Configuration Management Commands on Cisco IOS XR Software

This chapter describes the Cisco IOS XR software commands used to manage your basic configuration.

For detailed information about configuration management concepts, tasks, and examples, see *Cisco IOS XR Getting Started Guide*.

abort

To terminate a configuration session and discard all uncommitted changes without system confirmations, use the **abort** command in any configuration mode.

abort

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

Any configuration mode

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **abort** command to terminate a configuration session and return to EXEC mode from any configuration mode. This command causes all uncommitted configuration changes to be discarded. You will not be prompted to commit the changes.

Task ID

This command requires the task ID for the feature or configuration submode impacted by the command.

Examples

The following example shows how to use the **abort** command to discard all changes made during a configuration session:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/2/0/0
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# abort
RP/0/RP0/CPU0:router#
```

Related Commands

Command	Description
clear (global)	Discards changes to the target configuration that have not yet been committed, without exiting the configuration session.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.
exit	Exits from the current configuration mode to the next higher command mode or logs out of the terminal session.

admin

To enter administration EXEC mode, use the **admin** command in EXEC mode.

admin

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. A note about correct usage was added.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **admin** command to enter administration EXEC mode. Administration commands are used to configure secure domain routers (SDRs) and to execute other administration plane commands.

Note Administration commands can be run only by entering administration mode and not by prefixing the command with the **admin** keyword in EXEC mode.

Task ID

Task ID	Operations
admin	read, write, execute

Examples

The following example shows how to enter administration EXEC mode:

```
RP/0/RP0/CPU0:router# admin
```

```
RP/0/RP0/CPU0:router(admin)#
```

To use administration configuration mode, use the **configure** command in administration EXEC mode:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# configure
RP/0/RP0/CPU0:router(admin-config)#
```

Related Commands

Command	Description
configure	Enters global configuration mode.

alias

To create a command alias, use the **alias** command in global configuration mode. To delete an alias, use the **no** form of this command.

alias *alias-name* [(*param1*, *param2*, ..., *paramx*)] *content1* [;*content2*; ...; *contentx*]

no alias *alias-name*

Syntax Description.

alias-name	Name of the command alias. Alias names can be a single word or multiple words joined by a hyphen (-) or an underscore (_).
param1, paramx	(Optional) Parameters assigned to the alias. These parameters are filled in at execution time.
content1, contentx	Original command syntax. Valid abbreviations of the original command syntax can be entered for the *content* argument.

Defaults

No command aliases are configured.

Command Modes

Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. The *parameter* argument was added.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Cisco IOS XR software supports generic alias definitions for various entities. Any physical or logical entity can have an alias as a reference. For example, an alias can refer to a command, a partial command, a group of commands, a location, or an IP address.

An alias must first be defined. The alias can then be used in command lines in place of the defined entity.

Following is a list of properties for an alias:

- An alias can be used anywhere, in any mode or submode.

- An alias can have zero, one, or many parameters.
- An alias can refer to those parameters with the $ sign.
- If an alias refers to more than one command, the commands must be separated by a semicolon (;).
- The size of the **alias** command is limited to 1024 characters.

The alias command can be used anywhere. If the content referenced by the alias is invalid or inappropriate in that context or submode, the system issues a warning message containing the substituted content.

An alias name should not be a subset of the keywords that it represents as alias. Substitution is done only when the entered input match fails completely. For instance, the attempt to define an alias with *config* as the alias name fails, as shown here:

```
RP/0/RP0/CPU0:router# (config)# alias config set_host hostname router
RP/0/RP0/CPU0:router# (config)# show configuration

alias set_host hostname router
```

Use the **show aliases** command to display all command aliases or the command aliases in a specified mode.

Task ID

Task ID	Operations
logging	read, write

Examples

The following example shows how to create an alias named ipbr for the **show ipv4 interface brief** command, commit the configuration, enter EXEC mode, and then enter the configured alias:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# alias ipbr show ipv4 interface brief
RP/0/RP0/CPU0:router(config)# show configuration

Building configuration...
alias ipbr show ipv4 interface brief
end
RP/0/RP0/CPU0:router(config)# commit

RP/0/RP0/CPU0:Feb 21 04:42:57.017 : config[65689]: %MGBL-LIBTARCFG-6-COMMIT : Co
nfiguration committed by user 'lab'.   Use 'show configuration commit changes 1000000022'
to view the changes.
RP/0/RP0/CPU0:router(config)# end

RP/0/RP0/CPU0:Mar 27 22:19:05 : config[65739]: %SYS-5-CONFIG_I : Configured from
 console by lab
RP/0/RP0/CPU0:router# ipbr
RP/0/RP0/CPU0:router# show ipv4 interface brief

Interface                      IP-Address      Status                Protocol
Loopback0                      1.1.1.1         Up                    Up
Loopback999                    unassigned      Up                    Up
MgmtEth0/0/CPU0/0              12.29.56.21     Up                    Up
RP/0/RP0/CPU0:router#
```

The following example shows how to define an alias, cisco's-pos, for interface POS1/0/2/3 and then how to use that alias to shut down the interface:

```
RP/0/RP0/CPU0:router(config)# alias cisco's-pos POS1/0/2/3
```

```
RP/0/RP0/CPU0:router(config)# interface cisco's-pos
RP/0/RP0/CPU0:router(config-if)# shutdown
RP/0/RP0/CPU0:router(config-if)# exit
RP/0/RP0/CPU0:router(config)#
```

The following example shows the use of a parameter name in an alias definition:

```
RP/0/RP0/CPU0:router(config)# alias shint (intname) show interface $intname
```

The following example shows an alias defined with one parameter and two commands:

```
RP/0/RP0/CPU0:router(config)# alias shint_both (intname) show interface $intname;show run
interface $intname
```

The following example shows the use of the alias shint_both in EXEC mode:

```
RP/0/RP0/CPU0:router(exec)# shint_both(POS1/2/3/4)
```

Two commands are issued, as follows:

```
RP/0/RP0/CPU0:router(exec)# show interface POS1/2/3/4; show run interface POS1/2/3/4
```

Related Commands

Command	Description
show aliases	Displays a summary of all command aliases.

apply-template

To apply a template to the target configuration, use the **apply-template** command in global configuration mode.

apply-template {*template-name1* [*template-name2* [*template-name3* [*template-name4* [*template-name5*]]]]}

Syntax Description

template-name1, *template-name2*...	Name of the template to be applied to the running configuration. Use the **template** command to define a template.

Defaults

No templates are applied to the target configuration.

Command Modes

Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **apply-template** command to apply a template to the target configuration. Templates allow you to create a template name that represents a group of configuration commands.

Use the **template** command to define a template. Use the **end-template** command to exit template configuration mode and return to global configuration mode. Use the **show running-config** command with the optional **template** keyword and *template-name* argument to display the contents of a template.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to define a template and then apply the template to the target configuration:

```
RP/0/RP0/CPU0:router(config)# template hostname-template
RP/0/RP0/CPU0:router(config-TPL)# hostname crs1
RP/0/RP0/CPU0:router(config-TPL)# end-template
RP/0/RP0/CPU0:router(config)# apply-template hostname-template
```

Related Commands

Command	Description
end-template	Exits template configuration mode.
show running-config	Displays the current running (active) configuration.
template	Defines a template.

clear (EXEC)

To reset command functions, use the **clear** command in administration EXEC mode or in EXEC mode.

clear *feature*

Syntax Description

feature	System feature or functionality to reset.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **clear** command in EXEC mode to reset and clear the contents of a feature. To display a list of the available clear commands, use the question mark (?) online help function.

Tip The **clear** command can also be used in global configuration mode to clear the contents of a target configuration session without exiting configuration mode. See the **clear (global)** command.

Task ID

This command requires the task ID for the feature or configuration submode impacted by the command.

Examples

The following example shows how to use a **clear** command. In this example, the **clear logging** command clears the logging buffer. The **show logging** command verifies that the logging buffer has been cleared.

```
RP/0/RP0/CPU0:router# clear logging

Clear logging buffer [confirm] [y/n] :y
```

```
RP/0/RP0/CPU0:router# show logging

Syslog logging: enabled (5 messages dropped, 0 flushes, 0 overruns)
Console logging: level debugging, 201 messages logged
Monitor logging: level debugging, 0 messages logged
Trap logging: level informational, 0 messages logged
Buffer logging: level debugging, 0 messages logged

Log Buffer (16384 bytes):
```

Related Commands

Command	Description
clear (global)	Discards changes to the target configuration that have not yet been committed, without exiting the configuration session.

clear (global)

To discard changes to the target configuration that have not yet been committed without exiting the configuration session, use the **clear** command in administration configuration or in global configuration mode.

clear [*feature*]

Syntax Description

feature	(Optional) System feature or functionality to reset.

Defaults

No default behavior or values

Command Modes

Administration configuration
Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **clear** command in administration configuration mode or global configuration mode to discard changes to a target configuration session without exiting from global configuration mode.

Tip The **clear** command can also be used in administration EXEC mode or EXEC mode to reset the contents of a feature. See the **clear (EXEC)** command.

Task ID

This command requires the task ID for the feature or configuration submode impacted by the command.

Examples

The following example shows how to discard uncommitted changes to the target configuration without exiting the configuration session. In the following example, an IPv4 address is configured on Packet-over-SONET/SDH (POS) interface 0/2/0/0. The **show configuration** command displays the uncommitted changes to the target configuration. The **clear** command discards the uncommitted changes. The **show configuration** verifies that the changes made to the target configuration were discarded.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/2/0/0
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# exit
RP/0/RP0/CPU0:router(config)# show configuration
Building configuration...
interface POS0/2/0/0
 ipv4 address 1.1.1.1 255.0.0.0
!
end

RP/0/RP0/CPU0:router(config)# clear
RP/0/RP0/CPU0:router(config)# show configuration
Building configuration...
end
```

Related Commands

Command	Description
abort	Ends a configuration session without saving changes to the target configuration.
clear (EXEC)	Resets command functions in administration EXEC mode or in EXEC mode.
commit	Merges the target configuration to the running configuration.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.
exit	Exits from the current configuration mode to the next higher command mode or logs out from the terminal session.

clear comment

To discard a comment associated with a configuration, use the **clear comment** command in any configuration mode.

clear comment

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

Any configuration mode

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **clear comment** command clears any comments that were added for a specific configuration in the configuration file. After you enter the **clear comment** command, enter the configuration for which you want to delete the comment, on a separate line.

To enter configuration comments, enter ! followed by the comment. The comment you enter is associated with the next configuration entered. For example:

```
RP/0/RP0/CPU0:router#!router1 is located in xxx
RP/0/RP0/CPU0:router# hostname router1
RP/0/RP0/CPU0:router# commit
```

The comment is displayed in the output for the **show running-config** command:

```
RP/0/RP0/CPU0:router# show running-config
...
!router1 is located in xxx
hostname router1
...
```

Task ID

This command requires the task ID for the feature or configuration submode impacted by the command.

Examples

The following example shows how to discard the comment associated with the configuration ipv4 address 1.1.1.1 255.0.0.0.

```
RP/0/RP0/CPU0:router(config-if)# clear comment
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
```

clear configuration commits

To delete old commit IDs from the commit database to free up disk space, use the **clear configuration commits** command in EXEC or administration EXEC mode.

clear configuration commits {**diskspace** *kilobytes* | **oldest** *number-of-commits*}

Syntax Description

diskspace *kilobytes*	Deletes as many commit IDs (beginning with the oldest available commit ID) from the commit database as required to free the number of kilobytes (KB) specified for the *kilobytes* argument. The range for the number of kilobytes of disk space to free is 1 to 4194304. **Note** The amount of disk space freed may vary depending on the size and number of commits present in the commit database.
oldest *number-of-commits*	Deletes the number of commit IDs specified for the *number-of-commits* argument. **Note** Use the online help (**?**) function to display the range of commit IDs available for deletion.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. This command was earlier named **clear configuration rollback points**.
Release 3.3.0	Added support for administration EXEC mode.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **clear configuration commits** command to delete the number of commit IDs available for rollback operations. The most recent 100 commits are retained by the system. As new commit IDs are added, the oldest commit IDs are discarded and are no longer available for rollback operations.

Note The **clear configuration commits** command deletes commits from the commit database only. The running configuration, thus, is not changed.

Note When a commit ID is deleted from the commit database, it is no longer available for rollback and can no longer be used to display commit changes (with the **show configuration rollback changes** command).

Use the **rollback configuration** command to roll back the current running configuration to a previous configuration. Use the **show configuration rollback changes** command to display a list of the commit IDs available for rollback operations or to display the changes that would be made by the **rollback configuration** command.

Task ID

Task ID	Operations
config-services	execute

Examples

The following example shows how to delete the oldest 16 commit IDs to free up disk space. After entering this command, you will be prompted to confirm the deletion.

```
RP/0/RP0/CPU0:router# clear configuration commits oldest 16

Deleting 16 rollback points '1000000021' to '1000000036'
256 KB of disk space will be freed. Continue with deletion?[confirm] y
```

Related Commands

Command	Description
rollback configuration	Rolls back the configuration to a previous commit.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

clear configuration inconsistency

To clear an inconsistency alarm for an SDR configuration or admin plane configuration, use the **clear configuration inconsistency** command in EXEC or administration EXEC mode.

clear configuration inconsistency

Syntax Description

This command has no arguments or keywords.

Defaults

Administration EXEC mode: Clears the inconsistency alarms for the admin plane configuration.
EXEC mode: Clears the inconsistency alarms for an SDR configuration.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.4.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

An inconsistency alarm is set when there is a failure to restore the configuration; this can occur during router startup, or when a line card, modular services card (MSC), or route processor (RP) card is inserted or removed.

If an inconsistency alarm is set, a message similar to the following example is displayed:

```
RP/0/0/CPU0:May 26 11:58:40.662 : cfgmgr-rp[130]: %MGBL-CONFIGCLI-3 BATCH_CONFIG_FAIL : 28
config(s) failed during startup. To view failed config(s) use the command - "show
configuration failed startup"

RP/0/0/CPU0:May 26 11:58:41.731 : cfgmgr-rp[130]: %MGBL-CONFIG-3-ADMIN_INCONSISTENCY_ALARM
: Admin plane configuration inconsistency alarm has been raised. Configuration commits
will be blocked until an ADMIN plane 'clear configuration inconsistency' command has been
run to synchronize persisted admin plane configuration with running admin configuration.
```

When the inconsistency alarm is set, all configuration commit operations fail until the alarm is cleared using the **clear configuration inconsistency** command. This command clears the alarm and removes the failed configuration.

