

Configuring Transparent and Proxy Media Redirection Using ACNS Software 4.x

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Command Summary

Related Information

Introduction

This document describes how to configure the Cisco Cache/Content Engine for transparent and proxy media caching using Web Cache Coordination Protocol (WCCP) version 2. Cisco ACNS Release 4.x, includes, as an option, the RealProxy from RealNetworks, Inc. to support both stream splitting (distributing live feeds) and streaming media caching (on-demand content) in both Real-Time Streaming Protocol (RTSP)-based streaming and other Real PNM (RealNetworks metafile) formats.

The Content Engine can be configured to transparently accept RTSP requests redirected from the WCCP router, as well as traditional proxy-style RTSP requests from RealPlayer client software. Streaming media caching provides content on demand to the extent that, if a user has already viewed a cached streaming media file, it can be served to subsequent users without the requirement to connect to the origin server. Be aware that live broadcasts cannot be cached.

To configure the Content Engine to accept RTSP traffic, complete these steps:

1. Issue the **rtsp proxy** command in global configuration mode for entering the IP address, port, and the license used in the RealProxy of the Content Engine.
2. Issue the **wccp media-cache** global configuration command to register the Content Engine with any WCCP-enabled routers.

Streaming media objects are cached in the media file system (mediafs) disk partitions while the RealProxy software is copied to the software file system (swfs) partition as part of the installation procedure. Issue the **disk** command to create the mediafs partitions; issue the **mediafs** command to maintain these partitions (refer to Maintaining the Hard Disk Storage for further information on disk partitions). The RealProxy software can be administered with the RealAdministrator GUI (to access this page, the default username/password is admin/diamond).

To configure WCCP-enabled routers, you need to issue the **wccp service-group 80** command. Command output is shown in the Configurations section.

Before You Begin

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Prerequisites

There are no specific prerequisites for this document.

Requirements

Readers of this document should have knowledge of these topics:

- Content Engine running ACNS Software Release 4.x or later
- RealProxy software installed with mediafs partitions mounted

Note: You must purchase a license key in order to activate the RealProxy features in the Cache software. For ordering on Cisco.com, refer to Ordering.

Components Used

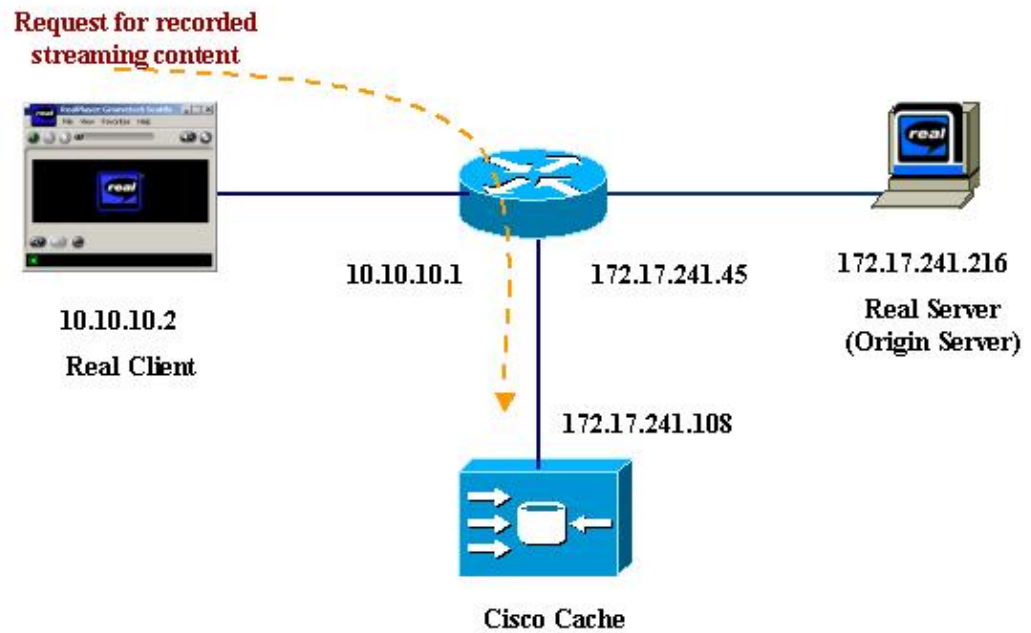
The information in this document is based on these software and hardware versions:

