRO=Scales a picture in a picture box in such a way that the x scale and y scale of a picture remain the same. The picture cannot be reduced to a size smaller than 10% or increased to a size larger than 1000%, both horizontally and vertically.</p>	
SCALEACROSS CDATA #IMPLIED	Specifies the horizontal scale of a picture as an integer percentage from 10 to 1000.	Specifies the horizontal scale of a picture as an integer percentage from 10 to 1000.	Specifies the horizontal scale of a picture as an integer percentage from 10 to 1000.
SCALEDOWN CDATA #IMPLIED	Specifies the vertical scale of a picture as an integer percentage from 10 to 1000.	Specifies the vertical scale of a picture as an integer percentage from 10 to 1000.	Specifies the vertical scale of a picture as an integer percentage from 10 to 1000.
OFFSETACROSS CDATA #IMPLIED	Specifies a horizontal offset for the content of a picture box.	Specifies a horizontal offset for the content of a picture box.	Specifies a horizontal offset for the content of a picture box.
OFFSETDOWN CDATA #IMPLIED	Specifies a vertical offset for the content of a picture box.	Specifies a vertical offset for the content of a picture box.	Specifies a vertical offset for the content of a picture box.
ANGLE CDATA #IMPLIED	Specifies a rotation angle for a picture as a floating-point value between -360 degrees and 360 degrees.	Specifies a rotation angle for a picture as a floating-point value between -360 degrees and 360 degrees.	Specifies a rotation angle for a picture as a floating-point value between -360 degrees and 360 degrees.
SKEW CDATA #IMPLIED	Specifies a skew angle for a picture as a floating-point value from -75 degrees to 75 degrees.	Specifies a skew angle for a picture as a floating-point value from -75 degrees to 75 degrees.	Specifies a skew angle for a picture as a floating-point value from -75 degrees to 75 degrees.
PICCOLOR CDATA #IMPLIED	<p>Identifies a color to be applied to a grayscale picture.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.</p>	<p>Identifies a color to be applied to a grayscale picture.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.</p>	<p>Identifies a color applied to a grayscale picture.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.</p>

Element type	Construct	Modify	Deconstruct
SHADE CDATA #IMPLIED	Specifies the shade of the color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a grayscale picture, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of a picture, as an integer percentage from 0 to 100.	Specifies the opacity of a picture, as an integer percentage from 0 to 100.	Specifies the opacity of a picture, as an integer percentage from 0 to 100.
PICBACKGROUNDCOLOR CDATA #IMPLIED	Identifies the background color applied to a grayscale picture.	Identifies the background color applied to a grayscale picture.	Identifies the background color applied to a grayscale picture.
PICBACKGROUNDSHADE CDATA #IMPLIED	Specifies the shade of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the shade of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the shade of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.
PICBACKGROUNDOPACITY CDATA #IMPLIED	Specifies the opacity of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the opacity of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.	Specifies the opacity of the background color applied to a grayscale picture, as an integer percentage from 0 to 100.
FLIPVERTICAL (true false none) "none"	Flips a picture vertically.	Flips a picture vertically. If a picture is already flipped vertically, then this flips the picture back.	Indicates whether a picture has been flipped vertically.
FLIPHORIZONTAL (true false none) "none"	Flips a picture horizontally.	Flips a picture horizontally. If a picture is already flipped horizontally, then this flips the picture back.	Indicates whether a picture has been flipped horizontally.
SUPRESSPICT (true false) "false"	Prevents a picture from being included in output.	Prevents a picture from being included in output.	Prevents a picture from being included in output.
FULLRES (true false none) "none"	Causes imported pictures to display at full resolution in QuarkXPress if the picture files are available.	Causes imported pictures to display at full resolution in QuarkXPress if the picture files are available.	Causes imported pictures to display at full resolution in QuarkXPress if the picture files are available.
MASK CDATA #IMPLIED	Identifies an alpha channel in the picture file to be used to mask the picture file.	Identifies an alpha channel in the picture file to be used to mask the picture file.	Identifies an alpha channel in the picture file that is being used to mask the picture file.
CLEARPICTURE (true false) "false"	Not applicable.	Removes the picture (if any) from the box.	Not applicable.
DPI CDATA #IMPLIED	Not applicable.	Not applicable.	Indicates the picture resolution in dots per inch (DPI).

PLACEHOLDER (Modifier schema)

Element type	Construct	Modify	Deconstruct
PLACEHOLDER (#PCDATA)	Not applicable.	Not applicable.	Describes a placeholder inserted in QuarkXPress for use with XML Import XTensions software. Note: To replace placeholders with XML content, use XML Import XTensions software with QuarkXPress, or refer to the thexmldoc and paginate parameters.
Attributes			
OWNER CDATA #REQUIRED	Not applicable.	Not applicable.	The name of the element in the XML or DTD that created the Placeholder.

POSITION (Modifier schema)

➡ Rather than using the [POSITION](#) element type, you can use the [RELPOSITION](#) element type to describe the position of [<GEOMETRY>](#) elements relative to the page or to the spread. To return item positions as [RELPOSITION](#) elements, use the [relativegeometry](#) parameter when deconstructing. For more information, see "[XML](#)."

Element type	Construct	Modify	Deconstruct
POSITION (TOP, LEFT, BOTTOM, RIGHT)	Specifies the absolute position of a box or line on the page, using coordinates measured in points from the upper-left corner of the page.	Specifies the absolute position of a box or line on the page, using coordinates measured in points from the upper-left corner of the page.	Specifies the absolute position of a box or line on the page, using coordinates measured in points from the upper-left corner of the page.
Attributes			
LOCKPROPORTIONS (true false) "false"	Specifies whether proportions are locked for an item.	Specifies whether proportions are locked for an item.	Specifies whether proportions are locked for an item.

PROJECT (Modifier schema)

Element type	Construct	Modify	Deconstruct
PROJECT (SAVEAS? PUBLICATION* HYPERLINK* TABLESTYLE* LAYOUT* STORY* CONTENT*)*	Describes the QuarkXPress project using one or more LAYOUT elements and allows you to save a copy of the project.	Identifies the QuarkXPress project being modified and allows you to save a copy of that project.	Identifies the QuarkXPress project being deconstructed.
Attributes			

Element type	Construct	Modify	Deconstruct
PROJECTNAME CDATA #IMPLIED	Specifies the name of the file to construct.	Not applicable.	Identifies the QuarkXPress project being deconstructed.
JOBJACKET CDATA #IMPLIED	The name and absolute path (on the server computer) of the Job Jackets file to use during construct. If the Job Jackets file cannot be located, cannot be read, or contains invalid XML, an error is returned. Note: You cannot create or modify Job Jackets files using the construct namespace and the modify attribute. To create or modify Job Jackets files, use the Job Jackets Manager dialog box (Utilities menu) in QuarkXPress.	Not applicable.	The name and path of the Job Jackets file associated with the deconstructed project.
JOBTICKET CDATA #IMPLIED	The name of the Job Ticket that contains the resources for this project. Note: All resources in the Job Ticket will be added to the project.	Not applicable.	The name of the Job Ticket associated with the deconstructed project.
XMLVERSION CDATA #IMPLIED	Not applicable.	Not applicable.	Identifies the version of QuarkXPress Server from which the XML is being returned. Ensures compatibility with future versions of the DTD. For example, the value 8.0 is returned for QuarkXPress Server 8.0.

PUBLICATION (Modifier schema)

Element type	Construct	Modify	Deconstruct
PUBLICATION (ID, PUBLICATIONCHANNEL*)	Not applicable.	Not applicable.	Identifies a set of one or more related layout families (PUBLICATIONCHANNEL elements). For example, a PUBLICATION may contain a PUBLICATIONCHANNEL for iPad and another PUBLICATIONCHANNEL for a different target device.

PUBLICATIONCHANNEL (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>PUBLICATIONCHANNEL (ID, LAYOUTREF*)</code>	Not applicable.	Not applicable.	Defines a layout family — that is, a set of related layouts (<code>LAYOUTREFS</code>).
Attributes			
<code>HEIGHT CDATA #IMPLIED</code>	Not applicable.	Not applicable.	Specifies the height of the screen for layout family's target device.
<code>WIDTH CDATA #IMPLIED</code>	Not applicable.	Not applicable.	Specifies the width of the screen for layout family's target device.

PUBLISHER (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>PUBLISHER (#PCDATA)></code>	Not applicable.	Specifies the publisher of an e-book.	Specifies the publisher of an e-book.

RELPOSITION (Modifier schema)

➡ To return item positions as `RELPOSITION` elements, use the `relativegeometry` parameter when deconstructing. For more information, see "[XML](#)."

Element type	Construct	Modify	Deconstruct
<code>RELPOSITION (ORIGIN, WIDTH, HEIGHT)</code>	Specifies the position of a box or line, using coordinates measured in points from the upper-left corner of the page or spread.	Specifies the position of a box or line, using coordinates measured in points from the upper-left corner of the page or spread.	Specifies the position of a box or line, using coordinates measured in points from the upper-left corner of the page or spread.

REPEATABLEMASTERPAGEALTERNATIVES (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>REPEATABLEMASTERPAGEALTERNATIVES (MAXREPEATS (CONDITIONALMASTERPAGEREFERENCE)*)</code>	Not applicable.	This sub-sequence is useful for the conditional application of master pages. The children of the <code>REPEATABLEMASTERPAGEALTERNATIVES</code> element are known as alternatives. Each alternative is represented by a <code>CONDITIONALMASTERPAGEREFERENCE</code> element. The <code>REPEATABLEMASTERPAGEALTERNATIVES</code> element may contain one or more alternatives.	Not applicable.

Element type	Construct	Modify	Deconstruct
Attributes			
MAXREPEATS	Not applicable.	Can be used to set an upper limit on the number of pages that may be generated using each of the <code>CONDITIONALMASTERPAGEREFERENCE</code>	Not applicable.

REPEATABLEMASTERPAGEREFERENCE (Modifier Schema)

Element type	Construct	Modify	Deconstruct
REPEATABLEMASTERPAGEREFERENCE (NAME* , MAXREPEATS*)	Not applicable.	This sub-sequence is useful for constructing runs of identical pages. It allows you to define a sequence in which a master page is applied to multiple pages in the page sequence. Causes a bounded or unbounded sequence of pages to be generated using the same master page. (*Unbounded = Default is hardcoded to 50000)	Not applicable.
Attributes			
NAME	Not applicable.	The name of the master page in the QuarkXPress template to be used.	Not applicable.
MAXREPEATS	Not applicable.	Used to set an upper limit on the number of pages that may be generated using this specifier.	Not applicable.

RGBCOLOR (Modifier schema)

Element type	Construct	Modify	Deconstruct
RGBCOLOR (empty)	Describes an RGB color that can be associated with a layer, as displayed in the Layers palette in QuarkXPress.	Describes an RGB color that can be associated with a layer, as displayed in the Layers palette in QuarkXPress.	Describes an RGB color that can be associated with a layer, as displayed in the Layers palette in QuarkXPress.
Attributes			
RED CDATA #IMPLIED	An integer from 0 to 255, indicating the red component of an RGB color.	An integer from 0 to 255, indicating the red component of an RGB color.	An integer from 0 to 255, indicating the red component of an RGB color.
GREEN CDATA #IMPLIED	An integer from 0 to 255, indicating the green component of an RGB color.	An integer from 0 to 255, indicating the green component of an RGB color.	An integer from 0 to 255, indicating the green component of an RGB color.
BLUE CDATA #IMPLIED	An integer from 0 to 255, indicating the blue component of an RGB color.	An integer from 0 to 255, indicating the blue component of an RGB color.	An integer from 0 to 255, indicating the blue component of an RGB color.

RICHTEXT (Modifier schema)

Element type	Construct	Modify	Deconstruct
RICHTEXT (#PCDATA)	Describes formatting for text. Use this element to apply additional formatting besides formatting applied with a paragraph or style sheet. Note: The RICHTEXT element replaces the TYPE element in QuarkXPress Server 7.2 and later.	Describes formatting for text. Use this element to apply additional formatting besides formatting applied with a paragraph or style sheet. Note: The RICHTEXT element replaces the TYPE element in QuarkXPress Server 7.2 and later.	Describes formatting for text, other than formatting applied with a paragraph or style sheet. Note: The RICHTEXT element replaces the TYPE element in QuarkXPress Server 7.2 and later.
Attributes			
CHARSTYLE CDATA #IMPLIED	Identifies a character style sheet to be applied to text. Note: Only the name of an H&J specification is included in this attribute. The definition of the H&J specification is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies a character style sheet to be applied to text.	Identifies the character style sheet applied to text. Note: Only the name of an H&J specification is included in this attribute. The definition of the H&J specification is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.
PLAIN (true false none) "none"	Removes existing formatting and renders text as plain text.	Removes existing formatting and renders text as plain text.	Removes existing formatting and renders text as plain text.
MERGE (true false) "false"	Specifies whether the formatting from the previous RICHTEXT tag should be carried into this RICHTEXT tag.	Specifies whether the formatting from the previous RICHTEXT tag should be carried into this RICHTEXT tag.	Specifies whether the formatting from the previous RICHTEXT tag should be carried into this RICHTEXT tag.
BOLD (true false none) "none"	Applies the bold type style to text.	Applies the bold type style to text.	Identifies the bold type style applied to text.
ITALIC (true false none) "none"	Applies the italic type style to text.	Applies the italic type style to text.	Identifies the italic type style applied to text.
FONT CDATA #IMPLIED	Identifies a font to be applied to text.	Identifies a font to be applied to text.	Identifies a font applied to text.
MISSINGFONT (true false) "false"	If the font is missing on rendering, then this attribute is set to true. This allows you to identify when rendering a portion of text that the original font is missing on the machine where the rendering is taking place, and allows your application to substitute the font (overriding the inbuilt font	If the font is missing on rendering, then this attribute is set to true. This allows you to identify when rendering a portion of text that the original font is missing on the machine where the rendering is taking place, and allows your application to substitute the font (overriding the inbuilt font	If the font is missing on rendering, then this attribute is set to true. This allows you to identify when rendering a portion of text that the original font is missing on the machine where the rendering is taking place, and allows your application to substitute the font (overriding the inbuilt font

Element type	Construct	Modify	Deconstruct
	mapping functionality in QuarkXPress Server). If the font specified in the XML is missing and if the MISSINGFONT attribute is present then this becomes the basis for applying font fallback on the particular text run if the FontFallback preference is enabled. Otherwise this would cause an error because the required font is missing.	mapping functionality in QuarkXPress Server).	mapping functionality in QuarkXPress Server).
PSFONTNAME CDATA #IMPLIED	Some fonts have different postscript and menu display names. The FONTNAME attribute describes the menu name of the font, and PSFONTNAME describes the internal postscript name of the font family.	Some fonts have different postscript and menu display names. The FONTNAME attribute describes the menu name of the font, and PSFONTNAME describes the internal postscript name of the font family.	Some fonts have different postscript and menu display names. The FONTNAME attribute describes the menu name of the font, and PSFONTNAME describes the internal postscript name of the font family.
SIZE CDATA #IMPLIED	Specifies a size for text, from 2 to 720 points.	Specifies a size for text, from 2 to 720 points.	Identifies the size of the text, from 2 to 720 points.
FONTSET CDATA #IMPLIED	Identifies a font set that has been applied to text. Note that you can apply font sets during a Construct operation, but you cannot create them.	Identifies a font set that has been applied to text. Note that you can apply font sets during a Modify operation, but you cannot create them.	Identifies a font set that has been applied to text.
FONTSETSIZE CDATA #IMPLIED	Specifies the size of the font set that has been applied to text. (The base size of text can be different from its font set size.)	Specifies the size of the font set that has been applied to text. (The base size of text can be different from its font set size.)	Specifies the size of the font set that has been applied to text. (The base size of text can be different from its font set size.)
COLOR CDATA #IMPLIED	Identifies the color for text. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color for text. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color for text. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Specifies the shade of text color, as an integer percentage from 0 to 100.	Specifies the shade of text color, as an integer percentage from 0 to 100.	Identifies the shade of text color, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of text, specified as an integer percentage from 0 to 100.	Specifies the opacity of text, specified as an integer percentage from 0 to 100.	Identifies the opacity of text, specified as an integer percentage from 0 to 100.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>NONBREAKING (true false none) "none"</code>	Specifies if the text will be nonbreaking or not. Used for special character (e.g., for a hyphen: <code><RICHTEXT NONBREAKING="true"> </RICHTEXT></code>)	Specifies if the text will be nonbreaking or not. Used for special characters (e.g., for a thinspace: <code><RICHTEXT NONBREAKING="true"> &thinsp; </RICHTEXT></code>)	Specifies if the text will be nonbreaking or not. Used for special characters (e.g., for a thinspace: <code><RICHTEXT NONBREAKING="true"> &thinsp; </RICHTEXT></code>)
<code>UNDERLINE (true false none) "none"</code>	Applies the underline type style to text.	Applies the underline type style to text.	Identifies the underline type style applied to text.
<code>WORDUNDERLINE (true false none) "none"</code>	Applies the word underline type style to text.	Applies the word underline type style to text.	Identifies the word underline type style applied to text.
<code>SMALLCAPS (true false none) "none"</code>	Applies small caps to text.	Applies small caps to text.	Identifies small caps applied to text.
<code>ALLCAPS (true false none) "none"</code>	Applies all caps to text.	Applies all caps to text.	Identifies all caps applied to text.
<code>SUPERSCRIP (true false none) "none"</code>	Applies the superscript type style to text.	Applies the superscript type style to text.	Identifies the superscript type style applied to text.
<code>SUBSCRIPT (true false none) "none"</code>	Applies the subscript type style to text.	Applies the subscript type style to text.	Identifies the subscript type style applied to text.
<code>SUPERIOR (true false none) "none"</code>	Applies the superior type style to text.	Applies the superior type style to text.	Identifies the superior type style applied to text.
<code>OUTLINE (true false none) "none"</code>	Applies the outline type style to text.	Applies the outline type style to text.	Identifies the outline type style applied to text.
<code>SHADOW (true false none) "none"</code>	Applies the shadow type style to text.	Applies the shadow type style to text.	Identifies the shadow type style applied to text.
<code>STRIKETHRU (true false none) "none"</code>	Applies the strikethru type style to text.	Applies the strikethru type style to text.	Identifies the strikethru type style applied to text.
<code>EMPHASISMARK (NONE DOT BLACKCIRCLE WHITECIRCLE WHITESQUARE FISHEYE COMMA BLACKSESAME WHITESESAME BLACKTRIANGLE) "NONE"</code>	Allows an emphasis mark to be placed on this RICHTEXT.	Allows an emphasis mark to be placed on this RICHTEXT.	Allows an emphasis mark to be placed on this RICHTEXT.
<code>BASELINESHIFT CDATA #IMPLIED</code>	Shifts text up or down without affecting paragraph line spacing. A positive value raises text; a negative value lowers text.	Shifts text up or down without affecting paragraph line spacing. A positive value raises text; a negative value lowers text.	Identifies a shift of text up or down without affecting paragraph line spacing. A positive value raises text; a negative value lowers text.
<code>HORIZONTALSCALE CDATA #IMPLIED</code>	Applies a horizontal scale to text, which makes characters narrower or wider.	Applies a horizontal scale to text, which makes characters narrower or wider.	Identifies a horizontal scale applied to text, which makes characters narrower or wider.
<code>VERTICALSCALE CDATA #IMPLIED</code>	Applies a vertical scale to text, which makes characters taller or shorter.	Applies a vertical scale to text, which makes characters taller or shorter.	Identifies a vertical scale applied to text, which makes characters taller or shorter. Specified as an