For example, the following configuration commit fails to finish due to an existing inconsistency alarm:

```
RP/0/0/CPU0:router# configure
```

```
ADMIN plane running configuration is inconsistent with persistent configuration.
No configuration commits will be allowed until an admin plane 'clear configuration
inconsistency' command is performed.
RP/0/0/CPU0:router(config)# hostname router2
RP/0/0/CPU0:router(config)#commit

ADMIN plane running configuration is inconsistent with persistent configuration.
No configuration commits will be allowed until an admin plane 'clear configuration
inconsistency' command is performed.
```

Enter the **clear configuration inconsistency** command to clear the alarm and allow commit operations to continue.

Note To reapply the failed configuration, you must reapply and recommit the configuration. Use the **load configuration failed startup** command to populate the target configuration with the contents of the previous failed configuration from the startup configuration.

Use the **show configuration history alarm** command to view the inconsistency alarm set and alarm clear events in the configuration history log.

SDR Usage

To clear the inconsistency alarms for the admin plane configuration, enter the **clear configuration inconsistency** command in administration EXEC mode.

To clear the inconsistency alarms for an SDR configuration, enter the **clear configuration inconsistency** command in EXEC mode for that SDR.

Task ID

Task ID	Operations
config-services	execute

Examples

The following example shows how to clear the inconsistency alarms for the admin plane configuration by entering the **configuration inconsistency** command in administration EXEC mode:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# clear configuration inconsistency

Creating any missing directories in Configuration File system...OK
Initializing Configuration Version Manager...OK
Syncing ADMIN commit database with running configuration...OK
Re-initializing cache files...OK
Updating Commit Database.  Please wait...[OK]
```

The following example shows how to clear the inconsistency alarms for an SDR configuration. The command is entered in EXEC mode and impacts only that SDR.

```
RP/0/RP0/CPU0:router# clear configuration inconsistency

Creating any missing directories in Configuration File system...OK
Initializing Configuration Version Manager...OK
Syncing commit database with running configuration...OK
Re-initializing cache files...OK
Updating Commit Database.  Please wait...[OK]
```

In the following example, a history of the inconsistency alarms set and cleared for an SDR configuration are displayed using the **show configuration history alarm** command:

```
RP/0/RP0/CPU0:router# show configuration history alarm

Sno.  Event      Info                          Time Stamp
~~~~  ~~~~~      ~~~~                          ~~~~~~~~~~
1     alarm      inconsistency alarm raised    Thu Jun 22 15:23:15 2006
2     alarm      inconsistency alarm cleared   Thu Jun 22 15:42:30 2006
3     alarm      inconsistency alarm raised    Sun Jul  9 13:39:57 2006
4     alarm      inconsistency alarm cleared   Sun Jul  9 14:15:48 2006
5     alarm      inconsistency alarm raised    Sat Jul 15 18:18:26 2006
6     alarm      inconsistency alarm cleared   Sat Jul 15 19:21:03 2006
```

Related Commands

Command	Description
load configuration failed startup	Populates the target configuration with the contents of the previous failed configuration from the startup configuration.
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration history alarm	Displays a history of the configuration inconsistency alarms that were set or cleared.

clear configuration inconsistency replica

To resolve configuration inconsistencies on a replica node, use the **clear configuration inconsistency replica** command in EXEC or administration EXEC mode.

clear configuration inconsistency replica location *node-id* [**detail**]

Syntax Description

location *node-id*	Resolves the configuration inconsistencies on the designated node. The *node-id* argument is expressed in rack/slot/module notation.
detail	(Optional) Displays details of the task's progress.

Defaults

Administration EXEC mode: Resolves any configuration inconsistencies for the admin plane configuration.
EXEC mode: Resolves any configuration inconsistencies for an SDR configuration.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.6.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

In administration EXEC mode, the replica node for the **clear configuration inconsistency replica** command is the standby designated system controller (DSC). In EXEC mode, the replica nodes are the route processors (RPs) or distributed route processors (DRPs) that can become the designated secure domain router system controller (DSDRSC).

Use the **clear configuration inconsistency replica** command if there is a configuration inconsistency between the standby DSC and the current active DSC; or alternatively, if the configuration on any nodes that could become the DSC is not the same as the configuration on the current DSC. To determine if you have a configuration inconsistency, use the **show configuration inconsistency replica** command.

To clear configuration inconsistencies for the admin plane configuration, enter the **clear configuration inconsistency replica** command in administration EXEC mode.

To clear configuration inconsistencies for an SDR configuration, enter the **clear configuration inconsistency replica** command in EXEC mode for that SDR.

Task ID

Task ID	Operations
config-services	execute

Examples

The following example shows how to clear any configuration inconsistencies for the DSC configuration by using the **clear configuration inconsistency replica** command in EXEC mode:

```
RP/0/RP0/CPU0:Router# clear configuration inconsistency replica location 0/rp1/cpu0

The replica has been repaired.
```

Related Commands

Command	Description
show configuration inconsistency replica	Displays configuration inconsistencies on a standby node.

clear configuration sessions

To clear (end) an active configuration session, use the **clear configuration sessions** command in EXEC or administration EXEC mode.

clear configuration sessions *session-id*

Syntax Description

session-id	Identifier for the configuration session to be terminated.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **clear configuration sessions** command to clear a configuration session. This command can be used to end the configuration sessions of another user. Any uncommitted changes to a user's target configuration are discarded.

Use the **show configuration sessions** command to identify active configuration sessions.

When a configuration session is cleared, a message is displayed on the terminal of the terminated user. For example:

```
RP/0/0/CPU0:router(config)# This configuration session was terminated by user 'user_a'
from line 'aux0_0_CPU0'
```

Task ID

Task ID	Operations
config-services	execute

Examples

The following example shows how to clear an active configuration session. In this example, the **show configuration sessions** command displays the active configuration session. The **clear configuration sessions** command clears the active configuration session.

```
RP/0/RP0/CPU0:router# show configuration sessions

Session                   Line        User      Date                      Lock
00000211-002c409b-00000000  con0_RP1_CPU0  UNKNOWN   Mon Feb  2 01:02:09 2004

RP/0/RP0/CPU0:router# clear configuration sessions 00000211-002c409b-00000000

session ID '00000211-002cb09b-00000000' terminated
```

Related Commands

Command	Description
show configuration sessions	Displays the active configuration sessions.

commit

To commit the target configuration to the active (running) configuration, use the **commit** command in any configuration mode.

commit [**replace**] [**best-effort**] [**force**] [**label** *line*] [**comment** *line*] [**confirmed** *minutes*] [**save-running filename** *file_path*]

Syntax Description

replace	(Optional) Replaces the entire running configuration with the contents of the target configuration.
best-effort	(Optional) Merges the target configuration with the running configuration and commits only valid changes (best effort). Some configuration changes might fail due to semantic errors.
force	(Optional) Forces a commit operation in low-memory conditions.
label *line*	(Optional) Assigns a meaningful label. This label is displayed (instead of the autogenerated commit ID) in the output for the **show configuration commit list**.
comment *line*	(Optional) Assigns a comment to a commit. This text comment is displayed in the commit entry displayed in the output for the **show configuration commit list** command with the optional **detail** keyword.
confirmed *minutes*	(Optional) Commits the configuration on a trial basis for a minimum of 30 seconds and a maximum of 300 seconds (5 minutes). **Note** The **confirmed** option is not available in administration configuration mode.
save-running filename *file_path*	(Optional) Saves the running configuration to a specified file.

Defaults

The default behavior is pseudo-atomic, meaning that all changes must succeed for the entire commit operation to succeed. If any errors are found, none of the configuration changes take effect.

Command Modes

Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. The **replace** keyword was added.
Release 3.3.0	The **confirmed** *minutes* keyword and argument were added. The **confirmed** option is not available in administration configuration mode.
Release 3.4.0	No modification.
Release 3.5.0	No modification.

Release	Modification
Release 3.6.0	No modification.
Release 3.7.0	Support was added for the **save-running filename** *file_path* keywords and argument.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Changes made during a configuration session are inactive until the **commit** command is entered. By default, the commit operation is pseudo-atomic, and not completely atomic. This means that the router attempts to apply the configuration first. If a configuration fails, the entire configuration is rolled back, meaning that any already applied configuration is also rolled back.

To replace the default numeric ID for the commit, use the optional **label** keyword. This label is displayed (instead of the autogenerated commit ID) in the output for the **show configuration commit list** command.

Enter an optional comment with the **comment** keyword to provide additional information about the commit action. This comment is displayed in the output for the **show configuration commit list** command with the **detail** keyword.

Use the optional **confirmed** *minutes* keyword and argument to commit a configuration on a trial basis for a minimum of 30 seconds and a maximum of 300 seconds (5 minutes). During the trial configuration period, enter **commit** to confirm the configuration. If **commit** is not entered, then the system reverts to the previous configuration when the trial time period expires. The confirmed option is not available in administration configuration mode.

You can use the **commit** command in conjunction with the **load** command. Load a new configuration with the **load** command, and use the **commit** command with the **replace** keyword to have the loaded configuration become the active (running) configuration.

Use the optional **save-running filename** *file_path* keywords and argument to save the running configuration to a specified file. To configure automatic saving of the configuration file on every commit, use the **configuration commit auto-save** command. If automatic saving of the configuration file is already enabled, specifying **save-running filename** *file_path* with the **commit** command has no additional effect.

Caution Saving the running configuration to a file is CPU intensive.

Note If you use the **commit** command without previously loading a target configuration, a blank configuration is committed.

Task ID

This command requires the task ID for the feature or configuration submode impacted by the command.

Examples

Committing the Target Configuration to the Active Running Configuration

The following example shows how to commit the target configuration to the active running configuration. In the following example, the **commit** command saves changes to the router hostname.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# hostname router1
RP/0/RP0/CPU0:router(config)# commit

RP/0/RP0/CPU0:Feb 21 04:42:57.017 : config[65689]: %MGBL-LIBTARCFG-6-COMMIT : Co
nfiguration committed by user 'user_a'.   Use 'show configuration commit changes
1000000033' to view the changes.
```

Adding a Comment to a Configuration Commit

The following example shows how to use the **commit** command with the optional **comment** keyword and *line* argument to assign a text description to the commit operation. The comment is then displayed in the output of the **show configuration commit list detail** command.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# hostname router2
RP/0/RP0/CPU0:router(config)# commit comment new name for router

RP/0/RP0/CPU0:Feb 21 04:42:57.017 : config[65689]: %MGBL-LIBTARCFG-6-COMMIT : Co
nfiguration committed by user 'user_a'.   Use 'show configuration commit changes
1000000226' to view the changes.

RP/0/RP0/CPU0:router2(config)# end
RP/0/RP0/CPU0:router2# show configuration commit list detail

   1) CommitId: 1000000226                Label: NONE
      UserId:   user_a                    Line:  con0_RP1_CPU0
      Client:   CLI                       Time:  12:59:26 UTC Wed Feb 04 2004
      Comment:  new name for router

   2) CommitId: 1000000225                Label: NONE
      UserId:   user_a                    Line:  con0_RP1_CPU0
      Client:   CLI                       Time:  12:58:32 UTC Wed Feb 04 2004
      Comment:  NONE
```

Changing the Commit ID to a Text Label

The following example shows how to use the **commit** command with the optional **label** keyword and *line* argument to change the commit ID to a text label for easier identification. The label is then displayed in the output of the **show configuration commit list** command.

```
RP/0/RP0/CPU0:router2# configure
RP/0/RP0/CPU0:router2(config)# hostname router3
RP/0/RP0/CPU0:router2(config)# commit label new_name

RP/0/RP0/CPU0:Feb 21 04:42:57.017 : config[65689]: %MGBL-LIBTARCFG-6-COMMIT : Co
nfiguration committed by user 'user_a'.   Use 'show configuration commit changes
1000000227' to view the changes.

RP/0/RP0/CPU0:router3(config)# end
RP/0/RP0/CPU0:router3# show configuration commit list

SNo. Label/ID    User      Line        Client      Time Stamp
~~~~ ~~~~~~~~    ~~~~      ~~~~        ~~~~~~      ~~~~~~~~~~
1    new_name    user_a    con0_RP1_C  CLI         13:00:53 UTC Wed Feb 04 2004
2    1000000226  user_a    con0_RP1_C  CLI         12:59:26 UTC Wed Feb 04 2004
3    1000000225  user_a    con0_RP1_C  CLI         12:58:32 UTC Wed Feb 04 2004
```

Commit a Configuration for a Specified Time

The following example shows how to use the **commit** command with the optional **confirmed** keyword and *number* argument. The configuration changes are committed only for the specified number of seconds. You can then either confirm the commit operation or discard the changes.

```
RP/0/RP0/CPU0:router2# configure
RP/0/RP0/CPU0:router2(config)# hostname router3
RP/0/RP0/CPU0:router2(config)# commit confirmed 30
RP/0/RP0/CPU0:router3(config)# end
```

Related Commands

Command	Description
abort	Ends a configuration session without saving changes to the target configuration.
clear (EXEC)	Resets command functions in administration EXEC mode or in EXEC mode.
clear (global)	Discards changes to the target configuration that have not yet been committed, without exiting the configuration session.
configuration commit auto-save	Configures automatic saving of the running configuration to a specified file on every commit.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.
exit	Exits from the current configuration mode to the next higher command mode or logs out of the terminal session.
load	Populates the target configuration with the contents of a previously saved configuration file.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

configuration commit auto-save

To enable automatic saving of the running configuration to a specified file on every commit, use the **configuration commit auto-save** command in global configuration mode. To disable automatic saving of the running configuration to a specified file on every commit, use the **no** form of the command.

Caution Saving the running configuration to a file is CPU intensive.

configuration commit auto-save filename *file_path*

no configuration commit auto-save

Syntax Description

filename *file_path*	Specifies the location to which to save the running configuration.

Command Default

No default behavior or values

Command Modes

Global configuration

Command History

Release	Modification
Release 3.7.0	This command was introduced on the Cisco CRS-1 and on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **configuration commit auto-save** command configures the system to save the running configuration to the specified file and location every time a **commit** command is run. Alternatively, you can save the configuration on a one-time basis by specifying the **save-running** keyword when you run the **commit** command.

Task ID

Task ID	Operations
config-services	write

Examples

The following example shows how to configure the system to save the running configuration to the file disk0:/usr whenever the **commit** command is used:

```
RP/0/RP0/CPU0:router(config)# configuration commit auto-save filename disk0:/usr
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.

configure

To enter global configuration mode or administration configuration mode, use the **configure** command in EXEC or administration EXEC mode.

configure [**exclusive** | **terminal**]

Syntax Description

exclusive	(Optional) Locks the router configuration. The system configuration can be made only from the login terminal.
terminal	(Optional) Configures the system from the login terminal. This is the default.

