Configuration Replace and Configuration Rollback

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The Configuration Replace and Configuration Rollback feature provides the capability to replace the current running configuration with any saved Cisco IOS configuration file. This functionality can be used to revert to a previous configuration state, effectively rolling back any configuration changes that were made since that configuration file was saved.

Finding Feature Information in This Module

Your Cisco IOS software release may not support all of the features documented in this module. To reach links to specific feature documentation in this module and to see a list of the releases in which each feature is supported, use the "Feature Information for Configuration Replace and Configuration Rollback" section on page 42.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS and Catalyst OS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Contents

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Prerequisites for Configuration Replace and Configuration Rollback

- The format of the configuration files used as input by the Configuration Replace and Configuration Rollback feature must comply with standard Cisco IOS software configuration file indentation rules as follows:
  - Start all commands on a new line with no indentation, unless the command is within a configuration submode.
  - Indent commands within a first-level configuration submode one space.
  - Indent commands within a second-level configuration submode two spaces.
  - Indent commands within subsequent submodes accordingly.

  These indentation rules describe how Cisco IOS software creates configuration files for such Cisco IOS commands as **show running-config** or **copy running-config** *destination-url*. Any configuration file generated on a Cisco IOS device complies with these rules.
- Free memory larger than the combined size of the two configuration files (the current running configuration and the saved replacement configuration) is required.

Restrictions for Configuration Replace and Configuration Rollback

- If the router does not have free memory larger than the combined size of the two configuration files (the current running configuration and the saved replacement configuration), the configuration replace operation is not performed.
- Certain Cisco IOS configuration commands such as those pertaining to physical components of a networking device (for example, physical interfaces) cannot be added or removed from the running configuration. To illustrate, a configuration replace operation cannot remove the **interface ethernet 0** command line from the current running configuration if that interface is physically present on the device. Similarly, the **interface ethernet 1** command line cannot be added to the running configuration if no such interface is physically present on the device. A configuration replace operation that attempts to perform these types of changes results in error messages indicating that these specific command lines failed.
- In very rare cases, certain Cisco IOS configuration commands cannot be removed from the Cisco IOS running configuration without reloading the router. A configuration replace operation that attempts to remove this type of command results in error messages indicating that these specific command lines failed.

Information About Configuration Replace and Configuration Rollback

To use the Configuration Replace and Configuration Rollback feature, you should understand the following concepts:

Configuration Archive

The Cisco IOS configuration archive is intended to provide a mechanism to store, organize, and manage an archive of Cisco IOS configuration files to enhance the configuration rollback capability provided by the **configure replace** command. Before this feature was introduced, you could save copies of the running configuration using the **copy running-config** *destination-url* command, storing the replacement file either locally or remotely. However, this method lacked any automated file management. On the other hand, the Configuration Replace and Configuration Rollback feature provides the capability to automatically save copies of the running configuration to the Cisco IOS configuration archive. These archived files serve as checkpoint configuration references and can be used by the **configure replace** command to revert to previous configuration states.

The **archive config** command allows you to save Cisco IOS configurations in the configuration archive using a standard location and filename prefix that is automatically appended with an incremental version number (and optional timestamp) as each consecutive file is saved. This functionality provides a means for consistent identification of saved Cisco IOS configuration files. You can specify how many versions of the running configuration are kept in the archive. After the maximum number of files are saved in the archive, the oldest file is automatically deleted when the next, most recent file is saved. The **show archive** command displays information for all configuration files saved in the Cisco IOS configuration archive.

The Cisco IOS configuration archive, in which the configuration files are stored and available for use with the **configure replace** command, can be located on the following file systems:

- If your platform has disk0—disk0:, disk1:, ftp:, pram:, rcp:, slavedisk0:, slavedisk1:, or tftp:
- If your platform does not have disk0—ftp:, http:, pram:, rcp:, or tftp:

Configuration Replace

The **configure replace** command provides the capability to replace the current running configuration with any saved Cisco IOS configuration file. This functionality can be used to revert to a previous configuration state, effectively rolling back any configuration changes that were made since the previous configuration state was saved.

When using the **configure replace** command, you must specify a saved Cisco IOS configuration as the replacement configuration file for the current running configuration. The replacement file must be a complete configuration generated by a Cisco IOS device (for example, a configuration generated by the **copy running-config** *destination-url* command), or, if generated externally, the replacement file must comply with the format of files generated by Cisco IOS devices. When the **configure replace** command

is entered, the current running configuration is compared with the specified replacement configuration and a set of diffs is generated. The algorithm used to compare the two files is the same as that employed by the **show archive config differences** command. The resulting diffs are then applied by the Cisco IOS parser to achieve the replacement configuration state. Only the diffs are applied, avoiding potential service disruption from reapplying configuration commands that already exist in the current running configuration. This algorithm effectively handles configuration changes to order-dependent commands (such as access lists) through a multiple pass process. Under normal circumstances, no more than three passes are needed to complete a configuration replace operation, and a limit of five passes is performed to preclude any looping behavior.

The Cisco IOS **copy** *source-url* **running-config** command is often used to copy a stored Cisco IOS configuration file to the running configuration. When using the **copy** *source-url* **running-config** command as an alternative to the **configure replace** *target-url* command, the following major differences should be noted:

- The **copy** *source-url* **running-config** command is a merge operation and preserves all the commands from both the source file and the current running configuration. This command does not remove commands from the current running configuration that are not present in the source file. In contrast, the **configure replace** *target-url* command removes commands from the current running configuration that are not present in the replacement file and adds commands to the current running configuration that need to be added.
- The **copy** *source-url* **running-config** command applies every command in the source file, whether or not the command is already present in the current running configuration. This algorithm is inefficient and, in some cases, can result in service outages. In contrast, the **configure replace** *target-url* command only applies the commands that need to be applied—no existing commands in the current running configuration are reapplied.
- A partial configuration file may be used as the source file for the **copy** *source-url* **running-config** command, whereas a complete Cisco IOS configuration file must be used as the replacement file for the **configure replace** *target-url* command.

