



Configuring Additional Router Features

This chapter contains instructions and information for entering basic configurations using the command-line interface (CLI).

Contents

- [Configuring the Domain Name and Domain Name Server, page 77](#)
- [Configuring Telnet, HTTP, and XML Host Services, page 79](#)
- [Managing Configuration History and Rollback, page 83](#)
- [Configuring Logging and Logging Correlation, page 88](#)
- [Creating and Modifying User Accounts and User Groups, page 92](#)

Configuring the Domain Name and Domain Name Server

Configure a domain name and Domain Name Server (DNS) for your router to contact other devices on your network efficiently. Use the following guidelines:

- To define a default domain name that the Cisco IOS XR software uses to complete unqualified hostnames (names without a dotted-decimal domain name), use the **domain-name** command in global configuration mode.
- To specify the address of one or more name servers to use for name and address resolution, use the **domain name-server** command in global configuration mode. If no name server address is specified, the default name server is 255.255.255.255 so the DNS lookup can be broadcast to the local network segment. If a DNS server is in the local network, it replies. If not, there might be a server that knows how to forward the DNS request to the correct DNS server.
- Use the **show hosts** command in EXEC mode to display the default domain name, the style of name lookup service, a list of name server hosts, and the cached list of hostnames and addresses.

To configure the DNS and DNS server, follow these steps:

SUMMARY STEPS

1. **configure**
2. **domain name** *domain-name-of-organization*
3. **domain name-server** *ipv4-address*

4. **end** or **commit**
5. **show hosts**

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure Example: RP/0/0/CPU0:router# configure	Enters global configuration mode.
Step 2	domain name <i>domain-name-of-organization</i> Example: RP/0/0/CPU0:router(config)# domain name cisco.com	Defines a default domain name used to complete unqualified hostnames.
Step 3	domain name-server <i>ipv4-address</i> Example: RP/0/0/CPU0:router(config)# domain name-server 192.168.1.111	Specifies the address of a name server to use for name and address resolution (hosts that supply name information). Note You can enter up to six addresses, but only one for each command.
Step 4	end or commit Example: RP/0/0/CPU0:router(config)# end or RP/0/0/CPU0:router(config)# commit	Saves configuration changes. <ul style="list-style-type: none"> • When you issue the end command, the system prompts you to commit changes: Uncommitted changes found, commit them before exiting(yes/no/cancel)? [cancel]: <ul style="list-style-type: none"> – Entering yes saves configuration changes to the running configuration file, exits the configuration session, and returns the router to EXEC mode. – Entering no exits the configuration session and returns the router to EXEC mode without committing the configuration changes. – Entering cancel leaves the router in the current configuration session without exiting or committing the configuration changes. • Use the commit command to save the configuration changes to the running configuration file and remain within the configuration session.
Step 5	show hosts Example: RP/0/0/CPU0:router(config)# show hosts	Displays all configured name servers.

Examples

The following example shows how the domain name and DNS are configured:

```
RP/0/0/CPU0:router# configure
RP/0/0/CPU0:router(config)# domain name cisco.com
RP/0/0/CPU0:router(config)# domain name-server 10.1.1.1
RP/0/0/CPU0:router(config)# commit
RP/0/0/CPU0:router(config)# end
RP/0/0/CPU0:router# show hosts

Default domain is cisco.com
Name/address lookup uses domain service
Name servers: 10.1.1.1
```

Related Documents

Related Topic	Document Title
Complete descriptions of the domain services commands	<i>Implementing Host Services and Applications on Cisco IOS XR Software module in Cisco IOS XR IP Addresses and Services Configuration Guide for the Cisco XR 12000 Series Router</i>

Configuring Telnet, HTTP, and XML Host Services

For security reasons, some host services are disabled by default. You can enable Host services, such as Telnet, XML, and HTTP by using the commands described in this section. Host services provide the following features:

- Enabling the Telnet server allows users to log in to the router using IPv4 or IPv6 Telnet clients.
- Enabling the XML agent enables XML Common Object Request Broker Architecture (CORBA) agent services so that you can manage and configure the router using an XML interface.