Defaults

If the **configure** command is entered without a keyword, the system is configured from the login terminal.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Configuration modes are used to enter changes to a target configuration session, and commit those changes to the running configuration. A router running Cisco IOS XR software contains multiple configurations:

- The configuration for a specific secure domain router (SDR). Each SDR has its own configuration that is modified when a user logs into an SDR and enters global configuration mode. This mode is used to configure SDR-specific features such as routing protocols.
- The administration configuration for system-wide resources and settings. Some features, such as creating SDRs, can be configured only in administration configuration mode.

Global Configuration Mode

Use the **configure** command in EXEC mode to enter global configuration mode and create a new target configuration for an SDR. From global configuration mode, you can enter any configuration submode. Configuration changes entered in global configuration mode impact the SDR to which the user is currently logged in.

Administration Configuration Mode

Use the **configure** command in administration EXEC mode to enter administration configuration mode and create a new target configuration. From administration configuration mode, you can enter any administration configuration submode. Configuration changes entered in administration configuration mode can impact resources for the entire router. See the command reference documentation for a specific command to determine the impact of commands entered in administration configuration mode.

Router Prompt

After you enter the **configure** command, the system appends "(config)" to the router prompt, indicating that the router is in a configuration mode. For example

- The following prompt indicates that you are in global configuration mode for an SDR:
  `RP/0/RP0/CPU0:router(config)#`
- The following prompt indicates that you are in administration configuration mode:
  `RP/0/RP0/CPU0:router(admin-config)#`

Locking a Configuration Session

To lock the configuration so that no other user can commit changes to the running configuration during your configuration session, issue the **configure** command with the **exclusive** keyword.

Committing Changes and Returning to EXEC or Administration EXEC Mode

Changes to the target configuration remain inactive until the **commit** command is entered. To leave global configuration or administration configuration mode and return to the EXEC or administration EXEC prompt, issue the **end** or **exit** command; you are prompted to commit any uncommitted changes.

To leave configuration mode and return directly to EXEC or administration EXEC mode without being prompted to commit changes and without saving changes to the target configuration, enter the **abort** command in any configuration mode.

Examples

The following example shows how to enter global configuration mode from EXEC mode and then enter interface configuration submode to configure an IPv4 address for Packet-over-SONET/SDH (POS) interface 0/1/0/0. In the example, the **commit** command commits the configuration, and the **end** command terminates the configuration session and return the router to EXEC mode.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/1/0/0
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# commit
RP/0/RP0/CPU0:router(config-if)# end
RP/0/RP0/CPU0:router#
```

The following example shows how to enter administration configuration mode and then configure an SDR. In this example, the user also enters SDR configuration submode. This example is for a Cisco XR 12000 Series Router.

```
RP/0/0/CPU0:router# admin
RP/0/0/CPU0:router(admin)# configure
RP/0/0/CPU0:router(admin-config)# sdr rname
```

```
RP/0/0/CPU0:router(admin-config-sdr:rname)# location 0/0/*
RP/0/0/CPU0:router(admin-config-sdr:rname)# location 0/5/*
RP/0/0/CPU0:router(admin-config-sdr:rname)# end
```

Related Commands

Command	Description
abort	Ends a configuration session without saving changes to the target configuration.
clear (EXEC)	Resets command functions in administration EXEC mode or in EXEC mode.
clear (global)	Discards changes to the target configuration that have not yet been committed, without exiting the configuration session.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.
exit	Exits from the current configuration mode to the next higher command mode or logs out of the terminal session.
show configuration (config)	Displays the contents of the target configuration.
show running-config	Displays the current running (active) configuration.

description (interface)

To add a description to an interface configuration, use the **description** command in interface configuration mode. To remove the description, use the **no** form of this command.

description *comment*

no description

Syntax Description

comment	Comment or a description applied to the interface. The maximum number of characters is 1022.

Defaults

No description is configured.

Command Modes

Interface configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **description** command to add a description to an interface configuration. The maximum number of characters is 1022.

Task ID

Task ID	Operations
interface	read, write

Examples

The following example shows how to add a description to an interface configuration. In this example, the **description** command names a Management Ethernet interface.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface mgmteth 0/rp1/cpu0/0
```

```
RP/0/RP0/CPU0:router(config-if)# description Management Ethernet Interface
```

Related Commands

Command	Description
show interfaces	Displays statistics for all interfaces configured on the router or access server.

do

To execute an EXEC mode command from a configuration mode, use the **do** command in any configuration mode.

do *exec-command*

Syntax Description

exec-command	EXEC mode command to be executed.

Defaults

No default behavior or values

Command Modes

Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **do** command in any configuration mode or configuration submode to execute EXEC mode commands.

To display the various EXEC mode commands that are available to execute with the **do** command, use the online help (?) function at the configuration mode prompt.

Note The **configure** and **describe** commands are not supported under the **do** command.

Task ID

Task ID	Operations
Task ID for the EXEC command that you are using	read

Examples

The following example shows how to execute an EXEC command from interface configuration mode. In this example, the **do** command displays output from the **show protocols** command within interface configuration mode:

```
RP/0/RP0/CPU0:router(config)# interface pos 0/1/0/1
RP/0/RP0/CPU0:router(config-if)# do show protocols

Routing Protocol "BGP 1"

Address Family IPv4 Unicast:
  Distance: external 20 internal 200 local 200
```

end

To terminate a configuration session and return directly to EXEC or administration EXEC mode, use the **end** command in any configuration mode.

end

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

Any configuration mode

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **end** command to exit any configuration mode and return directly to EXEC or administration EXEC mode. If you enter this command without committing the changes to the target configuration, you are prompted to do so:

```
Uncommitted changes found, commit them before exiting(yes/no/cancel)?[cancel]:
```

- Entering **yes** saves configuration changes to the running configuration file, exits the configuration session, and returns the router to EXEC or administration EXEC mode.

  If errors are found in the running configuration, the configuration session does not end. To view the errors, enter the **show configuration (config)** command with the **failed** keyword.
- Entering **no** exits the configuration session and returns the router to EXEC or administration EXEC mode without committing the configuration changes.
- Entering **cancel** leaves the router in the current configuration session without exiting or committing the configuration changes.

Note Entering **Ctrl-Z** is functionally equivalent to entering the **end** command.

Use the **abort** command to exit the configuration session and return to EXEC or administration EXEC mode without being prompted to commit changes and without saving changes to the target configuration.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to use the **end** command to end a configuration session. Changes stored in the target configuration are committed by answering **yes**.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/2/0/0
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# end
Uncommitted changes found, commit them before exiting(yes/no/cancel)? [cancel]: yes
RP/0/RP0/CPU0:router#
```

Related Commands

Command	Description
abort	Ends a configuration session without saving changes to the target configuration.
commit	Merges the target configuration to the running configuration.
clear (global)	Discards changes to the target configuration that have not yet been committed, without exiting the configuration session.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.
exit	Exits from the current configuration mode to the next higher command mode or logs out of the terminal session.
show configuration (config)	Displays the contents of the target configuration.

end-template

To exit template configuration mode and return to global configuration mode, use the **end-template** command in template configuration mode.

end-template

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values.

Command Modes

Template configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **end-template** command to exit template configuration mode after you have completed the template definition.

To define a template, use the **template** command. To apply a template to the target configuration, use the **apply-template** command. To view the contents of a template, use the **show running-config** command with the optional **template** keyword and *template-name* argument.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to enter template configuration mode, define a template named "hostname-template," and then exit from template configuration mode:

```
RP/0/RP0/CPU0:router(config)# template hostname-template
RP/0/RP0/CPU0:router(config-TPL)# hostname router-cs1
RP/0/RP0/CPU0:router(config-TPL)# end-template
RP/0/RP0/CPU0:router(config)#
```

Related Commands

Command	Description
end	Terminates a session and returns the router to EXEC mode from any configuration mode.

exit

To close an active terminal session and log off the router, use the **exit** command in EXEC or administration EXEC mode.

To return the router to the next higher configuration mode, use the **exit** command in any configuration mode.

exit

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC
Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **exit** command to exit any configuration mode from the current configuration mode to the next higher command mode.

To log off from a terminal session, enter the **exit** command in EXEC or administration EXEC mode.

When exiting from global or administration configuration mode to EXEC or administration EXEC mode, you are prompted to commit any uncommitted configuration changes.

```
Uncommitted changes found, commit them before exiting(yes/no/cancel)?[cancel]:
```

- Entering **yes** saves configuration changes to the running configuration file, exits the configuration session, and returns the router to EXEC or administration EXEC mode.

  If errors are found in the running configuration, the configuration session does not end. To view the errors, enter the **show configuration (config)** command with the **failed** keyword.

- Entering **no** exits the configuration session and returns the router to EXEC or administration EXEC mode without committing the configuration changes.
- Entering **cancel** leaves the router in the current configuration session without exiting or committing the configuration changes.

Note Entering the **exit** command from global configuration is functionally equivalent to entering the **end** command.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to return the router to the next higher command mode. In this example, the **exit** command exits from interface configuration mode and returns to global configuration mode. The **exit** command is entered a second time to exit from global configuration mode and return to EXEC mode. Because the configuration has not been committed explicitly (with the **commit** command), the system prompts to commit the configuration changes made during the session.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/2/0/0
RP/0/RP0/CPU0:router(config-if)# ipv4 address 1.1.1.1 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# exit
RP/0/RP0/CPU0:router(config)# exit
Uncommitted changes found, commit them before exiting(yes/no/cancel)?[cancel]: yes
```

The following example shows how to use the **exit** command from EXEC mode to log off from a terminal session:

```
RP/0/RP0/CPU0:router# exit


router con0_RP1_CPU0 is now available


Press RETURN to get started.
```

Related Commands

Command	Description
abort	Ends a configuration session without saving changes to the target configuration.
commit	Merges the target configuration to the running configuration.
end	Terminates a session and returns the router to EXEC mode from any configuration mode.

hostname

To specify or modify the hostname for the router, use the **hostname** command in global configuration mode.

hostname *name*

Syntax Description

name	New hostname for the router.

Defaults

The factory-assigned default hostname is “ios.”

Command Modes

Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The hostname is used in prompts and default configuration filenames.

No blank or space characters are permitted as part of a name. Do not expect case to be preserved. Uppercase and lowercase characters look the same to many Internet software applications. It may seem appropriate to capitalize a name the same way you might do in English, but conventions dictate that computer names appear all lowercase. For more information, see RFC 1178, *Choosing a Name for Your Computer.*

Task ID

Task ID	Operations
root-lr	read, write

Examples

The following example shows how to change the router hostname:

```
RP/0/RP0/CPU0:router(config)# hostname crs1
```

load

To populate the target configuration with the contents of a previously saved configuration file, use the **load** command in global configuration or administration configuration mode.

load *device*:*directory-path*

Syntax Description

device:*directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

If the full path of the file is not specified, the present working directory is used.

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **load** command to populate the target configuration with the contents of a previously saved configuration. When loading a file, you must specify the device, directory path, and filename of the configuration file.

Use the **commit** command in conjunction with the **load** command. Load a new configuration with the **load** command, and use the **commit** command with the **replace** keyword to have the loaded configuration become the active (running) configuration.

Use the **show configuration failed (config)** command with the optional **load** keyword to display syntax errors that occurred during the last load operation.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to load a target configuration file into the current configuration session. The current configuration session is then populated with the contents of the file.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# load disk1:myconfig.cfg
RP/0/RP0/CPU0:router(config)# show config

Building configuration...
interface POS 0/3/0/0
 description My Pos Interface
 ipv4 address 10.10.11.20 255.0.0.0
!
end
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.
show configuration failed load	Displays syntax errors that occurred during the last load operation.

load commit changes

To populate the target configuration with changes from previous configuration commits, use the **load commit changes** command in global configuration or administration configuration mode. To remove the configuration, use the **no** form of this command.

load commit changes {*commit-id* | **since** *commit-id* | **last** *number-of-commits*}

Syntax Description

commit-id	Specific configuration commit.
since *commit-id*	Loads all configuration changes committed into the target buffer since (and including) a specific configuration commit, *commit-id*.
last *number-of-commits*	Loads the configuration changes into the target buffer that have been made during the last number of configuration commits specified with the *number-of-commits* argument.

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	Added support for administration configuration mode.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **load commit changes** to populate the target configuration with changes from previous configuration commits. The changes are not applied until you enter the **commit** command.

Use the **show configuration (config)** command to display the target configuration.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to populate the target configuration with changes from a previous configuration commit:

```
RP/0/RP0/CPU0:router(config)# load commit changes since 1000000006

Building configuration...
Loading.
223 bytes parsed in 1 sec (222)bytes/sec
```

load configuration failed

To populate the target configuration with the contents of the previous failed configuration commit, use the **load configuration failed** command in global configuration or administration configuration mode.

load configuration failed {**commit** | **startup** [**previous** *number-of-reloads*] [**noerror**]}

Syntax Description

commit	Loads the failed configuration from the last commit.
startup	Loads the failed configuration from the startup configuration.
previous *number-of-reloads*	(Optional) Loads the failed configurations from a previous router reload. Valid *number-of-reloads* values are 1 to 4.
noerror	(Optional) Excludes the error reasons when the failed configurations are loaded.

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	Support was added for the keyword **commit**. Support was added for the keyword **startup**. Support was added for the keyword and argument **previous** *number-of-reloads*. Support was added for the keyword **noerror**.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **load configuration failed** command to populate the target configuration with the contents of the previous failed configuration commit.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to populate the target configuration with the contents of the previous failed configuration commit:

```
RP/0/RP0/CPU0:router(config)# load configuration failed
```

Related Commands

Command	Description
show configuration (config)	Use the **show configuration failed** command in EXEC mode to display the failed items in the last configuration commit, including reasons for the error.

load configuration removed

To populate the target configuration with the contents of the previous removed configuration, use the **load configuration removed** command in global configuration or administration configuration mode.

load configuration removed *config-id*

Syntax Description

config-id	Identifier of the removed configuration to load.

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.5.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **load configuration removed** command to populate the target configuration with the contents of the removed configuration during installation operations.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to populate the target configuration with the contents of the removed configuration during installation:

```
RP/0/RP0/CPU0:router(config)# load configuration removed 20070316021626.cfg
```

Related Commands

Command	Description
show configuration persistent	Displays the configuration removed during installation operations.

load rollback changes

To populate the target configuration with the contents of a previous configuration, use the **load rollback changes** command in global configuration or administration configuration mode.

load rollback changes {*commit-id* | **last** *number-of-commits* | **to** *commit-id*}

Syntax Description

commit-id	Rolls back the configuration changes for a specific configuration commit.
last *number-of-commits*	Rolls back to the configuration that existed before the last number of commits (specified with the *number-of-commits* argument) were made.
to *commit-id*	Rolls back to the running configuration that existed before the configuration specified with the *commit-id* argument.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	Added support for administration configuration mode.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **load rollback changes** command to load rollback configuration changes to the target configuration. This command is similar to the **rollback configuration** command. The difference between the commands is that the **load rollback changes** command copies the rollback changes to the target configuration and does not commit the changes until the changes are explicitly committed with the **commit** command.

