



Configuring RealNetworks RealProxy Streaming Media Caching

This chapter describes how Real Networks RealProxy Version 8.01 streaming media caching is configured on the Content Engine. This chapter contains the following sections:

- [Enabling RealProxy on the Content Engine, page 10-1](#)
- [Enabling Transparent Caching of RTSP Traffic Using WCCP-Enabled Routers, page 10-3](#)
- [Enabling Conventional Proxy Caching of RTSP Traffic, page 10-5](#)

Enabling RealProxy on the Content Engine

To enable RealProxy on the Content Engine, follow these steps.



Note

To enable RealProxy on the Content Engine, you must use CLI commands.

- Step 1** Access the CLI and view the RealProxy license agreement by using the **show rtsp license-agreement** command in EXEC mode.
- ```
ContentEngine# show rtsp license-agreement
```
- Step 2** After reading the license agreement, enter global configuration mode and accept the license agreement.
- ```
ContentEngine# configure
ContentEngine(config)# rtsp proxy media-real accept-license-agreement
```
- Step 3** Enter your Cisco license key. Alternatively, accept an evaluation license by using the **rtsp proxy media-real evaluation** command.
- ```
ContentEngine(config)# rtsp proxy media-real license-key licensekey
```
- Step 4** Configure an IP address for the RealProxy that is visible to the RealPlayer clients that use it.
- ```
ContentEngine(config)# rtsp proxy media-real ip-address ip-address
```
- This step is required before you can enable RealProxy media cache.
- Step 5** Enable the RealProxy media cache on the Content Engine with the **rtsp proxy media-real enable** command.
- ```
ContentEngine(config)# rtsp proxy media-real enable
```

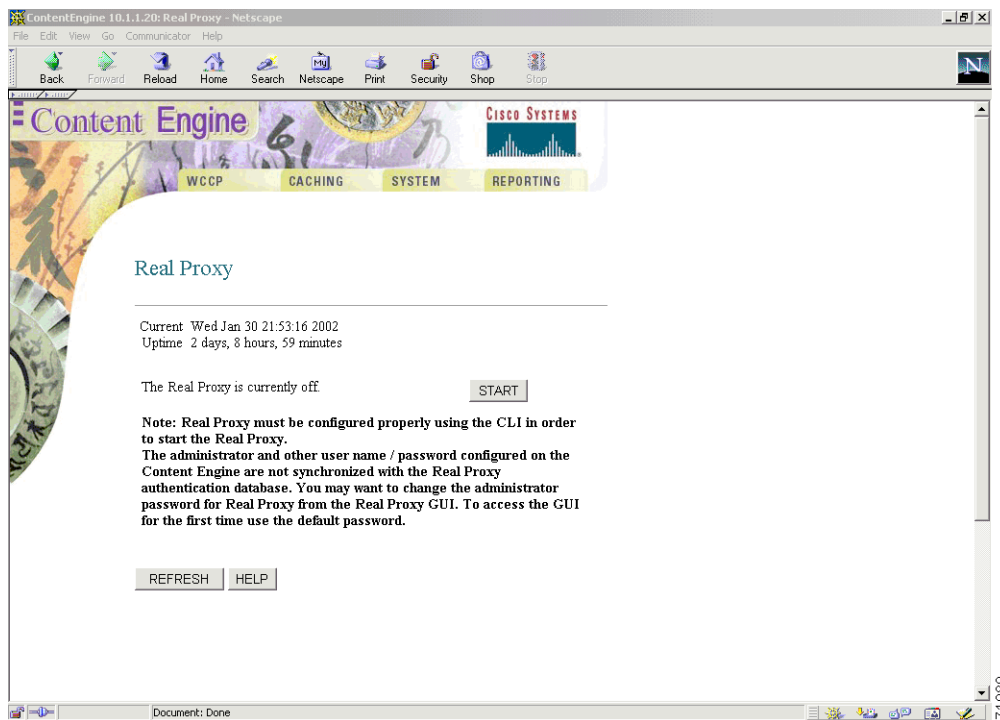
You are now able to configure the RTSP parameters required for streaming media connections through RTSP traffic technologies by transparent caching or conventional caching.

- Step 6** Access the RealSystem administrator GUI by clicking the **Admin** button on the RealProxy page (Figure 10-1) in the Content Engine Management GUI. The **Admin** button is active when the RealProxy software is installed and enabled. Use *admin* as the default username and *diamond* as the password to access this administration page from the Content Engine GUI.