Element type	Construct	Modify	Deconstruct
	Specified as an integer percentage from 25 to 400.	Specified as an integer percentage from 25 to 400.	integer percentage from 25 to 400.
<code>TRACKAMOUNT CDATA #IMPLIED</code>	Adjusts the amount of space between characters and words.	Adjusts the amount of space between characters and words.	Identifies an amount of adjusted space applied between characters and words.
<code>KERNAMOUNT CDATA #IMPLIED</code>	Adjusts the amount of space between two characters.	Adjusts the amount of space between two characters.	Identifies an amount of adjusted space applied between two characters.
<code>LIGATURES (true false none) "none"</code>	Indicates whether standard ligatures should be applied.	Indicates whether standard ligatures should be applied.	Indicates whether standard ligatures are applied.
<code>OT_STANDARD_LIGATURES (true false none) "none"</code>	Applies the OpenType standard ligatures type style to text.	Applies the OpenType standard ligatures type style to text.	Identifies the OpenType standard ligatures type style applied to text.
<code>OT_DISCRETIONARY_LIGATURES (true false none) "none"</code>	Applies the OpenType discretionary type style to text.	Applies the OpenType discretionary type style to text.	Identifies the OpenType discretionary type style applied to text.
<code>OT_ORDINALS (true false none) "none"</code>	Applies the OpenType ordinals type style to text.	Applies the OpenType ordinals type style to text.	Identifies the OpenType ordinals type style applied to text.
<code>OT_TITLING_ALTERNATES (true false none) "none"</code>	Applies the OpenType titling alternates type style to text.	Applies the OpenType titling alternates type style to text.	Identifies the OpenType titling alternates type style applied to text.
<code>OT_ALL_SMALL_CAPS (true false none) "none"</code>	Applies the OpenType all small caps type style to text.	Applies the OpenType all small caps type style to text.	Identifies the OpenType all small caps type style applied to text.
<code>OT_FRACTIONS (true false none) "none"</code>	Applies the OpenType fractions type style to text.	Applies the OpenType fractions type style to text.	Identifies the OpenType fractions type style applied to text.
<code>OT_SWASHES (true false none) "none"</code>	Applies the OpenType swashes type style to text.	Applies the OpenType swashes type style to text.	Identifies the OpenType swashes type style applied to text.
<code>OT_SMALL_CAPS (true false none) "none"</code>	Applies the OpenType small caps type style to text.	Applies the OpenType small caps type style to text.	Identifies the OpenType small caps type style applied to text.
<code>OT_CONTEXTUAL_ALTERNATIVES (true false none) "none"</code>	Applies the OpenType contextual alternates type style to text.	Applies the OpenType contextual alternates type style to text.	Identifies the OpenType contextual alternates type style applied to text.
<code>OT_TABULAR_FIGURES (true false none) "none"</code>	Applies the OpenType tabular figures type style to text.	Applies the OpenType tabular figures type style to text.	Identifies the OpenType tabular figures type style applied to text.
<code>OT_PROPORTIONAL_FIGURES (true false none) "none"</code>	Applies the OpenType proportional figures type style to text.	Applies the OpenType proportional figures type style to text.	Identifies the OpenType proportional figures type style applied to text.
<code>OT_LINING_FIGURES (true false none) "none"</code>	Applies the OpenType lining figures type style to text.	Applies the OpenType lining figures type style to text.	Identifies the OpenType lining figures type style applied to text.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>OT_NONE (true false none) "none"</code>	Removes OpenType formatting from text.	Removes OpenType formatting from text.	Indicates the OpenType formatting has been removed from text.
<code>OT_SUPERSCRIPT (true false none) "none"</code>	Applies the OpenType superscript type style to text.	Applies the OpenType superscript type style to text.	Identifies the OpenType superscript type style applied to text.
<code>OT_SUBSCRIPT (true false none) "none"</code>	Applies the OpenType subscript type style to text.	Applies the OpenType subscript type style to text.	Identifies the OpenType subscript type style applied to text.
<code>OT_NUMERATOR (true false none) "none"</code>	Applies the OpenType numerator type style to text.	Applies the OpenType numerator type style to text.	Identifies the OpenType numerator type style applied to text.
<code>OT_DENOMINATOR (true false none) "none"</code>	Applies the OpenType denominator type style to text.	Applies the OpenType denominator type style to text.	Identifies the OpenType denominator type style applied to text.
<code>OT_OLDSTYLE_FIGURES (true false none) "none"</code>	Applies the OpenType old style figures type style to text.	Applies the OpenType old style figures type style to text.	Identifies the OpenType old style figures type style applied to text.
<code>OT_SCIENTIFIC_INFERIOR_FEATURE (true false none) "none"</code>	Replaces lining or old style figures with inferior figures (smaller glyphs which sit lower than the standard baseline, primarily for chemical or mathematical notation). May also replace lowercase characters with alphabetic inferiors.	Replaces lining or old style figures with inferior figures (smaller glyphs which sit lower than the standard baseline, primarily for chemical or mathematical notation). May also replace lowercase characters with alphabetic inferiors.	Replaces lining or old style figures with inferior figures (smaller glyphs which sit lower than the standard baseline, primarily for chemical or mathematical notation). May also replace lowercase characters with alphabetic inferiors.
<code>OT_ITALICS_FEATURE (true false none) "none"</code>	Some fonts (such as Adobe® Pro Japanese fonts) have both Roman and Italic forms of some characters in a single font. This feature replaces the Roman glyphs with the corresponding Italic glyphs.	Some fonts (such as Adobe Pro Japanese fonts) have both Roman and Italic forms of some characters in a single font. This feature replaces the Roman glyphs with the corresponding Italic glyphs.	Some fonts (such as Adobe Pro Japanese fonts) have both Roman and Italic forms of some characters in a single font. This feature replaces the Roman glyphs with the corresponding Italic glyphs.
<code>OT_HVKANA_ALTERNATES (true false none) "none"</code>	Apply specially designed horizontal or vertical Kana forms that correspond with the story direction (vertical or horizontal).	Apply specially designed horizontal or vertical Kana forms that correspond with the story direction (vertical or horizontal).	Apply specially designed horizontal or vertical Kana forms that correspond with the story direction (vertical or horizontal).
<code>OT_RUBINOTATION_FORMS (true false none) "none"</code>	Japanese typesetting often uses smaller kana glyphs, generally in superscripted form, to clarify the meaning of kanji which may be unfamiliar to the reader. These are called ruby, from the old typesetting term for four-point-sized type. This feature identifies glyphs in the font which have been designed for this use,	Japanese typesetting often uses smaller kana glyphs, generally in superscripted form, to clarify the meaning of kanji which may be unfamiliar to the reader. These are called ruby, from the old typesetting term for four-point-sized type. This feature identifies glyphs in the font which have been designed for this use,	Japanese typesetting often uses smaller kana glyphs, generally in superscripted form, to clarify the meaning of kanji which may be unfamiliar to the reader. These are called ruby, from the old typesetting term for four-point-sized type. This feature identifies glyphs in the font which have been designed for this use,

Element type	Construct	Modify	Deconstruct
	substituting them for the default designs.	substituting them for the default designs.	substituting them for the default designs.
OT_LOCALIZED_FORMS (true false none) "none"	Replace default forms of glyphs with localized forms.	Replace default forms of glyphs with localized forms.	Replace default forms of glyphs with localized forms.
OT_ALTERNATE_WIDTHS_NONE (true false none) "none"	Apply alternate widths for heights based on story direction (vertical or horizontal).	Apply alternate widths for heights based on story direction (vertical or horizontal).	Apply alternate widths for heights based on story direction (vertical or horizontal).
OT_FULL_WIDTHS (true false none) "none"	Replace glyphs set on other em widths with glyphs set on full-em widths.	Replace glyphs set on other em widths with glyphs set on full-em widths.	Replace glyphs set on other em widths with glyphs set on full-em widths.
OT_HALF_WIDTHS (true false none) "none"	Replace glyphs set on other em widths with half-em width glyphs.	Replace glyphs set on other em widths with half-em width glyphs.	Replace glyphs set on other em widths with half-em width glyphs.
OT_THIRD_WIDTHS (true false none) "none"	Replace glyphs set on other em widths with glyphs set on third-em widths.	Replace glyphs set on other em widths with glyphs set on third-em widths.	Replace glyphs set on other em widths with glyphs set on third-em widths.
OT_QUARTER_WIDTHS (true false none) "none"	Replace glyphs set on other em widths with glyphs set on quarter-em widths.	Replace glyphs set on other em widths with glyphs set on quarter-em widths.	Replace glyphs set on other em widths with glyphs set on quarter-em widths.
OT_PROPORTIONAL_WIDTHS (true false none) "none"	Fit glyphs to individual, proportional widths.	Fit glyphs to individual, proportional widths.	Fit glyphs to individual, proportional widths.
OT_ALTVERTMETRICS (true false none) "none"	Center glyphs inside a full-em height.	Center glyphs inside a full-em height.	Center glyphs inside a full-em height.
OT_PROPORTIONAL_ALIVERIMETRICS (true false none) "none"	Fit glyphs to individual, proportional heights.	Fit glyphs to individual, proportional heights.	Fit glyphs to individual, proportional heights.
OT_ALTERNATE_HALF_METRICS (true false none) "none"	Fit full-em height glyphs to half-em heights.	Fit full-em height glyphs to half-em heights.	Fit full-em height glyphs to half-em heights.
OT_ALTERNATE_FORMS_NONE (true false none) "none"OT_JIS78FORMS (true false none) "none" OT_JIS83FORMS (true false none) "none" OT_JIS90FORMS (true false none) "none" OT_JIS04FORMS (true false none) "none" OT_SIMPLIFIED_FORMS (true false none) "none"	Alternate glyph forms, such as JIS2004, JIS78, JIS90, Simplified, and Traditional. These glyph forms are specially designed for some Japanese OpenType fonts.	Alternate glyph forms, such as JIS2004, JIS78, JIS90, Simplified, and Traditional. These glyph forms are specially designed for some Japanese OpenType fonts.	Alternate glyph forms, such as JIS2004, JIS78, JIS90, Simplified, and Traditional. These glyph forms are specially designed for some Japanese OpenType fonts.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
OT_TRADITIONAL_FORMS (true false none) "none"			
LANGUAGE (SwissGerman SwissGermanReformed BrazilianPortuguese Bulgarian Croatian Czech Dutch Danish Finnish French German ReformedGerman Hungarian Greek Italian BokmalNorwegian Portuguese Polish Slovak Russian Romanian Swedish Turkish Spanish USEnglish Catalan Estonian Lithuanian Latvian Icelandic Slovenian InternationalEnglish SimplifiedChinese TraditionalChinese Japanese Korean Ukrainian NynorskNorwegian None none) "none"	Specifies the dictionary preference used for hyphenation.	Specifies the dictionary preference used for hyphenation.	Identifies the dictionary preference used for hyphenation.
SENDING CDATA #IMPLIED	Sending is a character spacing attribute used particularly in East Asian typography, similar to kerning, but applicable as a fixed value over a range of text.	Sending is a character spacing attribute used particularly in East Asian typography, similar to kerning, but applicable as a fixed value over a range of text.	Sending is a character spacing attribute used particularly in East Asian typography, similar to kerning, but applicable as a fixed value over a range of text.
APPLYSENDINGTONONCJK (true false none) "none"	Describes whether sending should be applied to both Roman and Chinese/Japanese/Korean glyphs (true) or just to Chinese, Japanese, and Korean Glyphs (false).	Describes whether sending should be applied to both Roman and Chinese/Japanese/Korean glyphs (true) or just to Chinese, Japanese, and Korean Glyphs (false).	Describes whether sending should be applied to both Roman and Chinese/Japanese/Korean glyphs (true) or just to Chinese, Japanese, and Korean Glyphs (false).
UEGLYPHID CDATA #IMPLIED	Unencoded Glyphs (UEG)Some glyphs, especially in legacy Korean documents, are not covered by the Unicode specification. These are referred to as UEG or Unencoded Glyphs. This attribute represents the font glyph ID for such characters that cannot be represented. Note that this is an empty element, as the	Some glyphs, especially in legacy Korean documents, are not covered by the Unicode specification. These are referred to as UEG or Unencoded Glyphs. This attribute represents the font glyph ID for such characters that cannot be represented. Note that this is an empty element, as the glyph cannot be represented as text.	Some glyphs, especially in legacy Korean documents, are not covered by the Unicode specification. These are referred to as UEG or Unencoded Glyphs. This attribute represents the font glyph ID for such characters that cannot be represented. Note that this is an empty element, as the glyph cannot be represented as text.

Element type	Construct	Modify	Deconstruct
	glyph cannot be represented as text.		
OTVARIANT CDATA #IMPLIED	Specifies which variant to use from among the multiple match found (if any).	Specifies which variant to use from among the multiple match found (if any).	Specifies which variant to use from among the multiple match found (if any).
OTFEATURE CDATA #IMPLIED	Contains the value of the OpenType feature applied on text like AlternateFractions (afrc), AlternateAnnotations, etc.	Contains the value of the OpenType feature applied on text like AlternateFractions (afrc), AlternateAnnotations, etc.	Contains the value of the OpenType feature applied on text like AlternateFractions (afrc), AlternateAnnotations, etc.
SCRIPT (Hira Hani Hrkt Hang Yiii Kana Bopo none) "none"	Represents the script system used by this <RICHTEXT> element's content.	Represents the script system used by this <RICHTEXT> element's content.	Represents the script system used by this <RICHTEXT> element's content.
HALFWIDTHUPRIGHT (true false none) "none"	Specifies whether this character should be presented upright in a vertical story. This is specifically applicable to Roman characters within a vertical story.	Specifies whether this character should be presented upright in a vertical story. This is specifically applicable to Roman characters within a vertical story.	Specifies whether this character should be presented upright in a vertical story. This is specifically applicable to Roman characters within a vertical story.
FAUXSTYLE (BOLD ITALIC BOLDITALIC NONE) #IMPLIED	Not applicable.	Not applicable.	Indicates whether the text contains a faux type style (such as a bold face that is constructed by software, as opposed to a bold font).
PAGENUMBERCHAR (CURRENTPAGE NEXTPAGE PREVIOUSPAGE) #IMPLIED	Represents an automatic page number character. If a <RICHTEXT> element with this attribute occurs in a section, section-specific numbering and formatting is applied to the page number. For more information, see " Working with sections ."	Represents an automatic page number character. If a <RICHTEXT> element with this attribute occurs in a section, section-specific numbering and formatting is applied to the page number. For more information, see " Working with sections ."	Represents an automatic page number character.
HYPERLINKREF CDATA #IMPLIED	Not applicable.	Not applicable.	Specifies that this <RICHTEXT> element is a hyperlink by referring to a <HYPERLINK>.
HLTYPE (WWWURL PAGE ANCHOR) #IMPLIED	Not applicable.	Not applicable.	Specifies the type of hyperlink this <RICHTEXT> element hyperlinks to. Options include <WWWURL> (a URL on the Web), <PAGE> (the top of a page in the same layout), and <ANCHOR> (an anchor).
HLANCHORREF CDATA #IMPLIED	Not applicable.	Not applicable.	If this <RICHTEXT> element is a hyperlink of the <HLTYPE ANCHOR>, this

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
			attribute identifies the anchor by name.
BACKGROUND_COLOR CDATA #IMPLIED	Specifies a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Specifies a background color to be inserted behind the text. This color displays only in rendered output, and is not saved with the project file.	Not applicable.

RIGHT (Modifier schema)

Element type	Construct	Modify	Deconstruct
RIGHT (#PCDATA)	The distance between the box or lines right edge and the right edge of the page, in points.	The distance between the box or lines right edge and the right edge of the page, in points.	The distance between the box or lines right edge and the right edge of the page, in points.

RIGHTCONTROLPOINT (Modifier schema)

Element type	Construct	Modify	Deconstruct
RIGHTCONTROLPOINT (empty)	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .
Attributes			
X CDATA #IMPLIED	X coordinate of RIGHTCONTROLPOINT.	X coordinate of RIGHTCONTROLPOINT.	X coordinate of RIGHTCONTROLPOINT.
Y CDATA #IMPLIED	Y coordinate of RIGHTCONTROLPOINT.	Y coordinate of RIGHTCONTROLPOINT.	Y coordinate of RIGHTCONTROLPOINT.

RIGHTGRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
RIGHTGRID (empty)	Describes a grid line on the right edge of a cell in an <code><INLINETABLE></code> .	Describes a grid line on the right edge of a cell in an <code><INLINETABLE></code> .	Not applicable.
Attributes			
TYPE (TOP LEFT BOTTOM RIGHT) #IMPLIED	Specifies the location of the grid line.	Specifies the location of the grid line.	Not applicable.
STYLE CDATA #IMPLIED	Identifies the <code><TABLESTYLE></code> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <code><TABLESTYLE></code> values.	Identifies the <code><TABLESTYLE></code> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <code><TABLESTYLE></code> values.	Not applicable.
WIDTH CDATA #IMPLIED	Specifies the width of the grid line in points.	Specifies the width of the grid line in points.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the color of the grid line.	Specifies the color of the grid line.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the shade of the grid line.	Specifies the shade of the grid line.	Not applicable.
OPACITY CDATA #IMPLIED	Specifies the opacity of the grid line.	Specifies the opacity of the grid line.	Not applicable.
GAPCOLOR CDATA #IMPLIED	Specifies the color of the gap (if any) between the lines that make up the grid line.	Specifies the color of the gap (if any) between the lines that make up the grid line.	Not applicable.
GAPSHADE CDATA #IMPLIED	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Not applicable.
GAPOPACITY CDATA #IMPLIED	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Not applicable.

ROW (Modifier schema)

Element type	Construct	Modify	Deconstruct
ROW ((CELL GRIDLINE) *)	Describes a row in a table.	Describes a row in a table.	Describes a row in a table.
Attributes			

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>ROWCOUNT</code> CDATA #REQUIRED	Specifies the index position of a row from top to bottom. For example, <code>ROWCOUNT = 1</code> indicates the first row from the top, and <code>ROWCOUNT = 2</code> indicates the second row from the top.	Specifies the index position of a row from top to bottom. For example, <code>ROWCOUNT = 1</code> indicates the first column from the top, and <code>ROWCOUNT = 2</code> indicates the second column from the top.	Specifies the index position of a row from top to bottom. For example, <code>ROWCOUNT = 1</code> indicates the first column from the top, and <code>ROWCOUNT = 2</code> indicates the second column from the top.
<code>ROWHEIGHT</code> CDATA #IMPLIED	Specifies the height of a row. Note: If this attribute is empty, the row is resized to fit its contents, unless <code>RICHTEXT@MAINTAINGEOMETRY</code> is set to true, in which case any row that does not have a <code>ROWHEIGHT</code> attribute will be sized equally using the amount of space remaining after all the specified <code>ROWHEIGHT</code> attributes have been subtracted from the total height of the box.	Specifies the height of a row. Note: If this attribute is empty, the row is resized to fit its contents, unless <code>RICHTEXT@MAINTAINGEOMETRY</code> is set to true, in which case any row that does not have a <code>ROWHEIGHT</code> attribute will be sized equally using the amount of space remaining after all the specified <code>ROWHEIGHT</code> attributes have been subtracted from the total height of the box.	Specifies the height a row.
<code>COLOR</code> CDATA #IMPLIED	Identifies the color of a row. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a row. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a row. Overrides the <code>TABLE@COLOR</code> attribute. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
<code>SHADE</code> CDATA #IMPLIED	Specifies the shade of the color applied to a row, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a row, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a row, as an integer percentage from 0 to 100.
<code>OPACITY</code> CDATA #IMPLIED	Specifies the opacity of the color applied to a row, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a row, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a row, specified as an integer percentage from 0 to 100.
<code>MERGEROWSPAN</code> CDATA #IMPLIED	Attribute used for merging cells and rows.	Attribute used for merging cells and rows.	If a table includes merged cells, then the <code>MERGECOLSPAN</code> value is shown in the xml output.
<code>SPLIT</code> (true false) #IMPLIED	Not applicable.	Attribute used for splitting rows and columns.	Not applicable.

Element type	Construct	Modify	Deconstruct
<code>AUTOFIT (true false none) "none"</code>	Specifies whether the rows or columns will adjust size to fit the content.	Specifies whether the rows or columns will adjust size to fit the content.	Specifies whether the rows or columns will adjust size to fit the content.
<code>AUTOFITMAXLIMIT CDATA #IMPLIED</code>	Max limit for autofit.	Max limit for autofit.	Max limit for autofit.

RUBI (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>RUBI (RUBITEXT, (RICHTEXT ANCHOREDBOXREF HIDDEN CALLOUTANCHOR INLINEBOX)+)</code>	Specifies a region of base text and the rubi text to include with that text. Note the second and subsequent children of the RUBI element (<code>RICHTEXT ANCHOREDBOX HIDDEN CALLOUTANCHOR INLINEBOX</code>)+ declare the base text to which the rubi text is to be applied.	Specifies a region of base text and the rubi text to include with that text. Note the second and subsequent children of the RUBI element (<code>RICHTEXT ANCHOREDBOX HIDDEN CALLOUTANCHOR INLINEBOX</code>)+ declare the base text to which the rubi text is to be applied.	Specifies a region of base text and the rubi text to include with that text. Note the second and subsequent children of the RUBI element (<code>RICHTEXT ANCHOREDBOX HIDDEN CALLOUTANCHOR INLINEBOX</code>)+ declare the base text to which the rubi text is to be applied.

RUBITEXT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>RUBITEXT (RICHTEXT)</code>	Specifies the rubi text to be applied to the specified base text. The RUBITEXT element is a container for a RICHTEXT element. All the usual character formatting attributes can be applied to the rubi text through this RICHTEXT element.	Specifies the rubi text to be applied to the specified base text. The RUBITEXT element is a container for a RICHTEXT element. All the usual character formatting attributes can be applied to the rubi text through this RICHTEXT element.	Specifies the rubi text to be applied to the specified base text. The RUBITEXT element is a container for a RICHTEXT element. All the usual character formatting attributes can be applied to the rubi text through this RICHTEXT element.
Attributes			
<code>ALIGNMENT (LEFT TOP CENTERED RIGHT BOTTOM JUSTIFIED FORCED ONETOONE EQUALSPACE ONERUBISPACE) "CENTERED"</code>	Controls how non-overhanging rubi text aligns with the base text. For more information, see "Rubi alignment options" in the QuarkXPress documentation.	Controls how non-overhanging rubi text aligns with the base text. For more information, see "Rubi alignment options" in the QuarkXPress documentation.	Controls how non-overhanging rubi text aligns with the base text. For more information, see "Rubi alignment options" in the QuarkXPress documentation.
<code>OVERHANGALIGNMENT (none LEFT TOP CENTERED RIGHT BOTTOM JUSTIFIED FORCED ONETOONE EQUALSPACE) "none"</code>	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>PLACEMENT (ABOVE BELOW RIGHT LEFT) "ABOVE"</code>	This attribute specifies whether rubi text displays above or below the base text (in a horizontal story) or to the left of or right of the base text (in a vertical story).	This attribute specifies whether rubi text displays above or below the base text (in a horizontal story) or to the left of or right of the base text (in a vertical story).	This attribute specifies whether rubi text displays above or below the base text (in a horizontal story) or to the left of or right of the base text (in a vertical story).
<code>RELATIVESIZE CDATA "50"</code>	Defines the size of the rubi text compared to the base text.	Defines the size of the rubi text compared to the base text.	Defines the size of the rubi text compared to the base text.
<code>OFFSET CDATA "0"</code>	Use this attribute to control how far the rubi text is offset from the base text.	Use this attribute to control how far the rubi text is offset from the base text.	Use this attribute to control how far the rubi text is offset from the base text.
<code>OVERHANG (none UNRESTRICTED HALFRUBI FULLRUBI HALFBASE FULLBASE) "HALFRUBI"</code>	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."	Defines how far the rubi text can overhang base text that is unrelated to the rubi text. For more information, see "Rubi overhang options."
<code>AUTOALIGNATLINEEDGES (true false) "true"</code>	Automatically aligns rubi text with the border of a text box when the rubi text overhangs the base text and touches the edge of the text box.	Automatically aligns rubi text with the border of a text box when the rubi text overhangs the base text and touches the edge of the text box.	Automatically aligns rubi text with the border of a text box when the rubi text overhangs the base text and touches the edge of the text box.
<code>ANNONATIONS (true false) "true"</code>	Applicable for OT fonts applied to rubi. If the font supports annotations, then that is applied on the rubi text.	Applicable for OT fonts applied to rubi. If the font supports annotations, then that is applied on the rubi text.	Applicable for OT fonts applied to rubi. If the font supports annotations, then that is applied on the rubi text.