Use the **show configuration rollback changes** command to display rollback changes.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to populate the target configuration with the contents of a previous configuration:

```
RP/0/RP0/CPU0:router(config)# load rollback changes 1000000004

Building configuration...
Loading.
302 bytes parsed in 1 sec (301)bytes/sec
```

man

The Cisco IOS XR software provides online help for standard Cisco IOS XR command-line interface (CLI) commands using manual (man) pages. To display manual pages, use the **man** command in EXEC mode.

man {**command** *command-name* | **feature** [*feature-name*] | **keyword** *keywords*}

Syntax Description

command *command-name*	Displays the manual pages for a specific command. The *command-name* argument must include the complete command name.
feature	Displays all commands in the feature. Use the **man feature** command to list the available feature names.
feature-name	(Optional) Feature name to match. The *feature-name* argument does not display man pages, but displays a list of command names that match the feature name.
keyword *keywords*	Enters one or more keywords to match in a command. When entering multiple keywords, the keywords must be entered in the same sequential order as they are in the command. The *keywords* argument does not display man pages, but displays a list of command names that match the keywords.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

You must have the documentation PIE installed before you can use the **man** command. If you attempt to run this command without the documentation PIE installed, an error is displayed as shown in the following example:

```
RP/0/RP0/CPU0:router# man command show install
Building index table...
Warning. Unable to get directory info for '/pkg/man' :No such file or directory.
```

```
 Discarding!
man [5521656]:Building index table failed. No entries found
```

For information about installing optional software PIEs, refer to the *Upgrading and Managing Cisco IOS XR Software* module in *Cisco IOS XR System Management Configuration Guide*.

Use the **man** command to display the manual pages for a specific command on the basis of the command name, a feature, or a keyword. Each man page contains the command name, syntax, command mode, usage, examples, and related commands.

The **man** command queries and displays command information about the router. A query can be based on keywords or a feature. The **feature** keyword and *feature-name* argument display all commands that match the feature. For example, entering **man feature hfr-base-1** displays all commands that match the hfr-base-1 feature. The **keyword** keyword and *keywords* argument display all commands that contain the keyword. For example, **man keyword ipv4** displays all commands that contain ipv4.

Task ID

Task ID	Operations
basic-services	read

Examples

The following example shows how to display the manual page for the **arp timeout** command:

```
RP/0/RP0/CPU0:router# man command arp timeout

COMMAND
arp timeout

DESCRIPTION


To specify how long dynamic entries learned on an interface remain in the
Address Resolution Protocol (ARP) cache, use the arp timeout command in
interface configuration mode. To remove the arp timeout command from the
configuration file and restore the system to its default condition with
respect to this command, use the no form of this command.

arp timeout seconds

no arp timeout<seconds>

SYNTAX DESCRIPTION

seconds
Time, in seconds, for which an entry remains in the ARP cache. The
range is from 0 to 4294967. A value of 0 means that entries are never
cleared from the cache. The default is 14400.

DEFAULTS

Entries remain in the ARP cache for 14400 seconds (4 hours).

COMMAND MODES

Interface configuration

COMMAND HISTORY

Release
Modification
```

```
Release 2.0
This command was introduced.

USAGE GUIDELINES

To use the arp timeout command, you must be a member of a user group
associated with the cef task ID.

For detailed information about user groups and task IDs, refer to the
Configuring AAA Services on Cisco IOS-XR Software module of the Cisco IOS-XR
System Security Configuration Guide.

This command is ignored when issued on interfaces that do not use ARP. Also,
ARP entries that correspond to the local interface or that are statically
configured by the user never time out.

The show interfaces command displays the ARP timeout value in
hours:minutes:seconds, as follows:

* * * * * * * * * * * * * * * * * START OF LISTING * * * * * * * * * * * * * * * * *

ARP type: ARPA, ARP Timeout 04:00:00
* * * * * * * * * * * * * * * * * END OF LISTING * * * * * * * * * * * * * * * * *

EXAMPLES

The following example shows how to set the ARP timeout to 3600 seconds to
allow entries to time out more quickly than the default:

* * * * * * * * * * * * * * * * * START OF LISTING * * * * * * * * * * * * * * * * *

RP/0/RP0/CPU0:router# configure

RP/0/RP0/CPU0:router(config)# interface MgmtEth 0/RP1/CPU0/0

RP/0/RP0/CPU0:router(config-if)# arp timeout 3600
* * * * * * * * * * * * * * * * * END OF LISTING * * * * * * * * * * * * * * * * *

RELATED COMMANDS

Command
Description

clear arp-cache
Deletes all dynamic entries from the ARP cache.

show arp (cache)
Displays the entries in the ARP table.

show interfaces
Displays statistics for all interfaces configured on the networking
device.
```

more

To display the contents of a file, use the **more** command in EXEC or administration EXEC mode.

more [**/ascii** | **/binary** | **/ebcdic**] *filesystem***:***directory-path* [**location** *node-id* | **location all**] [**| begin** *regular-expression* | **| exclude** *regular-expression* | **| include** *regular-expression*]

Syntax Description

/ascii	(Optional) Displays a binary file in ASCII format.
/binary	(Optional) Displays a file in hexadecimal or text format.
/ebcdic	(Optional) Displays a binary file in ebcdic format.
filesystem:directory-path	File system location of the file to be displayed. Include the file system alias for the *filesystem* argument, followed by a colon, and the directory path of the file to be displayed.
location *node-id*	(Optional) Displays the contents of a file on a designated node.
location all	(Optional) Displays the contents of a file from all nodes.
regular-expression	(Optional) Regular expression found in **more** command output.
| begin	(Optional) Begins unfiltered output of the **more** command with the first line that contains the regular expression.
| exclude	(Optional) Displays output lines that do not contain the regular expression.
| include	(Optional) Displays output lines that contain the regular expression.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **more** command to display any text file, especially an ASCII file stored on the router or accessible through the network. The file can be a configuration file or any other text file.

Filtering Output

The output displayed by the **more** command can be filtered using the options shown in Table 18.

Table 18 Filtering Options

Command	Purpose
more *filesystem*: **| begin** *regular-expression*	Begins unfiltered output of the **more** command with the first line that contains the regular expression.
more *filesystem*: **| exclude** *regular-expression*	Displays output lines that do not contain the regular expression.
more *filesystem*: **| include** *regular-expression*	Displays output lines that contain the regular expression.

Adding a Filter at the --More-- Prompt

You can also specify a filter at the --More-- prompt of a **more** command output. To filter output from the --More-- prompt, enter a forward slash (**/**) followed by a regular expression. The filter remains active until the command output finishes or is interrupted (using **Ctrl-Z** or **Ctrl-C**).

- A second filter cannot be specified at a --More-- prompt if a filter has already been specified at the original command or at a previous --More-- prompt.
- The minus sign (**–**) preceding a regular expression displays output lines that do not contain the regular expression.
- The plus sign (**+**) preceding a regular expression displays output lines that contain the regular expression.

Note After you specify a filter for a **more** command, you cannot specify another filter at the next --More-- prompt. The first specified filter remains until the **more** command output finishes or until you interrupt the output. The use of the **begin** keyword does not constitute a filter.

Task ID

Task ID	Operations
filesystem	execute

Examples

The following is partial sample output from the **more** command. The output displays a configuration file saved on the hard disk drive.

```
RP/0/RP0/CPU0:router# more harddisk:/user/alternate.cfg

!! Last configuration change at 15:52:55 UTC Fri Feb 13 2004 by UNKNOWN
!
line console
 exec-timeout 0 0
!
interface MgmtEth0/RP1/CPU0/0
 ipv4 address 10.32.45.154 255.0.0.0
!
interface POS0/1/0/0
 ipv4 address 10.32.45.155 255.0.0.0
 keepalive disable
!
```

```
interface POS0/1/0/1
 ipv4 address 10.32.45.156 255.0.0.0
 keepalive disable
!
interface POS0/1/0/2
/ip
 ipv4 address 10.32.45.157 255.0.0.0
 keepalive disable
!
interface POS0/1/0/3
 ipv4 address 10.32.45.158 255.0.0.0
 keepalive disable
!
interface POS0/2/0/0
 ipv4 address 10.32.45.159 255.0.0.0
 keepalive disable
!
--More--
```

The following is partial sample output from the **more disk0:config.backup | begin ipv4** command. The output begins with unfiltered output from the first line that contains the regular expression "ipv4." In this example, a new search is specified that begins with output lines that contain the regular expression "ipv4."

```
RP/0/RP0/CPU0:router# more disk0:config.backup | begin ipv4

 ipv4 address 2.2.2.2 255.255.255.255
!
interface pos0/3/1/0
 shutdown
!
interface pos0/3/1/2
 shutdown
!
interface POS0/2/1/0
 ipv4 address 1.1.1.1 255.255.255.0
 keepalive disable
!
interface POS0/2/1/1
 ipv4 address 1.1.1.1 255.255.255.0
 keepalive disable
!
interface POS0/2/1/2
 ipv4 address 1.1.1.1 255.255.255.0
 keepalive disable
!
interface POS0/2/1/3
 shutdown
!
/ipv4
filtering...
 ipv4 address 1.1.1.1 255.255.255.0
 proxy-arp disable
 shutdown
!
interface pos 0/1/0/0
 ipv4 address 1.1.1.1 255.255.255.0
 proxy-arp disable
!
route ipv4 0.0.0.0/0 12.25.26.5
route ipv4 223.255.254.254/32 12.25.0.1
end
```

The following is partial sample output of the **more** command on the sample file config.backup in disk0:. The command usage is **more disk0:config.backup | include log**. At the --More-- prompt, a new search is specified that begins with output lines that contain the regular expression “aaa.”

```
RP/0/RP0/CPU0:router# more disk0:config.backup | include log

logging trap
logging trap informational
logging console debugging
logging history size 1
.
.
.

/aaa
filtering...
aaa authentication login default none
```

The following is partial sample output from the **more disk0:myconfig/file | exclude** command. The output excludes lines that contain the regular expression “alias.” In this example, at the --More-- prompt, a new search is specified, beginning with output lines that contain the regular expression “ipv4 address.”.

```
RP/0/RP0/CPU0:router# more disk0:myconfig/file | exclude alias

Building configuration...
!! Last configuration change at 18:17:00 UTC Thu May 16 2004 by lab
!
hostname router
line console
 exec-timeout 0 0
 width 132
 length 0
 session-timeout 0
/ipv4 address
filtering...
ipv4 address 10.10.1.1 255.255.255.255
!
interface Loopback200
 ipv4 address 10.20.1.1 255.255.255.255
!
interface pos0/0/0/0
 ipv4 address 10.30.1.1 255.255.0.0
 keepalive 100
!
interface preconfigure POS0/1/0/1
 shutdown
end
```

Related Commands

Command	Description
show	Displays system status and configuration.

pwd (config)

To display the current configuration submode from a configuration submode, use the **pwd** command in any supported configuration submode.

pwd

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

Any subconfiguration mode

Command History

Release	Modification
Release 3.5.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **pwd** command to determine within which configuration submode you are currently located.

Examples

The following example shows how to use the **pwd** command from an interface configuration submode:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/6/4/5
RP/0/RP0/CPU0:router(config-if)# pwd

interface POS0/6/4/5
RP/0/RP0/CPU0:router(config-if)#
```

rollback configuration

To roll back the running configuration to a previous configuration, use the **rollback configuration** command in EXEC or administration EXEC mode.

rollback configuration {**last** *number-of-commits* | **to** *commit-id*} [**force**] [**label** *label*] [**comment** *comment*]

Syntax Description

last *number-of-commits*	Rolls back to the configuration that existed before the last number of commits (specified with the *number-of-commits* argument) were made.
to *commit-id*	Rolls back to the running configuration that existed before the configuration specified with the *commit-id* argument.
force	(Optional) Specifies to override any commit blocks.
label *label*	(Optional) Assigns a text label to this rollback. The *label* argument must begin with a letter.
comment *comment*	(Optional) Assigns a text comment to this rollback. *comment* can be up to 60 characters long.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	This command was added to administration EXEC mode.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Each time the **commit** command is entered, a commit ID is assigned to the new configuration. You can revert the system to the configuration of a previous commit ID with the **rollback configuration** command:

- Use the **to** keyword to revert to the configuration that existed *before* the configuration specified with the *commit-id* argument.
- Use the **last** keyword to revert to the configuration that existed *before* the last number of configuration commits (specified with the *number-of-commits* argument) were made.

- Use **show configuration commit list** to display a list of the commit IDs available for rollback operations.

Note The most recent 100 commits are retained by the system. As new commit IDs are added, the oldest commit IDs are discarded and are no longer available for rollback operations.

Use the **force** keyword to override commits that would fail otherwise. This is useful in the event of a low-memory condition on the router, to revert to a commit that would remove a configuration that caused the low-memory condition.

Task ID

Task ID	Operations
root-lr (EXEC)	read, write
root-system (administration EXEC)	read, write

Examples

Rolling Back to a Specific Commit ID

The following example shows how to roll back to a specific commit ID. In this example, the **show configuration commit list** command displays the available rollback points. The configuration is then rolled back to a prior commit with the **rollback configuration** command.

```
RP/0/RP0/CPU0:router# show configuration commit list

SNo. Label/ID    User      Line        Client      Time Stamp
~~~~ ~~~~~~~~    ~~~~      ~~~~        ~~~~~~      ~~~~~~~~~~
1    1000000009  lab       con0_RP0_C  Rollback    02:41:08 UTC Sun Sep 26 2004
2    1000000008  lab       con0_RP0_C  CLI         02:40:30 UTC Sun Sep 26 2004
3    1000000007  lab       con0_RP0_C  CLI         02:39:54 UTC Sun Sep 26 2004
4    1000000006  lab       con0_RP0_C  Rollback    02:38:40 UTC Sun Sep 26 2004
5    1000000005  lab       con0_RP0_C  CLI         02:37:35 UTC Sun Sep 26 2004
6    1000000004  lab       con0_RP0_C  CLI         02:37:04 UTC Sun Sep 26 2004
7    1000000003  lab       con0_RP0_C  CLI         02:34:53 UTC Sun Sep 26 2004
8    1000000002  UNKNOWN   con0_RP0_C  CLI         23:51:30 UTC Fri Sep 24 2004
9    1000000001  UNKNOWN   con0_RP0_C  CLI         23:08:31 UTC Fri Sep 24 2004

RP/0/RP0/CPU0:router# rollback configuration to 1000000008

Loading Rollback Changes.
Loaded Rollback Changes in 1 sec
Committing.
1 items committed in 1 sec (0)items/sec
Updating.RP/0/RP0/CPU0:Sep 26 02:42:09.318 : config_rollback[65707]: %LIBTARCFG-
6-COMMIT : Configuration committed by user 'lab'.   Use 'show commit changes 100
0000010' to view the changes.

Updated Commit database in 1 sec
Configuration successfully rolled back to '1000000008'.
```

Rolling Back to a Span of Configuration Commits

The following example shows how to roll back to the configuration that existed prior to the last two configuration commits:

```
RP/0/RP0/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.
```

Related Commands

Command	Description
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

root

To return to configuration mode from a configuration submode, use the **root** command in any supported configuration submode.

root

Syntax Description

This command has no keywords or arguments.