Note In Cisco IOS Release 12.2(25)S and 12.3(14)T, a locking feature for the configuration replace operation was introduced. When the **configure replace** command is used, the running configuration file is locked by default for the duration of the configuration replace operation. This locking mechanism prevents other users from changing the running configuration while the replacement operation is taking place, which might otherwise cause the replacement operation to terminate unsuccessfully. You can disable the locking of the running configuration by using the **nolock** keyword when issuing the **configure replace** command.

The running configuration lock is automatically cleared at the end of the configuration replace operation. You can display any locks that may be currently applied to the running configuration using the **show configuration lock** command.

Configuration Rollback

The concept of rollback comes from the transactional processing model common to database operations. In a database transaction, you might make a set of changes to a given database table. You then must choose whether to commit the changes (apply the changes permanently) or to roll back the changes (discard the changes and revert to the previous state of the table). In this context, rollback means that a journal file containing a log of the changes is discarded, and no changes are applied. The result of the rollback operation is to revert to the previous state, before any changes were applied.

The **configure replace** command allows you to revert to a previous configuration state, effectively rolling back changes that were made since the previous configuration state was saved. Instead of basing the rollback operation on a specific set of changes that were applied, the Cisco IOS configuration rollback capability uses the concept of reverting to a specific configuration state based on a saved Cisco IOS configuration file. This concept is similar to the database idea of saving a checkpoint (a saved version of the database) to preserve a specific state.

If the configuration rollback capability is desired, you must save the Cisco IOS running configuration before making any configuration changes. Then, after entering configuration changes, you can use that saved configuration file to roll back the changes (using the **configure replace** *target-url* command). Furthermore, since you can specify any saved Cisco IOS configuration file as the replacement configuration, you are not limited to a fixed number of rollbacks, as is the case in some rollback models based on a journal file.

Benefits of Configuration Replace and Configuration Rollback

- Allows you to revert to a previous configuration state, effectively rolling back configuration changes.
- Allows you to replace the current running configuration file with the startup configuration file without having to reload the router or manually undo CLI changes to the running configuration file, therefore reducing system downtime.
- Allows you to revert to any saved Cisco IOS configuration state.
- Simplifies configuration changes by allowing you to apply a complete configuration file to the router, where only the commands that need to be added or removed are affected.
- When using the **configure replace** command as an alternative to the **copy** *source-url* **running-config** command, increases efficiency and prevents risk of service outages by not reapplying existing commands in the current running configuration.

How to Use Configuration Replace and Configuration Rollback

This section contains the following procedures:

- Configuring the Configuration Archive, page 5 (optional)
- Performing a Configuration Replace or Configuration Rollback Operation, page 7 (required)
- Monitoring and Troubleshooting the Configuration Replace and Configuration RollbackRollback Feature, page 9 (optional)

Configuring the Configuration Archive

No prerequisite configuration is needed to use the **configure replace** command. Using the **configure replace** command in conjunction with the Cisco IOS configuration archive and the **archive config** command is optional but offers significant benefit for configuration rollback scenarios. Before using the **archive config** command, the configuration archive must be configured. Perform this task to configure the characteristics of the configuration archive.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **archive**
4. **path** *url*
5. **maximum** *number*
6. **time-period** *minutes*
7. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**archive** **Example:** `Router(config)# archive`	Enters archive configuration mode.
Step 4	**path** *url* **Example:** `Router(config-archive)# path disk0:myconfig`	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive. • The *url* argument is a URL (accessible by the Cisco IOS file system) used for saving archive files of the running configuration file in the Cisco IOS configuration archive. You can set up an archive on any file system that your platform supports (see the "Configuration Archive" section on page 3).
Step 5	**maximum** *number* **Example:** `Router(config-archive)# maximum 14`	(Optional) Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive. • The *number* argument is the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive. Valid values are from 1 to 14. The default is 10. **Note** Before using this command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive.

	Command or Action	Purpose
Step 6	**time-period** *minutes* **Example:** `Router(config-archive)# time-period 10`	(Optional) Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive. • The minutes argument specifies how often, in minutes, to automatically save an archive file of the current running configuration in the Cisco IOS configuration archive. **Note** Before using this command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive.
Step 7	**end** **Example:** `Router(config-archive)# end`	Exits to privileged EXEC mode.

Performing a Configuration Replace or Configuration Rollback Operation

Perform this task to replace the current running configuration file with a saved Cisco IOS configuration file.

SUMMARY STEPS

1. Configure the Cisco IOS configuration archive.
2. **enable**
3. **archive config**
4. **configure terminal**
5. Enter changes to the current running configuration.
6. **exit**
7. **configure replace** *target-url* [**list**] [**force**] [**time** *seconds*] [**nolock**]
8. **configure confirm**
9. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	Configure the Cisco IOS configuration archive.	See the "Configuring the Configuration Archive" section on page 5.

