



## Working with the Configuration Files

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- [Information About Configuration Files, page 2-1](#)
- [Guidelines for Creating and Using Configuration Files, page 2-2](#)
- [Creating a Configuration File Using a Text Editor, page 2-2](#)
- [Copying Configuration Files Using TFTP, page 2-3](#)
- [Copying Configuration Files Using FTP, page 2-5](#)
- [Copying Configuration Files Using RCP, page 2-8](#)
- [Clearing Configuration Information, page 2-11](#)
- [Replacing and Rolling Back Configurations, page 2-12](#)

### Information About Configuration Files

Configuration files contain commands that you enter to customize the function of the Cisco IOS software. You can create a basic configuration file by using the **setup** program or by entering the **setup** privileged EXEC command.

Startup configuration files are used during system startup to configure the software. Running configuration files contain the current configuration of the software. The two configuration files can be different. The startup configuration is stored in the NVRAM section of flash memory and is persistent; the running configuration is stored in DRAM and is replaced by the startup configuration at the next reboot.

You can copy (*download*) configuration files from a TFTP, FTP, or RCP server to the running configuration or startup configuration of the switch. You perform this task when you want to:

- Restore a backed-up configuration file.
- Use the configuration file for another switch.

For example, you might add another switch to your network and want it to have a configuration similar to the original switch. By copying the file to the new switch, you can change the relevant parts rather than recreating the whole file.

- Load the same configuration commands on all the switches in your network so that all the switches have similar configurations.

The **copy {ftp: | rcp: | tftp:} system:running-config** privileged EXEC command loads the configuration files on the switch as if you were entering the commands at the command line. The switch does not erase the existing running configuration before adding the commands. If a command in the copied configuration file replaces a command in the existing configuration file, the existing command is

erased. For example, if the copied configuration file contains a different IP address in a particular command than the existing configuration, the IP address in the copied configuration is used. However, some commands in the existing configuration might not be replaced or negated. In this case, the resulting configuration file is a mixture of the existing configuration file and the copied configuration file, with the copied configuration file having precedence. To restore a configuration file to an exact copy of a file stored on a server, copy the configuration file directly to the startup configuration (by using the **copy {ftp: | rcp: | tftp:} nvram:startup-config** privileged EXEC command), and reload the switch.

You can copy (*upload*) configuration files from the switch to a file server by using TFTP, FTP, or RCP. You might perform this task to back up a current configuration file to a server before changing its contents so that you can later restore the original configuration file from the server.

## Guidelines for Creating and Using Configuration Files

Creating configuration files can aid in your switch configuration. Configuration files can contain some or all of the commands needed to configure one or more switches. For example, you might want to download the same configuration file to several switches that have the same hardware configuration.

Use these guidelines when creating a configuration file:

- We recommend that you connect through the console port or Ethernet management port for the initial configuration of the switch. If you are accessing the switch through a network connection instead of through a direct connection to the console port or Ethernet management port, keep in mind that some configuration changes (such as changing the switch IP address or disabling ports) can cause a loss of connectivity to the switch.
- If no password has been set on the switch, we recommend that you set one by using the **enable secret secret-password** global configuration command.

## Creating a Configuration File Using a Text Editor

When creating a configuration file, you must list commands logically so that the system can respond appropriately. To create a configuration file using a text editor, follow these steps:

- 
- Step 1** Copy an existing configuration from a switch to a server.  
For more information, see the [“Downloading the Configuration File Using TFTP”](#) section on page 2-3, the [“Downloading a Configuration File Using FTP”](#) section on page 2-6, or the [“Downloading a Configuration File Using RCP”](#) section on page 2-10.
- Step 2** Open the configuration file in a text editor, such as vi or emacs on UNIX or Notepad on a PC.
- Step 3** Extract the portion of the configuration file with the desired commands, and save it in a new file.
- Step 4** Copy the configuration file to the appropriate server location. For example, copy the file to the TFTP directory on the workstation (usually /tftpboot on a UNIX workstation).
- Step 5** Make sure the permissions on the file are set to world-read.
-

# Copying Configuration Files Using TFTP

You can configure the switch with configuration files that you create from scratch, download from another switch, or download from a TFTP server. You can copy (upload) configuration files to a TFTP server for storage.