Defaults

No default behavior or values

Command Modes

Any subconfiguration mode except the following:

- The **root** command is not available under the route-policy submodes, because it requires the **end-policy** command to exit out of the configuration.
- The **root** command is not available in template submode, but is available in the submodes configurable under the template submode.

Command History

Release	Modification
Release 3.4.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **root** command to return directly to configuration mode from any configuration submode.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows how to use the **root** command to return to configuration mode from the interface configuration submode:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface pos 0/1/0/0
RP/0/RP0/CPU0:router(config-if)# root
RP/0/RP0/CPU0:router(config)#
```

The following example shows how to use the **root** command from a submode configurable under the template submode. In this example, the **root** command is used to return to configuration mode from the username submode:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# template test
RP/0/RP0/CPU0:router(config-TPL)# username xyz
RP/0/RP0/CPU0:router(config-un)# root
RP/0/RP0/CPU0:router(config)# show conf

Building configuration...
template test
 username xyz
 !
end-template
end
```

Tip The root command is not available from the template submode, but is available in the submodes configurable under the template submode.

save configuration

To save the contents of a configuration to a file, use the **save configuration** command in global configuration or administration configuration mode.

save configuration [**running**] *device***:***directory-path*

Syntax Description

running	(Optional) Saves the contents of the running configuration.
*device***:***directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

To save a configuration to a file, use the **save configuration** *device***:***directory-path* command.

To save a configuration that failed to a file, use the **save configuration failed** command.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows the configuration saved to disk0 from EXEC mode:

```
RP/0/RP0/CPU0:router(config)# save configuration disk0:sample3

Destination file name (control-c to abort): [/sample3]?
Building configuration.
1 lines built in 1 second
```

```
[OK]
RP/0/RP0/CPU0:router(config)#
```

The following example shows the configuration saved to disk1 from administration EXEC mode:

```
RP/0/RP0/CPU0:router(admin-config)# save configuration disk1:sample4

Destination file name (control-c to abort): [/sample4]?
Building configuration.
1 lines built in 1 second
[OK]
```

Related Commands

Command	Description
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration failed	Saves the contents of a failed configuration.
save configuration merge	Saves the changes for a merged configuration to a file.
save configuration removed	Saves the contents of a removed configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save configuration changes

To save the changes of a configuration to a file, use the **save configuration changes** command in global configuration or administration configuration mode.

save configuration changes *device***:***directory-path*

Syntax Description

*device***:***directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	This command was added to administration configuration mode.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

To save the configuration changes to be made during a replace operation to a file, use the **save configuration changes** command.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows the configuration saved to disk0 from EXEC mode:

```
RP/0/RP0/CPU0:router(config)# save configuration changes disk0:sample3

Destination file name (control-c to abort): [/sample3]?
Building configuration.
1 lines built in 1 second
[OK]
RP/0/RP0/CPU0:router(config)#
```

Related Commands

Command	Description
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration failed	Saves the contents of a failed configuration.
save configuration merge	Saves the changes for a merged configuration to a file.
save configuration removed	Saves the contents of a removed configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save configuration commit changes

To save the changes for a commit, or a series of commits, to a file, use the **save configuration commit changes** command in global configuration or administration configuration mode.

save configuration commit changes {*commit-id* | **last** *number-of-commits* | **since** *commit-id*} *device***:***directory-path*

Syntax Description

commit-id	Specific commit ID.
last *number-of-commits*	Saves changes made in the most recent *number-of-commits.*
since *commit-id*	Saves changes made since (and including) a specific *commit-id*.
*device***:***directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **save configuration commit changes** command to save the changes made in a commit operation to a file. You can specify a specific commit ID, all the changes since a specified commit ID, or the changes that occurred during the last *n* commits.

Task ID

Task ID	Operations
config-services	read

Examples

The following example saves the changes from the last two commit operations to disk0:

```
RP/0/RP0/CPU0:router(admin-config)# save configuration commit changes last 2 disk0:sample1

Destination file name (control-c to abort): [/sample1]?
Building configuration.
5 lines built in 1 second
[OK]
RP/0/RP0/CPU0:router(admin-config)#
```

Related Commands

Command	Description
save configuration	Saves the contents of a configuration to a file.
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration failed	Saves the contents of a failed configuration.
save configuration merge	Saves the changes for a merged configuration to a file.
save configuration removed	Saves the contents of a removed configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save configuration failed

To save the contents of the failed configuration, use the **save configuration failed** command in global configuration or administration configuration mode.

save configuration failed [**load | noerrors | startup** [**previous** *number*]] *device***:***directory-path*

Syntax Description

load	(Optional) Saves the failed configuration (syntax errors) in the last reload.
noerror	(Optional) Saves the failed items in the last commit (excludes the error reasons).
startup	(Optional) Saves the failed configuration during startup.
previous *number*	(Optional) Saves a failed startup configuration from the specified previous sessions. The *number* argument is a value between 1 and 4 that indicates how many failed startup configurations to save.
*device***:***directory-path*	Storage device and directory path of the configuration file to be saved.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	The **startup** keyword was added in administration configuration mode.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

To save a configuration to a file, use the **save configuration** command.

To save a configuration that failed to a file, use the **save configuration failed** command.

To save a configuration that failed during startup to a file, use the **save configuration failed** command with the **startup** keyword.

Task ID

Task ID	Operations
config-services	read

Examples

The following example saves the failed configuration to disk0:

```
RP/0/RP0/CPU0:router(admin-config)# save configuration failed disk1:/configs
```

Related Commands

Command	Description
save configuration	Saves the contents of a configuration to a file.
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration merge	Saves the changes for a merged configuration to a file.
save configuration removed	Saves the contents of a removed configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save configuration merge

To save the contents of a merged configuration to a file, use the **save configuration** command in global configuration or administration configuration mode.

save configuration merge *device***:***directory-path*

Syntax Description

*device***:***directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

To save a merged configuration to a file, use the **save configuration merge** *device***:***directory-path* command.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows the configuration saved to disk0:

```
RP/0/RP0/CPU0:router(admin-config)# save configuration merge disk0:sample3

Destination file name (control-c to abort): [/sample3]?
Building configuration.
1 lines built in 1 second
[OK]
```

Related Commands

Command	Description
save configuration	Saves the contents of a configuration to a file.
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration failed	Saves the contents of a failed configuration.
save configuration removed	Saves the contents of a removed configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save configuration removed

To save the contents of a removed configuration to a file, use the **save configuration removed** command in global configuration or administration configuration mode.

save configuration removed {*removed-configuration-file*} *device*:*directory-path*

Syntax Description

removed-configuration-file	Specifies the name of the removed configuration file.
device:*directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

When a package is deactivated, the configuration belonging to that package is removed from the running configuration and saved to a file. To save a copy of the removed configuration file, use the **save configuration removed** {*removed-configuration-file*} *device*:*directory-path* command.

Task ID

Task ID	Operations
config-services	read

Examples

To view a list of the available removed configuration files, use the **save configuration removed** command followed by a question mark:

```
RP/0/RP0/CPU0:router(config)# save configuration removed ?
```

```
  20051208042507.cfg  Removed configuration.
  20051208044553.cfg  Removed configuration.
  <cr>
```

In the following example, a removed configuration is saved to disk0 and assigned the filename "sample3":

```
RP/0/RP0/CPU0:router(config)# save configuration removed 20051208042507.cfg disk0:sample3

Destination file name (control-c to abort): [/sample3]?
Building configuration.
1 lines built in 1 second
[OK]
```

Related Commands

Command	Description
save configuration	Saves the contents of a configuration to a file.
save configuration commit changes	Saves the changes for a commit, or a series of commits, to a file.
save configuration failed	Saves the contents of a failed configuration.
save configuration merge	Saves the changes for a merged configuration to a file.
save rollback changes	Saves rollback changes for a commit ID or a group of commits.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

save rollback changes

To save the rollback changes, use the **save rollback changes** command in global configuration or administration configuration mode.

save rollback changes {*commit-id* | **last** *number-of-commits* | **to** *commit-id*} *device***:***directory-path*

Syntax Description

commit-id	Specific commit ID.
last *number-of-commits*	Saves the rollback changes for the last *n* commits
to *commit-id*	Saves rollback changes up to a specific *commit-id*.
*device***:***directory-path*	Storage device and directory path of the configuration file to be loaded into the target configuration.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **save rollback changes** command to save the changes that would be made in a configuration rollback to a specific commit point or for a series of commits.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows that the rollback changes for the commit point 5 are saved to the file sample4 on disk0:

```
RP/0/RP0/CPU0:router(admin-config)# save rollback changes last 1 disk0:sample4
```

```
Destination file name (control-c to abort): [/sample4]?
Building configuration.
6 lines built in 1 second
[OK]
```

Related Commands

Command	Description
save configuration	Saves the contents of a configuration to a file.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

set default-afi

To set the default address family identifier (AFI) for the current session, use the **set default-afi** command in EXEC mode.

set default-afi {**all** | **ipv4** | **ipv6**}

Syntax Description

all	Sets the default AFI to IPv4 and IPv6 for the current session.
ipv4	Sets the default AFI to IPv4 for the current session. This is the default setting.
ipv6	Sets the default AFI to IPv6 for the current session.

Defaults

The default AFI setting is set to IPv4 for all sessions.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **set default-afi** command to set the default AFI for the current session. This command acts as a keystroke shortcut for **show** commands. If the default AFI setting is set to IPv4, then you would not have to specify the **ipv4** keyword for **show** commands that support the **ipv4** keyword. For example, if the AFI setting is set to IPv4, you could issue the **show route** command without specifying the **ipv4** keyword to display IPv4 routes in the Routing Information Base (RIB).

Use the **show default-afi-safi-vrf** command to display the default AFI setting.

Task ID

Task ID	Operations
basic-services	read, write

Examples

The following example shows how to set the default AFI to IPv6:

```
RP/0/RP0/CPU0:router# set default-afi ipv6

%% Default Address Family Identifier is set to 'ipv6'
```

Related Commands

Command	Description
set default-safi	Sets the default SAFI for the current session.
set default-vrf	Sets the default VRF settings for the current session.
show default-afi-safi-vrf	Displays the default AFI, SAFI, and VRF settings for the current session.

set default-safi

To set the default subaddress family identifier (SAFI) for the current session, use the **set default-safi** command in EXEC mode.

set default-safi {**all** | **multicast** | **unicast**}

Syntax Description

all	Sets the default SAFI to multicast and unicast for the current session.
multicast	Sets the default SAFI to multicast for the current session.
unicast	Sets the default SAFI to unicast for the current session. This is the default setting.

Defaults

The default SAFI setting is set to unicast for all sessions.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **set default-safi** command to set the default SAFI setting for the current session. This command acts as a keystroke shortcut for **show** commands. If the default SAFI setting is set to unicast, you would not have to specify the **unicast** keyword for **show** commands that support that keyword. For example, if the default SAFI setting is set to unicast, you could issue the **show route** command without specifying the **unicast** keyword to display information about unicast address prefixes in the Routing Information Base (RIB).

Use the **show default-afi-safi-vrf** command to display the default SAFI setting.

Task ID

Task ID	Operations
basic-services	read, write

Examples

The following example shows how to set the default SAFI to multicast:

```
RP/0/RP0/CPU0:router# set default-safi multicast

%% Default Sub-Address Family Identifier is set to 'multicast'
```

Related Commands

Command	Description
set default-afi	Sets the default AFI settings for the current session.
set default-vrf	Sets the default VRF settings for the current session.
show default-afi-safi-vrf	Displays the default AFI, SAFI, and VRF settings for the current session.

set default-vrf

To set the default VPN routing and forwarding (VRF) instance for the current session, use the **set default-vrf** command in EXEC mode.

set default-vrf {*name* | **none**}

Syntax Description

name	Default VPN routing and forwarding name.
none	Sets the default VPN routing and forwarding name to empty.

Defaults

The default VRF setting is set to empty.

Command Modes

EXEC

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **set default-vrf** command to set the default VRF setting for the current session. This command acts as a keystroke shortcut for **show** commands. For example, if the default VRF is configured, you can issue the **show route** command without specifying the VRF name.

When the default VRF for the session is set to **none**, then IPv4 routes for the system default VRF are displayed.

Note To override the default VRF setting, specify the VRF name in the **show** command.

Use the **show default-afi-safi-vrf** command to display the default VRF setting.

Task ID

Task ID	Operations
basic-services	read, write

Examples

In the following example, the default VRF is set to “dft_vrf”:

```
RP/0/0/CPU0:router# set default-vrf dft_vrf

%% Default Virtual Routing/Forwarding is set to 'dft_vrf'
```

In the following command, the **show route** command is entered without specifying a VRF name. Because the default VRF was set to “dft_vrf”, the results for that VRF are displayed.

```
RP/0/0/CPU0:router# show route ipv4

% No matching vrf found
```

When the default VRF for the session is set to **none**, the system default VRF routes are displayed. In the following example, the default VRF is set to **none** (empty), and the **show route** command displays the system default VRF information:

```
RP/0/RP0/CPU0:router# set default-vrf none

%% Default Virtual Routing/Forwarding is set to ''

RP/0/0/CPU0:router# show route ipv4

Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - ISIS, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, su - IS-IS summary null, * - candidate default
       U - per-user static route, o - ODR, L - local

Gateway of last resort is 12.29.0.1 to network 0.0.0.0

S*   0.0.0.0/0 [1/0] via 12.29.0.1, 00:31:30
L    10.10.10.10/32 is directly connected, 3d02h, Loopback1
C    12.29.0.0/16 is directly connected, 00:31:30, MgmtEth0/0/CPU0/0
L    12.29.56.21/32 is directly connected, 00:31:30, MgmtEth0/0/CPU0/0
```

Related Commands

Command	Description
set default-afi	Sets the default AFI settings for the current session.
set default-safi	Sets the default SAFI for the current session.
show default-afi-safi-vrf	Displays the default AFI, SAFI, and VRF settings for the current session.

show

To display information about the system configuration or operational state, use the **show** command in EXEC mode, administration EXEC mode, or any configuration mode.

show *command* [**| begin** *regular-expression* **| exclude** *regular-expression* **| file** *filesystem***: | include** *regular-expression*]

Syntax Description

command	Supported **show** command.
|	Vertical bar (the "pipe" symbol) indicates that an output processing specification follows.
regular-expression	(Optional) Regular expression found in **show** command output.
begin	(Optional) Begins unfiltered output of the **show** command with the first line that contains the regular expression.
exclude	(Optional) Displays output lines that do not contain the regular expression.
file *filesystem***:**	(Optional) Writes the output lines that contain the regular expression to the specified file on the specified file system. Include the file system alias for the *filesystem* argument, followed by a colon, and the directory path and filename.
include	(Optional) Displays output lines that contain the regular expression.