	Command or Action	Purpose
Step 2	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 3	**archive config** **Example:** `Router# archive config`	(Optional) Saves the current running configuration file to the configuration archive. **Note** The **path** command must be configured before using this command.
Step 4	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 5	Enter changes to the current running configuration.	—
Step 6	**exit** **Example:** `Router(config)# exit`	Exits to privileged EXEC mode.
Step 7	**configure replace** *target-url* [**list**] [**force**] [**time** *seconds*] [**nolock**] **Example:** `Router# configure replace disk0:myconfig-1 list time 30`	Replaces the current running configuration file with a saved Cisco IOS configuration file. • The *target-url* argument is a URL (accessible by the Cisco IOS file system) of the saved Cisco IOS configuration file that is to replace the current running configuration, such as the configuration file created in Step 3 using the **archive config** command. • The **list** keyword displays a list of the command lines applied by the Cisco IOS software parser during each pass of the configuration replace operation. The total number of passes performed is also displayed. • The **force** keyword replaces the current running configuration file with the specified saved Cisco IOS configuration file without prompting you for confirmation. • The **time** *seconds* keyword and argument specify the time (in seconds) within which you must enter the **configure confirm** command to confirm replacement of the current running configuration file. If the **configure confirm** command is not entered within the specified time limit, the configuration replace operation is automatically reversed (in other words, the current running configuration file is restored to the configuration state that existed prior to entering the **configure replace** command). • The **nolock** keyword disables the locking of the running configuration file that prevents other users from changing the running configuration during a configuration replace operation.

	Command or Action	Purpose
Step 8	**configure confirm** **Example:** `Router# configure confirm`	(Optional) Confirms replacement of the current running configuration file with a saved Cisco IOS configuration file. **Note** Use this command only if the **time** *seconds* keyword and argument of the **configure replace** command are specified.
Step 9	**exit** **Example:** `Router# exit`	Exits to user EXEC mode.

Monitoring and Troubleshooting the Configuration Replace and Configuration RollbackRollback Feature

Perform this task to monitor and troubleshoot the Configuration Replace and Configuration Rollback feature.

SUMMARY STEPS

1. **enable**
1. **show archive**
2. **debug archive versioning**
3. **debug archive config timestamp**
4. **exit**

DETAILED STEPS

Step 1 **enable**

Use this command to enable privileged EXEC mode. Enter your password if prompted. For example:

```
Router> enable
Router#
```

Step 2 **show archive**

Use this command to display information about the files saved in the Cisco IOS configuration archive. For example:

```
Router# show archive

There are currently 1 archive configurations saved.
The next archive file will be named disk0:myconfig-2
 Archive #  Name
   0
   1       disk0:myconfig-1 <- Most Recent
   2
   3
   4
   5
   6
   7
```

```
   8
   9
   10
   11
   12
   13
   14
```

The following is sample output from the **show archive** command after several archive files of the running configuration have been saved. In this example, the maximum number of archive files to be saved is set to three.

```
Router# show archive

There are currently 3 archive configurations saved.
The next archive file will be named disk0:myconfig-8
 Archive #  Name
   0
   1       :Deleted
   2       :Deleted
   3       :Deleted
   4       :Deleted
   5       disk0:myconfig-5
   6       disk0:myconfig-6
   7       disk0:myconfig-7 <- Most Recent
   8
   9
   10
   11
   12
   13
   14
```

Step 3 debug archive versioning

Use this command to enable debugging of the Cisco IOS configuration archive activities to help monitor and troubleshoot configuration replace and rollback. For example:

```
Router# debug archive versioning

Jan  9 06:46:28.419:backup_running_config
Jan  9 06:46:28.419:Current = 7
Jan  9 06:46:28.443:Writing backup file disk0:myconfig-7
Jan  9 06:46:29.547: backup worked
```

Step 4 debug archive config timestamp

Use this command to enable debugging of the processing time for each integral step of a configuration replace operation and the size of the configuration files being handled. For example:

```
Router# debug archive config timestamp
Router# configure replace disk0:myconfig force

Timing Debug Statistics for IOS Config Replace operation:
       Time to read file slot0:sample_2.cfg = 0 msec (0 sec)
       Number of lines read:55
       Size of file        :1054

Starting Pass 1
       Time to read file system:running-config = 0 msec (0 sec)
       Number of lines read:93
       Size of file        :2539
       Time taken for positive rollback pass = 320 msec (0 sec)
       Time taken for negative rollback pass = 0 msec (0 sec)
```

```
       Time taken for negative incremental diffs pass = 59 msec (0 sec)
       Time taken by PI to apply changes = 0 msec (0 sec)
       Time taken for Pass 1 = 380 msec (0 sec)
Starting Pass 2
       Time to read file system:running-config = 0 msec (0 sec)
       Number of lines read:55
       Size of file        :1054
       Time taken for positive rollback pass = 0 msec (0 sec)
       Time taken for negative rollback pass = 0 msec (0 sec)
       Time taken for Pass 2 = 0 msec (0 sec)

Total number of passes:1
Rollback Done
```

Step 5 **exit**

Use this command to exit to user EXEC mode. For example:

```
Router# exit
Router>
```

Configuration Examples for Configuration Replace and Configuration Rollback

This section provides the following configuration examples:

Configuring the Configuration Archive: Example

The following example shows how to perform the initial configuration of the Cisco IOS configuration archive. In this example, disk0:myconfig is specified as the location and filename prefix for the files in the configuration archive and a value of 10 is set as the maximum number of archive files to be saved.

```
configure terminal
!
archive
 path disk0:myconfig
 maximum 10
 end
```

Replacing the Current Running Configuration with a Saved Cisco IOS Configuration File: Example

The following example shows how to replace the current running configuration with a saved Cisco IOS configuration file named disk0:myconfig. The **configure replace** command interactively prompts you to confirm the operation.

```
Router# configure replace disk0:myconfig

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

Total number of passes: 1
Rollback Done
```

In the following example, the **list** keyword is specified in order to display the command lines that were applied during the configuration replace operation:

```
Router# configure replace disk0:myconfig list

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

!Pass 1

!List of Commands:
no snmp-server community public ro
snmp-server community mystring ro
end

Total number of passes: 1
Rollback Done
```

Reverting to the Startup Configuration File: Example

The following example shows how to revert to the Cisco IOS startup configuration file using the **configure replace** command. This example also shows the use of the optional **force** keyword to override the interactive user prompt.

```
Router# configure replace nvram:startup-config force

Total number of passes: 1
Rollback Done
```