- Cisco Content Engine 590 running Cisco ACNS Software Release 4.x or later in a lab environment with cleared configurations
- Cisco 7513 Router running Cisco IOS Software Release 12.0.18(S)

Configure

Note: To find additional information on the commands used in this document, use the Command Lookup Tool (registered customers only) .

Network Diagram



Configurations

Cisco Cache Engine 560 (Cisco ACNS Software Release 4.x)

```

hostname disaster
!
ip domain-name cisco.com
!
interface FastEthernet 0/0
ip address 172.17.241.108 255.255.255.0
exit
interface FastEthernet 0/1
shutdown
exit
!
ip default-gateway 172.17.241.45

```

```
!  
ip name-server 144.254.6.77  
!  
!  
wccp router-list 1 172.17.241.29 172.17.241.31 172.17.241.45  
wccp web-cache router-list-num 1  
wccp media-cache router-list-num 1  
wccp version 2  
!  
!  
rtsp proxy media-real license-key <removed>  
rtsp proxy media-real ip-address 172.17.241.108  
rtsp proxy media-real enable  
rtsp proxy incoming 554  
rtsp proxy l4-switch enable  
!  
!  
username admin password 1 GnlNqzm/arxcI  
username admin privilege 15  
username cisco password 1 714DWnzYTRHC.  
username cisco privilege 15  
!  
!
```

```
Building configuration...  
Current configuration : 3071 bytes  
!  
version 12.0  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
no service single-slot-reload-enable  
!  
hostname lsd
```

```
!  
ip subnet-zero  
ip wccp web-cache  
ip wccp 80  
ip cef  
no ip domain-lookup  
ip domain-name cisco.com.  
ip name-server 144.254.6.77  
!  
interface Ethernet5/0  
    ip address 172.17.241.45 255.255.255.0  
    no ip directed-broadcast  
    ip wccp 80 redirect out  
!  
interface Ethernet5/1  
    ip address 10.10.10.1 255.255.255.0  
    no ip directed-broadcast  
!  
ip classless  
ip route 0.0.0.0 0.0.0.0 172.17.241.1  
!  
line con 0  
    exec-timeout 0 0  
line aux 0  
line vty 0 4  
    password <removed>  
    login  
!  
end
```

debug and show Commands

Before issuing debug commands, refer to [Important Information on Debug Commands](#).

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which

allows you to view an analysis of **show** command output.

```
disaster#show mediafs volumes
```

```
disk00/03 :    mounted    size: 10669934
```

```
disk01/00 :    mounted    size: 14226579
```

```
disk01/02 :    formatted   size: 7113289
```

```
disaster#show statistics mediacache real requests
```

Media Cache Statistics - Requests

	Total	% of Requests
Total Received Requests:	5	-
Demand Cache Hit:	3	60.0
Demand Cache Miss:	2	40.0
Demand Pass-Through:	0	0.0
Live Split:	0	0.0
Live Pass-Through:	0	0.0

```
disaster#show statistics mediacache real savings
```

Media Cache Statistics - Savings

	Requests	Bytes
Total:	5	14617438
Hits:	3	6458830
Miss:	2	8158608
Savings:	60.0 %	44.2 %

```
disaster#show rtsp all
```

Media Types:

 Servicing Real Media

Real Proxy License Key:

 Installed

Media Specific Info:

 Real Proxy IP address: 172.17.241.108

Incoming Proxy-Mode:

 Servicing Proxy mode RTSP connections on port: 554

RTSP Transparent Proxy (WCCP):