Defaults

No defaults behavior or values

Command Modes

EXEC
Administration EXEC
Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **show** commands display information about the system and its configuration. To display a list of the available **show** commands, use the question mark (?) online help function.

Filtering Output

Table 19 shows the search options for the **show** command.

Table 19 Show Command Search Options

Command	Purpose
show *command* **| begin** *regular-expression*	Begins unfiltered output of the **show** command with the first line that contains the regular expression.
show *command* **| exclude** *regular-expression*	Displays output lines that do not contain the regular expression.
show *command* **| include** *regular-expression*	Displays output lines that contain the regular expression.
show *command* **| file** *filesystem***:**	Writes the output lines that contain the regular expression to the specified file on the specified file system.

Adding a Filter at the --More-- Prompt

You can also specify a filter at the --More-- prompt of a **show** command output. To filter output from the --More-- prompt, enter a forward slash (**/**) followed by a regular expression. The filter remains active until the command output finishes or is interrupted (using **Ctrl-Z** or **Ctrl-C**).

- If a filter is specified at the original command or a previous --More-- prompt, a second filter cannot be applied.
- The use of the keyword **begin** does not constitute a filter.
- The minus sign (**–**) preceding a regular expression displays output lines that do not contain the regular expression.
- The plus sign (**+**) preceding a regular expression displays output lines that contain the regular expression.

Task ID

This command requires the task ID for the feature used with the **show** command. For example, the command **show interfaces** requires read privileges in the interface task ID.

Examples

The following example shows output from the **show interface | include protocol** command. In this example, the **show interface** command includes only lines in which the regular expression "protocol" appears:

```
RP/0/RP0/CPU0:router# show interface | include protocol

Null0 is up, line protocol is up
0 drops for unrecognized upper-level protocol
POS0/2/0/0 is administratively down, line protocol is administratively down
0 drops for unrecognized upper-level protocol
POS0/2/0/1 is administratively down, line protocol is administratively down
0 drops for unrecognized upper-level protocol
POS0/2/0/2 is administratively down, line protocol is administratively down
0 drops for unrecognized upper-level protocol
POS0/2/0/3 is administratively down, line protocol is administratively down
```

```
0 drops for unrecognized upper-level protocol
FastEthernet0/RP0/CPU0/0 is administratively down, line protocol is administratively
down
FastEthernet0/RP0/CPU0/0 is administratively down, line protocol is administratively
down
0 drops for unrecognized upper-level protocol
```

On most systems, the **Ctrl-Z** key combination can be entered at any time to interrupt the output and return to EXEC mode. For example, issue the **show running-config | begin hostname** command to start the display of the running configuration file at the line containing the hostname setting, then use **Ctrl-Z** when you get to the end of the information you are interested in.

The following is sample output from the **show configuration running | begin line** command. The output begins with unfiltered output from the first line that contains the regular expression "line." In this example, at the --More-- prompt, a new search is specified that begins with output lines that contain the regular expression "ipv4."

Note The use of the keyword **begin** does not constitute a filter.

```
RP/0/RP0/CPU0:router# show configuration running | begin line

Building configuration...
line console
 exec-timeout 120 120
!
logging trap
--More--
/ipv4
filtering...
route ipv4 0.0.0.0 255.255.0.0 pos0/2/0/0
interface pos0/2/0/0
 ipv4 address 172.19.73.215 255.255.0.0
end
```

Related Commands

Command	Description
more	Displays output from a text file.

show aliases

To display all **alias** commands or the **alias** commands in a specified mode, use the **show aliases** command in EXEC mode.

show aliases

Syntax Description

This command has no arguments or keywords.

Defaults

Displays all aliases currently configured on the system.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show aliases** command to display all aliases currently configured on the system.

Task ID

Task ID	Operations
basic-services	read

Examples

The following is sample output from the **show aliases** command. The output displays a summary of all the command aliases configured.

```
RP/0/RP0/CPU0:router# show aliases

exec mode aliases:
ipv4_brief              show ipv4 interface brief

interface mode aliases:
  sample_int              pos 0/2/0/0
```

Related Commands

Command	Description
alias	Creates a command alias.

show configuration (config)

To display information about the current configuration session (target configuration), use the **show configuration** command in any configuration mode.

show configuration [**merge**] [**running**]

Syntax Description

merge	(Optional) Displays the configuration that occurs if the contents of the uncommitted changed (target configuration) are committed to the running configuration.
running	(Optional) Displays the running (committed) configuration.

Defaults

When the command **show configuration** is entered without an argument, the uncommitted changes to the target configuration are displayed.

Command Modes

Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show configuration** command to display details on uncommitted configuration changes.

Use the **show configuration** command with the **running** keyword to display the running (active) configuration.

Prior to committing the target configuration, use the **show configuration merge** command from any configuration mode to display the result of merging the target configuration with the running configuration.

Task ID

Task ID	Operations
basic-services	read

Examples

In this example, the **show configuration** command displays uncommitted changes made during a configuration session:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface POS0/3/0/3
RP/0/RP0/CPU0:router(config-if)# description faq
RP/0/RP0/CPU0:router(config-if)# ipv4 address 10.10.11.20 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# show configuration

Building configuration...
interface POS0/3/0/3
 description faq
 ipv4 address 10.10.11.20 255.0.0.0
end
```

The following is sample output from the **show configuration** command with the optional **merge** keyword. In the following example, the **show configuration merge** command is entered during an configuration session. The output displays the result of merging the target and running configuration, without committing the changes.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# interface POS0/3/0/3
RP/0/RP0/CPU0:router(config-if)# description faq
RP/0/RP0/CPU0:router(config-if)# ipv4 address 10.10.11.20 255.0.0.0
RP/0/RP0/CPU0:router(config-if)# show configuration merge

Building configuration...
hostname router
interface POS0/0/0/0
 ipv4 address 1.2.3.4 255.0.0.0
exit
interface POS0/3/0/3
 description faq
 ipv4 address 1.1.1.1 255.0.0.0
 shutdown
end
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.
load	Populates the target configuration with the contents of a previously saved configuration file.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.

Command	Description
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration changes

To display the configuration changes to be made during a replace operation, use the **show configuration changes** command in global configuration or administration configuration mode.

show configuration changes [**diff**]

Syntax Description		
	diff	(Optional) Displays the changes in UNIX-like format.

Defaults

No default behavior or values

Command Modes

Global configuration
Administration configuration

Command History

Release	Modification
Release 3.3.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
config-services	read
basic-services	read

Examples

The following example shows the changes to be made during a replace operation:

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

Building configuration...
# hostname router
# hostname bla
- logging console
- telnet vrf default ipv4 server disable
- domain ipv4 host xhu-u5
- domain ipv4 host coax-u10
- domain ipv4 host coax-u10.cisco.com
```

```
- domain name
- interface Loopback1
-  ipv4 address 10.0.0.2 255.255.255.224
- !
- interface Loopback2
-  description
- !
- interface Loopback5
-  description
- !
- interface Loopback6
-  description
- !
- interface MgmtEth0/0/CPU0/0
-  ipv4 address 10.0.0.1 255.255.255.224
- !
- interface GigabitEthernet0/2/0/0
-  shutdown
- !
- interface GigabitEthernet0/2/0/1
-  shutdown
- !
- interface GigabitEthernet0/2/0/2
-  shutdown
- !
- interface POS0/3/0/0
-  description
-  shutdown
- !
- interface POS0/4/0/0
-  shutdown
- !
- router static
-  address-family ipv4 unicast
-   0.0.0.0/0 255.255.255.224
-  !
- !
- xml agent corba hostname router
end
```

show configuration commit changes

To display the changes made to the running configuration by previous configuration commits, a configuration commit, or for a range of configuration commits, use the **show configuration commit changes** command in EXEC, administration EXEC, administration configuration, or global configuration mode.

show configuration commit changes {*commit-id* | **since** *commit-id* | **last** *number-of-commits*} [**diff**]

Syntax Description

since	Displays all changes committed to the running configuration since (and including) a specific configuration commit.
commit-id	Displays configuration changes for a specific configuration commit.
last *number-of-commits*	Displays the changes made to the running configuration during the last number of configuration commits specified for the *number-of-commits* argument.
diff	(Optional) Displays added lines, changed lines, and deleted lines.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC
Administration configuration
Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. Command name was modified to include the **configuration** keyword. This command was previously named **show commit changes**.
Release 3.3.0	Support was added for administration EXEC and administration configuration modes. Support was added for the keyword **diff**.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Each time a configuration is committed with the **commit** command, the configuration commit operation is assigned a commit ID. The **show configuration commit changes** command displays the configuration changes made since the specified commit.

To display a list of the available commit IDs, enter the **show configuration commit list** command. You can also display the commit IDs by entering the **show configuration commit changes** command with the online help function (**?**).

Task ID

Task ID	Operations
config-services	read

Examples

The following is sample output from the **show configuration commit list** command. The output displays commit IDs.

```
RP/0/RP0/CPU0:router# show configuration commit list

SNo. Label/ID    User      Line        Client      Time Stamp
~~~~ ~~~~~~~~    ~~~~      ~~~~        ~~~~~~      ~~~~~~~~~~
1    1000000077  lab       con0_RP1_C  CLI         15:42:45 UTC Fri Jan 30 2004
2    1000000076  lab       con0_RP1_C  Rollback    15:30:39 UTC Fri Jan 30 2004
3    1000000075  lab       con0_RP1_C  Rollback    15:25:26 UTC Fri Jan 30 2004
4    1000000074  lab       con0_RP1_C  Rollback    15:04:29 UTC Fri Jan 30 2004
5    1000000073  lab       con0_RP1_C  CLI         14:49:07 UTC Fri Jan 30 2004
6    1000000072  lab       con0_RP1_C  CLI         14:48:35 UTC Fri Jan 30 2004
```

The following is sample output from the **show configuration commit changes** command with the *commit-id* argument. In this example, the output displays the changes made in the configuration commit assigned commit ID 1000000077.

```
RP/0/RP0/CPU0:router# show configuration commit changes 1000000077

Building configuration...
alias exec shrun show configuration running
alias exec shver show version
end
```

The following is sample output from the **show configuration commit changes** command with the **since** keyword and *commit-id* argument. In this example, the output displays the configuration changes made since the configuration commit assigned commit ID 1000000077 was committed.

```
RP/0/RP0/CPU0:router# show configuration commit changes since 1000000077

Building configuration...
no hw-module node 0/RP0/CPU0 shutdown
hostname router
logging trap
no logging console
logging history size 1
alias exec shrun show configuration running
alias exec shver show version
interface MgmtEth0/RP1/CPU0/0
 ipv4 address 12.25.34.10 255.255.0.0
```

```
 no shutdown
!
interface preconfigure MgmtEth0/RP0/CPU0/0
 no shutdown
!
no route ipv4 0.0.0.0/0 12.7.0.1
route ipv4 0.0.0.0/0 12.25.0.1
route ipv4 223.255.254.254/32 12.25.0.1
telnet ipv4 server enable
end
```

The following is sample output from the **show configuration commit changes** command with the **diff** keyword. In the display, the following symbols signify changes:

+ indicates an added line.

- indicates a deleted line.

# indicates a modified line.

```
router# show configuration commit changes last 1 diff

Building configuration...
+ interface Loopback1000
+ ipv4 address 190.190.180.1 255.255.255.255
!
end

+ interface Loopback1000
  +  ipv4 address 190.190.180.1 255.255.255.255
  !
  end
```

Related Commands

Command	Description
rollback configuration	Rolls back the configuration to a previous commit.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

show configuration commit list

To display information about the configuration commits stored in the commit database, use the **show configuration commit list** command in EXEC, administration EXEC, administration configuration, or global configuration mode.

show configuration commit list [*number-of-commits*] [**detail**]

Syntax Description

number-of-commits	(Optional) Number of commits (beginning with the most recent commit) that are available for rollback.
detail	(Optional) Displays detailed commit information, including comments.

Defaults

If this command is entered without any optional arguments or keywords, the output displays information about all the configuration commits stored in the commit database.

Command Modes

EXEC
Administration EXEC
Administration configuration
Global configuration

Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router. This command replaces the **show rollback points** command, which was available in previous releases.
Release 3.3.0	Support was added for the administration EXEC and administration configuration modes.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show configuration commit list** command to list the commit IDs (up to 100) that are available for rollback.

Note The most recent 100 commits are retained by the system. As new commit IDs are added, the oldest commit IDs are discarded and are no longer available for rollback operations.

Task ID

Task ID	Operations
config-services	read

Examples

The following is sample output from the **show configuration commit list** command. The output displays the commit IDs that are available for rollback.

```
RP/0/RP0/CPU0:router# show configuration commit list

SNo. Label/ID    User      Line        Client      Time Stamp
~~~~ ~~~~~~~~    ~~~~      ~~~~        ~~~~~~      ~~~~~~~~~~
1    1000000010  UNKNOWN   con0_RP1_C  Rollback    02:25:53 UTC Fri Feb 06 2004
2    1000000009  UNKNOWN   con0_RP1_C  CLI         02:23:09 UTC Fri Feb 06 2004
3    1000000008  UNKNOWN   con0_RP1_C  CLI         02:22:54 UTC Fri Feb 06 2004
4    1000000007  UNKNOWN   con0_RP1_C  CLI         02:22:18 UTC Fri Feb 06 2004
5    1000000006  UNKNOWN   con0_RP1_C  CLI         02:07:21 UTC Fri Feb 06 2004
6    1000000005  UNKNOWN   con0_RP1_C  CLI         01:59:50 UTC Fri Feb 06 2004
7    1000000004  UNKNOWN   con0_RP1_C  CLI         01:58:13 UTC Fri Feb 06 2004
8    1000000003  UNKNOWN   con0_RP1_C  CLI         01:58:04 UTC Fri Feb 06 2004
9    1000000002  UNKNOWN   con0_RP1_C  CLI         10:41:31 UTC Wed Feb 04 2004
10   1000000001  UNKNOWN   con0_RP1_C  CLI         10:41:14 UTC Wed Feb 04 2004
```

Table 20 describes the significant fields shown in the display.