Performing a Configuration Replace Operation with the configure confirm Command: Example

The following example shows the use of the **configure replace** command with the **time** *seconds* keyword and argument. You must enter the **configure confirm** command within the specified time limit to confirm replacement of the current running configuration file. If the **configure confirm** command is not

entered within the specified time limit, the configuration replace operation is automatically reversed (in other words, the current running configuration file is restored back to the configuration state that existed prior to entering the **configure replace** command).

```
Router# configure replace nvram:startup-config time 120

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

Total number of passes: 1
Rollback Done

Router# configure confirm
```

Performing a Configuration Rollback Operation: Example

The following example shows how to make changes to the current running configuration and then roll back the changes. As part of the configuration rollback operation, you must save the current running configuration before making changes to the file. In this example, the **archive config** command is used to save the current running configuration. The generated output of the **configure replace** command indicates that only one pass was performed to complete the rollback operation.

Note Before using the **archive config** command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive.

You first save the current running configuration in the configuration archive as follows:

```
archive config
```

You then enter configuration changes as shown in the following example:

```
configure terminal
!
user netops2 password rain
user netops3 password snow
exit
```

After having made changes to the running configuration file, assume you now want to roll back these changes and revert to the configuration that existed before the changes were made. The **show archive** command is used to verify the version of the configuration to be used as a replacement file. The **configure replace** command is then used to revert to the replacement configuration file as shown in the following example:

```
Router# show archive

There are currently 1 archive configurations saved.
The next archive file will be named disk0:myconfig-2
 Archive #  Name
   0
   1       disk0:myconfig-1 <- Most Recent
   2
   3
   4
   5
```

```
  6
  7
  8
  9
  10

Router# configure replace disk0:myconfig-1

Total number of passes: 1
Rollback Done
```

Additional References

The following sections provide references related to the Configuration Replace and Configuration Rollback feature.

Related Documents

Related Topic	Document Title
Configuration Locking	*Exclusive Configuration Change Access and Access Session Locking*, Release 12.4(11)T feature module
Commands for managing configuration files	*Cisco IOS Configuration Fundamentals Command Reference*, Release 12.4T
Information about managing configuration files	"Managing Configuration Files" chapter in the *Cisco IOS Configuration Fundamentals Configuration Guide*, Release 12.4T
Using the Contextual Configuration Diff Utility feature	*Contextual Configuration Diff Utility*, Cisco IOS Release 12.3(4)T feature module

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIBs	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
The Cisco Technical Support & Documentation website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

Command Reference

This section documents new and modified commands only.

- **archive config**
- **configure confirm**
- **configure replace**
- **debug archive config timestamp**
- **debug archive versioning**
- **maximum**
- **path (archive configuration)**
- **show archive**
- **show configuration lock**
- **time-period**

archive config

To save a copy of the current running configuration to the Cisco IOS configuration archive, use the **archive config** command in privileged EXEC mode.

archive config

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Usage Guidelines

Note Before using this command, you must configure the **path** command in order to specify the location and filename prefix for the files in the Cisco IOS configuration archive.

The Cisco IOS configuration archive is intended to provide a mechanism to store, organize, and manage an archive of Cisco IOS configuration files to enhance the configuration rollback capability provided by the **configure replace** command. Before this feature was introduced, you could save copies of the running configuration using the **copy running-config** *destination-url* command, storing the target file either locally or remotely. However, this method lacked any automated file management. On the other hand, the Configuration Replace and Configuration Rollback feature provides the capability to automatically save copies of the running configuration to the Cisco IOS configuration archive. These archived files serve as checkpoint configuration references and can be used by the **configure replace** command to revert to previous configuration states.

The **archive config** command allows you to save Cisco IOS configurations in the configuration archive using a standard location and filename prefix that is automatically appended with an incremental version number (and optional time stamp) as each consecutive file is saved. This functionality provides a means for consistent identification of saved Cisco IOS configuration files. You can specify how many versions of the running configuration are kept in the archive. After the maximum number of files has been saved in the archive, the oldest file is automatically deleted when the next, most recent file is saved. The **show archive** command displays information for all configuration files saved in the Cisco IOS configuration archive.

Examples

The following example shows how to save the current running configuration to the Cisco IOS configuration archive using the **archive config** command. Before using the **archive config** command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive. In this example, the location and filename prefix are specified as disk0:myconfig as follows:

```
configure terminal
!
archive
 path disk0:myconfig
 end
```

You then save the current running configuration in the configuration archive, as follows:

```
archive config
```

The **show archive** command displays information on the files saved in the configuration archive as shown in the following sample output:

```
Router# show archive

There are currently 1 archive configurations saved.
The next archive file will be named disk0:myconfig-2
 Archive #  Name
   0
   1       disk0:myconfig-1 <- Most Recent
   2
   3
   4
   5
   6
   7
   8
   9
   10
```

Related Commands

Command	Description
archive	Enters archive configuration mode.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

configure confirm

To confirm replacement of the current running configuration with a saved Cisco IOS configuration file, use the **configure confirm** command in privileged EXEC mode.

configure confirm

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Usage Guidelines

The **configure confirm** command is used only if the **time** *seconds* keyword and argument of the **configure replace** command are specified. If the **configure confirm** command is not entered within the specified time limit, the configuration replace operation is automatically reversed (in other words, the current running configuration file is restored to the configuration state that existed prior to entering the **configure replace** command).