RULE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>RULE (empty)</code>	Describes a rule above or below a paragraph.	Describes a rule above or below a paragraph.	Describes a rule above or below a paragraph.
Attributes			
<code>ENABLED (true false none) "none"</code>	Specifies whether to add a rule to a paragraph or not.	Specifies whether to add a rule to a paragraph or not.	Specifies whether a rule is applied to a paragraph or not.
<code>POSITION (ABOVE BELOW) "BELOW"</code>	Specifies whether a rule should be above or below a paragraph.	Specifies whether a rule should be above or below a paragraph.	Specifies whether a rule is above or below a paragraph.
<code>LENGTH (TEXT COLUMN INDENTS) "INDENTS"</code>	Specifies the length of a rule. TEXT = Rule is the same length as the first line of text in the paragraph (for rule above) or the last line	Specifies the length of a rule. TEXT = Rule is the same length as the first line of text in the paragraph (for rule above) or the last line	Specifies the length of a rule. TEXT = Rule is the same length as the first line of text in the paragraph (for rule above) or the last line

Element type	Construct	Modify	Deconstruct
	<p>of text in the paragraph (for rule below).</p> <p>COLUMN = Rule extends to edges of parent box or column.</p> <p>INDENTS = Rule extends from the paragraph's left indent to its right indent.</p>	<p>of text in the paragraph (for rule below).</p> <p>COLUMN = Rule extends to edges of parent box or column.</p> <p>INDENTS = Rule extends from the paragraph's left indent to its right indent.</p>	<p>of text in the paragraph (for rule below).</p> <p>COLUMN = Rule extends to edges of parent box or column.</p> <p>INDENTS = Rule extends from the paragraph's left indent to its right indent.</p>
LEFT CDATA #IMPLIED	Specifies a distance to indent a rule farther from the left. A positive number moves the end-point to the right; a negative number moves the end-point to the left.	Specifies a distance to indent a rule farther from the left. A positive number moves the end-point to the right; a negative number moves the end-point to the left.	Specifies a distance a rule is indented farther from the left. A positive number moves the end-point to the right; a negative number moves the end-point to the left.
RIGHT CDATA #IMPLIED	Specifies a distance to indent a rule farther from the right. A positive number moves the end-point to the left; a negative number moves the end-point to the right.	Specifies a distance to indent a rule farther from the right. A positive number moves the end-point to the left; a negative number moves the end-point to the right.	Specifies a distance a rule is indented farther from the right. A positive number moves the end-point to the left; a negative number moves the end-point to the right.
OFFSET CDATA #IMPLIED	Specifies the amount of space between a rule and the paragraph to which it is attached.	Specifies the amount of space between a rule and the paragraph to which it is attached.	Specifies the amount of space between a rule and the paragraph to which it is attached.
WIDTH CDATA #IMPLIED	Specifies the thickness of a rule.	Specifies the thickness of a rule.	Specifies the thickness of a rule.
COLOR CDATA #IMPLIED	<p>Identifies the color for a rule.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.</p>	<p>Identifies the color for a rule.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.</p>	<p>Identifies the color for a rule.</p> <p>Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.</p>
SHADE CDATA #IMPLIED	Specifies the shade of a rules color, as an integer percentage from 0 to 100.	Specifies the shade of a rules color, as an integer percentage from 0 to 100.	Specifies the shade of a rules color, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of a rules color, specified as an integer percentage from 0 to 100.	Specifies the opacity of a rules color, specified as an integer percentage from 0 to 100.	Specifies the opacity of a rules color, specified as an integer percentage from 0 to 100.
STYLE CDATA #IMPLIED	Identifies a Dashes & Stripes style (LINESTYLE) for a rule.	Identifies a Dashes & Stripes style (LINESTYLE) for a rule.	Identifies a Dashes & Stripes style (LINESTYLE) for a rule.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Note: Only the name of a Dashes & Stripes style is included in this attribute. The definition of the Dashes & Stripes style is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.

RUNAROUND (Modifier schema)

Element type	Construct	Modify	Deconstruct
RUNAROUND (empty)	Describes a runaround applied to a box or line.	Describes a runaround applied to a box or line.	Describes a runaround applied to a box or line.
Attributes			
TYPE (NONE ITEM EMBEDDEDPATH ALPHACHANNEL NONWHITEAREAS PICTUREBOUNDS SAMEASCLIPPING AUTOIMAGE MANUAL) "NONE"	Specifies the type of runaround applied to a box or line: NONE = Text runs behind the box or line. ITEM = Text runs around the edges of the box or line. EMBEDDEDPATH = Text runs around a path embedded in the picture file. ALPHACHANNEL = Text runs around an alpha channel embedded in the picture file. NONWHITEAREAS = Text runs around a path based on the dark and light areas of the picture file. See the THRESHOLD attribute. PICTUREBOUNDS = Text runs around the rectangular canvas area of the picture, regardless of the size and shape of the picture box. SAMEASCLIPPING = Text runs around the pictures clipping path, if any. AUTOIMAGE = Text runs around a clipping path created based on the dark and light areas in the picture file. See the THRESHOLD attribute.	Specifies the type of runaround applied to a box or line: NONE = Text runs behind the box or line. ITEM = Text runs around the edges of the box or line. EMBEDDEDPATH = Text runs around a path embedded in the picture file. ALPHACHANNEL = Text runs around an alpha channel embedded in the picture file. NONWHITEAREAS = Text runs around a path based on the dark and light areas of the picture file. See the THRESHOLD attribute. PICTUREBOUNDS = Text runs around the rectangular canvas area of the picture, regardless of the size and shape of the picture box. SAMEASCLIPPING = Text runs around the pictures clipping path, if any. AUTOIMAGE = Text runs around a clipping path created based on the dark and light areas in the picture file. See the THRESHOLD attribute.	Specifies the type of runaround applied to a box or line: NONE = Text runs behind the box or line. ITEM = Text runs around the edges of the box or line. EMBEDDEDPATH = Text runs around a path embedded in the picture file. ALPHACHANNEL = Text runs around an alpha channel embedded in the picture file. NONWHITEAREAS = Text runs around a path based on the dark and light areas of the picture file. See the THRESHOLD attribute. PICTUREBOUNDS = Text runs around the rectangular canvas area of the picture, regardless of the size and shape of the picture box. SAMEASCLIPPING = Text runs around the pictures clipping path, if any. AUTOIMAGE = Text runs around a clipping path created based on the dark and light areas in the picture file. See the THRESHOLD attribute.
TOP CDATA #IMPLIED	Valid when RUNAROUND@TYPE = ITEM	Valid when RUNAROUND@TYPE = ITEM	Valid when RUNAROUND@TYPE = ITEM

Element type	Construct	Modify	Deconstruct
	or PICTUREBOUNDS . Moves the top edge of the runaround by the specified number of points (positive=up, negative=down).	or PICTUREBOUNDS . Moves the top edge of the runaround by the specified number of points (positive=up, negative=down).	or PICTUREBOUNDS . Moves the top edge of the runaround by the specified number of points (positive=up, negative=down).
RIGHT CDATA #IMPLIED	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the right edge of the runaround by the specified number of points (positive=right, negative=left).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the right edge of the runaround by the specified number of points (positive=right, negative=left).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the right edge of the runaround by the specified number of points (positive=right, negative=left).
LEFT CDATA #IMPLIED	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the left edge of the runaround by the specified number of points (positive=left, negative=right).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the left edge of the runaround by the specified number of points (positive=left, negative=right).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the left edge of the runaround by the specified number of points (positive=left, negative=right).
BOTTOM CDATA #IMPLIED	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the bottom edge of the runaround by the specified number of points (positive=down, negative=up).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the bottom edge of the runaround by the specified number of points (positive=down, negative=up).	Valid when RUNAROUND@TYPE = ITEM or PICTUREBOUNDS . Moves the bottom edge of the runaround by the specified number of points (positive=down, negative=up).
PATHNAME CDATA #IMPLIED	Identifies a clipping path embedded in a picture for use as the runaround path.	Identifies a clipping path embedded in a picture for use as the runaround path.	Identifies a clipping path embedded in a picture for use as the runaround path.
OUTSET CDATA #IMPLIED	Valid when RUNAROUND@TYPE=AUTOIMAGE , EMBEDDEDPATH , ALPHACHANNEL , NONWHITEAREAS , or SAMEASCLIPPING . Specifies a single outset or inset integer value in points to be used on all sides.	Valid when RUNAROUND@TYPE=AUTOIMAGE , EMBEDDEDPATH , ALPHACHANNEL , NONWHITEAREAS , or SAMEASCLIPPING . Specifies a single outset or inset integer value in points to be used on all sides.	Valid when RUNAROUND@TYPE=AUTOIMAGE , EMBEDDEDPATH , ALPHACHANNEL , NONWHITEAREAS , or SAMEASCLIPPING . Specifies a single outset or inset integer value in points to be used on all sides.
NOISE CDATA #IMPLIED	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies that areas smaller than this number of points should be ignored when creating a runaround path.	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies that areas smaller than this number of points should be ignored when creating a runaround path.	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies that areas smaller than this number of points should be ignored when creating a runaround path.
THRESHOLD CDATA #IMPLIED	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies	Valid when RUNAROUND@TYPE=AUTOIMAGE , ALPHACHANNEL , or NONWHITEAREAS . Specifies

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
	the maximum integer percentage of darkness that should be considered white when creating a runaround path.	the maximum integer percentage of darkness that should be considered white when creating a runaround path.	the maximum integer percentage of darkness that should be considered white when creating a runaround path.
SMOOTHNESS CDATA #IMPLIED	Valid when RUNAROUND@TYPE=AUTOIMAGE, ALPHACHANNEL, or NONWHITEAREAS. Specifies the smoothness, in points, of an automatically created runaround path.	Valid when RUNAROUND@TYPE=AUTOIMAGE, ALPHACHANNEL, or NONWHITEAREAS. Specifies the smoothness, in points, of an automatically created runaround path.	Valid when RUNAROUND@TYPE=AUTOIMAGE, ALPHACHANNEL, or NONWHITEAREAS. Specifies the smoothness, in points, of an automatically created runaround path.
OUTSIDEONLY (true false none) "none"	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates that only the outer edges of the runaround path should be used.	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates that only the outer edges of the runaround path should be used.	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates that only the outer edges of the runaround path is used.
RESTRICTTOBOX (true false none) "none"	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates whether the runaround path is restricted to the inside of the box.	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates whether the runaround path is restricted to the inside of the box.	Valid when RUNAROUND@TYPE=AUTOIMAGE, EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Indicates whether the runaround path is restricted to the inside of the box.
INVERT (true false none) "none"	Valid when RUNAROUND@TYPE=EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the runaround path.	Valid when RUNAROUND@TYPE=EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the runaround path.	Valid when RUNAROUND@TYPE=EMBEDDEDPATH, ALPHACHANNEL, or NONWHITEAREAS. Reverses the shape of the runaround path.
EDITED (true false none) "none"	Not applicable.	Not applicable.	Indicates whether the runaround path has been manually edited in QuarkXPress.

SAVEAS (Modifier schema)

Element type	Construct	Modify	Deconstruct
SAVEAS (empty)	Lets you save a constructed QuarkXPress project to a specific location on the server computer. Roughly equivalent to choosing File > Save As in QuarkXPress.	Lets you save a modified QuarkXPress project to a specific location on the server computer. Roughly equivalent to choosing File > Save As in QuarkXPress.	Not applicable.
Attributes			

Element type	Construct	Modify	Deconstruct
<code>NEWNAME CDATA #IMPLIED</code>	Specifies a name for the project being saved.	Specifies a name for the project being saved. Can be a relative path to the document pool.	Not applicable.
<code>PATH CDATA #IMPLIED</code>	The absolute path on the server computer for saving the project.	The absolute path on the server computer for saving the project.	Not applicable.
<code>SAVETOPOOL (true false) "true"</code>	Specifies whether the project should be saved to the document pool, in addition to saving it in the location specified in the <code>PATH</code> attribute.	Specifies whether the project should be saved to the document pool, in addition to saving it in the location specified in the <code>PATH</code> attribute.	Not applicable.
<code>REPLACE (true false) "true"</code>	Indicates whether the saved project should replace any existing file with the same name in the specified location. An index number gets appended to the file name if this value is set to false and a file with the supplied name exists at the specification location. For example, if <code>NEWNAME = file.qxp</code> and the <code>REPLACE</code> value is set to false, the file is saved as <code>file1.qxp</code> when a file with the same name exists at the specified location.	Indicates whether the saved project should replace any existing file with the same name in the specified location. An index number gets appended to the file name if this value is set to false and a file with the supplied name exists at the specification location. For example, if <code>NEWNAME = file.qxp</code> and the <code>REPLACE</code> value is set to false, the file is saved as <code>file1.qxp</code> when a file with the same name exists at the specified location.	Not applicable.

SCALETO (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>SCALETO</code> (empty)	Lets you specify the maximum or minimum size of a box for a fit-box-to-content operation.	Lets you specify the maximum or minimum size of a box for a fit-box-to-content operation.	Not applicable.
Attributes			
<code>X CDATA #REQUIRED</code>	The largest or smallest allowable width for the resized box, as an integer percentage.	The largest or smallest allowable width for the resized box, as an integer percentage.	Not applicable.
<code>Y CDATA #REQUIRED</code>	The largest or smallest allowable height for the resized box, as an integer percentage.	The largest or smallest allowable height for the resized box, as an integer percentage.	Not applicable.

SECTION (Modifier schema)

Element type	Construct	Modify	Deconstruct
SECTION (empty)	Describes a section break in a layout.	Describes a section break in a layout.	Specifies a section in a QuarkXPress layout.
Attributes			
PREFIX CDATA #IMPLIED	The prefix to be added before each automatic page number inserted in this section.	The prefix to be added before each automatic page number inserted in this section.	The prefix to be added before each automatic page number inserted in this section.
OPERATION (CREATE DELETE) #IMPLIED	Not applicable.	Specifies whether to create or delete the indicated section.	Not applicable.
FORMAT (NUMERIC ROMAN SMALLROMAN ALPHA SMALLALPHA ASIANNUMBERS) #IMPLIED	The format of each automatic page number inserted in this section.	The format of each automatic page number inserted in this section.	The format of each automatic page number inserted in this section.
NUMBER CDATA #IMPLIED	The starting page number for this section.	The starting page number for this section.	The starting page number for this section.

SECTIONNUMBERFORMAT (Modifier schema)

Element type	Construct	Modify	Deconstruct
SECTIONNUMBERFORMAT (empty)	Not applicable.	Allows you to specify the page number format.	Not applicable.
Attributes			
FORMAT (NUMERIC ROMAN SMALLROMAN ALPHA SMALLALPHA ASIANNUMBERS) #IMPLIED	Not applicable.	The format of each automatic page number inserted in this section.	Not applicable.
PREFIX CDATA #IMPLIED	Not applicable.	The prefix to be added before each automatic page number inserted in this section.	Not applicable.
INITIALPAGENUMBER	Not applicable.	Fixes the page number for the first page of the PAGESEQUENCE to which it applies.	Not applicable.

SHADOW (Modifier schema)

Element type	Construct	Modify	Deconstruct
SHADOW (empty)	Describes an automatic drop shadow.	Describes an automatic drop shadow.	Describes an automatic drop shadow.

Element type	Construct	Modify	Deconstruct
Attributes			
<code>COLOR CDATA #REQUIRED</code>	Identifies the color of a drop shadow. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a drop shadow. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file, defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a drop shadow. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
<code>SHADE CDATA #REQUIRED</code>	Specifies the shade of the color applied to a drop shadow, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a drop shadow, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a drop shadow, as an integer percentage from 0 to 100.
<code>OPACITY CDATA #REQUIRED</code>	Specifies the opacity of a drop shadow, specified as an integer percentage from 0 to 100.	Specifies the opacity of a drop shadow, specified as an integer percentage from 0 to 100.	Specifies the opacity of a drop shadow, specified as an integer percentage from 0 to 100.
<code>ANGLE CDATA #REQUIRED</code>	Specifies an angle in degrees for a drop shadow. Should be a floating point value between -180 and 180.	Specifies an angle in degrees for a drop shadow. Should be a floating point value between -180 and 180.	Specifies an angle in degrees for a drop shadow. Should be a floating point value between -180 and 180.
<code>DISTANCE CDATA #REQUIRED</code>	Specifies the distance in points from the edge of an item to the edge of the items drop shadow as a floating point value.	Specifies the distance in points from the edge of an item to the edge of the items drop shadow as a floating point value.	Specifies the distance in points from the edge of an item to the edge of the items drop shadow as a floating point value.
<code>SKEW CDATA #REQUIRED</code>	Specifies a skew angle for a drop shadow as a floating-point value from -75 degrees to 75 degrees	Specifies a skew angle for a drop shadow as a floating-point value from -75 degrees to 75 degrees	Specifies a skew angle for a drop shadow as a floating-point value from -75 degrees to 75 degrees
<code>SCALE CDATA #REQUIRED</code>	Specifies the size of an items drop shadow as an integer percentage of the size of the item. The valid values are from 10 to 1000 percent.	Specifies the size of an items drop shadow as an integer percentage of the size of the item. The valid values are from 10 to 1000 percent.	Specifies the size of an items drop shadow as an integer percentage of the size of the item. The valid values are from 10 to 1000 percent.
<code>BLUR CDATA #REQUIRED</code>	Specifies the blur distance for a drop shadow, from 0 to 144 points, with higher values creating blurrier edges.	Specifies the blur distance for a drop shadow, from 0 to 144 points, with higher values creating blurrier edges.	Specifies the blur distance for a drop shadow, from 0 to 144 points, with higher values creating blurrier edges.
<code>KNOCKOUTSHADOW (true false) "false"</code>	Specifies whether a shadow displays through semi-opaque areas of its item.	Specifies whether a shadow displays through semi-opaque areas of its item.	Specifies whether a shadow displays through semi-opaque areas of its item.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>SYNCHRONIZEANGLE</code> (<code>true</code> <code>false</code>) "false"	Specifies whether to synchronize the angle of a drop shadow with the angles of other drop shadows in the layout.	Specifies whether to synchronize the angle of a drop shadow with the angles of other drop shadows in the layout.	Specifies whether to synchronize the angle of a drop shadow with the angles of other drop shadows in the layout.
<code>RUNAROUNDShadow</code> (<code>true</code> <code>false</code>) "false"	Specifies whether to include a drop shadow with the text runaround specified in the <code>RUNAROUND</code> element. Note: The <code>OUTSET</code> attribute of the <code>RUNAROUND</code> element is measured from the edges of the drop shadow. For example, if text is wrapping around a rectangular pull-out quote with a drop shadow, text will not overlap the drop shadow if <code>RUNAROUNDShadow</code> is set to true.	Specifies whether to include a drop shadow with the text runaround specified in the <code>RUNAROUND</code> element. Note: The <code>OUTSET</code> attribute of the <code>RUNAROUND</code> element is measured from the edges of the drop shadow. For example, if text is wrapping around a rectangular pull-out quote with a drop shadow, text will not overlap the drop shadow if <code>RUNAROUNDShadow</code> is set to true.	Specifies whether to include a drop shadow with the text runaround specified in the <code>RUNAROUND</code> element. Note: The <code>OUTSET</code> attribute of the <code>RUNAROUND</code> element is measured from the edges of the drop shadow. For example, if text is wrapping around a rectangular pull-out quote with a drop shadow, text will not overlap the drop shadow if <code>RUNAROUNDShadow</code> is set to true.
<code>MULTIPLYShadow</code> (<code>true</code> <code>false</code>) "true"	Specifies how a drop shadow is combined with its background. When <code>true</code> , the shadow color is combined with the background color or colors using a "multiply" blending mode, producing a darker result (similar to an overprint). When <code>false</code> , the color of the background is combined with the color of the shadow to create the intermediate shades you see on screen. In general, set to <code>true</code> if the shadow is a lighter color, and set to <code>false</code> if the shadow is black.	Specifies how a drop shadow is combined with its background. When <code>true</code> , the shadow color is combined with the background color or colors using a "multiply" blending mode, producing a darker result (similar to an overprint). When <code>false</code> , the color of the background is combined with the color of the shadow to create the intermediate shades you see on screen. In general, set to <code>true</code> if the shadow is a lighter color, and set to <code>false</code> if the shadow is black.	Specifies how a drop shadow is combined with its background. When <code>true</code> , the shadow color is combined with the background color or colors using a "multiply" blending mode, producing a darker result (similar to an overprint). When <code>false</code> , the color of the background is combined with the color of the shadow to create the intermediate shades you see on screen.
<code>INHERITOPACITY</code> (<code>true</code> <code>false</code>) "false"	Specifies whether the drop shadow reflects the opacity or opacities of the item, such as differences in opacity between the box background and frame.	Specifies whether the drop shadow reflects the opacity or opacities of the item, such as differences in opacity between the box background and frame.	Specifies whether the drop shadow reflects the opacity or opacities of the item, such as differences in opacity between the box background and frame.

SHRINKACROSS (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>SHRINKACROSS</code> (#PCDATA)	Not applicable.	Shrinks a box horizontally to the left by the specified number of points.	Not applicable.

Element type	Construct	Modify	Deconstruct
		Note: A box can shrink on the same page or on other spreads and pages.	

SHRINKDOWN (Modifier schema)

Element type	Construct	Modify	Deconstruct
SHRINKDOWN (#PCDATA)	Not applicable.	Shrinks a box vertically toward the top of the page by the specified number of points. Note: A box can shrink on the same page or on other spreads and pages.	Not applicable.

