Release Note for the Cisco Global Site Selector, Release 3.0(x)

November 14, 2008

Note The most current Cisco documentation for released products is available on Cisco.com.

Contents

This release note applies to the software versions 3.0(2) and 3.0(1) for the Cisco Global Site Selector (GSS).

For information on version 3.0(x) commands and features, refer to the GSS documentation located on Cisco.com. This document contains the following sections:

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Upgrading or Downgrading the GSS Software

The *Cisco Global Site Selector Administration Guide* contains the required information to upgrade your GSS software. See Appendix A, "Performing GSS Software Upgrades and Downgrades" for information about the following topics:

- Understanding Cisco-Supported hardware and software compatibility for the GSS
- Understanding the software upgrade sequence to upgrade to 3.0(x)
- Preparing the GSS for a software upgrade
- Preparing the GSS for a software upgrade when CNR is loaded
- Installing a new software image
- Preparing to downgrade from software version 3.0(x)
- Downgrading software versions on GSS devices

Operating Considerations for Software Version 3.0(x)

The operating considerations for software version 3.0(x) are as follows:

- Cisco LocalDirector does not reply properly to TCP keepalives sent on port 23 from a GSS device. To correct this behavior, specify a different keepalive method with LocalDirector or directly probe the servers located behind LocalDirector. Refer to the LocalDirector documentation for more information.
- The GSS model 4480 cannot support all of the version 3.0(x) software functionality when it is operating as the primary GSSM; therefore, you cannot use this combination of hardware and software platforms as a primary or standby GSSM. Because the GSS 4480 is approaching its end-of-life target date, you must contact your Cisco representative regarding a hardware upgrade.

New ANM Support Feature in Software Version 3.0(2)

Software release 3.0(2) enables you to use the Cisco Application Networking Manager (ANM) to activate or suspend the DNS rules and VIP answers that you configure for a GSS mesh. ANM can also retrieve the following statistical information from the primary GSSM for all of the GSS devices in your GSS mesh: VIP operational status, VIP hit count, DNS rule hit count, and DNS rule successful hits.

The software requirements for using ANM with your GSS mesh are as follows:

- ANM software—Version 2.0 or later.
- GSS software—Version 3.0(2) or later installed on each GSS device in the GSS mesh.

For a more information about using ANM with your GSS mesh, including a list of operational considerations, see the *User Guide for the Cisco Application Networking Manager 2.0* located at the following URL: http://www.cisco.com/en/US/docs/net_mgmt/application_networking_manager/2.0/user/guide/User_Guide.html

New Features in Software Version 3.0(1)

The new features associated with software version 3.0(1) are as follows:

- GSS supports up to 16 devices in a GSS cluster—The maximum size of a GSS cluster, or mesh, is now 16 GSS devices. Using software prior to version 3.0(1), the maximum size of a GSS cluster is limited to eight GSS devices.
- GSS supports global manual reactivation of answers and clauses—New global manual reactivation CLI commands and GUI functionality enable you to control when an answer or clause is reactivated after returning to an available state from an offline (answer) or unavailable (clause) state. Using software prior to version 3.0(1), the GSS automatically activates answers or clauses when they return from an offline or unavailable state. For more information, see the "CLI Command Changes in Software Version 3.0(1)" and "GUI Changes in Software Version 3.0(1)" sections.
- GSS supports CPU utilization monitoring—New SNMP MIB and traps enable the GSS to report when the CPU usage rises above, or drops below, specified threshold values. For more information, see the "CLI Command Changes in Software Version 3.0(1)" section.
- GSS CLI supports activation and suspension of DNS rules—New CLI commands enable you to suspend or activate DNS rules. Using software prior to version 3.0(1), you must use the GSS GUI to perform these functions. For more information, see the "CLI Command Changes in Software Version 3.0(1)" section.
- GSS system log messages enhanced—New system log messages indicate that the primary GSSM and the GSS devices in the mesh acknowledge performing the following operations:
  - Synchronization of the GSS configuration.
  - Change in the global manual reactivation function operating state (enabled or disabled).
  - Change in the operating state of an answer or clause by the GSS to Operational Suspend. This syslog message requires that the global manual reactivation function is enabled and the manual reactivation function is enabled on the answer or clause.