Prerequisites

Ensure the following prerequisites are met before configuring Telnet, HTTP, and XML host services:

- For the XML and HTTP host services, the Manageability package must be installed and activated on the router.
- To enable the Secure Socket Layer (SSL) of the HTTP and XML services, the security package must be installed and activated on the router.

See *Cisco IOS XR System Management Configuration Guide for the Cisco XR 12000 Series Router* for information on installing and activating packages.



Note

This process enables the Telnet, HTTP, and XML host services on the Management Ethernet interfaces. For more information on how to enable these services on other inband interfaces, see *Implementing Management Plane Protection in Cisco IOS XR Software module in Cisco IOS XR System Security Configuration Guide for the Cisco XR 12000 Series Router*.

SUMMARY STEPS

1. **configure**
2. **interface** *MgmtEth interface-path-id*
ipv4 address *ipv4-address subnetmask*
3. **ipv4 virtual address** *ipv4-address subnetmask*
4. **end** or **commit**
5. **exit**
6. **configure**
7. **telnet** {*ipv4 | ipv6*} **server** **max-servers** *limit*
8. **http server**
9. **xml agent**
10. **end** or **commit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure Example: RP/0/0/CPU0:router# configure	Enters global configuration mode.
Step 2	interface <i>MgmtEth interface-path-id</i> ipv4 address <i>ipv4-address subnetmask</i> Example: Active RP RP/0/0/CPU0:router(config)# interface MgmtEth0/RP0/CPU0/0 RP/0/0/CPU0:router(config-if)# ipv4 address 172.29.52.75 255.255.255.0 RP/0/RP0/CPU0:router(config-if)# no shut RP/0/RP0/CPU0:router(config-if)# exit Standby RP RP/0/0/CPU0:router(config)# interface MgmtEth0/RP1/CPU0/0 RP/0/0/CPU0:router(config-if)# ipv4 address 172.29.52.76 255.255.255.0 RP/0/0/CPU0:router(config-if)# no shut RP/0/0/CPU0:router(config-if)# exit	Configures the Management Ethernet ports on the active and standby RPs.
Step 3	ipv4 virtual address <i>ipv4-address subnetmask</i> RP/0/0/CPU0:router(config)# ipv4 virtual address 172.29.52.77 255.255.255.0	Defines an IPv4 virtual address for the Management Ethernet interface.

	Command or Action	Purpose
Step 4	<pre>end or commit</pre> <p>Example: RP/0/0/CPU0:router(config)# end or RP/0/0/CPU0:router(config)# commit </p>	<p>Saves configuration changes.</p> <ul style="list-style-type: none"> When you issue the end command, the system prompts you to commit changes: <pre>Uncommitted changes found, commit them before exiting (yes/no/cancel)? [cancel]:</pre> <ul style="list-style-type: none"> Entering yes saves configuration changes to the running configuration file, exits the configuration session, and returns the router to EXEC mode. Entering no exits the configuration session and returns the router to EXEC mode without committing the configuration changes. Entering cancel leaves the router in the current configuration session without exiting or committing the configuration changes. Use the commit command to save the configuration changes to the running configuration file and remain within the configuration session.
Step 5	<pre>exit</pre> <p>Example: RP/0/0/CPU0:router(config)# exit </p>	Exits global configuration mode.
Step 6	<pre>configure</pre> <p>Example: RP/0/0/CPU0:router# configure </p>	Enters global configuration mode.
Step 7	<pre>telnet ipv4 server max-servers limit or telnet ipv6 server max-servers limit</pre> <p>Example: RP/0/0/CPU0:router(config)# telnet ipv4 server max-servers 5 </p>	Enables Telnet services on the router and specifies the maximum number of allowable Telnet servers.
Step 8	<pre>http server</pre> <p>Example: RP/0/0/CPU0:router(config)# http server </p>	Enables HTTP server on the router.