SINGLEMASTERPAGEREFERENCE (Modifier schema)

Element type	Construct	Modify	Deconstruct
SINGLEMASTERPAGEREFERENCE (NAME *)	Not applicable.	Defines a sequence in which a single master page will be applied to pages in a page sequence. The given master page is applied to one page of the page sequence.	Not applicable.
Attributes			
NAME	Not applicable.	Specifies the name of the master page in the QuarkXPress template to be used.	Not applicable.

SIZE (Modifier schema)

Element type	Construct	Modify	Deconstruct
SIZE (empty)	Lets you specify the maximum or minimum size of a box for a fit-box-to-content operation.	Lets you specify the maximum or minimum size of a box for a fit-box-to-content operation.	Not applicable.
Attributes			
WIDTH CDATA #REQUIRED	The largest or smallest allowable width for the resized box.	The largest or smallest allowable width for the resized box.	Not applicable.
HEIGHT CDATA #REQUIRED	The largest or smallest allowable height for the resized box.	The largest or smallest allowable height for the resized box.	Not applicable.

SPINEIMAGE (Modifier schema)

Element type	Construct	Modify	Deconstruct
SPINEIMAGE (#PCDATA)	Not applicable.	Part of the <code><EBOOKMETADATA></code> element. Specifies the path of the spine image (if any).	Specifies the path of the spine image (if any).
Attributes			
INCLUDE (true false) #REQUIRED	Not applicable.	If <code>true</code> , a spine image is included with Blio eBook output.	If <code>true</code> , a spine image is included with Blio eBook output.

SPLINESHAPE (Modifier schema)

Element type	Construct	Modify	Deconstruct
SPLINESHAPE (CONTOURS)	Specifies a complex spline shape in QuarkXPress (i.e., the curve of a Bezier box or Bezier text path).	Specifies a complex spline shape in QuarkXPress (i.e., the curve of a Bezier box or Bezier text path).	Specifies a complex spline shape in QuarkXPress (i.e., the curve of a Bezier box or Bezier text path).
Attributes			
RECTSHAPE (true false) "false"	Specifies whether the shape is a pure rectangle.	Specifies whether the shape is a pure rectangle.	Specifies whether the shape is a pure rectangle.
INVERTEDSHAPE (true false) "false"	Specifies whether the shape encodes the inverse of its area ("inside out").	Specifies whether the shape encodes the inverse of its area ("inside out").	Specifies whether the shape encodes the inverse of its area ("inside out").
HASSPLINES (true false) "false"	Specifies whether any of the contours in the shape contains a spline.	Specifies whether any of the contours in the shape contains a spline.	Specifies whether any of the contours in the shape contains a spline.
HASHOLES (true false) "false"	Specifies whether any of the contours is inside another.	Specifies whether any of the contours is inside another.	Specifies whether any of the contours is inside another.
NEWFORMAT (true false) "false"	Specifies whether incompatible with "old" (3.31 and below) shapes.	Specifies whether incompatible with "old" (3.31 and below) shapes.	Specifies whether incompatible with "old" (3.31 and below) shapes.
MORETHANONETOPLEVELCONTOUR (true false) "false"	Specifies whether there is more than one top-level contour.	Specifies whether there is more than one top-level contour.	Specifies whether there is more than one top-level contour.
CLOSEDSHAPE (true false) "false"	Specifies whether all its contours are closed. (Polylines might not be.)	Specifies whether all its contours are closed. (Polylines might not be.)	Specifies whether all its contours are closed. (Polylines might not be.)
WELLFORMED (true false) "false"	Specifies whether the shape does not intersect itself other than at the vertex.	Specifies whether the shape does not intersect itself other than at the vertex.	Specifies whether the shape does not intersect itself other than at the vertex.
TAGSALLOCATED (true false) "false"	Specifies whether the vertex tags are set correctly.	Specifies whether the vertex tags are set correctly.	Specifies whether the vertex tags are set correctly.

Element type	Construct	Modify	Deconstruct
<code>INCOMPLETE (true false) "false"</code>	Specifies whether shape is associated with UNFINISHED box.	Specifies whether shape is associated with UNFINISHED box.	Specifies whether shape is associated with UNFINISHED box.
<code>VERTSELECTED (true false) "false"</code>	Specifies whether one or more verts are selected.	Specifies whether one or more verts are selected.	Specifies whether one or more verts are selected.

SPREAD (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>SPREAD (ID, PAGE*, (BOX TABLE GROUP COMPOSITIONZONE)*)</code>	Describes a spread (a series of one or more <code>PAGE</code> elements, divided by a <code>SPINE</code>)	Identifies the spread to be modified.	Describes a spread (a series of one or more <code>PAGE</code> elements, divided by a <code>SPINE</code>).
Attributes			
<code>OPERATION (CREATE DELETE) #IMPLIED</code>	Not applicable.	Specifies whether to create or delete the indicated spread.	Not applicable.

STACKINGORDER (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>STACKINGORDER (#PCDATA)</code>	Lets you control whether a box or line is in front of or behind other items on the page. Only accepts <code>SENDBACKWARD</code> , <code>SENDTOBACK</code> , <code>BRINGFORWARD</code> , <code>BRINGTOFRONT</code> .	Lets you control whether a box or line is in front of or behind other items on the page. Only accepts <code>SENDBACKWARD</code> , <code>SENDTOBACK</code> , <code>BRINGFORWARD</code> , <code>BRINGTOFRONT</code> .	Not applicable.

STATICCONTENT (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>STATICCONTENT (BOX*)</code>	Not Applicable.	Enables you to specify content chunks that are intended to be repeated across multiple flow page (i.e. running headers and footers).	Not Applicable.

STORY (Modifier schema)

Element type	Construct	Modify	Deconstruct
STORY (COPYFIT?, FITTEXT?, (PARAGRAPH RICHTEXT ANCHOREDBOXREF LINKEDBOX TEXTNODEPH TEXTPH HIDDEN LIST RUBI CALLOUTANCHOR INLINETABLE INLINEBOX PAGEBREAK)*, OVERMATTER?)	Describes a text story in a text box or a chain of text boxes.	Describes a text story in a text box or a chain of text boxes.	Describes a text story in a text box or a chain of text boxes.
Attributes			
CLEAROLDTEXT (true false) "true"	Not applicable.	Clears any existing text from the box.	Not applicable.
FITTEXTTOBOX (true false) "false"	Increases or decreases the size of the text to fit into the text box or text chain. Note: Text size increases only if Allow Text to Grow is checked in Text Modifier preferences (QuarkXPress Server/Edit > Preferences) in QuarkXPress Server. Note: To control how text fits to a box on a story-by-story basis, use the <FITTEXT> element type (for more information, see " FITTEXT (Modifier schema) ").	Increases or decreases the size of the text to fit into the text box or text chain. Note: Text size increases only if Allow Text to Grow is checked in Text Modifier preferences (QuarkXPress Server/Edit > Preferences) in QuarkXPress Server. Note: To control how text fits to a box on a story-by-story basis, use the <FITTEXT> element type (for more information, see " FITTEXT (Modifier schema) ").	Not applicable.
FILE CDATA #IMPLIED	The absolute path (on the server computer) to import a text document from.	The absolute path (on the server computer) to import a text document from.	Not applicable.
CONVERTQUOTES (true false) "true"	Converts straight quotation marks to typesetter's quotation marks and double hyphens to em dashes in an imported text file.	Converts straight quotation marks to typesetter's quotation marks and double hyphens to em dashes in an imported text file.	Not applicable.
INCLUDESTYLESHEETS (true false) "true"	Adds any style sheets in an imported text file or document to the QuarkXPress project.	Adds any style sheets in an imported text file or document to the QuarkXPress project.	Not applicable.
STORYDIRECTION (HORIZONTAL VERTICAL) #IMPLIED	Specified direction of this story.	Specified direction of this story.	Specified direction of this story.
UID CDATA #IMPLIED	Unique identifier of this story.	Unique identifier of this story.	Unique identifier of this story.

SUPPRESSOUTPUT (Modifier schema)

Element type	Construct	Modify	Deconstruct
SUPPRESSOUTPUT (#PCDATA)	Specifies whether a box is included in output. A true value does not include the box; a false value includes the box.	Specifies whether a box is included in output. A true value does not include the box; a false value includes the box.	Specifies whether a box is included in output. A true value does not include the box; a false value includes the box.

TAB (Modifier schema)

Element type	Construct	Modify	Deconstruct
TAB (empty)	Describes a single tab stop.	Describes a single tab stop.	Describes a single tab stop.
Attributes			
POSITION CDATA #REQUIRED	Specifies the position of a tab stop.	Specifies the position of a tab stop.	Specifies the position of a tab stop.
FILL CDATA #IMPLIED	Identifies one or two characters to repeat in order to fill the space between text and a tab stop.	Identifies one or two characters to repeat in order to fill the space between text and a tab stop.	Identifies one or two characters that repeat in order to fill the space between text and a tab stop.
ALIGNMENT (LEFT RIGHT CENTER COMMA DECIMAL ALIGNON) "LEFT"	Indicates how a tab stop should be aligned. LEFT = Aligns text flush left on the tab stop. RIGHT = Aligns text flush right on the tab stop. CENTER = Aligns text centrally on the tab stop. DECIMAL = Aligns text on a decimal point (period). COMMA = Aligns text on a first comma. ALIGN ON = Aligns text on any character you specify in the ALIGNON attribute.	Indicates how a tab stop should be aligned. LEFT = Aligns text flush left on the tab stop. RIGHT = Aligns text flush right on the tab stop. CENTER = Aligns text centrally on the tab stop. DECIMAL = Aligns text on a decimal point (period). COMMA = Aligns text on a first comma. ALIGN ON = Aligns text on any character you specify in the ALIGNON attribute.	Indicates how a tab stop is aligned. LEFT = Aligns text flush left on the tab stop. RIGHT = Aligns text flush right on the tab stop. CENTER = Aligns text centrally on the tab stop. DECIMAL = Aligns text on a decimal point (period). COMMA = Aligns text on a first comma. ALIGN ON = Aligns text on any character you specify in the ALIGNON attribute.
ALIGNON CDATA #IMPLIED>	Specifies a specific character to align a tab stop on.	Specifies a specific character to align a tab stop on.	Specifies a specific character a tab stop is aligned on.
ENABLED (true false) "true"			

TABLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
TABLE (ID, METADATA?, (PARENTTABLE TABLEBREAK ADDCELLS DELETEDCELLS COLSPEC ROW FRAME	Describes a table. Note: The size and position of a table are defined using the GEOMETRY element.	Describes a table. Note: The size and position of a table are defined using the GEOMETRY element.	Describes a table. Note: The size and position of a table are defined using the GEOMETRY element.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
GEOMETRY SHADOW GRID)*)			
Attributes			
OPERATION (CREATE DELETE) #IMPLIED	Not applicable.	Specifies whether to create or delete the indicated table.	Not applicable.
ROWS CDATA #IMPLIED	Specifies the number of rows in a table, including the header.	Specifies the number of rows in a table, including the header.	Specifies the number of rows in a table, including the header.
COLUMNS CDATA #IMPLIED	Specifies the number of columns in a table.	Specifies the number of columns in a table.	Specifies the number of columns in a table.
MAINTAINGEOMETRY (true false none) "none"	Controls whether inserted rows or columns affect the entire table's width and height. true = Table height and width remain the same. false = Table height and width change to accommodate new rows and columns.	Controls whether inserted rows or columns affect the entire table's width and height. true = Table height and width remain the same. false = Table height and width change to accommodate new rows and columns.	Controls whether inserted rows or columns affect the entire table's width and height. true = Table height and width remain the same. false = Table height and width change to accommodate new rows and columns.
COLOR CDATA #IMPLIED	Identifies the color of a table. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server.	Identifies the color of a table. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.	Identifies the color of a table. Note: Only the name of a color is included in this attribute. The definition of the color is stored in the projects Job Jackets file or defined using the Document Controls submenu in QuarkXPress Server, or an existing color created and saved in the project.
SHADE CDATA #IMPLIED	Specifies the shade of the color applied to a table, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a table, as an integer percentage from 0 to 100.	Specifies the shade of the color applied to a table, as an integer percentage from 0 to 100.
OPACITY CDATA #IMPLIED	Specifies the opacity of the color applied to a table, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a table, specified as an integer percentage from 0 to 100.	Specifies the opacity of the color applied to a table, specified as an integer percentage from 0 to 100.
BLENDSTYLE (SOLID LINEAR MIDLINEAR RECTANGULAR DIAMOND CIRCULAR FULLCIRCULAR none) "none"	Specifies the type of blend applied to this table (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this table (linear, circular, rectangular, etc.).	Specifies the type of blend applied to this table (linear, circular, rectangular, etc.).
BLENDANGLE CDATA #IMPLIED	Specifies the angle of the blend.	Specifies the angle of the blend.	Specifies the angle of the blend.

Element type	Construct	Modify	Deconstruct
<code>BLENDCOLOR CDATA #IMPLIED</code>	Specifies the second color of the blend. The first color of the blend is the color applied to the table, as in QuarkXPress.	Specifies the second color of the blend. The first color of the blend is the color applied to the table, as in QuarkXPress.	Specifies the second color of the blend. The first color of the blend is the color applied to the table, as in QuarkXPress.
<code>BLENDSHADE CDATA #IMPLIED</code>	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the table.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the table.	Specifies the shade applied to the second color of the blend. The shade of the first color of the blend is the shade of the color applied to the table.
<code>BLENDOPACITY CDATA #IMPLIED</code>	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the table.	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the table.	Specifies the opacity applied to the second color of the blend. The opacity of the first color of the blend is the opacity of the color applied to the table.
<code>ANCHOREDIN CDATA #IMPLIED</code>	Not applicable.	Not applicable.	Indicates an anchored box and identifies its parent box.
<code>AUTOFIT (rows columns all none) "none"</code>	Specifies whether the rows or columns will adjust size to fit the content.	Specifies whether the rows or columns will adjust size to fit the content.	Specifies whether the rows or columns will adjust size to fit the content.
<code>AUTOFITMAXLIMIT CDATA #IMPLIED</code>	Max limit for <code>AUTOFIT</code> .	Max limit for <code>AUTOFIT</code> .	Max limit for <code>AUTOFIT</code> .
<code>ANCHOREDGROUPMEMBER CDATA #IMPLIED</code>	Specifies that this table is a member of the indicated anchored group.	Specifies that this table is a member of the indicated anchored group.	Specifies that this table is a member of the indicated anchored group.
<code>ADDTOREFLOW (true false) #IMPLIED</code>	Not applicable.	If <code>true</code> , adds this table to the project's reflow article. Equivalent to the Digital Publishing > Add to Reflow command in QuarkXPress.	Not applicable.
<code>ARTICLENAME CDATA #IMPLIED</code>	Not applicable.	Specifies the name of the project's reflow article (to which this table is being added as a component). If no reflow article exists and you do not include this attribute, the default reflow article name is used.	Not applicable.

TABLEBREAK (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>TABLEBREAK (CHILDID HEADER FOOTER) *</code>	Sets a table break for a <code>HEADER</code> or <code>FOOTER</code> or both.	Sets a table break for a <code>HEADER</code> or <code>FOOTER</code> or both.	Sets a table break for a <code>HEADER</code> or <code>FOOTER</code> or both.
Attributes			

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
<code>BREAKHEIGHT CDATA #IMPLIED</code>	Specifies the height at which a table is set to break.	Specifies the height at which a table is set to break.	Indicates the height at which a table is set to break.
<code>MAINTAINLINK (true false) "true"</code>	Specifies whether a child table will maintain a link to its parent.	Specifies whether a child table will maintain a link to its parent.	Specifies whether a child table will maintain a link to its parent.
<code>BREAKWHENANCHORED (true false) #IMPLIED</code>	Specifies whether the table will break when anchored in a text flow.	Specifies whether the table will break when anchored in a text flow.	Specifies whether the table will break when anchored in a text flow.

TABLESTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>TABLESTYLE ((ID, FRAME?, TROWSTYLE, HEADTROWSTYLE?, CONTINUEDTROWSTYLE?, FOOTERTROWSTYLE?, ODDTROWSTYLE?, EVENTROWSTYLE?, TCOLSTYLE, FIRSTTCOLSTYLE?, LASTTCOLSTYLE?, ODDTCOLSTYLE?, EVENTCOLSTYLE?))</code>	Describes a style that can be applied to an <code><INLINETABLE></code> .	Describes a style that can be applied to an <code><INLINETABLE></code> .	Not applicable.
Attributes			
<code>WIDTH CDATA #IMPLIED</code>	Specifies the default width of the <code><TABLESTYLE></code> , expressed as a percentage of the width of the parent column or as an absolute measurement. To specify a percentage, use a number without a unit indicator.	Specifies the default width of the <code><TABLESTYLE></code> , expressed as a percentage of the width of the parent column or as an absolute measurement. To specify a percentage, use a number without a unit indicator.	Not applicable.

TABSPEC (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>TABSPEC (TAB)+</code>	Describes a group of tab stops.	Describes a group of tab stops.	Describes a group of tab stops.

TBODY (Modifier schema)

Element type	Construct	Modify	Deconstruct
<code>TBODY (TROW+)</code>	Identifies the body portion of an <code><INLINETABLE></code> .	Identifies the body portion of an <code><INLINETABLE></code> .	Not applicable.

TCOL (Modifier schema)

Element type	Construct	Modify	Deconstruct
TCOL (LEFTGRID?, RIGHTGRID?)	Describes a column in an <INLINETABLE>.	Describes a column in an <INLINETABLE>.	Not applicable.
Attributes			
COLINDEX CDATA #REQUIRED	Identifies the position of the column, with the first column being column 1.	Identifies the position of the column, with the first column being column 1.	Not applicable.
WIDTH CDATA #IMPLIED	Specifies the width of the column, either as an absolute measurement or as a percentage of the table width. To specify a percentage, use %. If you do not specify a width, column widths are distributed evenly.	Specifies the width of the column, either as an absolute measurement or as a percentage of the table width. To specify a percentage, use %. If you do not specify a width, column widths are distributed evenly.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the column.	Specifies the background color of the column.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the column.	Specifies the background shade of the column.	Not applicable.
STORYDIRECTION (HORIZONTAL VERTICAL) #IMPLIED	Specifies the default story direction of the column.	Specifies the default story direction of the column.	Not applicable.

TCOLSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
TCOLSTYLE (LEFTGRID?, RIGHTGRID?)	Defines a style for a column in an <INLINETABLE>.	Defines a style for a column in an <INLINETABLE>.	Not applicable.
Attributes			
WIDTH CDATA #IMPLIED	Specifies the width of the column style.	Specifies the width of the column style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the column style.	Specifies the background color of the column style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the column style.	Specifies the background shade of the column style.	Not applicable.

TCONTINUED (Modifier schema)

Element type	Construct	Modify	Deconstruct
TCONTINUED (TROW+)	Identifies a continued" indicator row in the header of an <INLINETABLE>.	Identifies a continued" indicator row in the header of an <INLINETABLE>.	Not applicable.

TEXT (Modifier schema)

Element type	Construct	Modify	Deconstruct
TEXT ((INSET)*, STORY)	Container for an INSET and STORY element.	Container for an INSET and STORY element.	Container for an INSET and STORY element.
Attributes			
ANGLE CDATA #IMPLIED	Specifies a rotation angle for text as a floating-point value between –360 degrees and 360 degrees.	Specifies a rotation angle for text as a floating-point value between –360 degrees and 360 degrees.	Indicates a rotation angle for text as a floating-point value between –360 degrees and 360 degrees.
SKEW CDATA #IMPLIED	Specifies a skew angle for text as a floating-point value from –75 degrees to 75 degrees.	Specifies a skew angle for text as a floating-point value from –75 degrees to 75 degrees.	Indicates a skew angle for text as a floating-point value from –75 degrees to 75 degrees.
COLUMNS CDATA #IMPLIED	Specifies the number of columns in a text box.	Specifies the number of columns in a text box.	Indicates a number of columns in a text box.
GUTTERWIDTH CDATA #IMPLIED	Specifies the width of the gutter(s) in a multi-column text box.	Specifies the width of the gutter(s) in a multi-column text box.	Specifies the width of the gutter(s) in a multi-column text box.
FLIPVERTICAL (true false none) "none"	Flips the text vertically in a text box.	Flips the text vertically in a text box.	Indicates the text is flipped vertically in a text box.
FLIPHORIZONTAL (true false none) "none"	Flips the text horizontally in a text box.	Flips the text horizontally in a text box.	Indicates the text is flipped horizontally in a text box.
VERTICALALIGNMENT (TOP CENTERED BOTTOM JUSTIFIED none) "none"	Vertically aligns the text.	Vertically aligns the text.	Indicates the vertical alignment of text.
INTERPARAGRAPHMAX CDATA #IMPLIED	Specifies the space between two consecutive paragraphs	Specifies the space between two consecutive paragraphs	Specifies the space between two consecutive paragraphs
FIRSTBASELINEMIN (ASCENT CAPHEIGHT CAPACCENT none) "none"	<p>Specifies the minimum distance between the top edge of a text box and the baseline of the first line of text.</p> <p>ASCENT = Specifies the distance based on the space needed for the accent mark of the tallest character.</p> <p>CAPHEIGHT= Specifies the distance based on the cap height of the tallest character.</p> <p>CAPACCENT = Specifies the distance based on the cap height of the tallest character plus the space required for an accent mark over an uppercase character.</p>	<p>Specifies the minimum distance between the top edge of a text box and the baseline of the first line of text.</p> <p>ASCENT = Specifies the distance based on the space needed for the accent mark of the tallest character.</p> <p>CAPHEIGHT= Specifies the distance based on the cap height of the tallest character.</p> <p>CAPACCENT = Specifies the distance based on the cap height of the tallest character plus the space required for an accent mark over an uppercase character.</p>	<p>Indicates the minimum distance between the top edge of a text box and the baseline of the first line of text.</p> <p>ASCENT = Specifies the distance based on the space needed for the accent mark of the tallest character.</p> <p>CAPHEIGHT= Specifies the distance based on the cap height of the tallest character.</p> <p>CAPACCENT = Specifies the distance based on the cap height of the tallest character plus the space required for an accent mark over an uppercase character.</p>

Element type	Construct	Modify	Deconstruct
OFFSET CDATA #IMPLIED	Specifies the distance between the first text baseline in the text box and the top inside edge of the text box.	Specifies the distance between the first text baseline in the text box and the top inside edge of the text box.	Indicates the distance between the first text baseline in the text box and the top inside edge of the text box.
RUNTEXTAROUNDALLSIDES (true false none) "none"	Indicates text runaround on all sides of an item.	Indicates text runaround on all sides of an item.	Indicates text runaround on all sides of an item.
TEXTORIENTATION (ROTATE SKEW ROTATEANDSKEW NOROTATEANDSKEW none) "none"	Specifies how the text should be attached to a line.	Specifies how the text should be attached to a line.	Indicates how the text is attached to a line.
TEXTALIGN (ASCENT CENTER BASELINE DESCENT none) "none"	Specifies the part of a font to use for positioning characters on a line.	Specifies the part of a font to use for positioning characters on a line.	Indicates the part of a font being used for positioning characters on a line.
TEXTALIGNWITHLINE (TOP CENTER BOTTOM none) "none"	Specifies how to align text to a line.	Specifies how to align text to a line.	Indicates text is aligned to a line.
FLIPTEXT (true false none) "none"	Flips the characters horizontally on a line.	Flips the characters horizontally on a line.	Indicates characters are horizontally flipped on a line.
GRIDSTYLE CDATA #IMPLIED	Identifies the grid style applied to the text.	Identifies the grid style applied to the text.	Identifies the grid style applied to the text.