**Note** To access the Content Engine GUI, enter the Content Engine IP address and append the default port number 8001 as the URL address in your browser of choice. For example, enter `http://CEIPaddress:8001` as the URL. See the “Logging On to the GUI” section on page 2-1 for more information on how to access the features supported by the Content Engine GUI.

**Figure 10-1 Content Engine Management GUI—RealProxy Page**



**Note** You must configure disk space to include mediafs storage with the **disk config** command before you can run cache streaming media using RealProxy.

# Enabling Transparent Caching of RTSP Traffic Using WCCP-Enabled Routers

During transparent caching, the user's network traffic flows through the WCCP-enabled router rather than through the Content Engine to access streaming media.

## Requirements

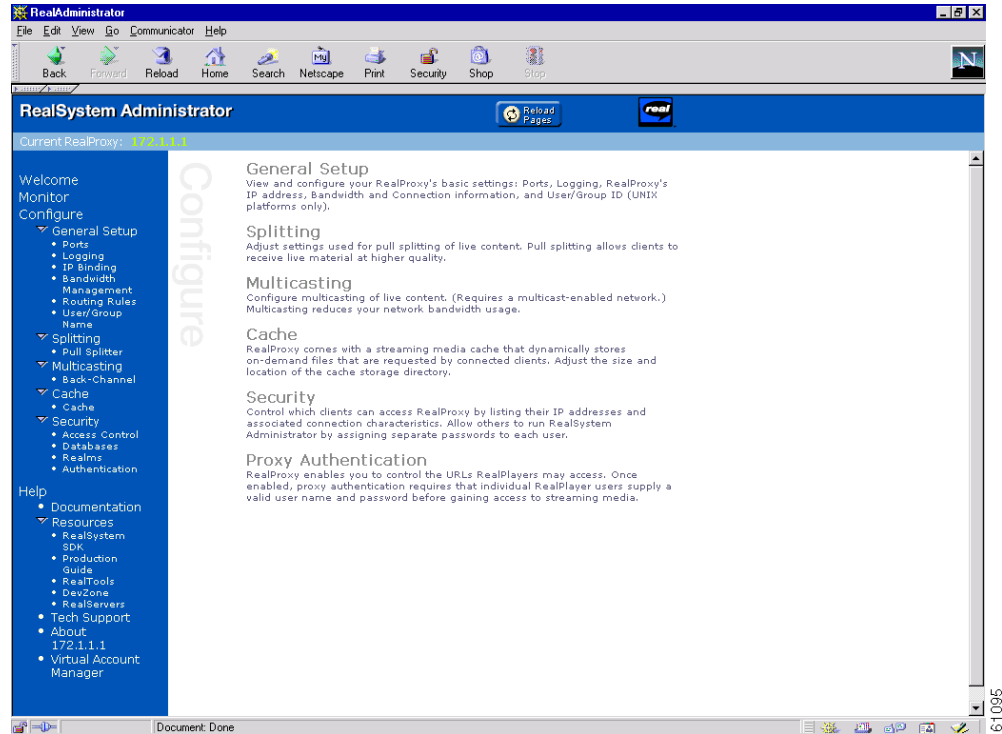
- Content Engine running ACNS 4.1 or later software
- RealProxy software installed with mediafs partitions mounted
- RealNetworks, Inc., license key
- IP addresses of the RealProxy and routers

## Procedure

To enable transparent redirection of RTSP traffic to the RealProxy, follow these steps:

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- Step 1** Enable RealProxy on the Content Engine. See the [“Enabling RealProxy on the Content Engine”](#) section on page 10-1.
- Step 2** On the routers running WCCP Version 2, turn the WCCP feature on for the specified service group used to redirect RTSP traffic to the Content Engine. For more information on router commands, see [Appendix B, “Web Cache Communication Protocol Version 2.”](#)
- ```
router(config)# ip wccp 80
```
- Step 3** Configure the outbound interfaces to the Internet and enter interface configuration mode. In the following example, the outbound interface is the Ethernet 0 device.
- ```
router(config)# interface Ethernet 0
```
- Step 4** Enable WCCP redirection to service group 80 on the interface specified in [Step 3](#).
- ```
router(interface)# ip wccp 80 redirect out
```
- Step 5** Set the WCCP Version 2 parameters on the Content Engine.
- In the following example, the WCCP Version 2-enabled routers have the IP addresses 172.16.25.25 and 172.16.24.24.
- ```
ContentEngine(config)# wccp version 2
ContentEngine(config)# wccp router-list 1 172.16.25.25 172.16.24.24
ContentEngine(config)# wccp media-cache router-list-num 1
```
- Step 6** Save the new configuration.
- ```
ContentEngine# copy running-config startup-config
```
- Step 7** Configure the RealProxy parameters as needed with the RealSystem administrator GUI, shown in [Figure 10-2](#). For documentation regarding the RealSystem administrator GUI, click **Documentation** on that page.