	Command or Action	Purpose
Step 9	xml agent Example: RP/0/0/CPU0:router(config)# xml agent RP/0/0/CPU0:router(config)# xml agent tty	Enables XML requests on the router.
Step 10	end or commit Example: RP/0/0/CPU0:router(config)# end or RP/0/0/CPU0:router(config)# commit	Saves configuration changes. <ul style="list-style-type: none"> When you issue the end command, the system prompts you to commit changes: <pre>Uncommitted changes found, commit them before exiting(yes/no/cancel)? [cancel]:</pre> <ul style="list-style-type: none"> Entering yes saves configuration changes to the running configuration file, exits the configuration session, and returns the router to EXEC mode. Entering no exits the configuration session and returns the router to EXEC mode without committing the configuration changes. Entering cancel leaves the router in the current configuration session without exiting or committing the configuration changes. Use the commit command to save the configuration changes to the running configuration file and remain within the configuration session.

Examples

The following example shows how the host services are enabled:

```
RP/0/0/CPU0:router# configure
RP/0/0/CPU0:router(config)# interface MgmtEth0/RP0/CPU0/0
RP/0/0/CPU0:router(config)# ipv4 address 172.29.52.75 255.255.255.0
RP/0/0/CPU0:router(config)# ipv4 virtual address 172.29.52.77 255.255.255.0
RP/0/0/CPU0:router(config)# commit
RP/0/0/CPU0:router(config)# exit
RP/0/0/CPU0:router# configure
RP/0/0/CPU0:router(config)# telnet ipv4 server max-servers 5
RP/0/0/CPU0:router(config)# http server
RP/0/0/CPU0:router(config)# xml agent
RP/0/0/CPU0:router(config)# commit
```

Related Documents

Related Topic	Document Title
Installation and activation of the Manageability and Security Packages	<i>Upgrading and Managing Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Management Configuration Guide for the Cisco XR 12000 Series Router</i>
Descriptions of the HTTP and XML server commands	<i>Manageability Commands on Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Management Command Reference for the Cisco XR 12000 Series Router</i>
Descriptions of the Telnet commands	<i>Host Services and Applications Commands on Cisco IOS XR Software</i> module of <i>Cisco IOS XR IP Addresses and Services Command Reference for the Cisco XR 12000 Series Router</i>

Managing Configuration History and Rollback

After each commit operation, the system saves a record of the committed configuration changes. This record contains only the changes made during the configuration session; it does not contain the complete configuration. Each record is assigned a unique ID, known as a *commit ID*.

When multiple commit IDs are present, you can use a commit ID to identify a previous configuration to which to return, or you can use the commit ID to load the configuration changes made during that configuration session. You can also load configuration changes from multiple commit IDs, and you can clear commit IDs. If you are thinking about rolling back the configuration to a specific commit ID, consider the following guidelines:

- You cannot roll back to a configuration that was removed because of package incompatibility. Configuration rollbacks can succeed only when the configuration passes all compatibility checks with the currently active Cisco IOS XR Software release.
- If the system finds an incompatible configuration during rollback, the operation fails and an error appears.

The Cisco IOS XR software automatically saves up to 100 of the most recent commit IDs. The following sections describe how to manage configuration changes and roll back to a previously committed configuration:

- [Displaying the Commit IDs, page 84](#)
- [Displaying the Configuration Changes Recorded in a Commit ID, page 84](#)
- [Previewing Rollback Configuration Changes, page 85](#)
- [Rolling Back the Configuration to a Specific Rollback Point, page 85](#)
- [Rolling Back the Configuration over a Specified Number of Commits, page 86](#)
- [Loading Commit ID Configuration Changes to the Target Configuration, page 86](#)
- [Loading Rollback Configuration Changes to the Target Configuration, page 87](#)
- [Deleting Commit IDs, page 88](#)

Displaying the Commit IDs

To display a history of up to 100 of the most recent commit IDs, enter the **show configuration commit list** command in EXEC or administration EXEC mode. Up to 100 of the most recent commit IDs are saved by the system. Each commit ID entry shows the user who committed configuration changes, the connection used to execute the commit, and commit ID time stamp.