TEXTATTRIBUTE (Modifier schema)

Element type	Construct	Modify	Deconstruct
TEXTATTRIBUTE (empty)	Specifies the text-related attributes of a box created with the <code>INLINEBOX</code> element type.	Specifies the text-related attributes of a box created with the <code>INLINEBOX</code> element type.	Not applicable.
Attributes			
COLUMNS NMTOKEN #IMPLIED	Specifies the number of columns in a text box.	Specifies the number of columns in a text box.	Not applicable.
GUTTERWIDTH NMTOKEN #IMPLIED	Specifies the width of the gutter(s) in a multi-column text box.	Specifies the width of the gutter(s) in a multi-column text box.	Not applicable.

TEXTNODEPH (Modifier schema)

Element type	Construct	Modify	Deconstruct
TEXTNODEPH ((TEXTNODEPH PARAGRAPH RICHTEXT	A text node placeholder allows metadata to be defined hierarchically on a	A text node placeholder allows metadata to be defined hierarchically on a	A text node placeholder allows metadata to be defined hierarchically on a

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
OVERMATTER TEXTPH)*, METADATA?)	region of text, and can contain further text node placeholders and text placeholders.	region of text, and can contain further text node placeholders and text placeholders.	region of text, and can contain further text node placeholders and text placeholders.
Attributes			
NAME CDATA #REQUIRED	The name of the text node placeholder. A placeholder name may not be Unique within the Box or XML Hierarchy.	The name of the text node placeholder. A placeholder name may not be Unique within the Box or XML Hierarchy.	The name of the text node placeholder. A placeholder name may not be Unique within the Box or XML Hierarchy.
OWNER (1347639377) "1347639377"	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute.	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute).	The XTensions ID of the XTensions that created this placeholder.

TEXTPH (Modifier schema)

Element type	Construct	Modify	Deconstruct
TEXTPH ((PARAGRAPH RICHTEXT OVERMATTER)*, METADATA?)	A text placeholder allows metadata to be defined on a region of text.	A text placeholder allows metadata to be defined on a region of text.	A text placeholder allows metadata to be defined on a region of text.
Attributes			
NAME CDATA #REQUIRED	The name of the text node placeholder.	The name of the text node placeholder.	The name of the text node placeholder.
OWNER (1347639377) "1347639377"	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute.	The XTensions ID of the XTensions that created this placeholder. The default XT ID is PlaceholderSXT ID (1347639377). All placeholders created through Modifier should use this ID. This ID is assigned by default by the DTD, so there is no need to specify this manually. DTD validation will add this attribute.	The XTensions ID of the XTensions that created this placeholder.

TFOOT (Modifier schema)

Element type	Construct	Modify	Deconstruct
TFOOT (TROW+)	Identifies the footer portion of an <INLINETABLE>.	Identifies the footer portion of an <INLINETABLE>.	Not applicable.

THEAD (Modifier schema)

Element type	Construct	Modify	Deconstruct
THEAD (TROW+, TCONTINUED?)	Identifies a header in an <INLINETABLE>.	Identifies a header in an <INLINETABLE>.	Not applicable.

TITLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
TITLE (#PCDATA)	Not applicable.	Specifies the title of an e-book.	Specifies the title of an e-book.

TOP (Modifier schema)

Element type	Construct	Modify	Deconstruct
TOP (#PCDATA)	The distance between the box or lines top edge and the top of the page, in points.	The distance between the box or lines top edge and the top of the page, in points.	The distance between the box or lines top edge and the top of the page, in points.

TOPGRID (Modifier schema)

Element type	Construct	Modify	Deconstruct
TOPGRID (empty)	Describes a grid line on the top edge of a cell in an <INLINETABLE>.	Describes a grid line on the top edge of a cell in an <INLINETABLE>.	Not applicable.
Attributes			
TYPE (TOP LEFT BOTTOM RIGHT) #IMPLIED	Specifies the location of the grid line.	Specifies the location of the grid line.	Not applicable.
STYLE CDATA #IMPLIED	Identifies the <TABLESTYLE> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <TABLESTYLE> values.	Identifies the <TABLESTYLE> that styles this grid line. If you specify this value, you do not have to specify the remaining attributes. If you specify the remaining attributes, those attribute values override the corresponding <TABLESTYLE> values.	Not applicable.

MODIFIER SCHEMA (ANNOTATED)

Element type	Construct	Modify	Deconstruct
WIDTH CDATA #IMPLIED	Specifies the width of the grid line in points.	Specifies the width of the grid line in points.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the color of the grid line.	Specifies the color of the grid line.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the shade of the grid line.	Specifies the shade of the grid line.	Not applicable.
OPACITY CDATA #IMPLIED	Specifies the opacity of the grid line.	Specifies the opacity of the grid line.	Not applicable.
GAPCOLOR CDATA #IMPLIED	Specifies the color of the gap (if any) between the lines that make up the grid line.	Specifies the color of the gap (if any) between the lines that make up the grid line.	Not applicable.
GAPSHADE CDATA #IMPLIED	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Specifies the shade of the gap (if any) between the lines that make up the grid line.	Not applicable.
GAPOPACITY CDATA #IMPLIED	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Specifies the opacity of the gap (if any) between the lines that make up the grid line.	Not applicable.

TROW (Modifier schema)

Element type	Construct	Modify	Deconstruct
TROW (TOPGRID?, BOTTOMGRID?, ENTRY*)	Describes a row in an <INLINETABLE>.	Describes a row in an <INLINETABLE>.	Not applicable.
Attributes			
COLOR CDATA #IMPLIED	Identifies the background color of the cells in the <TROW>.	Identifies the background color of the cells in the <TROW>.	Not applicable.
SHADE CDATA #IMPLIED	Identifies the background shade of the cells in the <TROW>.	Identifies the background shade of the cells in the <TROW>.	Not applicable.
STORYDIRECTION (HORIZONTAL VERTICAL) #IMPLIED	Specifies the story direction of the cells in the <TROW>.	Specifies the story direction of the cells in the <TROW>.	Not applicable.
ANGLE	Specifies the angle of the row	Specifies the angle of the row	Not applicable.
VALIGN	Specifies the vertical alignment of the row	Specifies the vertical alignment of the row	Not applicable.
ALIGNMENT	Specifies the alignment of the row	Specifies the alignment of the row	Not applicable.
ROWHEIGHT	Specifies the height of the row	Specifies the height of the row	Not applicable.

TROWSTYLE (Modifier schema)

Element type	Construct	Modify	Deconstruct
TROWSTYLE (TOPGRID?, BOTTOMGRID?)	Defines a style for rows in an <INLINETABLE>.	Defines a style for rows in an <INLINETABLE>.	Not applicable.
Attributes			
PARASTYLE CDATA #IMPLIED	Identifies the paragraph style sheet for the row style.	Identifies the paragraph style sheet for the row style.	Not applicable.
ALIGNMENT (LEFT RIGHT CENTER JUSTIFIED FORCED) #IMPLIED	Identifies the paragraph alignment for the row style.	Identifies the paragraph alignment for the row style.	Not applicable.
ANGLE CDATA #IMPLIED	Identifies the text angle for the row style.	Identifies the text angle for the row style.	Not applicable.
VALIGN (TOP CENTER BOTTOM) #IMPLIED	Specifies the vertical alignment of the row style.	Specifies the vertical alignment of the row style.	Not applicable.
COLOR CDATA #IMPLIED	Specifies the background color of the row style.	Specifies the background color of the row style.	Not applicable.
SHADE CDATA #IMPLIED	Specifies the background shade of the row style.	Specifies the background shade of the row style.	Not applicable.
INSET CDATA #IMPLIED	Specifies the text inset for all four sides of cells that use the row style.	Specifies the text inset for all four sides of cells that use the row style.	Not applicable.

VALUE (Modifier schema)

Element type	Construct	Modify	Deconstruct
VALUE (#PCDATA)	Specifies the VALUE of the key/value pair. The value can be given in CDATA form only, such as: <pre><METADATA> <VALUE KEY="myKey"> <![CDATA[METADATAVALUE]]> </VALUE> </METADATA></pre>	Specifies the VALUE of the key/value pair. The value can be given in CDATA form only, such as: <pre><METADATA> <VALUE KEY="myKey"> <![CDATA[METADATAVALUE]]> </VALUE> </METADATA></pre>	Specifies the VALUE of the key/value pair. The value can be given in CDATA form only, such as: <pre><METADATA> <VALUE KEY="myKey"> <![CDATA[METADATAVALUE]]> </VALUE> </METADATA></pre>
Attributes			
KEY CDATA #REQUIRED	Specifies the KEY attribute of the key/value pair.	Specifies the KEY attribute of the key/value pair. Metadata that contains a value for KEY but no value for VALUE will delete any metadata matching the value for KEY .	Specifies the KEY attribute of the key/value pair.

VERTEX (Modifier schema)

Element type	Construct	Modify	Deconstruct
VERTEX (LEFTCONTROLPOINT?, VERTEXPOINT, RIGHTCONTROLPOINT?)	A single vertex (i.e. Line segment) in a bezier curve.	A single vertex (i.e. Line segment) in a bezier curve.	A single vertex (i.e. Line segment) in a bezier curve.
Attributes			
SMOOTHVERTEX (true false) "false"	Specifies whether the given vertex is "straight" — i.e. C1 continuous.	Specifies whether the given vertex is "straight" — i.e. C1 continuous.	Specifies whether the given vertex is "straight" — i.e. C1 continuous.
STRAIGHTEDGE (true false) "false"	Specifies whether the following edge is "straight".	Specifies whether the following edge is "straight".	Specifies whether the following edge is "straight".
SYMMVERTEX (true false) "false"	Specifies whether the given vertex is also symmetrical — i.e., C2 continuous.	Specifies whether the given vertex is also symmetrical — i.e., C2 continuous.	Specifies whether the given vertex is also symmetrical — i.e., C2 continuous.
CUSPVERTEX (true false) "false"	Specifies whether the vertex is not smooth or symmetric.	Specifies whether the vertex is not smooth or symmetric.	Specifies whether the vertex is not smooth or symmetric.
TWISTED (true false) "false"	Specifies whether the following (splined) edge intersects itself.	Specifies whether the following (splined) edge intersects itself.	Specifies whether the following (splined) edge intersects itself.
VERTEXSELECTED (true false) "false"	Specifies whether the given vertex is selected.	Specifies whether the given vertex is selected.	Specifies whether the given vertex is selected.

VERTEXPOINT (Modifier schema)

Element type	Construct	Modify	Deconstruct
VERTEXPOINT (empty)	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .	Each point on a curve is described by three geometric positions: the x,y coordinate of the vertex point (this coordinate is relative to the bounding geometry of the shape, not the page), and the left and right control handles—as you would see onscreen in the QuarkXPress user environment. For more information on drawing and manipulating bezier curves, please see <i>A Guide to QuarkXPress</i> .

VERTICES (Modifier schema)

Element type	Construct	Modify	Deconstruct
VERTICES (VERTEX+)	A collection of vertexes which, combined, make up a contour.	A collection of vertexes which, combined, make up a contour.	A collection of vertexes which, combined, make up a contour.

WIDTH (Modifier schema)

Element type	Construct	Modify	Deconstruct
WIDTH (#PCDATA)	Indicates the width of an item.	Indicates the width of an item.	Indicates the width of an item.

Using SSL

You can configure QuarkXPress Server with different security options. In addition to your own network security specifications, you can specify Secure Sockets Layer (SSL) protocol for client applications.

Secure Sockets Layer (SSL) support

You can configure Tomcat (and therefore all QuarkXPress Server clients) to run in secure mode with Secure Sockets Layer (SSL) technology. This section explains the configuration process.

- ➔ It is also possible to run QuarkXPress Server without embedding Tomcat in the JVM. For more information, see the QuarkXPress Server *ReadMe* file.

To manage Web applications in the QuarkXPress Server environment, QuarkXPress Server embeds an instance of Apache Tomcat 6.18 in its JVM.

When you enable SSL, it applies to all QuarkXPress Server client applications.

Enabling SSL

The instructions below address two scenarios. The "server.xml" file you edit contains XML tags for both scenarios, which you need to enable or disable by "commenting" and "uncommenting" specific tags.

To enable SSL for secure HTTP for all QuarkXPress Server applications:

- 1 Open the "conf" folder in your QuarkXPress Server folder.
- 2 Open "server.xml" in a text-editing application.
- 3 Locate the following tag (preceded by the comment `<!-- Define a non-SSL HTTP/1.1 Connector on port 8080 -->`) and comment it out.

```
<Connector port="8080" maxHttpHeaderSize="8192" maxThreads="150"
minSpareThreads="25" maxSpareThreads="75" enableLookups="false"
redirectPort="61399" acceptCount="100" connectionTimeout="20000"
disableUploadTimeout="true" URIEncoding="UTF-8"/>
```

- 4 Locate the following tag (preceded by the comment `<!-- Define a SSL HTTP/1.1 Connector on port 61399 -->`) and uncomment it.

```
<Connector port="61399" maxHttpHeaderSize="8192"MaxThreads="150"
minSpareThreads="25" maxSpareThreads="75"enableLookups="false"
disableUploadTimeout="true"acceptCount="100" scheme="https"
secure="true"clientAuth="false" sslProtocol="TLS" />
```

- 5 Replace 61399 with 61400 (or any port on which Tomcat will be listening for secure connections).
- 6 Save and close "server.xml."
- 7 Open the "ServerApp.properties" file (in the "conf" folder) and enter the port number from step 5 for `qxpswebserver.port`.

➡ This change means QuarkXPress Server client applications can use HTTPS. For example, the URL for a QuarkXPress Server user would be as follows: `https://[server name]:[port]/`.

Enabling HTTP and HTTPS

To enable HTTP and HTTPS:

- 1 Open the "conf" folder in your QuarkXPress Server folder.
- 2 Open "server.xml" in a text-editing application.
- 3 Uncomment the following tag:

```
<Connector port="61399" maxHttpHeaderSize="8192"MaxThreads="150"
minSpareThreads="25" maxSpareThreads="75"enableLookups="false"
disableUploadTimeout="true"acceptCount="100" scheme="https"
secure="true"clientAuth="false" sslProtocol="TLS" />
```

- 4 Save and close "server.xml."

➡ This feature allows QuarkXPress Server application users to access QuarkXPress Server with HTTPS or HTTP.

Verifying and using SSL

To verify and use SSL:

- 1 Start the QuarkXPress Server
- 2 Test QuarkXPress Server access by navigating to the QuarkXPress Server Web interface HTTPS. For example: `https://[server]:[port]/qxpsadmin`

Keystores and SSL certificates

A *certificate* is a file on a Web server that is used in encryption and confirmation between two endpoints to establish a secure connection. A *keystore* is essentially a database of digital certificates on the Web server.

You can obtain an SSL certificate from a trusted Certificate Authority (CA). Import the certificate into the keystore used by QuarkXPress Server's JVM.

For more information about the importance of keystores, use the following URL:
<http://tomcat.apache.org/tomcat-6.0-doc/ssl-howto.html>.

QuarkXPress Server XTensions software

Just as XTensions software provides additional functionality to QuarkXPress, XTensions software enables QuarkXPress Server to do things it can't do by default. The XTensions modules included with QuarkXPress Server allow clients to render projects as PDF files, apply QuarkVista picture effects to pictures, dynamically update pictures in picture boxes and text in text boxes (as well as boxes themselves), import data on the fly, manipulate layers in projects, and more.

CopyDeskArticle XTensions software

CopyDeskArticle XTensions software allows QuarkXPress Server to do the following things:

- Render QuarkCopyDesk articles
- Export QuarkCopyDesk articles from a QuarkXPress project
- Add a QuarkCopyDesk article to an existing QuarkXPress project
- Create and delete components in a QuarkCopyDesk article within a QuarkXPress project

Rendering articles

To render QuarkCopyDesk articles, use the `copydesk` namespace, as follows:

```
http://[server]:[port]/[render type]/copydesk/[articlename]
```

For example, to render "Article.qcd" as a PDF file, you could use a URL like the following:

```
http://QXPServer.8080/pdf/copydesk/Article.qcd
```

Exporting articles

To export an article from a QuarkXPress project, use the `QCDDOC` namespace, as follows:

```
http://[server]:[port]/qcddoc/[project name]?article=[article name or ID]
```

For example, to export the article named "Article1" from the project named "Project1.qxp," you could use a URL like the following:

```
http://QXPServer.8080/qcddoc/Project1.qxp?article=Article1
```


- ➡ You cannot export an article from a QuarkXPress project unless the article has been created and named in QuarkXPress using CopyDeskArticleXT XTensions software.

To export an article in a particular format, use the `format` parameter.

- To export a standard article, use `format=fullfeatured`.
- To export an article in lightweight mode, use `format=lightweight`. This format can be useful in situations where file size is an issue. The lightweight file format includes only those items that a QuarkCopyDesk user is supposed to work on.

For example:

`http://QXPServer.8080/qcddoc/Project1.qxp?article=Article1?format=lightweight`

- ➡ You cannot export page pictures in lightweight mode.

Adding articles to projects

You can use Modifier XTensions software to create a QuarkCopyDesk article within an existing QuarkXPress project. For example, to add an article named "New Article" to the project named "Project1.qxp," you could use XML like the following:

```
<PROJECT PROJECTNAME="Project1.qxp" XMLVERSION="8.0">
  <LAYOUT POINTSPERINCH="72">
    <ID NAME="Layout 1" UID="1"/>
    <ARTICLE OPERATION="CREATE" DOCFORMAT="FULLFEATURED">
      <ID NAME="New Article" UID="4"/>
      <RGBCOLOR BLUE="98" GREEN="254" RED="0"/>
      <COMPONENT BOXNAME="Box1" BOXUID="1" COMPONENTCLASS="CT_TEXT"
        NAME="Component 1" UID="1"/>
    </ARTICLE>
  </LAYOUT>
</PROJECT>
```

For more information, see "[Using QuarkXPress Server](#)."

Creating and deleting components

You can use Modifier XTensions software to create and delete components in QuarkCopyDesk articles. For example, to add a component named "New Component" to the article named "Article 1" in the project named "Project1.qxp," you could use XML like the following:

```
<PROJECT JOBJACKET="Project1 Job Jacket" JOBTICKET="Default Job Ticket
1:Project1"
  PROJECTNAME="Project1.qxp" XMLVERSION="8.0">
  <LAYOUT POINTSPERINCH="72">
    <ID NAME="Layout 1" UID="1"/>
    <ARTICLE DOCFORMAT="FULLFEATURED">
      <ID NAME="Article 1" UID="1"/>
      <COMPONENT OPERATION="CREATE" BOXUID="9" COMPONENTCLASS="CT_TEXT"
        NAME="New Component"/>
    </ARTICLE>
  </LAYOUT>
</PROJECT>
```

To delete the component named "New Component" from the article named "Article1.qcd," you could use XML like the following:

```
<PROJECT JOBJACKET="Project1 Job Jacket" JOBTICKET="Default Job Ticket
1:Project1"
  PROJECTNAME="Project1.qxp" XMLVERSION="8.0">
  <LAYOUT POINTSPERINCH="72">
    <ID NAME="Layout 1" UID="1"/>
    <ARTICLE DOCFORMAT="FULLFEATURED">
      <ID NAME="Article 1" UID="1"/>
```

```
<COMPONENT OPERATION="DELETE" NAME="New Component" />
</ARTICLE>
</LAYOUT>
</PROJECT>
```

For more information, see "[Using QuarkXPress Server](#)."

PDF Filter XTensions software

PDF Filter XTensions software allows QuarkXPress Server to render a QuarkXPress project as a PDF file. To render QuarkXPress projects as PDF files when PDF is not the QuarkXPress Server default render type, use the **PDF** namespace, as follows:

```
http://[server]:[port]/pdf/[projectname]
```

For information about PDF preferences, see "[Preferences — PDF](#)." To take advantage of more detailed preferences, create a PDF output style and use that output style when rendering projects as PDF files.

For information about the parameters for exporting in this format, see "[Using QuarkXPress Server](#)."