Table 20 show configuration commit list Field Descriptions

Field	Description
SNo.	Serial number of the commit entry.
Label/ID	If a label was assigned to a commit, the first 10 characters of the label display; otherwise, the autogenerated commit ID displays.
User	User who executed the commit.
Line	Line in which the user session was established. In some cases, this field may display "UNKNOWN" or "SYSTEM". These fields indicate that an internal commit was made by the system.
Client	The management interface used to make the commit.
Time Stamp	Time and date when the commit was executed.

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.

Command	Description
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration failed (config)

To display information about a configuration that failed during the last commit, use the **show configuration failed** command in any configuration mode.

show configuration failed [**load** | **noerrors**]

Syntax Description

load	(Optional) Displays any syntax errors found in a configuration loaded with the **load** command.
noerrors	(Optional) Displays the configuration that failed in last commit without the error reasons.

Defaults

Displays the details of the failed configuration including error reasons.

Command Modes

Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.1	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.2	No modification.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
basic-services	read

Examples

The following example shows a failed commit operation:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# taskgroup bgp
RP/0/RP0/CPU0:router(config-tg)# description this is an example of an invalid task
group
```

```
RP/0/RP0/CPU0:router(config-tg)# commit

% Failed to commit one or more configuration items. Please use 'show configuration failed'
to view the errors
```

The following is sample output from the **show configuration** command with the optional **failed** keyword. The output displays the configuration items that failed during the last commit operation.

```
RP/0/RP0/CPU0:router(config-tg)# show configuration failed

!! CONFIGURATION FAILED DUE TO SEMANTIC ERRORS
taskgroup bgp
!!% Usergroup/Taskgroup names cannot be taskid names
!
```

The following is sample output from the **show configuration** command with the optional **failed** and **no errors** keywords. The output displays the configuration items that failed during the last commit operation without an error description.

```
RP/0/RP0/CPU0:router(config-tg)# show configuration failed noerrors

!! CONFIGURATION FAILED DUE TO SEMANTIC ERRORS
taskgroup bgp
!
```

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration failed incompatible

To display any configurations that were removed from the running configuration because they were not understood by the software being activated, use the **show configuration failed incompatible** command in EXEC or administration EXEC mode.

show configuration failed incompatible

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.6.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Any configurations in the running configuration that are not understood by new software being installed are removed from the running configuration. To see which configurations were removed, use the **show configuration failed incompatible** command.

Task ID

Task ID	Operations
config-services	read

Related Commands

Command	Description
show running-config	Displays the current running (active) configuration.

show configuration failed remove

To display information about a configuration that failed while being removed during installation operations, use the **show configuration failed remove** command in EXEC or administration EXEC mode.

show configuration failed remove

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.5.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows a failed commit operation:

```
RP/0/0/CPU0:router# show configuration failed remove

!! SEMANTIC ERRORS: This configuration was rejected by
!! the system due to semantic errors. The individual
!! errors with each failed configuration command can be
!! found below.

multicast-routing
 no address-family ipv4
!!% Process did not respond to sysmgr
 address-family ipv4
  no interface all enable
```

```
!!% Process did not respond to sysmgr
 !
!
```

Because the configuration failed to be removed, it is still displayed in the output from the **show running-configuration** command as expected:

```
RP/0/0/CPU0:router# show running-configuration
...
router pim vrf default address-family ipv4
 auto-rp candidate-rp GigabitEthernet0/2/0/3 scope 255 group-list 224/4 interval 10
!
multicast-routing
 address-family ipv4
  interface all enable
 !
!
```

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration failed rollback

To display information about a configuration that failed in the last rollback operation, use the **show configuration failed rollback** command in EXEC or administration EXEC mode.

show configuration failed rollback

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.5.0	This command was first introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
config-services	read
root-lr	read

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.

Command	Description
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration failed startup

To display information about a configuration that failed at startup, use the **show configuration failed** command in EXEC or administration EXEC mode.

show configuration failed startup [**noerror** | **previous** *number*]

Syntax Description

noerror	(Optional) Displays the configuration that failed at startup without an error reason.
previous *number*	(Optional) Displays the previous failed startup configuration or configurations. The *number* argument is a value from 1 to 4, which displays the failed startup configurations in previous *number* of sessions.

Defaults

If no keywords are specified, this command displays the details of the failed startup configuration including error reasons.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.1	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.2	No modification.
Release 3.3.0	Support was added for the **previous** *number* keyword and argument.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
config-services	read

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration history

To display a history of configuration events, use the **show configuration history** command in EXEC, administration EXEC, administration configuration, or global configuration mode.

show configuration history [**alarm** | **backup** | **cfs-check** | **commit** | **oir** | **rebase** | **shutdown** | **startup**] [**first** *number* | **last** *number* | **reverse**] [**detail**]

Syntax Description

alarm	(Optional) Displays alarm events.
backup	(Optional) Displays configuration backup events.
cfs-check	(Optional) Displays CFS check events.
commit	(Optional) Displays commit events.
detail	(Optional) Displays detailed information, including comments.
first *number*	(Optional) Displays the first *x* events. Replace *number* with the number of events to display.
last *number*	(Optional) Displays the last *x* events. Replace *number* with the number of events to display.
oir	(Optional) Displays online insertion and removal (OIR) events of router hardware.
rebase	(Optional) Displays commit database consolidation events.
reverse	(Optional) Displays the most recent events first.
shutdown	(Optional) Displays shutdown events.
startup	(Optional) Displays startup events, including alternate configurations, failed configurations, and other events.

Defaults

When entered without any optional arguments or keywords, this command displays all configuration events. The oldest events are displayed at the top of the list for each event type.

Command Modes

EXEC
Administration EXEC
Administration configuration
Global configuration

Command History

Release	Modification
Release 3.4.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.5.0	The **backup** and **rebase** keywords were added.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show configuration history** command to display information about the last (up to) 1500 configuration events.

Use one of the available keywords to display the configuration event only for that event type. Use the **first** *number* and **last** *number* options to display a specified number of events. Use the **reverse** keyword to display the newest events at the top of the list.

After an upgrade to Cisco IOS XR Release 3.6, the **show configuration history** command in administration EXEC mode does not display any information from before the upgrade. To see information about commits prior to the upgrade, use the **show configuration commit list** command in administration EXEC mode.

Task ID

Task ID	Operations
config-services	read

Examples

In the following example, the **show configuration history** command is used to display the history of all configuration events for an SDR:

```
RP/0/RP0/CPU0:router# show configuration history

Sno.  Event      Info                          Time Stamp
~~~~  ~~~~~      ~~~~                          ~~~~~~~~~~
1     alarm      inconsistency alarm raised    Thu Jun 22 15:23:15 2006
2     startup    configuration applied         Thu Jun 22 15:23:32 2006
3     OIR config restore                       Thu Jun 22 15:23:25 2006
4     OIR config restore                       Thu Jun 22 15:23:33 2006
5     OIR config restore                       Thu Jun 22 15:23:33 2006
6     OIR config restore                       Thu Jun 22 15:23:34 2006
7     OIR config restore                       Thu Jun 22 15:23:34 2006
8     OIR config restore                       Thu Jun 22 15:23:35 2006
9     OIR config restore                       Thu Jun 22 15:23:36 2006
10    OIR config restore                       Thu Jun 22 15:23:37 2006
11    OIR config restore                       Thu Jun 22 15:23:37 2006
12    OIR config restore                       Thu Jun 22 15:23:38 2006
13    OIR config restore                       Thu Jun 22 15:23:38 2006
14    OIR config restore                       Thu Jun 22 15:23:39 2006
15    OIR config restore                       Thu Jun 22 15:23:39 2006
16    OIR config restore                       Thu Jun 22 15:23:40 2006
17    OIR config restore                       Thu Jun 22 15:23:40 2006
18    OIR config restore                       Thu Jun 22 15:23:42 2006
19    OIR config restore                       Thu Jun 22 15:23:42 2006
20    OIR config restore                       Thu Jun 22 15:23:42 2006
21    OIR config restore                       Thu Jun 22 15:23:43 2006
 --More--
```

In the following example, the **show configuration history startup** command is used to display only the startup configuration events:

```
RP/0/RP0/CPU0:router# show configuration history startup

Sno.  Event      Info                          Time Stamp
~~~~  ~~~~~      ~~~~                          ~~~~~~~~~~
1     startup    configuration applied         Thu Jun 22 15:23:32 2006
2     startup    configuration applied         Sat Jul  1 15:02:24 2006
```

```
3     startup    configuration applied          Sat Jul  8 17:36:52 2006
4     startup    configuration applied          Sun Jul  9 13:40:27 2006
5     startup    configuration applied          Sat Jul 15 18:18:54 2006
```

In the following example, the **show configuration history commit** command is used with the **detail** keyword to display additional details regarding the commit events:

```
RP/0/RP0/CPU0:router# show configuration history commit detail

1)  Event: commit         Time: Thu Jun 22 15:44:33 2006
       Commit ID: 1000000001 Label:
       User: lab        Line: vty0
       Client: CLI           Comment:

   2)  Event: commit         Time: Thu Jun 22 16:58:18 2006
       Commit ID: 1000000002 Label:
       User: lab        Line: vty2
       Client: CLI           Comment:

   3)  Event: commit         Time: Thu Jun 22 16:58:39 2006
       Commit ID: 1000000003 Label:
       User: lab        Line: vty2
       Client: CLI           Comment:

   4)  Event: commit         Time: Sat Jul  1 15:29:31 2006
       Commit ID: 1000000001 Label:
       User: lab        Line: vty0
       Client: CLI           Comment:

   5)  Event: commit         Time: Sat Jul  1 15:32:25 2006
       Commit ID: 1000000002 Label:
       User: lab        Line: vty0
 --More--
```

Table 21 describes the significant fields shown in the display.

Table 21 show configuration history Field Descriptions

Field	Description
SNo.	Serial number of the entry.
Event	Type of configuration event.
Info	Summary of the configuration action.
Time Stamp	Time and date when the event was run.
Label/ID	If a label was assigned to a commit, the first 10 characters display; otherwise, the autogenerated commit ID displays.
User	User who issued the command.
Line	Line in which the user session was established. In some cases, this field may display "UNKNOWN" or "SYSTEM". These fields indicate that an internal action was made by the system.
Client	The management interface used to make the event.

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration inconsistency replica

To display any configuration inconsistencies on a replica node, use the **show configuration inconsistency replica** command in EXEC or administration EXEC mode.

show configuration inconsistency replica location *node-id*

Syntax Description

location *node-id*	Displays any configuration inconsistencies on the designated node. The *node-id* argument is expressed in the rack/slot/module notation.

Defaults

Administration EXEC mode: Displays configuration inconsistencies for the admin plane configuration.
EXEC mode: Displays configuration inconsistencies for an SDR configuration.

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 3.6.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

In administration EXEC mode, the replica node for the **show configuration inconsistency replica** command is the standby designated system controller (DSC). In EXEC mode, the replica nodes are the route processors (RPs) or distributed route processors (DRPs) that can become the designated secure domain router system controller (DSDRSC).

Use the **show configuration inconsistency replica** command, before performing a manual failover or DSC migration, to verify that the node in line to take over for the DSC or DSDRSC is in good shape. If any problems are reported, use the **clear configuration inconsistency replica** command to correct them.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows a configuration with inconsistencies:

```
RP/0/RP0/CPU0:Router# show configuration inconsistency replica location 0/rp1/cpu0

The replica at location 0/RP1/CPU0 is inconsistent.  Please run 'clear configuration
inconsistency replica location 0/RP1/CPU0'.
```

The following example shows sample output after the inconsistencies have been resolved:

```
RP/0/RP0/CPU0:Router# show configuration inconsistency replica location 0/rp1/cpu0

Replica is consistent
```

Related Commands

Command	Description
clear configuration inconsistency replica	Resolves configuration inconsistencies on a replica node.

show configuration persistent

To display the persistent configuration, use the **show configuration persistent** command in EXEC mode.

show configuration persistent [*diff*]

Syntax Description

diff	(Optional) Displays the difference between the running configuration and persistent configuration. This option is available only on the DSDRSC.

Defaults

If no argument is specified, the **show configuration persistent** command displays the entire contents of the persistent configuration file.

Command Modes

EXEC

Command History

Release	Modification
Release 3.7.0	This command was introduced on the Cisco CRS-1 and the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The persistent configuration is the configuration stored in nonvolatile memory, from which the running configuration is restored after the router is reloaded. The running configuration should be the same as the persistent configuration. Use this command with the *diff* argument if you want to check if, due to a bug, there is a difference between the running configuration and the persistent configuration.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows that there is no difference between the running configuration and the persistent configuration:

```
RP/0/RP0/CPU0:router# show configuration persistent diff

Building configuration...
end
```

The following example shows a difference between the running configuration and the persistent configuration:

```
RP/0/RP0/CPU0:router# show configuration persistent diff

Building configuration...
router vrrp
interface TenGigE0/1/0/1.1
vrrp 1 preempt delay 300
!
interface TenGigE0/1/0/1.2
vrrp 1 preempt delay 300
!
interface TenGigE0/1/0/1.3
vrrp 1 preempt delay 300
```

Related Commands

Command	Description
show running-config	Displays the current running (active) configuration.

show configuration removed

To display a configuration removed during installation operations, use the **show configuration removed** command in EXEC or administration EXEC mode.

show configuration removed *config-id*

Syntax Description

config-id	Name of removed configuration. Type ? to see a list of the names of all removed configurations.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	This command was added to the administration EXEC mode.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows a removed configuration:

```
RP/0/RP0/CPU0:router# show configuration removed 20060301112919.cfg

xml agent corba
http server
end
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.
load	Populates the target configuration with the contents of a previously saved configuration file.
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration rollback changes

To display changes that would be made by the **rollback configuration** command or to display the list of commit IDs, use the **show configuration rollback** command in EXEC, administration EXEC, administration configuration, or global configuration mode.

show configuration rollback changes {*commit-id* | **to** *commit-id* | **last** *number-of-commits*} [**diff**]

Syntax Description

commit-id	Name of configuration. When a specific *commit-id* is specified, only the changes that would occur if only the specified commit is rolled back are displayed.
to *commit-id*	Displays the changes that will occur to the running configuration if the system is rolled back to the configuration specified with the *commit-id* argument.
last *number-of-commits*	Displays the changes that will occur to the running configuration if the system is rolled back to the last number of commits specified with the *number-of-commits* argument.
diff	(Optional) Displays added lines, changed lines, and deleted lines.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC
Administration configuration
Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. The command name was modified to include the **configuration** keyword. The **show rollback points** command was deprecated and replaced by the **show configuration commit list** command.
Release 3.3.0	Support was added for the keyword **diff**.
Release 3.4.0	No modification.
Release 3.5.0	This command was added to administration EXEC mode.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Note The most recent 100 commits are retained by the system. As new commit IDs are added, the oldest commit IDs are discarded and are no longer available for rollback operations.