Examples

The following example shows the use of the **configure replace** command with the **time** *seconds* keyword and argument. You must enter the **configure confirm** command within the specified time limit to confirm replacement of the current running configuration file:

```
Router# configure replace nvram:startup-config time 120

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

Total number of passes: 1
Rollback Done

Router# configure confirm
```

Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

configure replace

To replace the current running configuration with a saved Cisco IOS configuration file, use the **configure replace** command in privileged EXEC mode.

configure replace *target-url* [**list**] [**force**] [**time** *seconds*] [**nolock**]

Syntax Description

target-url	URL (accessible by the Cisco IOS file system) of the saved Cisco IOS configuration file that is to replace the current running configuration.
list	(Optional) Displays a list of the command lines applied by the Cisco IOS software parser during each pass of the configuration replace operation. The total number of passes performed is also displayed.
force	(Optional) Replaces the current running configuration file with the specified saved Cisco IOS configuration file without prompting you for confirmation.
time *seconds*	(Optional) Time (in seconds) within which you must enter the **configure confirm** command to confirm replacement of the current running configuration file. If the **configure confirm** command is not entered within the specified time limit, the configuration replace operation is automatically reversed (in other words, the current running configuration file is restored to the configuration state that existed prior to entering the **configure replace** command).
nolock	(Optional) Disables the locking of the running configuration file that prevents other users from changing the running configuration during a configuration replace operation.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	The **nolock** keyword was added.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB	This command was implemented on the Cisco 10000 series.

Usage Guidelines

When configuring more than one keyword option, use the following rules:

- The **list** keyword must be entered before the **force** and **time** keywords.
- The **force** keyword must be entered before the **time** keyword.

If the current running configuration is replaced with a saved Cisco IOS configuration file that contains commands unaccepted by the Cisco IOS software parser, an error message is displayed listing the commands that were unaccepted. The total number of passes performed in the configuration replace operation is also displayed.

Note In Cisco IOS Release 12.2(25)S, a locking feature for the configuration replace operation was introduced. When the **configure replace** command is enabled, the Cisco IOS running configuration file is locked by default for the duration of the configuration replace operation. This locking mechanism prevents other users from changing the running configuration while the replace operation is taking place, which might otherwise cause the replace operation to terminate unsuccessfully. You can disable the locking of the running configuration using the **configure replace nolock** command.

The running configuration lock is automatically cleared at the end of the configuration replace operation. It is not expected that you should need to clear the lock manually during the replace operation, but as a protection against any unforeseen circumstances, you can manually clear the lock using the **clear configuration lock** command. You can also display any locks that may be currently applied to the running configuration using the **show configuration lock** command.

Examples

This section contains the following examples:

- Replacing the Current Running Configuration with a Saved Cisco IOS Configuration File
- Reverting to the Startup Configuration File
- Performing a Configuration Replace Operation with the configure confirm Command
- Performing a Configuration Rollback Operation

Replacing the Current Running Configuration with a Saved Cisco IOS Configuration File

The following example shows how to replace the current running configuration with a saved Cisco IOS configuration file named disk0:myconfig. Note that the **configure replace** command interactively prompts you to confirm the operation.

```
Router# configure replace disk0:myconfig

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

Total number of passes: 1
Rollback Done
```

In the following example, the **list** keyword is specified to display the command lines that were applied during the configuration replace operation:

```
Router# configure replace disk0:myconfig list

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

!Pass 1

!List of Commands:
no snmp-server community public ro
snmp-server community mystring ro
end
```

```
Total number of passes: 1
Rollback Done
```

Reverting to the Startup Configuration File

The following example shows how to revert to the Cisco IOS startup configuration file. This example also shows the use of the optional **force** keyword to override the interactive user prompt.

```
Router# configure replace nvram:startup-config force

Total number of passes: 1
Rollback Done
```

Performing a Configuration Replace Operation with the configure confirm Command

The following example shows the use of the **configure replace** command with the **time** *seconds* keyword and argument. You must enter the **configure confirm** command within the specified time limit to confirm replacement of the current running configuration file. If the **configure confirm** command is not entered within the specified time limit, the configuration replace operation is automatically reversed (in other words, the current running configuration file is restored to the configuration state that existed prior to entering the **configure replace** command).

```
Router# configure replace nvram:startup-config time 120

This will apply all necessary additions and deletions
to replace the current running configuration with the
contents of the specified configuration file, which is
assumed to be a complete configuration, not a partial
configuration. Enter Y if you are sure you want to proceed. ? [no]: Y

Total number of passes: 1
Rollback Done

Router# configure confirm
```

Performing a Configuration Rollback Operation

The following example shows how to make changes to the current running configuration and then roll back the changes. As part of the configuration rollback operation, you must save the current running configuration before making changes to the file. In this example, the **archive config** command is used to save the current running configuration. Note that the generated output of the **configure replace** command indicates that only one pass was performed to complete the rollback operation.

Note The **path** command must be configured before using the **archive config** command.

You first save the current running configuration in the configuration archive as follows:

```
Router# archive config
```

You then enter configuration changes as shown in the following example:

```
Router# configure terminal
Router(config)# user netops2 password rain
Router(config)# user netops3 password snow
Router(config)# exit
```

After making changes to the running configuration file, you might want to roll back these changes and revert to the configuration that existed before the changes were made. The **show archive** command is used to verify the version of the configuration to be used as a target file. The **configure replace** command is then used to revert to the target configuration file as shown in the following example:

```
Router# show archive

There are currently 1 archive configurations saved.
The next archive file will be named disk0:myconfig-2
 Archive #  Name
   0
   1       disk0:myconfig-1 <- Most Recent
   2
   3
   4
   5
   6
   7
   8
   9
   10

Router# configure replace disk0:myconfig-1

Total number of passes: 1
Rollback Done
```

Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

debug archive config timestamp

To enable debugging of the processing time for each integral step of a configuration replace operation and the size of the configuration files being handled, use the **debug archive config timestamp** command in privileged EXEC mode. To disable debugging output, use the **no** form of this command.