Modifier XTensions software

Modifier XTensions software lets clients perform all of the following tasks using XML:

- Modify the properties of pictures in a QuarkXPress project
- Modify the text in text boxes within a QuarkXPress project
- Modify the properties of text boxes and picture boxes in a QuarkXPress project
- Create and delete picture boxes and text boxes in a QuarkXPress project
- Import text or text strings into text boxes within a QuarkXPress project
- Import pictures into picture boxes within a QuarkXPress project
- Save modified QuarkXPress projects in any supported format to any location on the network (and also in the QuarkXPress Server document pool)
- Create and delete pages
- Create and delete layers
- Move items within layers
- Create and delete tables
- Modify tables and their contents
- Create QuarkCopyDesk articles and components
- Create lines, anchored boxes, and Bézier boxes
- Create lists
- Group and ungroup boxes
- Divide layouts into sections

To use Modifier XTensions software, a client creates an XML file indicating the actions to be taken and sends that XML file to the QuarkXPress Server application, where Modifier XTensions software reads the XML and makes the requested changes. Clients can use a single XML file or string to manipulate multiple documents and boxes.

For more specific information about Modifier XTensions software, and for the Modifier DTD, see "[Using QuarkXPress Server](#)."

- ➡ Modifier XTensions software supports both GET and POST functionality.
- ➡ Modifier XTensions software supports XML containing code that uses Unicode UTF-8 and UTF-16 encodings. Use the `encoding` attribute of the XML declaration to specify an encoding, as you would with any other XML file.

Using Modifier XTensions software

To use Modifier XTensions software:

- 1 Create a QuarkXPress project. Note the IDs or names of any text and picture boxes you want to manipulate.
- 2 Upload the project to the QuarkXPress Server document pool.
- 3 Create XML that describes the changes you want, as described in "[Creating XML for Modifier XTensions software](#)."
- 4 Send the XML to the server in one of the following ways:
 - Put the XML in a file on the server and then use a URL to point to the file, as follows:

```
http://server:port/namespace/path/projectname?modify=file:[absolute
path to XML file on server or relative path to XML file on server
relative to the document pool]
```

- Put the XML in the URL, as follows:

```
http://[server]:[port]/[namespace]/path/projectname?modify=[XML
string]
```

- ➡ Clients can also send XML in the form of a POST request.

Creating XML for Modifier XTensions software

All XML used with Modifier XTensions software uses the Modifier DTD. This DTD is documented in full in "[Modifier schema \(annotated\)](#)."

In general, the structure for addressing items in a particular layout is as follows:

```
<PROJECT>
  <LAYOUT>
    <ID NAME="[name of layout]">
      <[Item being addressed]>
        <[Parameters of item]>
      </[Item being addressed]>
    </LAYOUT>
  </PROJECT>
```

For more information, see "[Using QuarkXPress Server](#)."

Layer XTensions software

You can use QuarkXPress Server Layer XTensions software to control the visibility of specific layers in a rendered QuarkXPress project. You can also add layers, delete layers, edit layer attributes, and control whether layers are rendered.

- ➔ When you use the `getdocinfo` namespace, QuarkXPress Server returns information about items on all of the layers in the QuarkXPress project, including layers that are not visible.

Clients can use the `layer` parameter to specify a layer (even a hidden layer) to be rendered. For example, the URL `http://QXPServer:8080/doc.qxp?layer=layer1` renders only the layer named "layer1" in the project named "doc.qxp."

Clients can specify more than one layer in a single URL. For example, the URL `http://QXPServer:8080/doc.qxp?layer=layer1,layer2` renders the layers named "layer1" and "layer2."

For information about layer preferences, see "[Preferences — Layers](#)."

- ➔ If **Suppress Output** is selected for a layer, QuarkXPress Server does not render that layer when producing PDF, EPS, or PostScript files.

App Studio XTensions software

The App Studio XTensions modules allow QuarkXPress Server to render Print and App Studio layouts in QuarkXPress projects as AVE issue files.

In QuarkXPress 9.5.1.1, an option was added to allow the App Studio output to convert sections to page stacks. A new URL parameter `convertsectionstopagestacks` has been added to provide this ability.

The XML example below demonstrates how to apply sections using the ModifierXML:

```
<PAGESEQUENCE MASTERREFERENCE="APSMasterPages" FORCEPAGECOUNT="NOFORCE">  
SECTIONNUMBERFORMAT FORMAT="NUMERIC" INITIALPAGENUMBER="1"/>
```

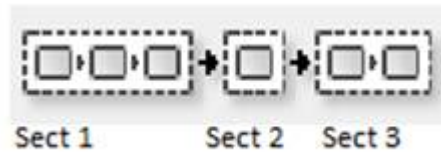
The element `SECTIONNUMBERFORMAT` creates a section start which applied to all pages in the page sequence. Each `PAGESEQUENCE` could have its own `SECTIONNUMBERFORMAT`.

If the modify request is sent to the server and each `PAGESEQUENCE` in the ModifyXML has its own `SECTIONNUMBERFORMAT`, creating sections, and the URL parameter contains `convertsectionstopagestacks=true`, the digital issue navigation would be as follows:



Sect 1 Sect 2 Sect 3

If the URL parameter contains `convertsectionstopagestacks=false`, the digital issue navigation would be as follows:



➡ By default, `convertsectionstopagestacks` is **false**.

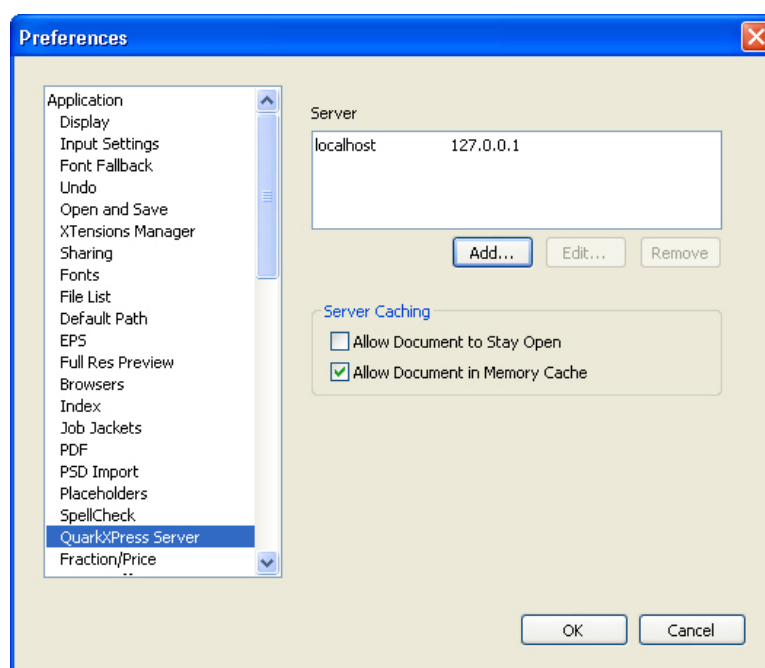
Telegraph XTensions software

Unlike the other XTensions software described in this guide, Telegraph XTensions software works with QuarkXPress, rather than with QuarkXPress Server. You can use Telegraph XTensions software to create QuarkXPress projects that can serve as templates in QuarkXPress Server. Using Telegraph XTensions software, you can assign unique names to individual items, define server caching parameters, and upload the template directly to a QuarkXPress Server computer.

➡ These topics explain how to use Telegraph XTensions software. It is assumed that you are already familiar with the functionality and user interface of QuarkXPress.

Setting Telegraph preferences

Telegraph XTensions software adds the **QuarkXPress Server** pane to the QuarkXPress **Preferences** dialog box (**QuarkXPress/Edit** menu). You can use this pane to configure settings for QuarkXPress Server templates, specify where to store your projects on the server, and control how projects are cached.



QuarkXPress Server pane of **Preferences** dialog box (**QuarkXPress/Edit** menu)

For information on adding a server, see "[Adding a server](#)."

To edit the properties of a server in the **Server** list, select the server name and then click **Edit**.

To remove a server from the **Server Setup** list, select the server and then click **Remove**.

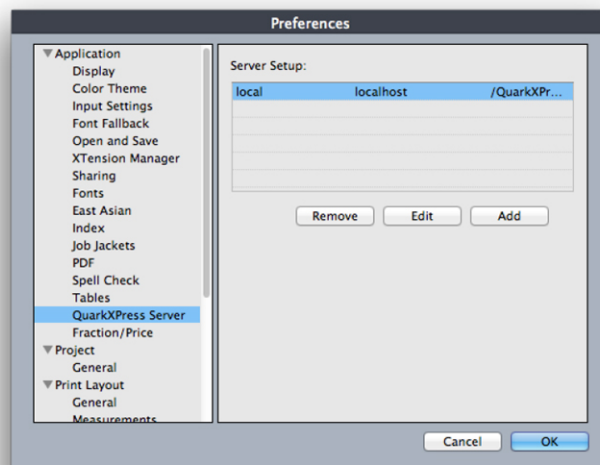
To allow projects checked in from this copy of QuarkXPress to remain open on the server after it has been served, check **Allow Document to Stay Open**.

To load projects checked in from this copy of QuarkXPress into the server memory cache, check **Allow Document in Memory Cache**.

Specifying a server for template upload

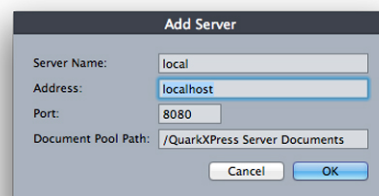
Before you can upload a template to a server with Telegraph XTensions software, you must add that server to the QuarkXPress preferences. To do so:

- 1 Choose **QuarkXPress/Edit > Preferences**. The **Preferences** dialog box displays.
- 2 Click **QuarkXPress Server** in the list on the left. The **QuarkXPress Server** pane displays.



QuarkXPress Server pane of Preferences dialog box

- 3 Click **Add**. The **Add Server** dialog box displays.



Add Server dialog box

- 4 Enter a human-readable name for the server in the **Server Name** field.

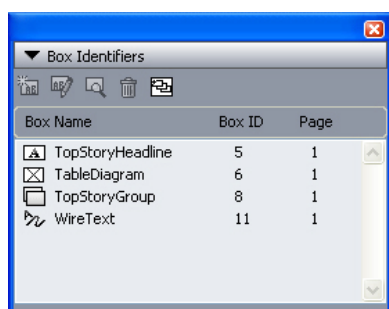
- 5 Enter the server's name or IP address in the **Address** field.
 - 6 Enter the server's port number in the **Port** field. The default port number is 8080. Valid values are from 1 to 65535.
 - 7 In the **Document Pool Path** field, enter the path to the document pool directory on the server, or to a subdirectory within the document pool. If you leave this field blank, the path defaults to the document pool directory path specified in the **QuarkXPress Server Document Root** field (**QuarkXPress Server > Server Configuration > Server** tab).
- ➡ If you enter a folder path that does not exist, QuarkXPress Server can create the folders in the path when you upload the template to a QuarkXPress Server. To create folders when you upload, check **Generate Hierarchy On Document Upload** in the **Server** tab of the QuarkXPress Server **Server Configuration** dialog box (**QuarkXPress Server > Server Configuration**) before you upload the template to the server.
- 8 Click **OK**, then close the **Preferences** dialog box.

Using Telegraph XTensions software


Once you have configured preferences for Telegraph QuarkXTensions software, you can begin creating QuarkXPress Server templates. After you complete a template, Telegraph XTensions software can upload the file to a QuarkXPress Server computer.


Identifying QuarkXPress items and groups


The **Box Identifiers** palette lets you associate names with items and groups. To display this palette, choose **Window > Box Identifiers**.




Box Identifiers palette

To edit the name of an item or group, select its name in the **Box Identifiers** palette and then click **Edit Box Name** .

To scroll to the location of a named item or group, double-click the target item or group's name in the **Box Identifiers** palette. Alternatively, you can select the name and click **Go To** .

To delete an item's or group's name (without deleting the item or group itself), select the name in the **Box Identifiers** palette and then click **Delete** .


To make sure that all named boxes display in the **Box Identifiers** palette, click **Populate Named Boxes** .

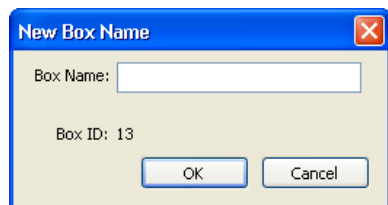
Each QuarkXPress item also has an identification number that you can use when you want to render individual project items in QuarkXPress Server. The number displays in the **Box ID** field in the upper right corner of the palette.

- ➔ In a chain of text boxes, all boxes use the same **Box Name**. However, each box has a unique **Box ID** number.

Naming items and groups

To specify a name for an item or group:

- 1 Using the Item tool, select the target item or group.
- 2 In the **Box Identifiers** palette, click **New Box Name** . The **New Box Name** dialog box displays.



New Box Name dialog box

- 3 Enter a name for the item or group in the **Box Name** field.
 - 4 Click **OK**. The name of the item or group displays on the **Box Identifiers** palette, next to the item's item ID and page number.
- ➔ In addition to items on layout pages, you can also name items on master pages. Items on layout pages that are based on items on master pages have a default name of "*<Item name on master page><New box UID>*".

Uploading templates

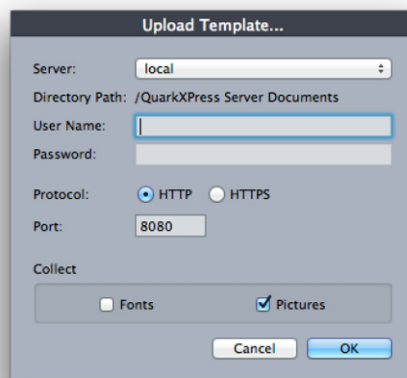
Telegraph QuarkXTensions software can upload a project to the QuarkXPress Server computer in one simple step. You can also upload any required pictures and fonts, if you choose to collect the fonts and pictures during the upload.

- ➔ QuarkXPress Server automatically generates any file hierarchy necessary when you upload content to the document pool from Telegraph XTensions software.
- ➔ You must have Telegraph XTensions software 10.0 or later to upload templates to QuarkXPress Server 9.0 or later. (You can use previous versions of Telegraph with previous versions of QuarkXPress, but if you do so you must upload projects to the server using the document pool upload capability in the QuarkXPress Server Web interface.)

- ➔ This feature does not upload assets that are used in App Studio AVE interactivity. You must upload such assets manually.

To upload the active project:

- 1 Choose **Utilities > Upload Template**. The **Upload Template** dialog box displays.
- ➔ If you have edited the project since you last saved it, QuarkXPress prompts you to save the project.



Upload Template dialog box

- 2 Choose a server from the **Server** drop-down menu. This drop-down menu includes the servers listed in the **QuarkXPress Server** pane of the **Preferences** dialog box (**QuarkXPress/Edit** menu).
 - 3 If you specified a directory path for the server, that path automatically displays in the **Directory Path** field. If you did not specify a directory path in the preferences, this field remains blank. This path defaults to the document pool directory specified in QuarkXPress Server.
 - 4 If you are uploading to QuarkXPress Server, and you have configured that server to require authentication, enter a valid user name and password in the **User Name** and **Password** fields. (If the QuarkXPress Server application does not require authentication, leave these fields empty.)
- ➔ To specify authentication information for a QuarkXPress Server application, choose **Administration > Preferences > General** in the QuarkXPress Server Web interface, check **Authenticate for Admin Requests** box and enter a user name and password.
- 5 To indicate which protocol to use for uploading, click **HTTP** or **HTTPS**.
 - 6 Enter the port for QuarkXPress Server in the **Port** field.
 - 7 To collect and upload fonts used by the project, check **Fonts**.
 - 8 To collect and upload pictures used by the project, check **Pictures**. This will upload high- or low-resolution pictures that are linked to or embedded in the project.

➡ If picture files are missing or have been modified since they were imported into the project, an alert displays. For more information about missing or modified picture files, see "[Uploading missing or modified pictures](#)."

9 Click **OK**.

➡ If you check **Fonts**, an alert reminds you of possible restrictions regarding copying font software. Click **OK** to continue uploading the project with the fonts, click **Do Not Collect Fonts** to upload the project without the fonts, or click **Cancel** to stop the upload.

The **Upload Status** window displays a progress bar that displays the status of the upload. When the upload is complete, a message notifies you whether the project uploaded successfully.

Uploading missing or modified pictures

If the picture files linked to the project are missing or have been modified since they were imported into the project, an alert displays at upload. Choose from among the following options:

- To continue the upload with low-resolution versions of the pictures, click **OK**.
- To stop the upload, click **Cancel**.
- To locate missing pictures or update modified pictures, click **List Pictures**.

If you click **List Pictures**, the **Missing/Modified Pictures** dialog box displays:

- To view a picture in the project, select the picture's name in the list and click **Show**.
- To locate a missing picture file, select it and click **Update**. The **Find** dialog box displays. Locate and choose the appropriate file, and then click **Open**.
- To update a modified picture file, click **Update**. Every instance of the modified picture in the project is updated.
- When **OK** displays in the **Status** column for each picture, click **Collect**. If the status of any picture is still **Missing** or **Modified** when you click **Collect**, that picture file will not be uploaded, but a low-resolution preview will remain in the project.
- To stop the upload and return to the project window, click **Cancel**.

QuarkXPress Server Manager

QuarkXPress Server Manager is a server application that efficiently routes rendering requests in an environment that uses one or more QuarkXPress Server applications. QuarkXPress Server Manager uses load-balancing methods to determine which server in the QuarkXPress Server pool can best process a document request, and uses caching to improve speed and efficiency. QuarkXPress Server Manager also provides failsafe capability by reliably resubmitting failed requests, either to the same QuarkXPress Server instance or to a different one (depending on the error message returned by the server instance).

QuarkXPress Server does not require QuarkXPress Server Manager, but a QuarkXPress Server Manager server can coordinate multiple QuarkXPress Server applications so that they work together with maximum speed, reliability, and availability.

QuarkXPress Server Manager also provides a Web services interface that allows developers to use QuarkXPress Server features without having to use the HTTP interface.

To configure a QuarkXPress Server Manager server application, you must use the QuarkXPress Server Manager Web client. The topics below explain how the QuarkXPress Server Manager Web client works and provide examples for using it.

Understanding QuarkXPress Server Manager

Before you begin, take time to review the topics below so that you understand how this chapter is structured and how you can get the most out of it.

Load balancing

Load balancing ensures that each rendering request is sent to a server that is likely to be able to handle it quickly. QuarkXPress Server Manager lets you choose from three load-balancing settings:

- **Dynamic Load Balancer:** The QuarkXPress Server Manager server considers file size and throughput requirements for each request. For example, assume the following series of requests is sent to QuarkXPress Server Manager in an environment that uses two QuarkXPress Server instances:

Request	Size
1	8MB

Request	Size
2	1MB
3	2MB

- **Random Load Balancer:** Each rendering request is sent to a random server.
- **Round-robin Load Balancer:** Requests are sent to servers in a set order. For example, if you have three QuarkXPress Server instances and QuarkXPress Server Manager receives ten rendering requests, the requests are distributed as follows:

Request	QuarkXPress Server instance used
1	1
2	2
3	3
4	1
5	2
6	3
7	1

The first request is assigned to server #1, and the second request is assigned to server #2. When the third request arrives, QuarkXPress Server Manager checks the loads that the two servers are already handling and assigns the task to the server with the smallest load — in this case, server #2.

If a request fails because a server stops responding or because of a "File Not Found" error, QuarkXPress Server Manager does not resubmit that request to that server.

- ➡ The **Dynamic** setting is typically the most efficient setting for environments with more than one QuarkXPress Server instance.

For information about choosing a load-balancing setting, see "[Controlling load balancing](#)." Developers can implement their own load-balancing systems; for more information, see "[Using QuarkXPress Server](#)."

Request timeout interval

QuarkXPress Server Manager attempts to send each request to a QuarkXPress Server instance that can promptly handle that request. However, in some situations a QuarkXPress Server instance might be unable to process a request in a reasonable amount of time (for example, if the server is working on a large rendering job, or if the server computer has stopped functioning). If you specify a certain period of time as the request timeout interval, QuarkXPress Server Manager will wait for the response until that period of time elapses, and then send the request to a different QuarkXPress Server instance. This ensures that a request does not get "lost" if its assigned QuarkXPress Server instance does not become available promptly.

For information about setting a request timeout interval, see "[Using other global settings](#)."

- ➡ If a client request fails despite being sent to multiple QuarkXPress Server instances, QuarkXPress Server sends the end user a customizable error message or exception so that the end user can appropriately handle the failure. A QuarkXPress Server Manager server can also automatically send e-mail to an administrator in the event of a problem; for more information, see "[Generating automatic e-mail messages](#)."

Determining QuarkXPress Server instance availability

QuarkXPress Server Manager uses two methods to determine the availability of a QuarkXPress Server instance: *ping* and *ping document*.

Ping

QuarkXPress Server Manager periodically sends a ping request to all of its QuarkXPress Server instances to determine whether they are available. Ping requests use the following format:

```
http://[Server]:[Port]/getprocessid
```

Ping document

QuarkXPress Server Manager periodically sends a render request to all of its QuarkXPress Server instances to determine whether they can render a document. Ping document requests use the following format:

```
http://[Server]:[Port]/[PingDocumentName.qxp]
```

You can specify the document to be used for this render request. To avoid long ping document rendering times, use a simple document.

You can specify the interval between pings and ping documents in the **Other Settings** pane in the **Global Settings** pane of the **QuarkXPress Server Manager** window (see "[Using other global settings](#)").

Logging with QXP Server Manager

QuarkXPress Server Manager logs all interactions with QuarkXPress Server instances. QuarkXPress Server Manager log files contain the following information:

- Render requests
- QuarkXPress Server responses
- Information about events (such as alerts) that occur during the render-request process
- Details about requests that were sent to a different QuarkXPress Server instance after the first assigned QuarkXPress Server instance was unable to process the request

Within the logs, each QuarkXPress Server instance is identified by its IP address and port number.

