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# Release Notes for Cisco Cache Engine, Version 1.7.6

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## July 1999

These release notes are for use with *Using the Cisco Cache Engine, Version 1.7* publication and contain information that was not available for inclusion in that manual. These notes discuss the following topics:

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## New Features

The following features are now supported in Version 1.7.6:

- Web Cache Communication Protocol (WCCP) Version 2 [CSCdm09288]
- Simple Network Management Protocol (SNMP) Agent [CSCdm19890]

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## Web Cache Communication Protocol Version 2

Web Cache Communication Protocol (WCCP) Version 2 contains the following features:

- Multiple router support
- Improved security
- Faster throughput

The following WCCP Version 2 features are not supported in Version 1.7.6:

- Reverse proxy
- Load bypass
- Authentication bypass
- Multicast address

Refer to the section “Related Documentation” for additional information on WCCP Version 2.

The Cache Engine Management Interface GUI has been updated to support WCCP Version 2 and the Web Cache service, which is only available with WCCP Version 2.

To enable WCCP Version 2 from the GUI, click **Config** and select the **WCCP** option. Select **Version 2** to enable WCCP Version 2. Version 2 allows for one **Router List**. Enter the IP address of every router which will redirect traffic to this cache. Click **UPDATE** to implement your changes.

To configure the Cache Engine to cache standard web traffic (outgoing to port 80 HTTP requests) for WCCP Version 2 from the GUI, click **Config** and select the **Web Cache** option. Click **HELP** for information on enabling and configuring the web cache service. The **web cache service** handles large collections of destination World Wide Web servers with various IP addresses throughout the network. The network content, rather than being duplicated across all Cache Engines, is assigned to a particular Cache Engine.

## Simple Network Management Protocol Agent

An SNMP v1/v2c agent is supported in Version 1.7.6. This SNMP agent can be remotely monitored from a Network Management Station (NMS). This agent can be managed by an SNMP version-1 (SNMP v1) or version-2c (SNMP v2c) manager. The agent supports all MIB-II groups, except the EGP group. The agent can generate SNMPv1-style traps.

The Cisco Cache Engine Management Information Base (MIB) specifies the network management variables associated with the Cache Engine that are stored in the agent. The Cisco Structure of Management Information (SMI) defines the syntax used in the Cisco MIB. The Cisco Cache Engine MIB and Cisco SMI files can be downloaded using a browser from the SNMP Help page in the Cache Engine Management Interface GUI. These files are required by the network management application running on the NMS.

The Cache Engine Management Interface GUI has been updated to support the configuration of the SNMP agent. To configure SNMP on the Cache Engine, click **Reporting** and select the **SNMP** option. Click **HELP** for information on enabling and configuring SNMP on the Cache Engine.

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## Changed Information

### Location of Home Router Field

The **Home Router** field is no longer on the Cache Engine Management Interface GUI **Config** menu, **Basic** Configuration option page. The **Home Router** field has been moved to the Cache Engine Management Interface GUI **Config** menu, **WCCP** option page. Select **Version 1** to enable WCCP Version 1. Enter a single WCCP v1 **Home Router**. Click **UPDATE** to implement your changes.

### Installation Changes

The installation for Version 1.7.6 is different than documented in the *Using the Cisco Cache Engine, Version 1.7* publication. Refer to the section “Related Documentation” for CCO location for the updated chapter 2, “Installing the Cache Engines” in the *Using the Cisco Cache Engine, Version 1.7* publication. The following changes are described in the updated chapter:

- Section “Collecting the Information Required for Configuration” on page 2-2. Before you install the Cache Engine, you need to know what version number of WCCP that needs to be configured (Version 1 or Version 2). When running WCCP Version 2, you can enter a list of routers instead of a single Home Router.
- Section “Initializing the Cache Engine Configuration” on page 2-7. You are no longer prompted for the “WCCP Home Router” after the operating system has booted when you can enter or override the basic configuration parameters.
- Section “Enabling Cache Support on the Router” on page 2-10. Ensure that the router is running a release of the Cisco IOS software that includes WCCP. You must upgrade the Cisco IOS software if it does not have this support before you can continue.

IOS versions before 12.0(3)T support only WCCP Version 1. IOS versions between 12.0(3)T and 12.0(5)T support only WCCP Version 2. IOS version 12.0(5)T or later support both WCCP Version 1 and Version 2. In IOS version 12.0(5)T or later, the default WCCP version is Version 2. You can override the WCCP default, by using the global configuration command **ip wccp version 1**.

If you have WCCP Version 1 configured and attempt to configure any WCCP Version 2 specific features, you will receive a configuration error.

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**Note** When upgrading to Version 1.7.6 from a previous release, the Cache Engine software automatically preserves the value of the “Home Router” that previously existed in the configuration and automatically enables WCCP Version 1. If there was no value for the “Home Router” set in the previous configuration, then after the upgrade to Version 1.7.6, WCCP is automatically configured to be disabled. If you want to use WCCP Version 2 on Version 1.7.6 after upgrading your Cache Engine, click **Config** on the Cache Engine Management Interface GUI and select the **WCCP** option. Select **Version 2** to enable WCCP Version 2. Version 2 allows for one **Router List**. Enter the IP address of every router which will redirect traffic to this cache. Click **UPDATE** to implement your changes.