- [Preparing to Download or Upload a Configuration File Using TFTP, page 2-3](#)
- [Downloading the Configuration File Using TFTP, page 2-3](#)
- [Uploading the Configuration File Using TFTP, page 2-4](#)

## Preparing to Download or Upload a Configuration File Using TFTP

- Ensure that the workstation acting as the TFTP server is properly configured. On a Sun workstation, make sure that the `/etc/inetd.conf` file contains this line:

```
tftp dgram udp wait root /usr/etc/in.tftpd in.tftpd -p -s /tftpboot
```

Make sure that the `/etc/services` file contains this line:

```
tftp 69/udp
```



**Note** You must restart the `inetd` daemon after modifying the `/etc/inetd.conf` and `/etc/services` files. To restart the daemon, either stop the `inetd` process and restart it, or enter a **fastboot** command (on the SunOS 4.x) or a **reboot** command (on Solaris 2.x or SunOS 5.x). For more information on the TFTP daemon, see the documentation for your workstation.

- Ensure that the switch has a route to the TFTP server. The switch and the TFTP server must be in the same subnetwork if you do not have a router to route traffic between subnets. Check connectivity to the TFTP server by using the **ping** command.
- Ensure that the configuration file to be downloaded is in the correct directory on the TFTP server (usually `/tftpboot` on a UNIX workstation).
- For download operations, ensure that the permissions on the file are set correctly. The permission on the file should be world-read.
- Before uploading the configuration file, you might need to create an empty file on the TFTP server. To create an empty file, enter the **touch filename** command, where *filename* is the name of the file you will use when uploading it to the server.
- During upload operations, if you are overwriting an existing file (including an empty file, if you had to create one) on the server, ensure that the permissions on the file are set correctly. Permissions on the file should be world-write.

## Downloading the Configuration File Using TFTP

To configure the switch by using a configuration file downloaded from a TFTP server, follow these steps:

- Step 1** Copy the configuration file to the appropriate TFTP directory on the TFTP server.
- Step 2** Verify that the TFTP server is properly configured by referring to the [“Preparing to Download or Upload a Configuration File Using TFTP”](#) section on page 2-3.

**Step 3** Log into the switch through the console port, the Ethernet management port, or a Telnet session.

**Step 4** Download the configuration file from the TFTP server to configure the switch.

Specify the IP address or hostname of the TFTP server and the name of the file to download.

Use one of these privileged EXEC commands:

- **copy tftp:[[/location]/directory]/filename system:running-config**
- **copy tftp:[[/location]/directory]/filename nvram:startup-config**
- **copy tftp:[[/location]/directory]/filename flash-[n]:/directory/startup-config**

The configuration file downloads, and the commands are executed as the file is parsed line-by-line.

This example shows how to configure the software from the file *tokyo-config* at IP address 172.16.2.155:

```
Switch# copy tftp://172.16.2.155/tokyo-config system:running-config
Configure using tokyo-config from 172.16.2.155? [confirm] y
Booting tokyo-config from 172.16.2.155:!!! [OK - 874/16000 bytes]
```

## Uploading the Configuration File Using TFTP

To upload a configuration file from a switch to a TFTP server for storage, follow these steps:

**Step 1** Verify that the TFTP server is properly configured by referring to the [“Preparing to Download or Upload a Configuration File Using TFTP” section on page 2-3](#).

**Step 2** Log into the switch through the console port, the Ethernet management port, or a Telnet session.

**Step 3** Upload the switch configuration to the TFTP server. Specify the IP address or hostname of the TFTP server and the destination filename.

Use one of these privileged EXEC commands:

- **copy system:running-config tftp:[[/location]/directory]/filename**
- **copy nvram:startup-config tftp:[[/location]/directory]/filename**
- **copy flash-[n]:/directory/startup-config tftp:[[/location]/directory]/filename**

The file is uploaded to the TFTP server.

This example shows how to upload a configuration file from a switch to a TFTP server:

```
Switch# copy system:running-config tftp://172.16.2.155/tokyo-config
Write file tokyo-config on host 172.16.2.155? [confirm] y
#
Writing tokyo-config!!! [OK]
```

# Copying Configuration Files Using FTP

You can copy configuration files to or from an FTP server.

- [Preparing to Download or Upload a Configuration File Using FTP, page 2-5](#)
- [Downloading a Configuration File Using FTP, page 2-6](#)
- [Uploading a Configuration File Using FTP, page 2-7](#)

## Preparing to Download or Upload a Configuration File Using FTP

The FTP protocol requires a client to send a remote username and password on each FTP request to a server. When you copy a configuration file from the switch to a server by using FTP, the Cisco IOS software sends the first valid username in this list:

- The username specified in the **copy** command if a username is specified.
- The username set by the **ip ftp username *username*** global configuration command if the command is configured.
- Anonymous.

