



Configuring the Cisco TelePresence Content Server for Streaming from a QuickTime Media Server

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Introduction

This deployment guide is designed to provide guidelines for configuring the TelePresence Content Server and the external QuickTime Streaming Server for live unicast and on demand streaming. These guidelines are for a Content Server running release 5.0.

The Content Server default installation supports only HTTP-based on demand streaming (also known as progressive download) of MPEG-4 from its local IIS Web Server. An external streaming media server, such as QuickTime or Darwin, must be set up for live unicast and true (RTSP) on-demand streaming of MPEG-4 content.

Live multicast streaming of MPEG-4 content does not require an external QuickTime server, as the multicast stream is sent directly from the Content Server. See the *Cisco TelePresence Content Server Release 5.0 Administration and User Guide* for more information.



QuickTime Streaming Server Configuration

The information required to set up your QuickTime Streaming Server can be found in the QuickTime Streaming Server Administration manual and the **streamingserver.xml**-sample file available within the QuickTime Streaming Server application folder.

The streamingserver.xml-sample file provides descriptions of each of the elements in the configuration file and therefore is a very useful reference.

While this document makes specific mention of QuickTime Streaming Server throughout, all the information is also directly relevant to the Darwin Streaming Server. The settings detailed in the sections “Configuring QTSS for live unicast streaming” and “Configuring QTSS for on demand streaming” are the same for both QuickTime Streaming Server and Darwin Streaming Server.

Configure for Live Unicast Streaming

To setup your QuickTime Streaming Server for live streaming of media from your Content Server, follow these steps:

Step 1 Edit the QuickTime Streaming Server configuration file:
/Library/QuickTimeStreaming/Config/streamingserver.xml

Step 2 Ensure that the Reflector Module allows broadcasts:

```
<MODULE NAME="QTSSReflectorModule">
<PREF NAME="allow_broadcasts" TYPE="Bool16">true</PREF>
</MODULE>
```

- a.** Check the port range settings within the Reflector Module as you will need these figures later when configuring the media server from the TelePresence Content Server web interface:

```
<MODULE NAME="QTSSReflectorModule">
<PREF NAME="maximum_static_sdp_port">65535</PREF>
<PREF NAME="minimum_static_sdp_port">20000</PREF>
</MODULE>
```



Note

When specifying ports for a new media server from the Content Server, the starting point must be an even number. The Content Server will use up to 30 ports for two simultaneous live calls. Ensure that the port range specified in this module is large enough to support the maximum number of live calls supported by your Content Server configuration.

Step 3 Check the Reflector Module IP allow list to ensure that your Content Server is in the IP range that is allowed to push media to the QuickTime Streaming Server.

```
<MODULE NAME="QTSSReflectorModule">
<PREF NAME="ip_allow_list">10.10.10.*</PREF>
<!-- or 10.10.10.* to specify a range etc -->
<!-- or 127.0.0.* to specify all IPs -->
</MODULE>
```



Note

You can use the * wildcard to specify an IP range or simply use 127.0.0.* to allow any IP address to push media to the QuickTime Streaming Server.

Step 4 Save your changes to **streamingserver.xml** and exit your editor.

Step 5 Create a specific user account to be used for authentication by the Content Server when pushing the live media to the QuickTime Streaming Server.

Create your new user using the command line utility **qtpasswd**.

```
qtpasswd -p password newuser
```



Note

The Content Server supports both basic and digest authentication and will negotiate with the QuickTime Streaming Server for the appropriate method for each connection.

Step 6 Give the newly created user privileges to push media to the QuickTime Streaming Server by creating a **qtaccess** file at the root level of the Movies folder of QuickTime Streaming Server. By default this path is **/Library/QuickTimeStreaming/Movies/**.

The contents of the new **qtaccess** file is structured in two sections, the first being write (push) privileges and the second being the view permissions. The following example allows any authenticated user account to be used for pushing content to the QuickTime Streaming Server and allows any user (unauthenticated) to view content streamed from the QuickTime Streaming Server:

```
<limit write>
require any-user
</limit>
require any-user
```

You can further limit the write (push) privileges to the QuickTime Streaming Server to specifically the new user you created by modifying the **<limit write>** section:

```
<limit write>
require user newuser
</limit>
require any-user
```

Or limit write (push) access to the new group you created as in the following example:

```
<limit write>
require group newgroup
</limit>
require any-user
```

Step 7 Configuration of the QuickTime Streaming Server is complete. To ensure all of the new settings become active within your QuickTime Streaming Server, stop and restart the service.

Configure for On-Demand Streaming

While there are no further changes required to the QuickTime streaming service setup to have it stream media generated by the Content Server on-demand, there needs to be some way for the Content Server to get the media to the QuickTime Streaming Server. The standard method for this is FTP.

Ensure that you have an FTP service running on same server as your QuickTime Streaming Server and that the FTP service has access to write into the Movies folder of your QuickTime Streaming Service. Please refer to the administration manual of your FTP service for details on how to accomplish this.

TelePresence Content Server Configuration

Now that your QuickTime Streaming Server is configured for live and on-demand streaming, you need to set up the Content Server using that configuration information.

