

Configuration Versioning

The Configuration Versioning feature allows you to maintain and manage backup copies of the Cisco 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.

- Information About Configuration Versioning, on page 1
- How to Configure Configuration Versioning, on page 2
- Configuration Examples for Configuration Versioning, on page 6
- Additional References, on page 6
- Feature Information for Configuration Versioning, on page 7

Information About Configuration Versioning

Configuration Archive

The Cisco configuration archive provides a mechanism to store, organize, and manage an archive of Cisco 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. With the Configuration Replace and Configuration Rollback feature, you can automatically save copies of the running configuration to the configuration archive. These archived files serve as checkpoint configuration references and can be used by the **configure replace** command to revert the configuration to a previous state.

The **archive config** command allows you to save Cisco 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 consistent identification of saved 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 configuration archive.

The 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 depending on your platform:

- If your platform has disk0:—disk0:, disk1:, ftp:, pram:, rcp:, slavedisk0:, slavedisk1:, or tftp:
- If your platform does not have disk0:—bootflash:, ftp:, harddisk:, http:, pram:, rcp:, tftp:, usb0:, or usb1:

How to Configure Configuration Versioning

Configuring the Characteristics of the Configuration Archive

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**
8. **archive config**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**archive** **Example:** `Device(config)# archive`	Enters archive configuration mode.
Step 4	**path** *url* **Example:** `Device(config-archive)# path bootflash:myconfig`	Specifies the location and filename prefix for the files in the configuration archive. • Depending on your hardware platform, the name of your file system might be different than shown in the example. **Note**

	Command or Action	Purpose
		If a directory is specified in the path instead of file, the directory name must be followed by a forward slash as follows: path flash:/*directory*/. The forward slash is not necessary after a filename; it is necessary only when specifying a directory.
Step 5	**maximum** *number* **Example:** `Device(config-archive)# maximum 14`	(Optional) Sets the maximum number of archive files of the running configuration to be saved in the configuration archive. • The *number* argument is the maximum number of archive files of the running configuration to be saved in the configuration archive. The range is 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 configuration archive.
Step 6	**time-period** *minutes* **Example:** `Device(config-archive)# time-period 10`	(Optional) Sets the time increment for automatically saving an archive file of the current running configuration in the configuration archive. • The *minutes* argument specifies how often, in minutes, to automatically save an archive file of the current running configuration in the 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 configuration archive.
Step 7	**end** **Example:** `Device(config-archive)# end`	Exits to privileged EXEC mode.
Step 8	**archive config** **Example:** `Device# archive config`	Saves the current running configuration file to the configuration archive. **Note** You must configure the **path** command before using the **archive config** command.

Monitoring and Troubleshooting the Configuration

SUMMARY STEPS

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

DETAILED STEPS

Procedure

Step 1 **enable**

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

Example:

```
Device> enable
Device#
```

Step 2 **show archive**

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

Example:

```
Device# show archive

There are currently 1 archive configurations saved.
The next archive file will be named bootflash:myconfig-2
 Archive #  Name
   0
   1       bootflash: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.

Example:

```
Device# show archive
```

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

Step 3 debug archive versioning

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

Example:

```
Device# 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 bootflash: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:

Example:

```
Device# debug archive config timestamp
Device# configure replace bootflash: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:

Example:

```
Device# exit
Device>
```

Configuration Examples for Configuration Versioning

Example: Creating a Configuration Archive

The following example shows how to perform the initial configuration of the configuration archive. In this example, bootflash: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. Depending on your hardware platform, the name of your file system might be different than shown in the example.

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

Additional References

Related Documents

Related Topic	Document Title
Information about managing configuration files	"Managing Configuration Files" module in the *Managing Configuration Files Configuration Guide*
Commands for managing configuration files	Cisco IOS Configuration Fundamentals Command Reference

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Configuration Versioning

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for Configuration Versioning

Feature Name	Releases	Feature Information
Configuration Versioning	12.2(25)S 12.2(33)SRA 12.3(7)T Cisco IOS XE Release 2.1	The Configuration Versioning feature allows you to maintain and manage backup copies of the Cisco 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. The following commands were introduced or modified: **archive config**, **debug archive versioning**, **log config**, **maximum**, **path** (archive configuration), **show archive**, **time-period**, **write-memory**.