The commit IDs are shown in the “Label/ID” column. The following example shows the **show configuration commit list** command display in EXEC and administration EXEC modes:

```
RP/0/0/CPU0:router# show configuration commit list
```

SNo.	Label/ID	User	Line	Client	Time Stamp
1	1000000219	cisco	vty0	CLI	12:27:50 UTC Wed Mar 22 2006
2	1000000218	cisco	vty1	CLI	11:43:31 UTC Mon Mar 20 2006
3	1000000217	cisco	con0_RP0_C	CLI	17:44:29 UTC Wed Mar 15 2006

```
RP/0/0/CPU0:router# admin
RP/0/0/CPU0:router(admin)# show configuration commit list
```

SNo.	Label/ID	User	Line	Client	Time Stamp
1	2000000022	cisco	vty1	CLI	15:03:59 UTC Fri Mar 17 2006
2	2000000021	cisco	con0_RP0_C	CLI	17:42:55 UTC Wed Mar 15 2006
3	2000000020	SYSTEM	con0_RP0_C	Setup Dial	17:07:39 UTC Wed Mar 15 2006

Displaying the Configuration Changes Recorded in a Commit ID

To display the configuration changes made during a specific commit session (commit ID), go to EXEC or administration EXEC mode and enter the **show configuration commit changes** command followed by a commit ID number. The easiest way to determine the commit ID is to enter the **show configuration commit changes ?** command first. In the following example, the command help is used to display the available commit IDs, and then the changes for a specific commit ID are displayed:

```
RP/0/0/CPU0:router(admin)# show configuration commit changes ?
```

```

last          Changes made in the most recent <n> commits
since         Changes made since (and including) a specific commit
2000000020   Commit ID
2000000021   Commit ID
2000000022   Commit ID

```

```
RP/0/0/CPU0:router(admin)# show configuration commit changes 2000000020
```

```

Building configuration...
username cisco
 secret 5 $1$MgUH$xzUEW6jLfyAYLKJE.3p440
 group root-system
!
end

```

Previewing Rollback Configuration Changes

The **show configuration rollback changes** command allows you to preview the configuration changes that take place if you roll back the configuration to a specific commit ID. For example, if you want to roll back the configuration to a specific point, all configuration changes made after that point must be undone. This rollback process is often accomplished by executing the **no** version of commands that must be undone.

To display the prospective rollback configuration changes from the current configuration to a specific commit ID, go to EXEC or administration EXEC mode and enter the **show configuration rollback changes to *commit ID*** command. In the following example, the command help displays the available commit IDs, and then the rollback changes are displayed:

```
RP/0/0/CPU0:router# show configuration rollback changes to ?
      1000000217  Commit ID
      1000000218  Commit ID
      1000000219  Commit ID

RP/0/0/CPU0:router# show configuration rollback changes to 1000000218

Building configuration...
no interface Loopback100
interface POS0/1/0/0
  no ipv6 nd dad attempts
  !
  !
no route-policy xx
end
```

To display the prospective rollback configuration changes from the current configuration to a specified number of previous sessions, go to EXEC or administration EXEC mode and enter the **show configuration rollback changes last *commit-range*** command:

```
RP/0/0/CPU0:router# show configuration rollback changes last 2

Building configuration...
interface Loopback3
no description
no ipv4 address 10.0.1.1 255.0.0.0
exit
interface Loopback4
no description
no ipv4 address 10.0.0.1 255.0.0.0
end
```

In the preceding example, the command display shows the proposed rollback configuration changes for the last two commit IDs.

Rolling Back the Configuration to a Specific Rollback Point

When you roll back the configuration to a specific rollback point, you undo all configuration changes made during the session identified by the commit ID for that rollback point, and you undo all configuration changes made after that point. The rollback process rolls back the configuration and commits the rolled-back configuration. The rollback process also creates a new rollback point so that you can roll back the configuration to the previous configuration.