debug archive config timestamp

no debug archive config timestamp

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Examples

The following is sample output from the **debug archive config timestamp** command:

```
Router# debug archive config timestamp
Router# configure replace disk0:myconfig force

Timing Debug Statistics for IOS Config Replace operation:
       Time to read file slot0:sample_2.cfg = 0 msec (0 sec)
       Number of lines read:55
       Size of file        :1054

Starting Pass 1
       Time to read file system:running-config = 0 msec (0 sec)
       Number of lines read:93
       Size of file        :2539
       Time taken for positive rollback pass = 320 msec (0 sec)
       Time taken for negative rollback pass = 0 msec (0 sec)
       Time taken for negative incremental diffs pass = 59 msec (0 sec)
       Time taken by PI to apply changes = 0 msec (0 sec)
       Time taken for Pass 1 = 380 msec (0 sec)
Starting Pass 2
       Time to read file system:running-config = 0 msec (0 sec)
       Number of lines read:55
       Size of file        :1054
       Time taken for positive rollback pass = 0 msec (0 sec)
       Time taken for negative rollback pass = 0 msec (0 sec)
       Time taken for Pass 2 = 0 msec (0 sec)

Total number of passes:1
Rollback Done
```

Related Commands

Command	Description
debug archive versioning	Enables debugging of the Cisco IOS configuration archive activities.

debug archive versioning

To enable debugging of the Cisco IOS configuration archive activities, use the **debug archive versioning** command in privileged EXEC mode. To disable debugging output, use the **no** form of this command.

debug archive versioning

no debug archive versioning

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Examples

The following is sample output from the **debug archive versioning** command:

```
Router# debug archive versioning

Jan  9 06:46:28.419:backup_running_config
Jan  9 06:46:28.419:Current = 7
Jan  9 06:46:28.443:Writing backup file disk0:myconfig-7
Jan  9 06:46:29.547: backup worked
```

Related Commands

Command	Description
debug archive config timestamp	Enables debugging of the processing time for each integral step of a configuration replace operation and the size of the configuration files being handled.

maximum

To set the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive, use the **maximum** command in archive configuration mode. To reset this command to its default, use the **no** form of this command.

maximum *number*

no maximum *number*

Syntax Description

number	Maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive. You can archive from 1 to 14 configuration files. The default is 10.

Command Default

By default, a maximum of 10 archive files of the running configuration are saved in the Cisco IOS configuration archive.

Command Modes

Archive configuration

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Usage Guidelines

Note Before using this command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive.

After the maximum number of files are saved in the Cisco IOS configuration archive, the oldest file is automatically deleted when the next, most recent file is saved.

Note This command should only be used when a local writable file system is specified in the *url* argument of the **path** command. Network file systems may not support deletion of previously saved files.

Examples

In the following example, a value of 5 is set as the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive:

```
configure terminal
!
archive
 path disk0:myconfig
 maximum 5
 end
```

Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

path (archive configuration)

To specify the location and filename prefix for the files in the Cisco IOS configuration archive, use the **path** command in archive configuration mode. To disable this function, use the **no** form of this command.

path *url*

no path *url*

Syntax Description

url	URL (accessible by the Cisco IOS file system) used for saving archive files of the running configuration file in the Cisco IOS configuration archive.

Command Default

If this command is not configured, no location or filename prefix is specified for files in the Cisco IOS configuration archive.

Command Modes

Archive configuration

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Usage Guidelines

When this command is entered, an archive file of the running configuration is saved when the **archive config**, **write-memory**, or **copy running-config startup-config** command is entered.

URLs are commonly used to specify files or location on the World Wide Web. On Cisco routers, URLs can be used to specify the location of a file or directory on a router or a remote file server. The **path** command uses a URL to specify the location and filename prefix for the Cisco IOS configuration archive.

The locations or file systems that you can specify in the *url* argument are as follows:

- If your platform has disk0—disk0:, disk1:, ftp:, pram:, rcp:, slavedisk0:, slavedisk1:, or tftp:
- If your platform does not have disk0—ftp:, http:, pram:, rcp:, or tftp:

The colon is required in the location format.

The filename of the first archive file is the filename specified in the *url* argument followed by -1. The filename of the second archive file is the filename specified in the *url* argument followed by -2 and so on.

Because some file systems are incapable of storing the date and time that a file was written, the filename of the archive file can contain the date, time, and router hostname. To include the router hostname in the archive file filename, enter the characters $h (for example, disk0:$h). To include the date and time in the archive file filename, enter the characters $t.

When a configuration archive operation is attempted on a local file system, the file system is tested to determine if it is writable and if it has sufficient space to save an archive file. If the file system is read-only or if there is not enough space to save an archive file, an error message is displayed.

If you specify the tftp: file server as the location with the **path** command, you need to create the configuration file on the TFTP file server and change the file's privileges before the **archive config** command works properly.

Examples

The following example of the **path** command shows how to specify the hostname, date, and time as the filename prefix for which to save archive files of the running configuration. In this example, the **time-period** command is also configured to automatically save an archive file of the running configuration every 20 minutes.

```
configure terminal
!
archive
 path disk0:$h$t
 time-period 20
 end
```

The following is sample output from the **show archive** command illustrating the format of the resulting configuration archive filenames.

```
Router# show archive

There are currently 3 archive configurations saved.
The next archive file will be named routerJan-16-01:12:23.019-4
Archive #  Name
   0
   1       disk0:routerJan-16-00:12:23.019-1
   2       disk0:routerJan-16-00:32:23.019-2
   3       disk0:routerJan-16-00:52:23.019-3 <- Most Recent
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14
```

Cisco IOS Configuration Archive on the TFTP File Server

The following example shows how to use the **path** command to specify the TFTP file server, address 10.48.71.226, as the archive configuration location and router-cfg as the configuration filename. First you need to create the configuration file on the TFTP server and change the file's privileges, then you can save configuration file to the configuration archive.