The switch sends the first valid password in this list:

- The password specified in the **copy** command if a password is specified.
- The password set by the **ip ftp password *password*** global configuration command if the command is configured.
- The switch forms a password named *username@switchname.domain*. The variable *username* is the username associated with the current session, *switchname* is the configured hostname, and *domain* is the domain of the switch.

The username and password must be associated with an account on the FTP server. If you are writing to the server, the FTP server must be properly configured to accept your FTP write request.

Use the **ip ftp username** and **ip ftp password** commands to specify a username and password for all copies. Include the username in the **copy** command if you want to specify only a username for that copy operation.

If the server has a directory structure, the configuration file is written to or copied from the directory associated with the username on the server. For example, if the configuration file resides in the home directory of a user on the server, specify that user's name as the remote username.

Before you begin downloading or uploading a configuration file, do the following:

- Ensure that the switch has a route to the FTP server. The switch and the FTP server must be in the same subnetwork if you do not have a router to route traffic between subnets. Check connectivity to the FTP server by using the **ping** command.
- If you are accessing the switch through the console or a Telnet session and you do not have a valid username, make sure that the current FTP username is the one that you want to use for the FTP download. You can enter the **show users** privileged EXEC command to view the valid username. If you do not want to use this username, create a new FTP username by using the **ip ftp username *username*** global configuration command during all copy operations. The new username is stored in NVRAM. If you are accessing the switch through a Telnet session and you have a valid username, this username is used, and you do not need to set the FTP username. Include the username in the **copy** command if you want to specify a username for only that copy operation.

- When you upload a configuration file to the FTP server, it must be properly configured to accept the write request from the user on the switch.

For more information, see the documentation for your FTP server.

## Downloading a Configuration File Using FTP

Beginning in privileged EXEC mode, follow these steps to download a configuration file by using FTP:

	Command	Purpose
Step 1	<b>configure terminal</b>  <b>Example:</b> Switch# configure terminal	(Optional) Enters global configuration mode on the switch. This step is required only if you override the default remote username or password.
Step 2	<b>ip ftp username <i>username</i></b>  <b>Example:</b> Switch(config)# ip ftp username NetAdmin1	(Optional) Changes the default remote FTP username.
Step 3	<b>ip ftp password <i>password</i></b>  <b>Example:</b> Switch(config)# ip ftp password adminpassword	(Optional) Changes the default FTP password.
Step 4	<b>end</b>  <b>Example:</b> Switch(config)# end	Returns to privileged EXEC mode.
Step 5	<b>copy</b> <b>ftp:[[[/username[:password]@]location]/directory] /filename] system:running-config</b>  or <b>copy</b> <b>ftp:[[[/username[:password]@]location]/directory] /filename] nvram:startup-config</b>  <b>Example:</b> Switch# copy ftp system:running-config	Copies the configuration file from the FTP server to the running configuration or to the startup configuration file.

This example shows how to copy a configuration file named *host1-config* from the home directory for user *netadmin1* on the remote server with an IP address of 172.16.101.101 and to load and run those commands on the switch:

```
Switch# copy ftp://netadmin1:mypass@172.16.101.101/host1-config system:running-config
Configure using host1-config from 172.16.101.101? [confirm]
Connected to 172.16.101.101
Loading 1112 byte file host1-config:![OK]
Switch#
%SYS-5-CONFIG: Configured from host1-config by ftp from 172.16.101.101
```

This example shows how to specify a remote username of *netadmin1*. The software copies the configuration file *host2-confg* from the home directory for user *netadmin1* on the remote server with an IP address of 172.16.101.101 to the switch startup configuration.

```
Switch# configure terminal
Switch(config)# ip ftp username netadmin1
Switch(config)# ip ftp password mypass
Switch(config)# end
Switch# copy ftp: nvram:startup-config
Address of remote host [255.255.255.255]? 172.16.101.101
Name of configuration file[rtr2-confg]? host2-confg
Configure using host2-confg from 172.16.101.101?[confirm]
Connected to 172.16.101.101
Loading 1112 byte file host2-confg:![OK]
[OK]
Switch#
%SYS-5-CONFIG_NV:Non-volatile store configured from host2-confg by ftp from
172.16.101.101
```

## Uploading a Configuration File Using FTP

Beginning in privileged EXEC mode, follow these steps to upload a configuration file by using FTP:

	Command	Purpose
Step 1	<b>configure terminal</b>  <b>Example:</b> Switch# configure terminal	(Optional) Enters global configuration mode.  This step is required only if you override the default remote username or password.
Step 2	<b>ip ftp username <i>username</i></b>  <b>Example:</b> Switch(config)# ip ftp username NetAdmin1	(Optional) Changes the default remote username.
Step 3	<b>ip ftp password <i>password</i></b>  <b>Example:</b> Switch(config)# ip ftp password adminpassword	(Optional) Changes the default password.