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- To enable cache support on the router for WCCP Version 1, enter:

```
ip wccp enable
```

To have the interface redirect packets for port 80 to the Cache Engine, enter the following command for each interface:

```
ip web-cache redirect
```

- To enable cache support on the router for WCCP Version 2, enter:

```
ip wccp web-cache
```

To have the interface redirect packets for port 80 to the Cache Engine, enter the following command for each interface:

```
ip wccp web-cache redirect out
```

## Resolved Caveats

- Problems with URL filtering of badurl/goodurl list. URL blocking can now detect duplicate entries when using bad site blocking. URLs will only be considered a duplicate if there is already an URL in the list that would block the new URL (e.g., www.primenet.com/~jahred will not be added to a list that already contains www.primenet.com since it would be blocked by the already existing URL. Whereas www.primenet.com will be added to a list that already contains www.primenet.com/~jahred). The online help was fixed to reflect correct good url list format. [CSCdm54309]
- Problems with xoom.com. The following error is received from Netscape whenever a server responds to a Cache Engine request without any HTTP headers: "Connection: close Frame ALERT! This document is designed to be viewed using Frame Features. If you are seeing this message, please consider upgrading to a frames-compatible browser." The user will no longer see this message and the HTML page is properly displayed in the browser. [CSCdm25619]
- The telnet server does not require username or password from a telnet client. When a user is accessing the telnet server of the Cache Engine with a telnet client, the user is now prompted for a username and password. The account associated with the username must have been given read/write administration privilege. [CSCdm40245]
- Version 1.7.x has trouble parsing forms. The default value for the TCP configuration parameters client and server read/write timeout values were changed from 30 seconds to 120 seconds. The short timeout value caused users to get a server timeout error for a POST operation if there was a lot of associated server processing required. [CSCdm32020]
- The TCP satellite scaling options did not work properly. TCP tuning parameters can now be used to tune for use with a satellite link. [CSCdm20091]
- Receive connection options must be set before connecting. A change made to the TCP tuning parameters via the GUI now take effect for any new connection established. A reboot of the Cache Engine is not required. [CSCdm07978]
- The cache does not work with an HTTP 0.9 request with a single \r\n. The Cache Engine now properly handles an HTTP 0.9 request that contains only a single \r\n after the HTTP header. [CSCdm19911]
- URL blocking needs to support 20,000 bad sites. The badurl.lst file can now contain up to 20,000 entries in the list of bad URL sites to be blocked. [CSCdm19889]
- Disk errors (both read and write) sometimes appear. These errors are detected and handled. If they become too frequent, WCCP is shut off and an event is logged. [CSCdm21659]
- Customer request for graphics in block page. This is now supported. [CSCdm32507]

- The IOS software does not have a configuration mode to allow a user to switch between WCCP 1 and 2 without switching IOS images and without rebooting. IOS 12.0(5)T or later router releases support both WCCP Version 1 and Version 2. [CSCdm09288]
- If you issue the **ping** command when using the Recovery floppy diskette, the system defaults into an infinite loop. To stop the infinite loop, you must reboot the Cache Engine. The workaround for this problem is to use a count variable with the **ping** command. For example, the site, www.domain.com, will be pinged three times when the following command is entered:
  - > **ping "domain.com", 3**
- When using the recovery floppy and this infinity ping problem occurs, it is best to reboot the Cache Engine. [CSCdj92645]

## Unresolved Caveats

- After power cycling a Cache Engine, you may see a bad disk label error message, and the system will fail to boot. This can persist for up to three power cycles. If the problem continues, contact TAC. [CSCdj66667]
- The information collected by the Address Resolution Protocol (ARP) requests is overwritten by subsequent responses. This problem occurs when a routing entry is created using an invalid subnet mask. This entry makes the Cache Engine to contact the ARP for the MAC addresses of hosts that are not connected directly to the network on which the Cache Engine resides. However, the routers answer the ARP requests, acting as a proxy agent. In configurations where more than one router is attached to the network on which the Cache Engine resides, multiple proxy ARP replies may be received. This causes subsequent replies to overwrite the initial reply message. When this occurs, an error message is generated by the Cache Engine that includes the phrase "(tNetTask): arp info overwritten for." This problem will be corrected in future releases. For now, ignore the error messages generated in these scenarios. [CSCdj76551]
- Since the Cache Engine has one million slots in its table, and it uses a hashing with CRC32 on the URL, distribution should be excellent. Instead, a collision occurs about 1/63,000 because the directory code uses a CRC32 hash for fast lookups. Although CRC32 is excellent at hashing dissimilar strings, it is less effective at hashing similar strings. Because many URLs are very similar, there are more hash collisions than one might expect. An improved hash algorithm will be used in future releases. [CSCdj80214]
- "Uptime" is not a reliable measure if the Time/Date is modified after you boot the Cache Engine. This is because the time is stamped during boot up and then compared with the current time to measure how long the Cache Engine has been up. The Monitor section contains a Java applet that may not function with some Beta versions of Netscape Navigator. [CSCdk10829]
- Using any unsupported **VxWorks** commands on the Cache Engine's command line may cause the Cache Engine to fail. Supported **VxWorks** commands are described in two locations:
  1. Appendix B of the *Using Cisco Cache Engine Version 1.7* documentation.
  2. On the web at <http://www.cisco.com/univercd/cc/td/doc/product/iaabu/webcache/ce17/ver17/wc17cli.htm>