The following example shows the commands to use to create the file and change the file's privileges on the TFTP server (UNIX commands):

```
> touch router-cfg-1
> chmod 777 router-cfg-1
```

The following example show how to create the configuration archive, save the running configuration to the archive, and display the files in the archive:

```
configure terminal
```

```
!
archive
 path tftp://10.48.71.226/router-cfg
 exit
exit
!
archive config

Router# show archive

The next archive file will be named tftp://10.48.71.226/router-cfg-2
 Archive #  Name
   0
   1       tftp://10.48.71.226/router-cfg-1 <- Most Recent
   2
   3
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14
Router#
```

The following is sample output from the **show archive** command if you did not create the configuration file on the TFTP server before attempting to archive the current running configuration file:

```
configure terminal
!
archive
 path tftp://10.48.71.226/router-cfg
 exit
exit

archive config

Router# show archive

The next archive file will be named tftp://10.48.71.226/router-cfg-1
 Archive #  Name
   0
   1
   2
   3
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14
```

Related Commands

Command	Description
archive	Enters archive configuration mode.
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

show archive

To display information about the files saved in the Cisco IOS configuration archive, use the **show archive** command in privileged EXEC mode.

show archive

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Examples

The following is sample output from the **show archive** command:

```
Router# show archive

There are currently 1 archive configurations saved.
The next archive file will be named disk0:myconfig-2
 Archive #  Name
   0
   1       disk0:myconfig-1 <- Most Recent
   2
   3
   4
   5
   6
   7
   8
   9
   10
   11
   12
   13
   14
```

The following is sample output from the **show archive** command after several archive files of the running configuration have been saved. In this example, the maximum number of archive files to be saved is set to three.

```
Router# show archive

There are currently 3 archive configurations saved.
The next archive file will be named disk0:myconfig-8
 Archive #  Name
   0
```

```
1       :Deleted
2       :Deleted
3       :Deleted
4       :Deleted
5       disk0:myconfig-5
6       disk0:myconfig-6
7       disk0:myconfig-7 <- Most Recent
8
9
10
11
12
13
14
```

Table 1 describes the significant fields shown in the displays.

Table 1 show archive Field Descriptions

Field	Description
Archive #	Indicates the number of the running configuration file saved to the Cisco IOS configuration archive. You can set the maximum number of archive files of the running configuration to be saved in the configuration archive. The most recent archive file is the last one shown in the display.
Name	Indicates the name of the running configuration file saved to the Cisco IOS configuration archive.

Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

show configuration lock

To display information about the lock status of the running configuration file during a configuration replace operation, use the **show configuration lock** command in privileged EXEC mode.

show configuration lock

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(25)S	This command was introduced.
12.3(14)T	This command was integrated into Cisco IOS Release 12.3(14)T. The output of this command was updated to display the configuration locking class.
12.0(31)S	The command output was enhanced.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Examples

The following is sample output from the **show configuration lock** command when the running configuration file is locked by another user.

Cisco IOS Release 12.2(25)S, Release 12.2(27)SBC, Release 12.3(14)T, and Later Releases

```
Router# configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)# configuration mode exclusive ?

auto     Lock configuration mode automatically
manual   Lock configuration mode on-demand

Router(config)# configuration mode exclusive auto
Router(config)# end

Router# show running-config | include configuration

configuration mode exclusive auto
Router#

Router# configure terminal                !<----------- Acquires the lock

Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
```

```
Router(config)# show configuration lock

Parser Configure Lock
---------------------
Owner PID : 3
User : unknown
TTY : 0
Type : EXCLUSIVE
State : LOCKED
Class : EXPOSED
Count : 1
Pending Requests : 0
User debug info : configure terminal
Router(config)#
Router(config)# end              ! <------------ Releases the lock
```

The following is sample output from the **show configuration lock** command when the running configuration file is not locked by another user.

```
Router# show configuration lock

Parser Configure Lock
---------------------
Owner PID : -1
User : unknown
TTY : -1
Type : NO LOCK
State : FREE
Class : unknown
Count : 0
Pending Requests : 0
User debug info :
Router#
```

Cisco IOS Release 12.0(31)S, 12.2(33)SRA, and Later Releases

```
Router# show configuration lock

Parser Configure Lock
-----------------------------------------------------
Owner PID                          : 3
User                               : unknown
TTY                                : 0
Type                               : EXCLUSIVE
State                              : LOCKED
Class                              : EXPOSED
Count                              : 1
Pending Requests                   : 0
User debug info                    : configure terminal
Session idle state                 : TRUE
No of exec cmds getting executed   : 0
No of exec cmds blocked            : 0
Config wait for show completion    : FALSE
Remote ip address                  : Unknown
Lock active time (in Sec)          : 6
Lock Expiration timer (in Sec)     : 593
Router(config)#
```

Table 2 describes the significant fields shown in the displays.

Table 2 show configuration lock Field Descriptions

Field	Description
Owner PID	Process identifier (PID) of the process that owns the lock.
User	Owner's username.
TTY	Owner's terminal number.
Type	Lock type (EXCLUSIVE/COUNTER/NO LOCK).
State	State of the lock (FREE/LOCKED).
Class	Classification of users of the lock (EXPOSED/ROLLBACK). Processes other than ROLLBACK belong to the EXPOSED class.
Count	In the case of a counter lock, total number of processes holding the lock.
Pending Requests	Total number of processes blocked by the lock.
User debug info	Any string given by the process (used for debugging only).
Session idle state	Indicates whether the user in an access session locking session is idle. Displays TRUE or FALSE.
No of exec cmds getting executed	Total number of EXEC commands (**show** and **clear**) being executed simultaneously from different sessions.
No of exec cmds blocked	Total number of EXEC commands (**show** and **clear**) waiting for the configuration command (running from the access session locking session) to complete its execution.
Config wait for show completion	Indicates whether a configuration command executed in an access session locking session is waiting for the completion of the **show** command being executed simultaneously from a different session. Displays TRUE or FALSE.
Remote ip address	IP address of the terminal from which the user telneted to the router.
Lock active time (in Sec)	Amount of time, in seconds, that elapsed since the lock was acquired.
Lock Expiration timer (in Sec)	The amount of time, in seconds, that expires before the lock is automatically released.