You can export log files in XML (Extensible Markup Language) or comma-separated values (CSV) format. For more information, see "[Exporting log files](#)."

Caching

To increase speed and efficiency, QuarkXPress Server Manager caches information in memory. If the response to a render request, URL request, or file request is included in the QuarkXPress Server Manager memory cache, QuarkXPress Server Manager returns the response from the disk cache instead of sending the request to a QuarkXPress Server instance. For more information, see "[Managing the cache](#)".

- ➡ Requests that contain a binary parameter and multipart responses are not cached, regardless of whether global caching or command-specific caching is enabled.
- ➡ When the QuarkXPress Server Manager server application receives response data from a QuarkXPress Server instance, QuarkXPress Server Manager can return that response directly or write it as a file and return the file's URL. The second approach maximizes efficiency for SOAP-based clients, because SOAP transfers binary data very slowly. Cached response files have names that begin with "TMP_", and they are removed when they reach the age specified in the cache settings (see "[Managing the cache](#)"). QuarkXPress Server Manager uses the cache file this way regardless of whether caching is turned on or off; however, you can override this behavior by setting the `responseasurl` parameter to `false` for every request.

Web services

QuarkXPress Server Manager provides a Web services interface that makes it easy for developers to create applications that use QuarkXPress Server. This Web services interface provides the same functionality that is available through the QuarkXPress Server HTTP interface. For more information about the Web services interface, see "[Using QuarkXPress Server](#)".

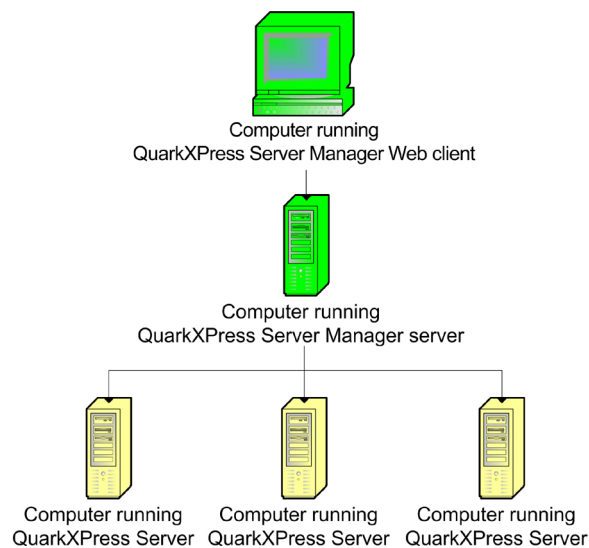
Working with QuarkXPress Server Manager

The general process for using QuarkXPress Server Manager is as follows:

- 1 Install QuarkXPress Server Manager software.
- 2 Launch one or more QuarkXPress Server instances on your network.
- 3 Launch the QuarkXPress Server Manager Console server application (see "[Starting the Manager server application](#)").
- 4 Launch the QuarkXPress Server Manager Web client (see "[Starting the Manager client application](#)").
- 5 Use the **Manage Servers** pane to add QuarkXPress Server instances, specify information about those servers (see "[Configuring QuarkXPress Server instances](#)"), and choose a load-balancing method (see "[Controlling load balancing](#)").
- 6 Configure proxy server settings, automatic e-mail settings, and various other settings in the **Global Settings** pane (see "[Using a proxy server](#)," "[Generating automatic e-mail messages](#)," and "[Using other global settings](#)").
- 7 As necessary, delete cache items and clear the QuarkXPress Server Manager server cache using the **Manage Cache** pane (see "[Managing the cache](#)").

Starting QuarkXPress Server Manager

Each QuarkXPress Server Manager server can handle multiple QuarkXPress Server instances.



QuarkXPress Server Manager diagram

Starting the Manager server application

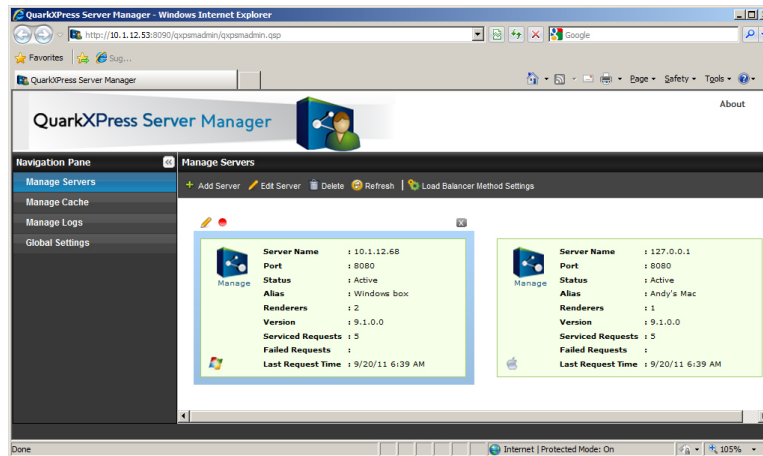
To launch the QuarkXPress Server Manager server application:

- *Mac OS:* Open the **QuarkXPress Server Manager/Server** folder inside the applications folder and double-click "QXPSMServerStart.command."
- *Windows (if you have not installed QuarkXPress Server Manager as a service):* Choose **Start > Programs > QuarkXPress Server Manager 9 > Start QuarkXPress Server Manager**. Alternatively, open the "Server" folder in the QuarkXPress Server Manager application folder and double-click the "QXPSMServerStart.bat" file as an administrator.

You can access API documentation in HTML format by navigating to [http://\[server\]:\[port\]](http://[server]:[port]), where [server] identifies the computer on which QuarkXPress Server Manager is running and [port] identifies the port it is running on.

Starting the Manager Web client

To launch the QuarkXPress Server Manager Web application, click **Open Admin Client** on the QuarkXPress Server Manager home page. The QuarkXPress Server Manager administration Web client displays.



The QuarkXPress Server Manager Web client

Request handler binding

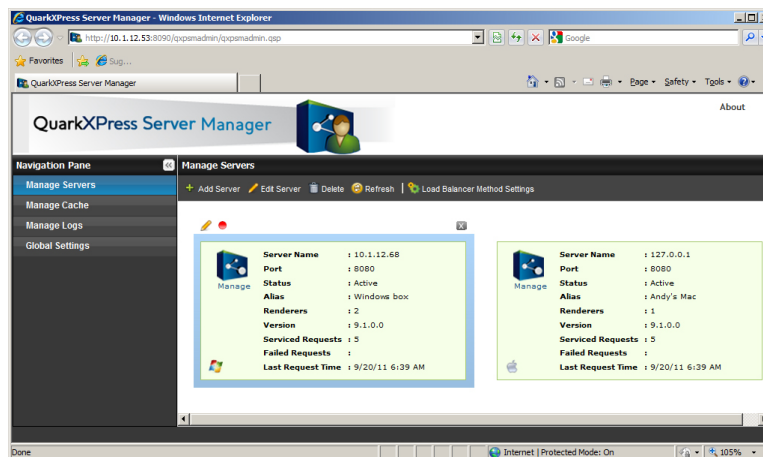
When you add a QuarkXPress Server instance to QuarkXPress Server Manager, you can choose to bind that server instance to particular rendering type or request type. When QuarkXPress Server Manager receives a matching request, it will send the request to only those server instances that are bound to that rendering type or request type. If multiple server instances are bound to a particular rendering type or request type, QuarkXPress Server Manager balances the load of such requests between the server instances.

An instance of QuarkXPress Server Manager that is not bound to any specific type of request is called a *generic server*. If a request is not bound to a particular server instance, QuarkXPress Server Manager sends that request to a generic server. If more than one generic server is available, QuarkXPress Server Manager balances the load of such requests between them.

You can bind a server to more than one rendering type or request type.

Configuring QuarkXPress Server instances

The **Manage Servers** pane lists the QuarkXPress Server instances the QuarkXPress Server Manager server is handling. You can use this pane to add QuarkXPress Server instances, edit the description of existing QuarkXPress Server instances, delete QuarkXPress Server instances, and choose a load balancing method.



Manage Servers pane

- ➔ To configure an individual QuarkXPress Server instance, click **Manage** under the icon for that instance. The QuarkXPress Server Web interface for that instance displays.

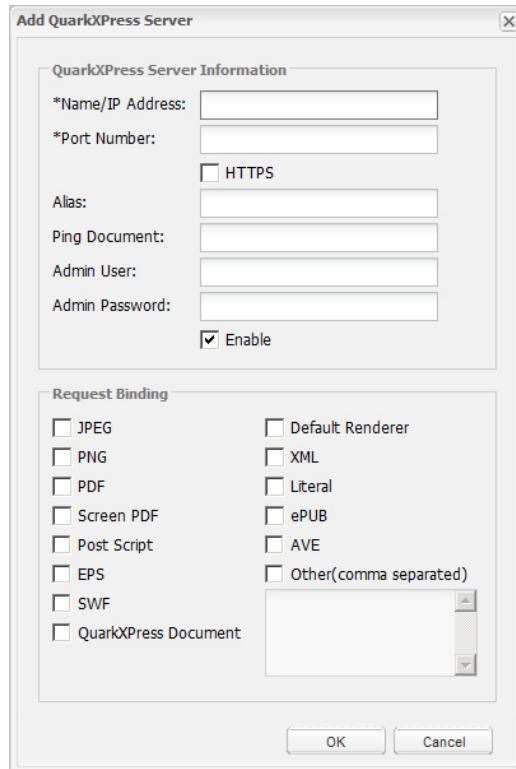
Adding and enabling a QuarkXPress Server instance

When you add and enable a QuarkXPress Server instance in the **Manage Servers** pane of the **QuarkXPress Server Manager** interface, the QuarkXPress Server Manager server begins routing rendering requests to that QuarkXPress Server instance.

- ➔ If you add and enable a QuarkXPress Server instance in this pane, be sure that clients are no longer sending rendering requests directly to that QuarkXPress Server instance; otherwise, the server will be handling both direct requests and routed requests, and the server might become overly busy. Note also that requests sent directly to such a QuarkXPress Server instance do not benefit from QuarkXPress Server Manager features such as load balancing, caching, and logging.

To add and enable a QuarkXPress Server instance:

- 1 Display the **Manage Servers** pane of the **QuarkXPress Server Manager** interface.
- 2 Click **Add Server**. The **Add QuarkXPress Server** dialog box displays.



The dialog box is titled "Add QuarkXPress Server". It contains two main sections: "QuarkXPress Server Information" and "Request Binding".

QuarkXPress Server Information:

- *Name/IP Address: [Text Field]
- *Port Number: [Text Field]
- ☐ HTTPS
- Alias: [Text Field]
- Ping Document: [Text Field]
- Admin User: [Text Field]
- Admin Password: [Text Field]
- ☒ Enable

Request Binding:

- ☐ JPEG
- ☐ PNG
- ☐ PDF
- ☐ Screen PDF
- ☐ Post Script
- ☐ EPS
- ☐ SWF
- ☐ QuarkXPress Document
- ☐ Default Renderer
- ☐ XML
- ☐ Literal
- ☐ ePUB
- ☐ AVE
- ☐ Other(comma separated) [Text Field]


At the bottom are "OK" and "Cancel" buttons.

Add QuarkXPress Server dialog box

- 3 Enter the QuarkXPress Server instance's DNS name or IP address in the **Name/IP Address** field.
- 4 Enter the QuarkXPress Server instance's port number in the **Port Number** field.
- 5 If the QuarkXPress Server instance is running with the HTTPS protocol, check **HTTPS**.
- 6 To specify an alternate name for the server, enter a value in the **Alias** field. The **Alias** value displays in the **Manage Servers** pane of the **QuarkXPress Server Manager** interface.
- 7 If you choose to use a particular ping document for this server (see "[Ping document](#)"), make sure the project file is in the QuarkXPress Server instance's document pool and then enter the project's file name in the **Ping Document** field. The ping document is used only if the global **Ping Type** is set to **Ping Document** (see "[Using other global settings](#)"). Note that if you do not set a ping document here, and no global ping document is set (see "[Using other global settings](#)"), an error message might display to indicate that the server is registered but inactive.
- 8 Enter the QuarkXPress Server instance user name and password in the **Admin User** and **Admin Password** fields.
- 9 To specify that QuarkXPress Server Manager should begin sending rendering requests to this QuarkXPress Server instance, check **Enable**.
- 10 To restrict this server to one or more particular types of rendering, check the appropriate boxes in the **Request Binding** area. To add additional render types (for example, render types provided by QuarkXPress Server XTensions software), check **Other** and enter the appropriate namespaces in the corresponding field as a comma-separated list. For more information, see "[Request handler binding](#)."

11 Click OK.

Editing a QuarkXPress Server instance



To edit the description of a QuarkXPress Server instance, display the **Manage Servers** pane of the **QuarkXPress Server Manager** interface, select the server in the list, and then click **Edit Server**. You can also display the **Edit QuarkXPress Server** dialog box by hovering the mouse cursor over the server and then clicking the **Edit Server** button  on the upper left.

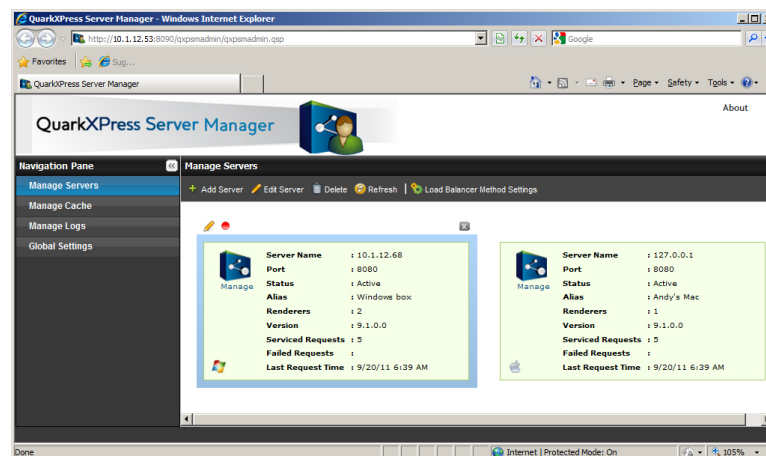
The options in the **Edit QuarkXPress Server** dialog box are the same as the options in the **Add QuarkXPress Server** dialog box (see "[Adding and enabling a QuarkXPress Server instance](#)").

Enabling and disabling routing to QuarkXPress Server instances

The **Status** field for each server in the **Manage Servers** pane of the **QuarkXPress Server Manager** interface shows the status of each QuarkXPress Server instance.

➡ The status fields are not updated automatically. To update the **Status** field for all servers, click **Refresh**.

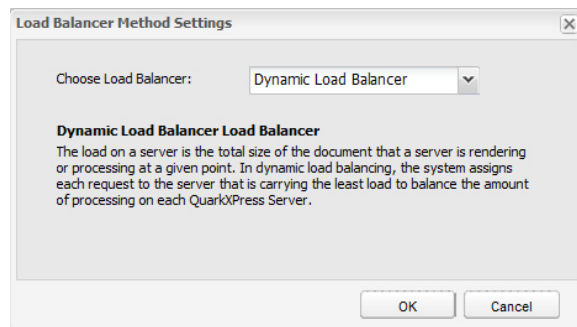
To enable or disable routing to a QuarkXPress Server instance, select the server, click **Edit Server** to display the **Edit QuarkXPress Server** dialog box, check or uncheck **Enable**, and then click OK. You can also enable or disable a QuarkXPress Server instance by hovering the mouse cursor over the server and then clicking the **Enable the Server** button  or **Disable the Server** button  on the upper left.



Manage Servers pane

Controlling load balancing

Load balancing ensures that each rendering request is sent to a QuarkXPress Server instance that is most likely to be able to handle it quickly. To define a load-balancing setting for the QuarkXPress Server Manager server, display the **Manage Servers** pane of the **QuarkXPress Server Manager** interface and click **Load Balancer Method Settings**. The **Load Balancer Method Settings** dialog box displays.




Load Balancer Method Settings dialog box

QuarkXPress Server Manager lets you choose from three load-balancing settings:

- **Dynamic Load Balancer:** Sends requests to servers based on file size
- **Random Load Balancer:** Sends each rendering request to a random server
- **Round-robin Load Balancer:** Sends requests to servers in a set order

For more information about these load-balancing settings, see "[Load balancing](#)"

Deleting a QuarkXPress Server instance

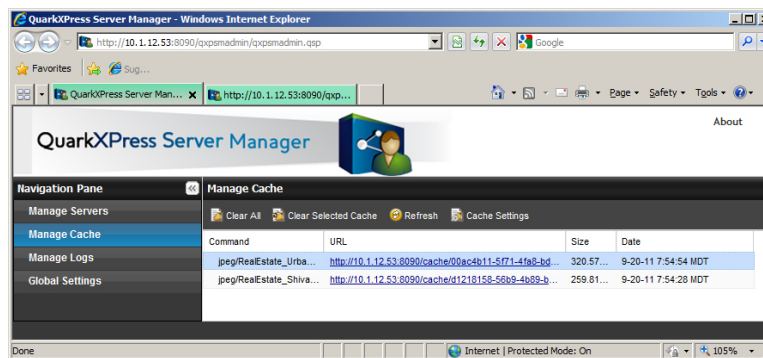
To delete a QuarkXPress Server instance from the list of available servers in the **QuarkXPress Server Manager** interface, display the **Manage Servers** pane, select the server name or IP address, and then click **Delete**. You can also delete a server by hovering the mouse cursor over the server and then clicking the **Delete the Server** button  on the upper left.

- ➔ Deleting a QuarkXPress Server instance from this dialog box does not shut down the QuarkXPress Server instance, but it does prevent the QuarkXPress Server Manager server from routing rendering requests to the QuarkXPress Server instance.

Managing the cache

Each QuarkXPress Server Manager server has an in-memory cache (in which it stores the keys to recently accessed items) and a disk-based cache (in which the items themselves are stored). If a request for a recently used item arrives, and a QuarkXPress Server Manager server has that request in its memory cache, the server can simply return the response from its disk cache instead of having to send the request to a QuarkXPress Server instance.

To manage the QuarkXPress Server Manager cache, display the **Manage Cache** pane of the **QuarkXPress Server Manager** interface.



Manage Cache pane

- ➔ Requests are stored in the cache only if the cache is turned on. For more information, see "[Configuring cache options](#)."
- ➔ The cache stores only the results of requests that do not deliberately bypass the cache.

Viewing a QuarkXPress Server Manager server cache

To view QuarkXPress Server Manager cache information, display the **Manage Cache** pane of the **QuarkXPress Server Manager** interface. For each file in the cache, this pane lists the command, URL, size, and time and date it was generated. To view a cache file, double-click the file name in the list.

Deleting files from the cache

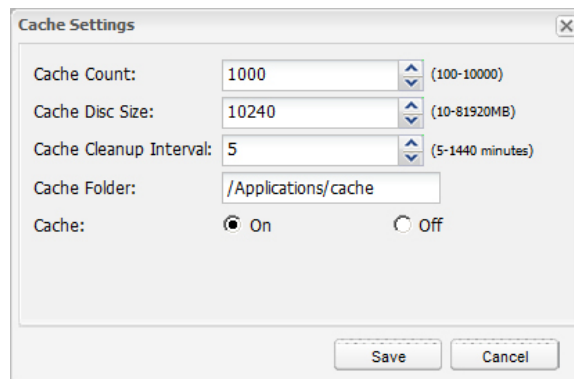
There is usually no need to manually delete files from a QuarkXPress Server Manager server's cache. When the cache reaches 95% of its capacity, QuarkXPress Server Manager automatically begins deleting the least recently used files in the cache to make room for new files. However, you can also manually clear files from the cache.

To manually delete cache files:

- 1 If you want to delete specific files, select those files in the list.
- 2 Click **Clear Selected Cache**. The **Clear Cache** alert displays.
- 3 Click **OK**.

Configuring cache options

To configure cache options, display the **Manage Cache** pane in the **QuarkXPress Server Manager** interface, then click **Cache Settings**. The **Cache Settings** dialog box displays.



The image shows a 'Cache Settings' dialog box with the following fields and options:

- Cache Count:** A numeric field set to 1000, with a range of (100-10000) indicated to the right.
- Cache Disc Size:** A numeric field set to 10240, with a range of (10-81920MB) indicated to the right.
- Cache Cleanup Interval:** A numeric field set to 5, with a range of (5-1440 minutes) indicated to the right.
- Cache Folder:** A text field containing the path /Applications/cache.
- Cache:** Two radio buttons, 'On' (which is selected) and 'Off'.

At the bottom right of the dialog are 'Save' and 'Cancel' buttons.

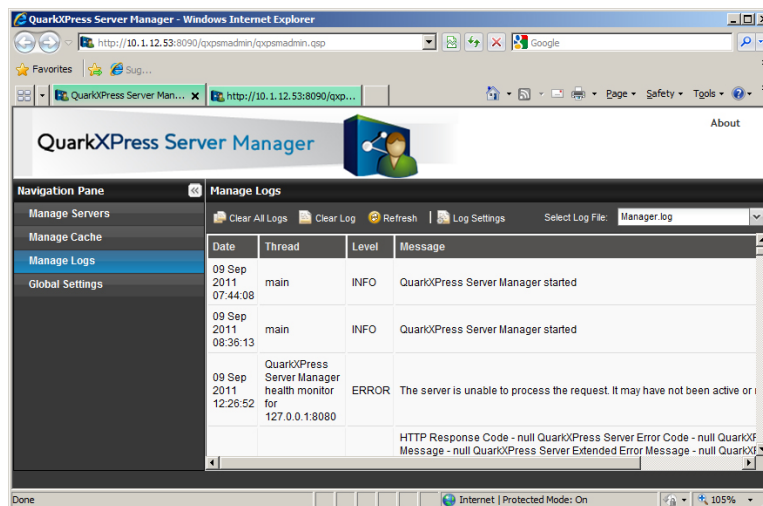
Manage Cache pane

- To set the maximum number of files allowed in the cache, enter a value in the **Cache Count** field. When the number of files in the cache reaches the number you set here, QuarkXPress Server Manager begins deleting the least recently used files to make room in the cache.
- To set the maximum disk cache size, enter a value in the **Cache Disk Size** field. When the disk cache reaches this size, QuarkXPress Server Manager begins deleting the least recently used files to make room in the cache.
- To specify an interval after which the cache should be periodically cleared, enter a value in the **Cache Cleanup Interval** field.
- To specify where cache files for the QuarkXPress Server Manager server should be stored, enter a path in the **Cache Folder** field.
- The **Cache** radio buttons let you control caching for the QuarkXPress Server Manager server. To turn caching on, click **On**. To turn caching off, click **Off**.