Configured for port: 554

RTSP Transparent Proxy (L4 Switch):

Configured for port: 554

disaster#**show wccp 80 detail**

Service Details for Media Cache Service

Service Enabled : Yes
Service Priority : 200
Service Protocol : 6
Application : Streaming
Service Flags (in Hex) : 512
Service Ports : 554 0 0 0
: 0 0 0 0
Security Enabled for Service : No
Multicast Enabled for Service : No
Weight for this Web-CE: 0

lsd#**show ip wccp 80 detail**

WCCP Cache-Engine information:

IP Address: 172.17.241.108
Protocol Version: 2.0
State: Usable
Redirection: GRE
Initial Hash Info: 00000000000000000000000000000000
00000000000000000000000000000000
Assigned Hash Info: FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
Hash Allotment: 256 (100.00%)
Packets Redirected: 35
Connect Time: 23:41:34

lsd#**show ip wccp**

Global WCCP information:

Router information:

Router Identifier: 172.17.241.45

Protocol Version: 2.0

Service Identifier: web-cache

Number of Cache Engines: 1
Number of routers: 1
Total Packets Redirected: 0
Total Packets Fast Redirected: 0
Total Packets CEF Redirected: 0
Total Packets DCEF Redirected: 0
Redirect access-list: -none-
Packets Denied Redirect (ACL): 0
Packets Denied Redirect (Policy): 0
Total Packets Unassigned: 0
Group access-list: -none-
Total Messages Denied to Group: 0
Total Authentication failures: 0
Policy Tag: 0
Policy Type: none

Service Identifier: 80

Number of Cache Engines: 1
Number of routers: 1
Total Packets Redirected: 35
Total Packets Fast Redirected: 0
Total Packets CEF Redirected: 35
Total Packets DCEF Redirected: 0
Redirect access-list: -none-
Packets Denied Redirect (ACL): 0
Packets Denied Redirect (Policy): 0
Total Packets Unassigned: 0
Group access-list: -none-
Total Messages Denied to Group: 0

Total Authentication failures: 0
 Policy Tag: 0
 Policy Type: none

Cache Engine show Commands

show Command	Description
show wccp content-engines	Displays WCCP Content Engine information.
show wccp flows media-cache	Displays media caching service packet flows.
show wccp routers	Displays WCCP router list.
show wccp services	Displays WCCP services configured.
show wccp slowstart	Displays WCCP slow start.
show wccp status	Displays WCCP running status.
show statistics mediacache real savings	Displays savings statistics.
show statistics mediacache real requests	Displays request statistics.
show rtsp all	Displays all RTSP configuration.
show rtsp proxy	Displays proxy mode configuration.
show mediafs volumes	Displays mediafs volumes.

Cache Engine debug Commands

debug Command	Description
debug wccp all	Enables WCCP to turn on all debugging.
debug wccp events	Enables WCCP events.
debug wccp packets	Enables WCCP packet-related information.

Router show commands

show Command	Description
show ip wccp 80 detail	Displays Cache Engine and WCCP router statistics for a particular service group.
show ip wccp 80 view	Displays service group view information

Router debug commands

debug Command	Description
debug ip wccp events	Displays WCCP events.
debug ip wccp packets	Displays WCCP packet-related information.

Command Summary

These Cache Engine commands were used in this configuration:

- **wccp version** *{1 | 2}*
- **wccp router-list** *number ip-address*
- **wccp media-cache router-list-num** *number*
- **rtsp proxy media-real license-key** *key*
- **rtsp proxy media-real ip-address** *ip-address*
- **rtsp proxy media-real** *enable*
- **rtsp proxy incoming** *port*

These are the router commands that were used in this configuration:

- **ip wccp** {web-cache | **service-number**}
- **ip wccp** {web-cache | **service-number**} **redirect out**

Related Information

- **Cache Engine Documentation**
- **Cisco ACNS Software Caching Configuration Guide, Release 4.2**
- **Technical Support – Cisco Systems**

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