**Tip**

To preview the commands that undo the configuration during a rollback, use the **show configuration rollback changes** command.

To roll back the router configuration to a previously committed configuration, go to EXEC or administration EXEC mode and enter the **rollback configuration to *commit ID*** command:

```
RP/0/0/CPU0:router# rollback configuration to 1000000220
Loading Rollback Changes.
Loaded Rollback Changes in 1 sec
Committing.
2 items committed in 1 sec (1)items/sec
Updating.
Updated Commit database in 1 sec
Configuration successfully rolled back to '1000000220'.
```

Rolling Back the Configuration over a Specified Number of Commits

When you roll back the configuration over a specific number of commits, you do not have to enter a specific commit ID. Instead, you specify a number x , and the software undoes all configuration changes made in the last x committed configuration sessions. The rollback process rolls back the configuration, commits the rolled-back configuration, and creates a new commit ID for the previous configuration.

**Tip**

To preview the commands that undo the configuration during a rollback, use the **show configuration rollback changes** command.

To roll back to the last x commits made, go to EXEC or administration EXEC mode and enter the **rollback configuration last x** command; x is a number ranging from 1 to the number of saved commits in the commit database.

In the following example, a request is made to roll back the configuration changes made during the previous two commits:

```
RP/0/0/CPU0:router# rollback configuration last 2

Loading Rollback Changes.
Loaded Rollback Changes in 1 sec
Committing.
1 items committed in 1 sec (0)items/sec
Updating.
Updated Commit database in 1 sec
Configuration successfully rolled back 2 commits.
```

Loading Commit ID Configuration Changes to the Target Configuration

If the changes saved for a specific commit ID are close to what you want, but a rollback is not appropriate, you can load the configuration changes for a commit ID into the target configuration, modify the target configuration, and then commit the new configuration. Unlike the rollback process, the loaded changes are not applied until you commit them.

**Note**

Unlike the rollback process, loading the commit ID configuration changes loads only the changes made during that commit operation. The load process does not load all changes made between the commit ID and the current committed configuration.

To load commit ID changes in the target configuration, go to global configuration or administration configuration mode and enter the **load commit changes** command with the commit ID number. In the following example, **show** commands are used to display the changes for a commit ID, the commit ID configuration is loaded into the target configuration, and the target configuration is displayed:

```
RP/0/0/CPU0:router# show configuration commit changes ?

      last          Changes made in the most recent <n> commits
      since          Changes made since (and including) a specific commit
      1000000217     Commit ID
      1000000218     Commit ID
      1000000219     Commit ID
      1000000220     Commit ID
      1000000221     Commit ID

RP/0/0/CPU0:router# show configuration commit changes 1000000219
Building configuration...
interface Loopback100
!
interface POS0/1/0/0
ipv6 nd dad attempts 50
!
end

RP/0/0/CPU0:router# config

RP/0/0/CPU0:router(config)# load commit changes 1000000219
Building configuration...
Loading.
77 bytes parsed in 1 sec (76)bytes/sec

RP/0/0/CPU0:router(config)# show configuration

Building configuration...
interface Loopback100
!
interface POS0/1/0/0
ipv6 nd dad attempts 50
!
end
```

Loading Rollback Configuration Changes to the Target Configuration

If the changes for a specific rollback point are close to what you want, but a rollback is not appropriate, you can load the rollback configuration changes into the target configuration, modify the target configuration, and then commit the new configuration. Unlike the rollback process, the loaded changes are not applied until you commit them.

**Tip**

To display the rollback changes, enter the **show configuration rollback changes** command.