  For more information, see the *Cisco Global Site Selector Administration Guide*.
- GSS CLI supports **enable** command password—New password-protect function enables you to control user access to the privileged EXEC mode commands. For more information, see the "CLI Command Changes in Software Version 3.0(1)" section.
- GSS CLI supports display of GSS mesh information—New CLI **show** commands enable you to display DNS rule and answer statistics for all of the GSS devices on the mesh. For more information, see the "CLI Command Changes in Software Version 3.0(1)" section.

Software Version 3.0(2) Open Caveats and Resolved Caveats

The following sections contain the open caveats and resolved caveats in software version 3.0(2):

Resolved Caveats for Software Version 3.0(2)

This section lists the resolved caveats for software version 3.0(2).

- **CSCsu44091**—The GSS needs to provide support for activating and suspending DNS rules and answers using ANM.
- **CSCsv45038**—The GSS DNS server receives a large number of the following log messages from CNR that frequently fill up the gss.log and DNS server log files: Unable to fetch UDP response info from map for the transaction id <id>.
- **CSCsv60530**—When you invoke the CNR shell on a GSS, the Network Registrar CCM and DNS servers may fail to initialize properly.

Open Caveats for Software Version 3.0(2)

The open caveats for software version 3.0(2) are the same as those for software version 3.0(1). For details, see the "Open Caveats for Software Version 3.0(1)" section.

Software Version 3.0(1) Open Caveats, Resolved Caveats, and Command Changes

The following sections contain the open caveats and resolved caveats in software version 3.0(1):

Resolved Caveats for Software Version 3.0(1)

This section lists the resolved caveats for software version 3.0(1).

- **CSCsl06617**—Several commands are missing from the CNR shell of the GSS. The required Linux commands are cat, cp, ftp, more, mv, tail, and top. These commands are file operations to edit, read, or rename the file and are required for ease of use.
- **CSCsq31840**—HTTP-HEAD keepalives on the GSS show an offline status for an answer even when the TCP KALs are working. This issue occurs when both interfaces on the GSS are configured with an IP address and the KALs can be sent from either interface.

- **CSCsq45987**—The DNS server component of a GSS becomes unresponsive and generates a core dump at the time of processing a reply packet from sticky.
- **CSCsq47889**—The GSS configuration server (CRM) reports memory leaks and cores while the GSS **show** commands are run in a loop.
- **CSCsq55602**—The GSS KAL engine consumes 100 percent of the CPU utilization even when no KAL configuration is present on the device.
- **CSCsq75812**—During the decompression and compression of a CNR DNS response that contains additional section records, the GSS may experience an error condition that causes the outgoing UDP packet size to increase beyond 512 bytes in size. This problem can occur even when the GSS does not have a matching GSLB configuration for the additional section records and does not perform additional section load balancing on the DNS response from CNR.
- **CSCsq75894**—When the GSS needs to perform additional server load balancing on a CNR response, it may add new information that causes the outgoing UDP packet size to increase beyond 512 bytes in size.
- **CSCsq91419**—The DRP agent commands do not work on the GSS devices that are not the primary or standby GSSM. Using these commands on non-GSSM devices results in the following error message: "% Command not supported when GSS is not run level 5."
- **CSCsr08580**—Creating a DNS rule using the GUI rule wizard fails and results in the following error message: "A non-Fatal System Error Occurred."
- **CSCsr29409**—The GSS reports memory allocation errors with CNR and stops answering DNS queries.
- **CSCsu08179**—The authoritative bit does not get set in a GSS negative response in which the query matches the domain configured in the domain-list but the query type is unsupported.
- **CSCsu49213**—Running multiple CNR shells may cause the CNR shell to fail intermittently.

Open Caveats for Software Version 3.0(1)

This section lists the open caveats for software version 3.0(1).

- **CSCsg53791**—The primary GSSM creates core files due to defect CSCsg44186. When the primary GSSM comes back up, its global sticky database cannot synchronize with the standby GSSM. Workaround: Reboot both the primary GSSM and the standby GSSM using the **reload** command. After they boot up, the global sticky database should synchronize.
- **CSCsq06966**—A GSS may not respond with the correct answer for some domain requests because not all of the configured domain names propagate from the primary GSSM to the GSS. Workaround: Restart the GSS by using the **gss stop** command followed by the **gss start** command.
- **CSCsr78339**—The GSS may stop forwarding requests to the CNR. When this problem occurs, none of subsequent requests are forwarded to the CNR until you restart the GSS. Workaround: Restart the GSS by using the **gss stop** command followed by the **gss start** command.
- **CSCsu51791**—When using the **gssm restore** *filename* command from the primary GSSM to restore the database on the GSS mesh, the standby GGSM fails to return to an active state. The database on the primary GSSM is restored and synchronized successfully with the other GSS mesh devices, which all return to an active state. Workaround: From the standby GSSM, disable and then enable the device using the **gss disable** and g**ss enable** commands to return it to an active state.