Figure 10-2 Content Engine Management GUI—RealProxy Administrator GUI



Enabling Conventional Proxy Caching of RTSP Traffic

During conventional proxy caching, the user media player is pointed to the Content Engine rather than to a WCCP-enabled router to access streaming media.

Requirements

- Content Engine running ACNS 4.1 or later software
- RealProxy software installed with mediafs partitions mounted
- RealNetworks, Inc., license key
- IP address of the RealProxy

Procedure

To configure the Content Engine to service RealPlayer clients with the RealProxy on the Content Engine, perform the following steps:

- Step 1** Enable RealProxy on the Content Engine. See the [“Enabling RealProxy on the Content Engine”](#) section on page 10-1.

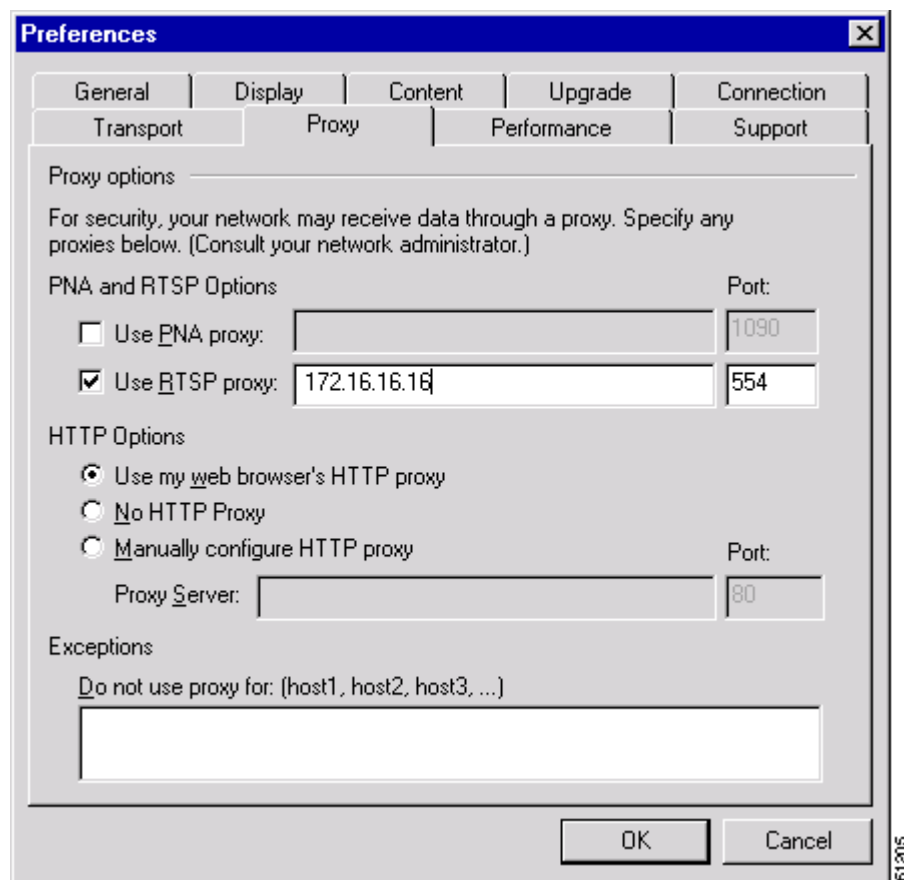
Step 2 Configure the Content Engine to listen for RTSP traffic on a specified port. The standard RTSP port is 554.

```
ContentEngine# rtsp proxy incoming 554
```

Step 3 Configure RealPlayer 8.01 clients to use the RealProxy on the Content Engine. (See [Figure 10-3](#).)

- a. Open RealPlayer.
- b. Choose **View > Preferences**.
- c. Click the **Proxy** tab.
- d. Check the **Use RTSP proxy** check box.
- e. Enter the IP address of the Content Engine in the Use RTSP proxy field.
- f. In the Port field, enter the port number that you entered in [Step 2](#).
- g. Click **OK**.