The following example shows how to configure the configuration file for single user auto configuration mode (using the **configuration mode exclusive auto** command). Use the **configure terminal** command to enter global configuration mode and lock the configuration mode exclusively. Once the Cisco IOS configuration mode is locked exclusively, you can verify the lock using the **show configuration lock** command.

```
Router#
Router# configure terminal
Router(config)# configuration mode exclusive auto
Router(config)# end

Router# configure terminal
Router(config)#
```

```
Router(config)# show configuration lock

Parser Configure Lock

Owner PID        :  10
User             :  User1
TTY              :  3
Type             :  EXCLUSIVE
State            :  LOCKED
Class            :  Exposed
Count            :  0
Pending Requests :  0
User debug info  :  0
```

Related Commands

Command	Description
configuration mode exclusive	Enables single-user (exclusive) access functionality for the Cisco IOS CLI.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
debug configuration lock	Enables debugging of the Cisco IOS configuration lock.

time-period

To set the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive, use the **time-period** command in archive configuration mode. To disable this function, use the **no** form of this command.

time-period *minutes*

no time-period *minutes*

Syntax Description

minutes	Specifies how often, in minutes, to automatically save an archive file of the current running configuration in the Cisco IOS configuration archive.

Command Default

By default, no time increment is set.

Command Modes

Archive configuration

Command History

Release	Modification
12.3(7)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was implemented on the Cisco 10000 series.

Usage Guidelines

Note Before using this command, you must configure the **path** command to specify the location and filename prefix for the files in the Cisco IOS configuration archive.

If this command is configured, an archive file of the current running configuration is automatically saved after the given time specified by the *minutes* argument. Archive files continue to be automatically saved at this given time increment until this function is disabled. Use the **maximum** command to set the maximum number of archive files of the running configuration to be saved.

Note This command saves the current running configuration to the configuration archive whether or not the running configuration has been modified since the last archive file was saved.

Examples

In the following example, a value of 20 minutes is set as the time increment for which to automatically save an archive file of the current running configuration in the Cisco IOS configuration archive:

```
configure terminal
```

```
!
archive
 path disk0:myconfig
 time-period 20
 end
```

Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
configure replace	Replaces the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.

Feature Information for Configuration Replace and Configuration Rollback

Table 3 lists the release history for this feature.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command reference documentation.

Cisco IOS software images are specific to a Cisco IOS software release, a feature set, and a platform. Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Note Table 3 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release. Unless noted otherwise, subsequent releases of that Cisco IOS software release also support that feature.

Table 3 Feature Information for Configuration Replace and Configuration Rollback

Feature Name	Releases	Feature Information
Configuration Replace and Configuration Rollback (F-4239)	12.3(7)T, 12.2(25)S, 12.3(14)T, 12.2(27)SBC, 12.2(31)SB2, 12.2(33)SRA, 12.2(33)SXH	The Configuration Replace and Configuration Rollback feature provides the capability to replace the current running configuration with any saved Cisco IOS configuration file. This functionality can be used to revert to a previous configuration state, effectively rolling back any configuration changes that were made since that configuration file was saved. In 12.3(7)T, this feature was introduced. In 12.2(25)S, support was added for a Cisco IOS 12.2S release. A locking mechanism for configuration replace (the Exclusive Configuration Change Access feature) was introduced. In 12.3(14)T, support for a locking mechanism for configuration replace (the Exclusive Configuration Change Access feature) was added for a Cisco IOS 12.3T release. In 12.2(27)SBC, support was added for a Cisco IOS 12.2SB release. In 12.2(33)SRA, support was added for a Cisco IOS 12.2SR release. In 12.2(31)SB2, this feature was implemented on the Cisco 10000 series. In 12.2(33)SXH, the “Configuration Rollback” feature was implemented in Release 12.2SX. The following sections provide information about this feature: • Configuration Archive, page 3 • Configuration Replace, page 3 • Configuration Rollback, page 4 • Benefits of Configuration Replace and Configuration Rollback, page 5 • Configuring the Configuration Archive, page 5 • Performing a Configuration Replace or Configuration Rollback Operation, page 7 • Monitoring and Troubleshooting the Configuration Replace and Configuration RollbackRollback Feature, page 9 The following commands were modified by this feature: **archive config**, **configure confirm**, **configure replace**, **debug archive config timestamp**, **debug archive versioning**, **maximum**, **path** (archive configuration), **show archive**, **show configuration lock**, **time-period**.

Table 3 Feature Information for Configuration Replace and Configuration Rollback (continued)

Feature Name	Releases	Feature Information
Configuration Versioning	12.3(7)T, 12.2(25)S, 12.2(33)SRA	The Configuration Versioning feature allows you to maintain and manage backup copies of the Cisco IOS running configuration on or off the device. The Configuration Replace feature uses the Configuration Versioning feature to provide a rollback to a saved copy of the running configuration.
Exclusive Configuration Change Access (F-4600)	12.2(25)S, 12.3(14)T, 12.2(33)SRA, 12.2(33)SXH	The Exclusive Configuration Change Access feature (also called the "Configuration Lock" feature) allows you to have exclusive change access to the Cisco IOS running configuration, preventing multiple users from making concurrent configuration changes. The following command was modified by this feature and applies to the Configuration Replace and Configuration Rollback feature: **show configuration lock**.