Use the *commit-id* argument without the **to** keyword to display the changes for a particular commit. This can be useful for troubleshooting actions of the **rollback configuration** command.

Examples

The following is sample output from the **show configuration rollback changes** command with the **to** keyword and the *commit-id* argument. The output displays the configuration changes that would occur if the configuration were to be rolled back to the configuration commit specified for the *commit-id* argument.

```
RP/0/RP0/CPU0:router# show configuration rollback changes to 1000000007

Building configuration...
hostname old-name
end
```

The following is sample output from the **show configuration rollback changes** command with **last** keyword and *number-of-commits* argument. The output displays the configuration changes that would occur if the configuration were to be rolled back to the number of configuration commits specified for the *number-of-commits* argument.

```
RP/0/RP0/CPU0:router# show configuration rollback changes last 2

Building configuration...
hostname orig_name
interface POS0/1/0/1
 shutdown
!
end
```

The following is sample output from the **show configuration rollback changes** command with the **diff** keyword.

In the display, the following symbols signify changes:

+ indicates an added line.
- indicates a deleted line.
# indicates a modified line.

```
router# show configuration rollback changes last 1 diff

Building configuration...
 interface Loopback1000
#  ipv4 address 1.1.1.1 255.255.255.255
!
end
```

Related Commands

Command	Description
rollback configuration	Rolls back the configuration to a previous commit.

show configuration running

To display the running configuration, use the **show configuration running** command in administration EXEC mode.

show configuration running [*config-keyword*]

Syntax Description

config-keyword	(Optional) Specific configuration to display.

Defaults

No default behavior or values

Command Modes

Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show configuration running** command to display the currently active configuration.

Task ID

Task ID	Operations
basic-services	read

Examples

The following example shows the currently running (committed) configuration:

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

Building configuration...
username lab
 secret 5 $1$XNWt$j8RscNdncKSRoMSnqSpbj/
 group root-system
!
```

```
end
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.
load	Populates the target configuration with the contents of a previously saved configuration file.
show configuration (config)	Displays the contents of the target configuration.
show configuration running-config	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration running-config

To display the running configuration, use the **show configuration running-config** command in EXEC mode.

show configuration running-config [*config-keyword*]

Syntax Description

config-keyword	(Optional) Specific configuration to display.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the *config-keyword* argument to display the running configuration for a specific keyword only.

Task ID

Task ID	Operations
basic-services	read

Examples

The following example shows the currently running (committed) configuration:

```
RP/0/0/CPU0:router# show configuration running-config

Building configuration...


!! Last configuration change at 15:36:31 UTC Thu Nov 17 2005 by lab
  sessions  Users with active configuration sess
```

```
!n
hostname router
line consolestartup   Sh
 exec-timeout 0 0onfiguration
!
logging console debugging
  |         Ou
snmp-server community public RW
  <cr>
RP/0/0/
ipv4 source-routeadmin)#show confi
key chain IPSLA ?
 key 10
  key-string password 1
 ipv4 address 10.0.0.0 255.255.255.0
 encapsulation ppp
 keepalive disable
!
interface POS0/7/0/0
 shutdown
!
interface POS0/7/0/1
 shutdown
!
interface POS0/7/0/2
 shutdown
!
interface POS0/7/0/3
 shutdown
!
route ipv4 0.0.0.0/0 12.7.0.1
ipsla
 responder
 !
!
end
```

Related Commands

Command	Description
commit	Merges the target configuration to the running configuration.
load	Populates the target configuration with the contents of a previously saved configuration file.
show configuration (config)	Displays the contents of the target configuration.
show configuration running	Displays the contents of the committed configuration.
show configuration commit changes	Displays the changes made to the running configuration by previous configuration commits.
show configuration commit list	Displays information about the configuration commits stored in the commit database.
show configuration history	Display history of configuration changes.
show configuration failed (config)	Displays information about a configuration that failed during the last commit.
show configuration failed startup	Displays information about a configuration that failed at startup.
show configuration rollback changes	Displays changes that would be made by the **rollback configuration** command or displays the list of commit IDs.

Command	Description
show configuration sessions	Displays the active configuration sessions.
show running-config	Displays the current running (active) configuration.

show configuration sessions

To display the active configuration sessions, use the **show configuration sessions** command in administration EXEC mode or in EXEC mode.

show configuration sessions [**detail**]

Syntax Description

detail	(Optional) Displays detailed information.

Defaults

No defaults behavior or values

Command Modes

EXEC
Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	Support was added for the **detail** keyword.
Release 3.4.0	No modification.
Release 3.5.0	*Session* changed to *Current Configuration Session* in the display output.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show configuration sessions** command to display the active configuration sessions. Use the **clear configuration sessions** command to clear a configuration session. The **show configuration sessions** command can be used with the **clear configuration sessions** command to verify that an active configuration session was cleared.

Task ID

Task ID	Operations
config-services	read

Examples

The following is sample output from the **show configuration sessions** command:

```
RP/0/RP0/CPU0:router# show configuration sessions

Current Configuration Session  Line       User     Date                     Lock
```

```
00000050-001200bb-00000000     con0_5_CPU cisco    Fri Feb 16 17:23:47 2007
```

Table 22 describes the significant fields shown in the display.

Table 22 show configuration sessions Field Descriptions

Field	Description
Session	System-generated configuration session ID number.
Line	Line in which the user session was established. In some cases, this field may display "UNKNOWN" or "SYSTEM." These fields indicate that an internal commit was made by the system.
User	User who initiated the configuration session.
Date	Time and date the configuration session was started.
Lock	Locked running-configuration. An asterisk, *, displayed in this field means the session has been locked. Only one session can lock the running configuration at a time.

Related Commands

Command	Description
clear configuration sessions	Clears an active configuration session.

show default-afi-safi-vrf

To display the default address family identifier (AFI), subaddress family identifier (SAFI) and VPN routing and forwarding (VRF) instance for the current session, use the **show default-afi-safi-vrf** command in EXEC mode.

show default-afi-safi-vrf

Syntax Description

This command has no arguments or keywords.

Defaults

No defaults behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	Display of the default VPN routing and forwarding (VRF) instance was supported.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show default-afi-safi-vrf** command to display the default AFI and SAFI settings for the current session. The AFI and SAFI settings are controlled by the following commands:

- **set default-afi**
- **set default-safi**
- **set default-vrf**

Task ID

Task ID	Operations
basic-services	read

Examples

The following is sample output from the **show default-afi-safi-vrf** command:

```
RP/0/RP0/CPU0:router# show default-afi-safi-vrf

%% Default AFI/SAFI/VRF for this session is:
        Address Family Identifier:       'ipv4'
        Sub-Address Family Identifier:   'unicast'
        Virtual Routing/Forwarding:      ''
```

Related Commands

Command	Description
set default-afi	Sets the default AFI setting for the current session.
set default-safi	Sets the default SAFI setting for the current session.
set default-vrf	Sets the default VRF setting for the current session.

show history

To display a history of commands executed in EXEC, administration EXEC, administration configuration, or global configuration mode use the **show history** command in one of the supported modes.

show history [**detail**]

Syntax Description

detail	(Optional) Displays detailed history information.

Defaults

No default behavior or values

Command Modes

EXEC
Administration EXEC
Administration configuration
Global configuration

Command History

Release	Modification
Release 3.4.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **show history** command displays a history of the command entered for the current command mode. For example, enter the **show history** command to display a history of commands entered in EXEC mode. Enter the **show history** command in global configuration mode to display a history of the commands entered in global configuration mode.

Task ID

Task ID	Operations
config-services	read
basic-services	read

Examples

In the following example, the **show history** command is run in EXEC mode to display a history of the command entered in EXEC mode:

```
RP/0/RP0/CPU0:router# show history
```

```
  configure
  admin
  show history
```

In the following example, the **show history** command is run in global configuration mode to display a history of the command entered in global configuration mode:

```
RP/0/RP0/CPU0:router(config)# show history
  interface pos 0/1/0/0
  ipv4 address 10.0.0.0
  root
  end
  describe line default autocommand config
  line default autocommand configure
  end
  show history
```

show running-config

To display the contents of the currently running configuration or a subset of that configuration, use the **show running-config** command in the appropriate mode.

show running-config [[**exclude**] *command*] [**sanitized**]

Syntax Description

exclude	(Optional) Excludes a specific configuration from the display.
command	(Optional) Displays only a single command or a subset of commands available under a specified command mode.
sanitized	(Optional) Displays a sanitized configuration for safe distribution and analysis.

Defaults

The **show running-config** command without any arguments or keywords displays the entire contents of the running configuration file.

Command Modes

EXEC
Administration EXEC
Any configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

You can display either the entire running configuration or a subset of the running configuration. The subset may be all the commands within a specified command mode.

Note In Cisco IOS XR software, the running configuration is automatically used at system startup, reset, or power cycle. The running configuration is the committed configuration.

Sanitized Output

Use the **show running-config** command with the **sanitized** keyword to display the contents of the active running configuration without installation-specific parameters. Some configuration details, such as IP addresses, are replaced with different addresses. The sanitized configuration can be used to share a configuration without exposing the configuration details.

Command Modes

When the **show running-config** command is entered in administration configuration mode, the configuration for the administration plane is displayed, including the configured logical routers for the system. When the **show running-config** command is entered in any global configuration mode, or in EXEC mode, the configuration for the specific secure domain router (SDR) is displayed.

Excluding Parts of the Display

Use the **exclude** keyword followed by a *command* argument to exclude a specific configuration from the display.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows how to enter the **show running-config** command with the question mark (?) online help function to display the available subsets of the running configuration that can be entered to display a subset of the running configuration:

```
RP/0/RP0/CPU0:router# show running-config ?

  aaa               Authentication, Authorization and Accounting
  alias             Create an alias for entity
  aps               Configure SONET Automatic Protection Switching (APS)
  arp               Global ARP configuration subcommands
  as-path           BGP autonomous system path filter
  as-path-set       Define an AS-path set
  banner            Define a login banner
  cdp               Enable CDP, or configure global CDP subcommands
  cef               CEF configuration commands
  cinetd            Global Cisco inetd configuration commands
  class-map         Configure QoS Class-map command
  clock             Configure time-of-day clock
  community-list    Add a community list entry
  community-set     Define a community set
  controller        Controller configuration subcommands
  dhcp              Dynamic Host Configuration Protocol
  domain            Domain service related commands
  exception         Coredump configuration commands
  exclude           Exclude a feature or configuration item from display
  explicit-path     Explicit-path config commands
  extcommunity-set  Define an extended communitiy set
  fault             Fault related commands
  forward-protocol  Controls forwarding of physical and directed IP broadcasts
  ftp               Global FTP configuration commands
 --More--
```

The following is sample output from the **show running-config** command that displays a subset of the running configuration. In the following example, the **show running-config** command is used to display the running configuration for Packet-over-SONET/SDH (POS) interface 0/2/0/1:

```
RP/0/RP0/CPU0:router# show running-config interface pos 0/2/0/1

interface POS0/2/0/1
ipv4 address 10.0.0.0 255.0.0.0
```

The following is sample output from the **show running-config sanitized** command that displays a sanitized version of the running configuration. The sanitized configuration can be used to share a configuration without exposing some configuration details.

```
RP/0/RP1/CPU0:router# show running-config sanitized
Building configuration...

!! Last configuration change at 05:26:50 UTC Thu Jan 19 2006 by <removed>
!
snmp-server traps fabric plane
snmp-server traps fabric bundle state
hostname <removed>
line console
 exec-timeout 0 0
!
exception choice 1 compress off filepath <removed>
logging console debugging
telnet vrf <removed> ipv4 server max-servers no-limit
snmp-server ifindex persist
snmp-server host 10.0.0.1 traps version <removed> priv <removed> udp-port 2555
snmp-server view <removed> <removed> included
snmp-server community <removed> RO LROwner
snmp-server community <removed> RO LROwner
snmp-server group <removed> v3 priv read <removed> write <removed>
snmp-server traps snmp
snmp-server traps syslog
interface Loopback10
!
interface Loopback1000
!
 --More--
```

Related Commands

Command	Description
show configuration (config)	Displays the contents of the target configuration.
show configuration running-config	Displays the contents of the running configuration.

show xml schema

To browse the XML schema and data, use the **show xml schema** command in EXEC mode.

show xml schema

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 3.6.0	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **show xml schema** command runs the XML schema browser so that you can browse the XML schema and data.

Task ID

Task ID	Operations
config-services	read

Examples

The following example shows how to enter the XML schema browser and the available commands:

```
RP/0/RP0/CPU0:router# show xml schema

Username: xxxx
Password:
Enter 'help' or '?' for help
xml-schema[config]:> ?

config                  oper                    action
adminoper               adminaction             cd
pwd                     classinfo               list
ls                      datalist                walk
walkdata                get                     hierarchy
quit                    exit                    help
xml-schema[config]:>
```

Related Commands

Command	Description
copy xml-schema	Copies the XML schema files on the router as a tar ball file (.tar.gz).

template

To create a template name and enter template configuration mode, use the **template** command in global configuration mode. To remove a template definition, use the **no** form of this command.

template *name*

no template *name*

Syntax Description

name	Unique name for the template to be created.

Defaults

No templates are defined.

Command Modes

Global configuration

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **template** command to enter template configuration mode. From template configuration mode, you can group a subset of configuration commands in a named template. Commonly used sets of configuration commands can be grouped into a named template. Defining a template is similar to creating a C macro function. A template provides modularity and ease of use during user configuration.

Use the **end-template** command to exit template configuration mode. After defining a template, use the **apply-template** command to apply the template. Use the **show running-config** command with the optional **template** keyword and *template-name* argument to display the contents of a template.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to enter template configuration mode to create a template. In this example, a template named "pre-pos" is defined for the preconfigured Packet-over-SONET/SDH (POS) interface 0/1/0/1. The **end-template** command is used to exit from template configuration mode.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# template pre-pos
RP/0/RP0/CPU0:router(config-TPL)# interface preconfigure pos0/1/0/0
RP/0/RP1/CPU0:router(config-if-pre)# ipv4 address 10.3.32.154 255.0.0.0
RP/0/RP1/CPU0:router(config-if-pre)# end-template
RP/0/RP0/CPU0:router(config)#
```

Note After configuring a template, you may want to display the contents of the configured template. To display a template configuration, use the **show running-config** command with the **template** keyword and *name* argument.

The following is sample output from the **show running-config** command with the **template** keyword and *name* argument. In this example, the output displays the contents of a template named "pre-pos."

```
RP/0/RP0/CPU0:router# show running-config template pre-pos

template pre-pos
 interface preconfigure POS0/1/0/0
  ipv4 address 10.3.32.154 255.0.0.0
 !
end-template
```

Related Commands

Command	Description
apply-template	Applies a template to the target configuration.
end-template	Exits template configuration mode.
show running-config	Displays the current running (active) configuration.