CLI Command Changes in Software Version 3.0(1)

Table 1 lists the new CLI commands, keywords, and arguments available in software version 3.0(1) for the new software features described in the "New Features in Software Version 3.0(1)" section.

Table 1 New CLI Commands and Keywords in Software Version 3.0(1)

Mode	Command and Syntax	Description
global server load-balancing configuration	**manual-reactivation** {**activate-mr-answers all** | **activate-mr-clauses all** | **enable**}	This new command manages the global manual reactivation function. The keywords are as follows: • **activate-mr-answers all**—Reactivates all of the answers that the GSS operationally suspended. • **activate-mr-clauses all**—Reactivates all of the clauses that the GSS operationally suspended. • **enable**—Enables the global manual reactivation function. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
global server load-balancing configuration	**answer vip** *ip_address* [**activate** | **location** *name* | **manual-reactivation** {**enable** | **disable**} | **name** *name* | **suspend**] **answer cra** *ip_address* [**activate** | **delay** *number* | **disable** | **enable** | **location** *name* | **manual-reactivation** {**enable** | **disable**} | **name** *name* | **suspend**] **answer ns** *ip_address* [**activate** | **disable** | **domain** *name* | **enable** | **location** *name* | **manual-reactivation** {**enable** | **disable**} | **name** *name* | **suspend**]	The **answer** command now includes the optional **manual-reactivation** keyword. This keyword determines whether the GSS reactivates the answer automatically when its state changes from offline to online or if you must manually reactivate the answer. Use one of the following keywords with this option: • **enable**—Enables the manual reactivation function. The GSS suspends the answer if it goes offline and changes its status to "Operational Suspend." The answer remains suspended until you reactivate it. • **disable**—Disables manual reactivation (default). If the answer goes offline, the GSS automatically reactivates the answer when it returns to an online state. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.

Table 1 New CLI Commands and Keywords in Software Version 3.0(1) (continued)

Mode	Command and Syntax	Description
rule configuration	**clause** *number* **vip-group** *name* [**manual-reactivation** {**enable** | **disable**} | **method** {**round-robin** | **least-loaded** | **ordered** | **weighted-round-robin** | **hashed** {**domain-name** | **source-address** | **both**}} [**count** *number* | **ttl** *number*]]	The **clause** command now includes the optional **manual-reactivation** keyword. This keyword determines whether or not the GSS reactivates the clause automatically when it becomes available for use after being unavailable because all the answers in the answer group associated with it were either offline or overloaded. Use one of the following keywords with this option: • **enable**—Enables the manual reactivation function. The GSS suspends the clause if it goes offline and changes its status to "Operational Suspend." The clause remains suspended until you reactivate it. • **disable**—Disables manual reactivation (default). If the clause goes offline, the GSS automatically reactivates the clause when it returns to an online state. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
	clause *number* **ns-group** *name* [**manual-reactivation** {**enable** | **disable**} | **method** {**round-robin** | **least-loaded** | **ordered** | **weighted-round-robin** | **hashed** {**domain-name** | **source-address** | **both**}}]	
	clause *number* **cra-group** *name* [**manual-reactivation** {**enable** | **disable**} | **method boomerang** | **fragment** *number* | **ip-ttl** *number* | **max-prop-delay** *number* | **pad** *number* | **secret** *key* | **server-delay** *number* | **ttl** *number*]	
privileged EXEC	**enable-passwd**	This new command controls user access to the privileged Exec mode for users that remotely connect to the GSS using Telnet or SSH. When you enter this command, the CLI prompts you for an admin password and then to define and confirm the enable password. For more information, see the *Cisco Global Site Selector Getting Started Guide*.
global server load-balancing configuration	**dns rule** *name* {**activate** | **owner** *name* | **source-address-list** *name* | **domain-list** *name* | **query** {**a** | **all**} | **suspend**}	The **dns rule** command now includes the following keywords: • **activate**—Reactivates the operation of a suspended DNS rule. • **suspend**—Suspends a DNS rule, preventing requests from being processed by it. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
global configuration	**show statistics dns answer** [**list** | **verbose** | *answer_name*]	The **show statistics dns answer** command now contains the optional **verbose** keyword that enables you to display detailed statistics for each answer. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.