To load rollback configuration changes from the current configuration to a specific session, go to global configuration or administration configuration mode and enter the **load rollback changes to *commit ID*** command:

```
RP/0/0/CPU0:router(config)# load rollback changes to 1000000068

Building configuration...
Loading.
233 bytes parsed in 1 sec (231)bytes/sec
```

To load rollback configuration changes from the current configuration to a specified number of previous sessions, go to global configuration or administration configuration mode and enter the **load rollback changes last *commit-range*** command:

```
RP/0/0/CPU0:router(config)# load rollback changes last 6

Building configuration...
Loading.
221 bytes parsed in 1 sec (220)bytes/sec
```

In the preceding example, the command loads the rollback configuration changes for the last six commit IDs.

To load the rollback configuration for a specific commit ID, go to global configuration or administration configuration mode and enter the **load rollback changes *commit ID*** command:

```
RP/0/0/CPU0:router(config)# load rollback changes 1000000060

Building configuration...
Loading.
199 bytes parsed in 1 sec (198)bytes/sec
```

Deleting Commit IDs

You can delete the oldest configuration commit IDs by entering the **clear configuration commits** command in EXEC or administration EXEC mode. The **clear configuration commits** command must be followed by either the amount of disk space to reclaim or number of commit IDs to delete. To reclaim disk space from the oldest commit IDs, enter the **clear configuration commits** command followed by the **diskspace** keyword and number of kilobytes to reclaim:

```
RP/0/0/CPU0:router# clear configuration commits diskspace 50

Deleting 4 rollback points '1000000001' to '1000000004'
64 KB of disk space will be freed. Continue with deletion?[confirm]
```

To delete a specific number of the oldest commit IDs, enter the **clear configuration commits** command followed by the **oldest** keyword and number of commit IDs to delete:

```
RP/0/0/CPU0:router# clear configuration commits oldest 5

Deleting 5 rollback points '1000000005' to '1000000009'
80 KB of disk space will be freed. Continue with deletion?[confirm]
```

Configuring Logging and Logging Correlation

System messages generated by the Cisco IOS XR software can be logged to a variety of locations based on the severity level of the messages. For example, you could direct information messages to the system console and also log debugging messages to a network server.

In addition, you can define correlation rules that group and summarize related events, generate complex queries for the list of logged events, and retrieve logging events through an XML interface.

The following sections describe logging and the basic commands used to log messages in Cisco IOS XR software:

- [Logging Locations and Severity Levels, page 89](#)
- [Alarm Logging Correlation, page 89](#)
- [Configuring Basic Message Logging, page 90](#)
- [Disabling Console Logging, page 92](#)

Logging Locations and Severity Levels

Table 9 shows error messages that can be logged to a variety of locations.

Table 9 Logging Locations for System Error Messages

Logging Destination	Command (Global Configuration Mode)
console	logging console
vt terminal	logging monitor
external syslog server	logging trap
internal buffer	logging buffered

Table 10 shows how you can log messages based on the severity level of the messages.

Table 10 Logging Severity Levels for System Error Messages

Level	Description
Level 0—Emergencies	System has become unusable.
Level 1—Alerts	Immediate action needed to restore system stability.
Level 2—Critical	Critical conditions that may require attention.
Level 3—Errors	Error conditions that may help track problems.
Level 4—Warnings	Warning conditions that are not severe.
Level 5—Notifications	Normal but significant conditions that bear notification.
Level 6—Informational	Informational messages that do not require action.
Level 7—Debugging	Debugging messages are for system troubleshooting only.

Alarm Logging Correlation

Alarm logging correlation is used to group and filter similar messages to reduce the amount of redundant logs and isolate the root causes of the messages.

For example, the original message describing the online insertion and removal (OIR) and system state being up or down can be reported, and all subsequent messages reiterating the same event can be correlated. When you create correlation rules, a common root event that is generating larger volumes of

follow-on error messages can be isolated and sent to the correlation buffer. An operator can extract all correlated messages for display later, should the need arise. For more information, see *Cisco IOS XR System Management Configuration Guide for the Cisco XR 12000 Series Router*.

Configuring Basic Message Logging

Numerous options for logging system messages in Cisco IOS XR software are available. This section provides a basic example.