Figure 10-3 RealPlayer 8.01 Configured to Use Content Engine as Conventional Proxy for RTSP Traffic



- Step 4** Configure the RealProxy parameters as needed with the RealSystem administrator GUI. The RealSystem Administrator Configuration page is shown in [Figure 10-2](#). RealPlayer is now able to use the Content Engine as a RealProxy to fetch streaming objects. For more information on setting up the RealSystem components used with the RealProxy, refer to the readme “Setting Up RealSystem Server” and “Setting Up RealSystem Player” sections at the following URL:
- <http://service.real.com/help/library/guides/proxy/readme.htm#5>
- Step 5** Save the Content Engine configuration to Flash memory.
- ```
ContentEngine# copy running-config startup-config
```
- 

## RealProxy Considerations

Use the following sections to help you configure additional features on the RealProxy.

### Disabling RealMedia Caching

The RealProxy player comes with a streaming media cache of its own for the replication of on-demand content. However, an administrator may wish to disable caching for various reasons:

- To collect more accurate data regarding cache hits or misses
- To prevent delivery of stale data
- To prevent personalized content by users

To prevent caching of all material from all servers and the RealProxy, follow these steps:

**Note**

The administrator, usernames, and all associated passwords configured on the Content Engine are not synchronized with the RealProxy authentication database. Once you have accessed the RealProxy GUI page configure other RealProxy users.

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- Step 1** Access the RealSystem Administrator GUI page by clicking the **Admin** button on the RealProxy page of the Content Engine management GUI. (See [Figure 10-1](#).) You must enable the RealProxy before you can access the **Admin** button on this page.)
- Step 2** Choose **Configure > Cache**.
- Step 3** In the Enable Caching field, choose **No**.
- Step 4** Click **Apply**.
- Step 5** Restart the RealProxy by restarting the Content Engine GUI.
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## Streaming On-Demand Clips

All on-demand clips are automatically available to the Content Engine. If there is content served by your RealServer that you do not want to be cached, see the [“Disabling RealMedia Caching”](#) section on page 10-7.

## Unicasting, Splitting, and Multicasting

Live clips are not available to caching software; the RealProxy will still proxy the live broadcasts for clients. RealServer acts as a source for live splitting, and the RealProxy acts as a splitter.

## Access Control

If a client requests a cached stream, the RealProxy sends the request to the source RealServer for permission before allowing the client to play the stream. If RealServer denies the request, the RealProxy does not allow the client to receive the stream.

You can block a single RealProxy from caching the material served by your RealServer by creating an access control rule from the RealSystem Administrator GUI that prohibits the IP address of that RealProxy from connecting to your RealServer. You can also restrict access to content based on the number of players and bandwidth.

The RealProxy cannot cache live broadcasts, because no actual downloadable file is there to cache. However, the RealProxy includes an ability to “share” live streams among clients and thus reduce the bandwidth required from a transmitter. RealServer and the RealProxy communicate through live splitting; RealServer is preconfigured to act as a transmitter, and the RealProxy is automatically set up to act as a receiver.

A description of the Real-Time Streaming Protocol (RTSP) is available as IETF RFC 2326.

## RealProxy Examples

The following example displays RTSP request statistics. The statistics reported are the total number of requests served, the total number of cache hits and misses, the total demand pass-through, and the total number of live connections, either by splitting or by live pass-through.

```
ContentEngine# show statistics mediacache real requests
Media Cache Statistics - Requests

```

|                          | Total | % of Requests |
|--------------------------|-------|---------------|
| Total Received Requests: | 17    | -             |
| Demand Cache Hit:        | 11    | 64.7          |
| Demand Cache Miss:       | 6     | 35.3          |
| Demand Pass-Through:     | 0     | 0.0           |
| Live Split:              | 0     | 0.0           |
| Live Pass-Through:       | 0     | 0.0           |

The following example displays RTSP savings statistics. In this example, the statistics reported are the total number of requests served, the total number of cache hits and misses, the bytes delivered, and the savings incurred by caching.

```
ContentEngine# show statistics mediacache real savings
Media Cache Statistics - Savings
 Requests Bytes

Total: 17 16666028
Hits: 11 3656524
Miss: 6 13009504
Savings: 64.7 % 21.9 %
ContentEngine#
```