Table 1 New CLI Commands and Keywords in Software Version 3.0(1) (continued)

Mode	Command and Syntax	Description
global configuration	**show statistics dns rule** [**list** | *rule_name* [**verbose**]]	The **show statistics dns rule** command now contains the optional **verbose** keyword that enables you to display detailed statistics for each DNS rule. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
privileged EXEC	**show statistics gss-mesh all dns answer** [**type** {**cra** | **ns** | **vip**}] [*ip_address*]	This new command displays answer statistics for all of the online GSS devices in the GSS mesh. The keywords and arguments are as follows: • **type**—(Optional) Specifies statistics for one of the following answer types: – **cra**—Content routing agent answer type – **ns**—DNS name server answer type – **vip**—Virtual IP answer type • *ip_address*—(Optional) IP address of a specific GSS in the GSS mesh. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
privileged EXEC	**show statistics gss-mesh all dns rule** [*rule_name*]	This new command displays rule statistics for all of the online GSS devices in the GSS mesh. The optional *rule_name* argument is the name of the DNS rule that you want to display statistics. For more information, see the *Cisco Global Site Selector CLI-Based Global Server Load-Balancing Configuration Guide*.
global configuration	**snmp-server enable-traps** [**core** | **gslb** [**ans** | **dns** | **kal** | **peer-status**] | **performance** [**cpu-falling-threshold** | **cpu-rising-threshold**] | **snmp** [**authentication** | **cold-start**]]	The **snmp-server enable-traps** command now includes the optional **performance** [**cpu-falling-threshold** | **cpu-rising-threshold**] keywords that enable monitoring of the CPU utilization. The keyword descriptions are as follows: • **performance**—Enables the SNMP CPU usage rising and falling threshold notification for monitoring CPU utilization. • **cpu-falling-threshold**—Enables only the SNMP CPU usage falling threshold notification for monitoring CPU utilization. • **cpu-rising-threshold**—Enables only the SNMP CPU usage rising threshold notification for monitoring CPU utilization. For more information, see the *Cisco Global Site Selector Administration Guide*.

Table 1 New CLI Commands and Keywords in Software Version 3.0(1) (continued)

Mode	Command and Syntax	Description
global configuration	**snmp-server** {**cpu-rising-threshold** *rising_threshold* | **cpu-falling-threshold** *falling_threshold*}	This new command enables you to configure the CPU utilization rising and falling threshold values that determine when the GSS issues either a CPU rising or CPU falling threshold crossing notification. The keywords and arguments are as follows: • **cpu-rising-threshold** *rising_threshold*—Specifies the rising threshold value as a percentage of the total CPU utilization. • **cpu-falling-threshold** *falling_threshold*—Specifies the falling threshold value as a percentage of the total CPU utilization. For more information, see the *Cisco Global Site Selector Administration Guide*.

GUI Changes in Software Version 3.0(1)

Several GUI screens now contain options for configuring the new global manual reactivation function described in the "New Features in Software Version 3.0(1)" section. The modified screens are as follows:

- Resources Tab—The menu options for this tab now contain the Manual Reactivation option for performing the following tasks:
  - Enable or disable the global manual reactivation function.
  - Reactivate all answers that have the manual reactivation function enabled and have been operationally suspended by the GSS.
  - Reactivate all clauses that have the manual reactivation function enabled and have been operationally suspended by the GSS.
- Create New Answer Screen (DNS Rules > Answers > Create Answer)—This screen now contains the Manual Reactivation checkbox option that enables the function for the answer.
- DNS Rule Builder (DNS Rules > DNS Rules > Open Rule Builder)—The section of the builder that is used to configure the DNS rule clauses now contains the Manual Reactivation checkbox option that enables the function for the clause.

For more information, see the *Cisco Global Site Selector GUI-Based Global Server Load-Balancing Configuration Guide*.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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