To configure basic message logging, follow these steps:

SUMMARY STEPS

1. **configure**
2. **logging** {*ip-address* | *hostname*}
3. **logging trap** *severity*
4. **logging console** [*severity*]
5. **logging buffered** [*severity* | *buffer-size*]
6. **commit**
7. **end**
8. **show logging**

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure Example: RP/0/0/CPU0:router# configure	Enters global configuration mode.
Step 2	logging { <i>ip-address</i> <i>hostname</i> } Example: RP/0/0/CPU0:router(config)# logging 10.1.1.1	Specifies a syslog server host to use for system logging.
Step 3	logging trap <i>severity</i> Example: RP/0/0/CPU0:router(config)# logging trap debugging	Limits the logging of messages sent to syslog servers to only those messages at the specified level. <ul style="list-style-type: none"> • Table 10 shows a summary of the logging severity levels.
Step 4	logging console [<i>severity</i>] Example: RP/0/0/CPU0:router(config)# logging console emergencies	Logs messages on the console. <ul style="list-style-type: none"> • When a severity level is specified, only messages at that severity level are logged on the console. • Table 10 shows a summary of the logging severity levels.

	Command or Action	Purpose
Step 5	logging buffered [<i>severity</i> <i>buffer-size</i>] Example: RP/0/0/CPU0:router(config)# logging buffered 1000000	Copies logging messages to an internal buffer. <ul style="list-style-type: none"> • Newer messages overwrite older messages after the buffer is filled. • Specifying a severity level causes messages at that level and numerically lower levels to be logged in an internal buffer. See Table 10 for a summary of the logging severity levels. • The buffer size is from 4096 to 4,294,967,295 bytes. Messages above the set limit are logged to the console.
Step 6	commit Example: RP/0/0/CPU0:router(config)# commit	Commits the target configuration to the router running configuration.
Step 7	end Example: RP/0/0/CPU0:router(config)# end	Ends the configuration session and returns to EXEC mode.
Step 8	show logging Example: RP/0/0/CPU0:router# show logging	Displays the messages that are logged in the buffer.

Examples

The following example shows how the basic message logging is configured.

```
RP/0/0/CPU0:router# configure
RP/0/0/CPU0:router(config)# logging 10.1.1.1
RP/0/0/CPU0:router(config)# logging trap debugging
RP/0/0/CPU0:router(config)# logging console emergencies
RP/0/0/CPU0:router(config)# logging buffered 1000000
RP/0/0/CPU0:router(config)# commit
RP/0/0/CPU0:router(config)# end
RP/0/0/CPU0:router# show logging

Syslog logging: enabled (162 messages dropped, 0 flushes, 0 overruns)
  Console logging: level emergencies, 593 messages logged
  Monitor logging: level debugging, 0 messages logged
  Trap logging: level debugging, 2 messages logged
  Logging to 10.1.1.1, 2 message lines logged
  Buffer logging: level debugging, 722 messages logged

Log Buffer (1000000 bytes):

RP/0/0/CPU0:Apr  8 19:18:58.679 : instdir[203]: %INSTALL-INSTMGR-6-INSTALL_OP
RP/0/0/CPU0:Apr  8 19:19:01.287 : instdir[203]: %INSTALL-INSTMGR-6-INSTALL_OP
RP/0/0/CPU0:Apr  8 19:22:15.658 : instdir[203]: %INSTALL-INSTMGR-6-INSTALL_OP
LC/0/1/CPU0:Apr  8 19:22:30.122 : sysmgr[74]: %OS-SYSMGR-7-INSTALL_NOTIFICATION
LC/0/6/CPU0:Apr  8 19:22:30.160 : sysmgr[74]: %OS-SYSMGR-7-INSTALL_NOTIFICATION
RP/0/0/CPU0:Apr  8 19:22:30.745 : sysmgr[79]: %OS-SYSMGR-7-INSTALL_NOTIFICATION
RP/0/0/CPU0:Apr  8 19:22:32.596 : sysmgr[79]: %OS-SYSMGR-7-INSTALL_NOTIFICATION
```

```

LC/0/1/CPU0:Apr  8 19:22:35.181 : sysmgr[74]: %OS-SYSMGR-7-INSTALL_FINISHED : s
LC/0/6/CPU0:Apr  8 19:22:35.223 : sysmgr[74]: %OS-SYSMGR-7-INSTALL_FINISHED : s
RP/0/0/CPU0:Apr  8 19:22:36.122 : sysmgr[79]: %OS-SYSMGR-7-INSTALL_FINISHED :
RP/0/0/CPU0:Apr  8 19:22:37.790 : sysmgr[79]: %OS-SYSMGR-7-INSTALL_FINISHED :
RP/0/0/CPU0:Apr  8 19:22:41.015 : schema_server[332]: %MGBL-SCHEMA-6-VERSIONC
RP/0/0/CPU0:Apr  8 19:22:59.844 : instdir[203]: %INSTALL-INSTMGR-4-ACTIVE_SOF
RP/0/0/CPU0:Apr  8 19:22:59.851 : instdir[203]: %INSTALL-INSTMGR-6-INSTALL_OP
--More--