Managing logs

A QuarkXPress Server Manager server maintains logs of all of the requests it receives, the responses from the QuarkXPress Server instances, information about events (such as alerts) that occur during the render-request process, dates and times, and details about each request that was sent to a different QuarkXPress Server instance after its first assigned QuarkXPress Server instance was unable to process the request.

- ➔ To control what information is stored in the logs, use the **Manage Logs** pane of the **QuarkXPress Server Manager** interface. For more information, see "[Configuring logging options](#)."



Manage Logs pane

Viewing log file details

To view information about a specific log file, display the **Manage Logs** pane of the **QuarkXPress Server Manager** interface, then choose the log file name from the **Select Log File** drop-down menu.

Deleting log files

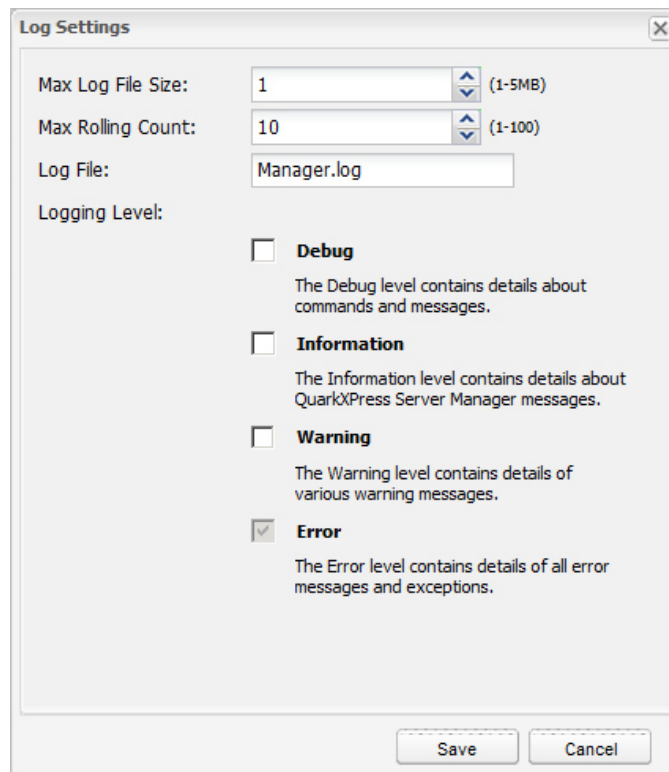
To delete a log file:

- 1 Display the **Manage Logs** pane of the **QuarkXPress Server Manager** interface.
- 2 Choose the target log file from the **Select Log File** drop-down menu.
- 3 Click **Clear Log**.

➡ To clear all log files, click **Clear All Logs**.

Configuring logging options

To configure logging options, click **Log Settings** pane in the **Manage Logs** pane of the **QuarkXPress Server Manager** interface. The **Log Settings** dialog box displays.



Log Settings dialog box

To set the maximum log file size, enter a value in the **Max Log File Size** field. When a log file reaches this size, the current log file is closed and a new log file is created.

To specify the maximum number of log files to keep, enter a value in the **Max Rolling Count** field. When the number of log files reaches this limit, QuarkXPress Server Manager deletes the oldest log file each time a new log file is created.

To specify the root name of the log file for the QuarkXPress Server Manager server, enter that name in the **Log File** field. To place the log file in a particular directory, precede the file name with an absolute path. QuarkXPress Server Manager appends numbers to this name to create consecutively named log files.

To control how much information is stored in the log files, check a box in the **Logging Level** area:

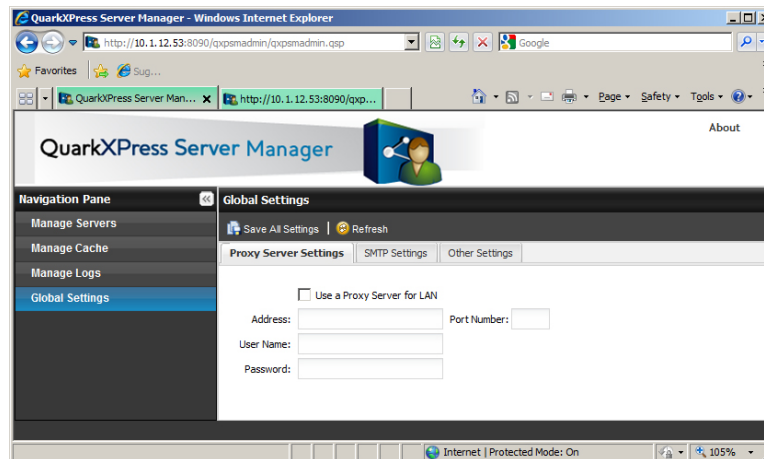
- **Debug:** Stores information such as the commands executed and the servers where those commands are executed. Also stores all of the information that is stored when **Information**, **Warning**, and **Error** are checked.
- **Information:** Stores informational messages such as startup messages and command-retry messages. Also stores all of the information that is stored when **Warning** and **Error** are checked.
- **Warning:** Stores warning messages. Also stores all of the information that is stored when **Error** is checked.
- **Error:** Stores error messages and stack traces for exceptions.

➡ The **Debug** and **Information** settings produce large logs that grow rapidly, so you might want to use these settings for troubleshooting only.

Using a proxy server

Some networks route network traffic through a proxy server for reasons of efficiency or security. To use a proxy server for all requests and responses between QuarkXPress Server Manager and QuarkXPress Server:

- 1 Display the **Proxy Server Settings** tab of the **Global Settings** pane of the QuarkXPress Server Manager interface.



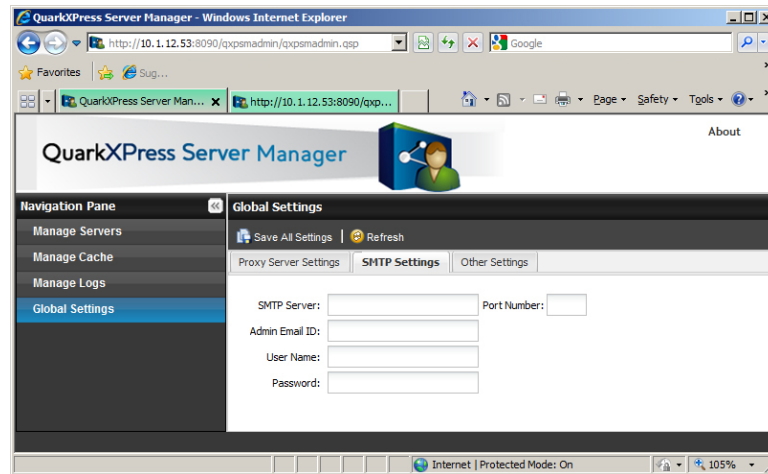
Proxy Server Settings tab

- 2 Check **Use a Proxy Server for LAN**.
- 3 Enter the proxy server's DNS name or IP address in the **Address** field.
- 4 Enter the proxy server's port number in the **Port Number** field.
- 5 Enter the proxy server's user name in the **User Name** field.
- 6 Enter the proxy server's password in the **Password** field.

Generating automatic e-mail messages

You can configure a QuarkXPress Server Manager server to automatically generate and send e-mail messages if particular events occur. To configure the QuarkXPress Server Manager server to automatically send e-mail messages:

- 1 Display the **SMTP Settings** tab of the **Global Settings** pane of the QuarkXPress Server Manager interface.
- 2 Enter a valid SMTP server name or IP address in the **SMTP Server** field and then enter the corresponding port number in the **Port Number** field.
- 3 Enter the e-mail address to which messages should be sent in the **Admin Email ID** field.
- 4 If this SMTP server requires validation, enter a valid user name in the **User Name** field and a valid password in the **Password** field.



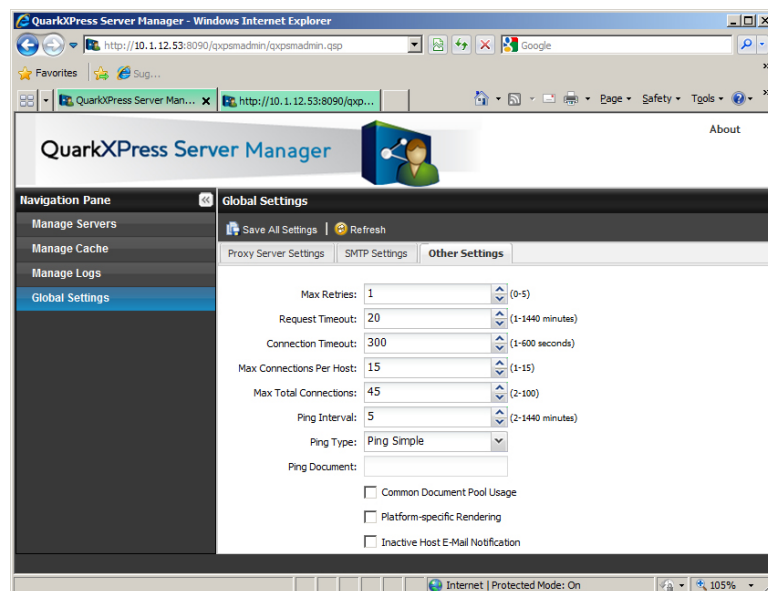
SMTP Settings pane

Two events can cause QuarkXPress Server Manager to generate an e-mail message:

- If **Inactive Host E-mail Notification** is checked (see "[Using other global settings](#)"), a message is sent when a QuarkXPress Server instance goes from the active state to the inactive state.
- If you have set up custom error messages (as described in "[Using custom error messages](#)"), certain QuarkXPress Server errors result in e-mail messages.

Using other global settings

To configure other global settings, display the **Other Settings** tab of the **Global Settings** pane of the QuarkXPress Server Manager user interface.



Other Settings tab of Global Settings page

- **Max Retries:** To specify the maximum number of times the QuarkXPress Server Manager server should submit a request to the QuarkXPress Server instances, enter a value in this field. When QuarkXPress Manager has unsuccessfully submitted a request this many times, the application returns an error message.

- **Request Timeout:** To specify the maximum number of minutes the QuarkXPress Server Manager server should wait for a response from a QuarkXPress Server instance, enter a value in this field. When this time has elapsed, the QuarkXPress Server Manager server retries the request (unless the **Max Retries** value has been reached).
- **Connection Timeout:** To specify the maximum number of seconds the QuarkXPress Server Manager server should spend attempting to establish a connection with a particular QuarkXPress Server instance, enter a value in this field.
- **Max Connections Per Host:** To specify the maximum number of connections the QuarkXPress Server Manager server should open for a particular QuarkXPress Server instance before it begins queuing requests, enter a value in this field.
- **Max Total Connections:** To specify the maximum number of connections the QuarkXPress Server Manager server should open for all hosts before it begins queuing requests, enter a value in this field.
- **Ping Interval:** To set the amount of time the QuarkXPress Server Manager server should wait between ping attempts (see "[Determining QuarkXPress Server instance availability](#)"), enter a value in this field.
- **Ping Type:** To indicate whether QuarkXPress Server Manager should use a simple ping or a ping document to test a QuarkXPress Server instance, choose an option from this drop-down menu.
- **Ping Document:** To indicate which QuarkXPress project the QuarkXPress Server Manager server should use for ping document requests, enter the project file name in this field. Make sure a copy of the project file is in each QuarkXPress Server instance's document pool. Note that individual QuarkXPress Server instances can override this value by providing another document name. Note also that a ping document is used only if **Ping Type** is set to **Ping Document**.
- **Common Document Pool Usage:** Check this box if all managed QuarkXPress Server instances are using the same document pool. If this box is checked, then upload, delete, and saveas requests are sent to one of the available servers. If this box is unchecked, then upload, delete, and saveas requests are sent to all managed servers. Note that you must manually set each server to point at the common document pool.
- **Platform-specific Rendering:** A QuarkXPress Server Manager server can send requests that involve Mac OS project files to a Mac OS-based QuarkXPress Server instance, and send requests that involve Windows project files to a Windows-based QuarkXPress Server instance. Setting up the server in this manner can be desirable if the project files involved use fonts that are available on only one platform or the other. To enable platform-specific rendering for the QuarkXPress Server Manager server, check this box.
- **Inactive Host E-mail Notification:** To automatically generate an e-mail message when a QuarkXPress Server instance becomes inactive, check this box. The e-mail message is sent to the address specified in the **SMTP Settings** pane.

Saving a server configuration

Changes that you make to a server configuration in the QuarkXPress Server Manager client are not made to the QuarkXPress Server Manager server until you click **Save All Settings** in the **Global Settings** pane of the QuarkXPress Server Manager interface.

To discard any changes you have made since logging on to the QuarkXPress Server Manager server, click **Refresh**. The configuration of the QuarkXPress Server Manager server remains as it was.

- ➡ Disabling or enabling a QuarkXPress Server instance from the QuarkXPress Server Manager client is not considered a configuration change.

Using custom error messages

You can control which errors cause the QuarkXPress Server Manager server application to send e-mail messages to the address specified in the **SMTP Settings** pane (see "[Generating automatic e-mail messages](#)"). You can also define which messages are sent when such errors occur. The first step is to create a custom error code that corresponds to a QuarkXPress Server error code. After you set up this custom error code, you can specify whether that code generates an e-mail message and then create custom error messages.

Creating a custom error code

To create a custom error code:

- 1 On the computer where the QuarkXPress Server Manager server application is running, open the following file in a text-editing application:
`[application folder]\server\conf\Manager_Server_ErrorCodeMapping.properties`
- 2 Create a new line containing a QuarkXPress Server specific error code for which you want to generate automatic e-mail messages (with or without a custom text message). Follow the error code with an equals sign, a unique custom error code, and a return.
- 3 Save and close the file.

- ➡ This change will not take effect until you quit and restart the QuarkXPress Server Manager server application.

Flagging an error code to generate an e-mail message

To specify that a custom error code should cause an e-mail message to be generated:

- 1 Create a unique custom error code for the target QuarkXPress Server error. For more information, see "[Creating a custom error code](#)".
- 2 On the computer where the QuarkXPress Server Manager server application is running, open the following file in a text-editing application:
`[application folder]\server\conf\ManagerErrorCodeMailOption.properties`
- 3 Create a new line containing the unique custom error code you defined in step 2. Follow the custom error code with a tab, enter a `1` (to send the message) or a `0` (to suppress the message), and then press Return.
- 4 Save and close the file.

- ➡ This change will not take effect until you quit and restart the QuarkXPress Server Manager server application.

Creating custom error text

To define the text that should be sent in an e-mail message when an error occurs:

- 1 Create a unique custom error code for the target QuarkXPress Server error (as described in "[Creating a custom error code](#)").
- 2 On the computer where the QuarkXPress Server Manager server application is running, open the following file in a text-editing application:

`[application folder]\server\conf\ManagerErrorCodeMessage.properties`
- 3 Create a new line containing the unique custom error code you defined in step 2. Follow the custom error code with a tab and then enter the custom text to be returned for that error.
- 4 Save and close the file.

➡ This change will not take effect until you quit and restart the QuarkXPress Server Manager server application.

Sending requests from a browser

Like QuarkXPress Server, QuarkXPress Server Manager lets you send requests from a Web browser. This capability helps to ensure that you need to make only minimal changes when you update an application so that it sends requests to a QuarkXPress Server Manager server instead of a QuarkXPress Server instance.

Assume that a QuarkXPress Server instance expects requests in the following format:

```
http://[QXPServer]:[port]/[request]?[request_parameters]
```

If this is the case, a QuarkXPress Server Manager server will expect requests in the following format:

```
http://[QXPManagerServer]:[port]/qxpsm/request/[request]?[request_parameters]
```

In other words, a QuarkXPress Server Manager server accepts requests in a format that is similar to the request format used with a QuarkXPress Server instance. That means you can get the benefits of QuarkXPress Server Manager without having to completely rewrite your applications.

Additional parameters

In addition to request-specific parameters, QuarkXPress Server Manager accepts the following request parameters. These parameters can be submitted in the standard QuarkXPress Server GET format joined by an ampersand (&) with the other parameters in the body of the request.

- `qxpsm_bypassfileinfo`: When QuarkXPress Server Manager receives a request, it executes a `fileinfo` request on the document to get the document's size and last-modified date and time. These values are used for load balancing and for determining whether to serve the document from the cache. If the value of this parameter is set to true, the `fileinfo` request is not made, file size is considered to be zero for load-balancing purposes, and the document in the cache is considered to have changed.

- `qxpsm_context`: Set this value if you need to use it in a custom load balancer.
- `qxpsm_maxtries`: This parameter lets you specify a maximum number of retries for a specific request. If this parameter is absent or set to 0, the global maximum retries value is used. To disable maximum retries for a request, use the value -1.
- `qxpsm_password`: The value of this parameter, if supplied, is used as the "Admin Password" value when the request is forwarded to a QuarkXPress Server instance.
- `qxpsm_responseasurl`: By default, QuarkXPress Server Manager writes responses as temporary files in the cache folder and returns a URL to the client. This approach prevents the performance degradation that can result from sending binary data using SOAP. However, you might want QuarkXPress Server Manager to return the response directly if you are creating an application that processes that response (simple or multipart) with its own logic. To make QuarkXPress Server Manager send a response to the browser rather than the URL of the temporary files in the cache, set this value to false. (Note that setting this value to false might result in decreased performance.)
- `qxpsm_responseredirect`: If you use servlet methodology to send a request to QuarkXPress Server Manager with `qxpsm_responseasurl=true`, QuarkXPress Server Manager returns a frameset page with one or more frames. If the response is not multipart, the frameset contains a single page with a URL pointing to a response file in the temporary cache. This can be problematic if, for example, you want to use the returned URL as an image link in an HTML page. In such situations, submit the request with both `qxpsm_responseredirect=true` and `qxpsm_responseasurl=true`. If you do this, QuarkXPress Server Manager returns the URL of the rendered file in the temporary cache instead of returning a frameset page. Note, however, that if the request results in a multipart response (such as the response returned by the `boxes` parameter), QuarkXPress Server Manager ignores the `qxpsm_responseredirect=true` parameter and returns the frameset page.
- `qxpsm_servername`: By default, the target QuarkXPress Server instance for each request is determined by the QuarkXPress Server Manager server's load-balancing system. To send a request to a specific QuarkXPress Server instance, set this parameter to the name or IP address of that QuarkXPress Server instance. Note that if you use this parameter with an IP address, you must also submit the port number using the `qxpsm_serverport` parameter.
- `qxpsm_serverport`: If you use the `qxpsm_servername` parameter with an IP address, supply the corresponding port number as this parameter's value.
- `qxpsm_timeout`: This parameter lets you specify a timeout (in milliseconds) for a specific request. If this parameter is absent or set to 0, the global timeout value is used. To disable timeout for a request, use the value -1.
- `qxpsm_usecache`: If you set this value to false, the request will be rendered regardless of whether it is cached and regardless of whether caching is enabled at the global level.
- `qxpsm_username`: The value of this parameter, if supplied, is used as the "Admin User" value when the request is forwarded to a QuarkXPress Server instance.
- `qxpsm_userpassword`: The value of this parameter, if supplied, is used as the "Admin User" password when the request is forwarded to a QuarkXPress Server instance. Default value is null, which means no password information. If this is not null, you must also provide `qxpsm_username`.

The XTensions Developer Kit (XDK)

The QuarkXPress Server XDK lets software developers implement features that are not available in QuarkXPress Server, such as server-side processing and application-specific services.

➡ The QuarkXPress Server XDK requires knowledge of C or C++.

Glossary

Document pool: The document pool contains the projects that are available for rendering. By default, the document pool is a collection of discrete files or folders in a specific, identified folder located on the local server or on a connected network drive. When some type of external document provider (such as a content management system or database) is used, projects are not stored in the local document pool.

Document provider: The document provider is the source for projects that QuarkXPress Server renders. The most basic document provider is the local document pool. Other document providers can be enabled through the creation of Server XTensions software, which establish a virtual file system. Server XTensions software can register for control of a specified range of the QuarkXPress Server namespace. When a project is requested from this range, server XTensions software retrieves the file from the specified source and hands it to the server. Examples of document providers include content management systems such as a standard database, or a live data feed from an HTTP agent.

Layout: A layout is a sequence of same-sized pages in a QuarkXPress project. A project can contain one or more layouts. A layout is functionally equivalent to a QuarkXPress document in QuarkXPress 5 and earlier.

Project: A QuarkXPress project is a file created by QuarkXPress. A project can contain one or more layouts.

Rendering: Rendering is the process of generating a file in a particular format (such as JPEG, EPS, or PDF) from a QuarkXPress layout.

Rendering type: The rendering type is the format in which QuarkXPress Server can render QuarkXPress layouts. Some rendering types, such as JPEG and PNG, can be displayed in a Web browser, while others must be saved to the hard drive.

Server XTensions Software (SXT): Server XTensions software is XTensions software written specifically for QuarkXPress Server. For more information, see the QuarkXPress Server XTensions Developer's Kit.

Renderer: A renderer is a process launched by QuarkXPress Server to help process rendering requests. Renderers reside on the same server as QuarkXPress Server and share the same memory and preferences. When renderers are launched, QuarkXPress Server becomes a load-balancing "master server," passing incoming requests to renderers for faster response times.

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