Using unsupported **VxWorks** commands on the Cache Engine command line may cause unrecoverable damage to your Cache Engine. For example, if you use the **diskInit** command, you will lose access to all DOS partitions on your Cache Engine. Subsequent attempts to boot the Cache Engine will fail because the boot files have been deleted. The only workaround is to contact the TAC. [CSCdk11957]
- If two Internet Cache Protocol (ICP) hosts are misconfigured as each other's parent cache, an infinite loop results. [CSCdk17264]

- If the following (example) sites are listed in a badurl.lst file, you cannot browse to these (example) locations separately:

http://www.gm.com/

http://www.gm.com/tools

However, you can browse to the http://www.gm.com/vehicles site, but you should not be allowed to browse there due to the http://www.gm.com/ entry in the badurl.lst file. Furthermore, rather than blocking a non-functioning gm.com URL starting with a letter after “v”, such as http://www.gm.com/vvv, the Cache Engine looks for it and returns an “object-not-found” error. If you combine two different badurl.lst files, at times all entries of one file are blocked, and other times these entries are not blocked. If the badurl.lst file includes only http://www.gm.com/ and http://www.netking.com/, all subdirectories are blocked. [CSCdk23156]

- The Cache Engine fails to automatically detect 10-MB/sec. full-duplex network connections. The connections register as half-duplex because the line-speed autosense detection on the network adapter card does not determine this setting correctly.

The workaround for this problem is to use the **EthernetConfig** command on the Cache Engine’s command line interface to verify your Ethernet link works properly. Connect your Cache Engine to its hub, switch, or router, then use one of the commands below to configure your system:

-> **EthernetConfig(100, “full”)**

-> **EthernetConfig(100, “half”)**

-> **EthernetConfig(10, “full”)**

-> **EthernetConfig(10, “half”)**

You must also attach a console to the Cache Engine to initially configure the engine. This can be a normal VT100-style console, or a laptop or desktop computer that can attach to the engine’s serial port. Once you have completed the basic configuration, you can manage the Cache Engine using a web browser from any machine. [CSCdk24099]

- It is difficult to force the Cache Engine to be bypassed using the Microsoft Internet Explorer web browser version 4.0, because IE does not send pragma:no cache HTTP headers in transparent mode. The workaround is to use the Netscape Navigator web browser and press Shift and Reload. [CSCdk40032]
- Some sites report that large file transfers are interrupted during very slow network conditions. Adjust the TCP settings (click Tuning and select the TCP option) from the web graphical user interface (GUI) if you experience this problem. See Chapter 3, “Managing the Cache Engine” and the section “Working with Tuning Options” in *Using Cisco Cache Engine, Version 1.7* document for a description of the TCP tuning options. [CSCdk49101]
- Some sites report that they receive an incorrect personal customized home page at select web sites. If you encounter this problem, disable cookie caching (click Tuning and select the Freshness option) by selecting “No” on the Freshness web GUI page. See Chapter 3, “Managing the Cache Engine” and the subsection “Changing How Objects are Cached Using Freshness” under the section “Working with Tuning Options” in *Using Cisco Cache Engine, Version 1.7* document to view the Freshness page options. [CSCdk83258]

## Related Documentation

- The *Using the Cisco Cache Engine, Version 1.7* publication that ships with the Cache Engine is available on Cisco Connection Online (CCO) at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/iaabu/webcache/ce17/ver17/index.htm>

- The updated Chapter 2 “Installing the Cache Engine” in the *Using the Cisco Cache Engine, Version 1.7* publication is available on Cisco Connection Online (CCO) at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/iaabu/webcache/ce17/ver17/wc17inst.htm>

- The new Appendix D “Web Cache Communication Protocol Version 2” of the *Using the Cisco Cache Engine, Version 1.7* publication is available on Cisco Connection Online (CCO) at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/iaabu/webcache/ce17/ver17/wc17wcc2.htm>

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**Note** For administering WCCP Version 2 with a Cisco Cache Engine, Version 2.0.x, refer to Appendix C “Web Cache Communication Protocol Version 2” of the *Cisco Cache Engine User Guide, Version 2.0.0* publication that ships with the Cache Engine. This appendix is available on Cisco Connection Online (CCO) at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/iaabu/webcache/ce20/ver20/wc20wcc2.htm>

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Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco’s customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: [cco.cisco.com](http://cco.cisco.com)
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO’s Frequently Asked Questions (FAQ), contact [cco-help@cisco.com](mailto:cco-help@cisco.com). For additional information, contact [cco-team@cisco.com](mailto:cco-team@cisco.com).

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## CD-ROM Documentation

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