```

Disabling Console Logging

To disable console logging, enter the **logging console disable** command in global configuration mode.

Related Documents

Related Topic	Document Title
Configuration of system logging	<i>Implementing Logging Services on Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Monitoring Configuration Guide for the Cisco XR 12000 Series Router</i>
Commands used to configure logging	<i>Logging Services Commands on Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Monitoring Command Reference for the Cisco XR 12000 Series Router</i>
Configuration of alarm correlation and generating complex queries	<i>Implementing and Monitoring Alarms and Alarm Log Correlation on Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Management Configuration Guide for the Cisco XR 12000 Series Router</i>
Commands used to configure alarm correlation	<i>Alarm Management and Logging Correlation Commands on Cisco IOS XR Software</i> module of <i>Cisco IOS XR System Management Command Reference for the Cisco XR 12000 Series Router</i>
Retrieve logging events through an XML interface	<i>Cisco IOS XR XML API Guide for the Cisco XR 12000 Series Router</i>

Creating and Modifying User Accounts and User Groups

In the Cisco IOS XR software, users are assigned individual usernames and passwords. Each username is assigned to one or more user group, each of which defines display and configuration commands the user is authorized to execute. This authorization is enabled by default in the Cisco IOS XR software, and each user must log in to the system using a unique username and password.

The following section describe the basic commands used to configure users and user groups:

[Displaying Details About User Accounts, User Groups, and Task IDs, page 93](#)

For a summary of user accounts, user groups, and task IDs, see the [“User Groups, Task Groups, and Task IDs” section on page 41](#).



Note

The management of user accounts, user groups, and task IDs is part of the authentication, authorization, and accounting (AAA) feature. AAA is a suite of security features included in the Cisco IOS XR software. For more information on the AAA concepts and configuration tasks, see *Cisco IOS XR System Security Configuration Guide for the Cisco XR 12000 Series Router* and *Cisco IOS XR*

System Security Command Reference for the Cisco XR 12000 Series Router. For instructions to activate software packages, see *Cisco IOS XR System Management Configuration Guide for the Cisco XR 12000 Series Router.*

Displaying Details About User Accounts, User Groups, and Task IDs

Table 11 summarizes the EXEC mode commands used to display details about user accounts, user groups, and task IDs.

Table 11 **Commands to Display Details About Users and User Groups**

Command	Description
show aaa userdb <i>username</i>	Displays the task IDs and privileges assigned to a specific username. To display all users on the system, type the command without a username.
show aaa usergroup <i>usergroup-name</i>	Displays the task IDs and privileges that belong to a user group. To display all groups on the system, type the command without a group name.
show task supported	Displays all task IDs for the system. Only the root-system users, root-lr users, or users associated with the WRITE:AAA task ID can configure task groups.