The steps for setting up your TCS are described below:

- [Create a Media Server, page 4](#)
- [Create a Template, page 5](#)
- [Create a Recording Alias, page 6](#)

Create a Media Server

The following steps will create a new media server on the Content Server with support for live and on demand streaming through QuickTime Streaming Server. If you only require support for one type of streaming, follow the steps as applicable to create a live streaming-only or on demand-only media server.

-
- Step 1** From the **Management** tab, go to **Recording setup > Media server configurations**.
- Step 2** Click **Add QuickTime or Darwin Streaming Server** to create a new QuickTime media server.
- Step 3** Enter a name for your new media server, and check the type of streaming you want to support. You can check **Support live unicast streaming**, **Support live multicast streaming**, **Support on Demand**, or all three.
- Step 4** If you checked **Support live unicast streaming**, do the following:
- In the **Unicast server address** field, enter the IP address of the QuickTime Streaming Server in the Unicast server address field.
 - Enter a **Streaming port range start** value that is within the range set in Step 3 of “Configure for live unicast streaming”. This value must be an even number. The Content Server will use a range of 30 ports beginning with this port for streaming of up to two live simultaneous calls.
 - Enter the user credentials you have authorized to write to the QTSS in [Step 6](#) of the “[Configure for Live Unicast Streaming](#)” section on [page 2](#).
 - In most cases when setting up a new media server, it is recommended that you click **Use default live URL**.



Note

You should choose to use alternate live URLs only if you know the live streaming URLs for the QuickTime Streaming Server require different path or filename information to that generated by the Content Server (for example, when live streaming to a CDN).

- Step 5** If you checked **Support live multicast streaming**, do the following:
- In the **Multicast IP address** field, enter the destination multicast IP address that the Content Server streams to. Your chosen multicast IP address must not conflict with any other multicast address in use in your network. Further considerations apply if you want to multicast over the public Internet. Contact your network administrator for more information.
 - In the **Streaming port range start** field, enter the first port number in the live streaming port range. The setting is between 10000 and 65000. This port number must be even.
 - In the **TTL** drop-down menu, choose the multicast time to live (TTL) threshold.

This value tells the network how far multicast packets should be allowed to travel across the network. The default threshold is LAN (TTL=32). The value "Subnet" (TTL=1) means that packets do not pass the first network router and should mean a multicast stream is viewable on any network, even those not enabled for multicast, where the client is on the same subnet as the Content Server.

The efficacy of higher values—LAN (TTL=32), WAN (64), Internet (128), Unrestricted (255)—depends on the network configuration.

- Step 6** If you checked **Support on demand**, media needs to be moved from the Content Server to the QuickTime Streaming Server. The standard method for this is File Transfer Protocol (FTP). In the **On demand settings** section, click **FTP movies to location** and enter the required FTP server information:
- a. In **Server address**, enter the FTP server IP address.
 - b. The default FTP port is 21.
 - c. If you leave the **Directory** field empty, the media will be placed in the root folder of the FTP server.
 - d. Ensure that the account used for the FTP user has write privileges to the FTP server.
 - e. In the **On demand URLs** section, it is recommended that you click **Use default on demand URLs**.
You should enter alternate on-demand URLs only if you know the streaming server requires a different path or filename information to that generated by the Content Server.

- Step 7** Click **Save**.
-

Create a Template

Now that you have created a media server that supports streaming from a QuickTime Streaming Server, you need to use this media server in a Content Server template. Multiple templates can use the same media server.

-
- Step 1** From the **Management** tab, go to **Recording setup > Templates**.
- Step 2** Click **Add template** to create a new template.
- Step 3** In the **Name** field, enter a name for your template.
- Step 4** Check **Viewable in the Content Server web interface**.
- Step 5** In the **Outputs to view in the Content Server web interface section**, click one of the viewing layouts.
- Step 6** In the **On demand** section, do the following:
- a. Click **MPEG-4 for QuickTime** from the formats available.
 - b. Click one or two options under **Sizes (Audio only, Small, Medium, or Large)**.
- Step 7** In the **On demand media server settings for MPEG-4 for QuickTime**, choose a media server that supports on-demand streaming from a QuickTime Streaming Server.
- Step 8** Check **Live stream** if you would like the call to be available for live streaming. Ensure that the format for live streaming chosen from the drop-down menu is **MPEG-4 for QuickTime**.
- Step 9** In the **Live media server settings** section, choose a media server that supports live streaming from QTSS.
- Step 10** Click **Save**.
-

Create a Recording Alias

Now that you have a template for streaming from a QuickTime Streaming Server, you need to create a recording alias on the Content Server that uses this template. Multiple recording aliases can use the same template.

-
- Step 1** From the **Management** tab, go to **Recording setup > Recording aliases** to add or edit a recording alias.
 - Step 2** Enter a name for your recording alias, and choose a Content Server template that supports streaming from QTSS.
 - Step 3** Click **Save**.
-

You have now configured the Content Server for streaming off QuickTime Streaming Server. Make a test call on the recording alias you have created to verify your configuration.

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