	Command	Purpose
Step 4	<b>end</b>  <b>Example:</b> Switch(config)# end	Returns to privileged EXEC mode.
Step 5	<b>copy system:running-config</b> <b>ftp:[[/[[[username[:password]@]location]/directory]</b> <b>/filename]</b>  or <b>copy nvram:startup-config</b> <b>ftp:[[/[[[username[:password]@]location]/directory]</b> <b>/filename]</b>  <b>Example:</b> Switch# copy system:running-config ftp:	Copies the specified configuration file to the specified location on the FTP server.

This example shows how to copy the running configuration file named *switch2-config* to the *netadmin1* directory on the remote host with an IP address of 172.16.101.101:

```
Switch# copy system:running-config ftp://netadmin1:mypass@172.16.101.101/switch2-config
Write file switch2-config on host 172.16.101.101?[confirm]
Building configuration... [OK]
Connected to 172.16.101.101
Switch#
```

This example shows how to store a startup configuration file on a server by using FTP to copy the file:

```
Switch# configure terminal
Switch(config)# ip ftp username netadmin2
Switch(config)# ip ftp password mypass
Switch(config)# end
Switch# copy nvram:startup-config ftp:
Remote host[]? 172.16.101.101
Name of configuration file to write [switch2-config]?
Write file switch2-config on host 172.16.101.101?[confirm]
! [OK]
```

## Copying Configuration Files Using RCP

You can copy configuration files from and to an RCP server.

- [Preparing to Download or Upload a Configuration File Using RCP, page 2-8](#)
- [Downloading a Configuration File Using RCP, page 2-10](#)
- [Uploading a Configuration File Using RCP, page 2-11](#)

## Preparing to Download or Upload a Configuration File Using RCP

To copy configuration files using RCP, you need access to a server that supports the remote shell (rsh). (Most UNIX systems support rsh.) Because you are copying a file from one place to another, you must have read permission on the source file and write permission on the destination file. If the destination file does not exist, RCP creates it for you.

RCP requires a client to send a remote username with each RCP request to a server. When you copy a configuration file from the switch to a server, the Cisco IOS software sends the first valid username in this list:

- The username specified in the **copy** command if a username is specified.
- The username set by the **ip rcmd remote-username *username*** global configuration command if the command is configured.
- The remote username associated with the current TTY (terminal) process. For example, if the user is connected to the router through Telnet and was authenticated through the **username** command, the switch software sends the Telnet username as the remote username.
- The switch hostname.

For a successful RCP copy request, you must define an account on the network server for the remote username. If the server has a directory structure, the configuration file is written to or copied from the directory associated with the remote username on the server. For example, if the configuration file is in the home directory of a user on the server, specify that user's name as the remote username.

Before you begin downloading or uploading a configuration file by using RCP, do the following:

- Ensure that the workstation acting as the RCP server supports the remote shell (rsh).
- Ensure that the switch has a route to the RCP server. The switch and the server must be in the same subnetwork if you do not have a router to route traffic between subnets. Check connectivity to the RCP server by using the **ping** command.
- If you are accessing the switch through the console or a Telnet session and you do not have a valid username, make sure that the current RCP username is the one that you want to use for the RCP download. You can enter the **show users** privileged EXEC command to view the valid username. If you do not want to use this username, create a new RCP username by using the **ip rcmd remote-username *username*** global configuration command to be used during all copy operations. The new username is stored in NVRAM. If you are accessing the switch through a Telnet session and you have a valid username, this username is used, and you do not need to set the RCP username. Include the username in the **copy** command if you want to specify a username for only that copy operation.
- When you upload a file to the RCP server, it must be properly configured to accept the RCP write request from the user on the switch. For UNIX systems, you must add an entry to the `.rhosts` file for the remote user on the RCP server. For example, suppose that the switch contains these configuration lines:

```
hostname Switch1
ip rcmd remote-username User0
```

If the switch IP address translates to *Switch1.company.com*, the `.rhosts` file for User0 on the RCP server should contain this line:

```
Switch1.company.com Switch1
```

For more information, see the documentation for your RCP server.

## Downloading a Configuration File Using RCP

Beginning in privileged EXEC mode, follow these steps to download a configuration file by using RCP:

	Command	Purpose
Step 1	<b>configure terminal</b>  <b>Example:</b> Switch# <code>configure terminal</code>	(Optional) Enters global configuration mode.  This step is required only if you override the default remote username.
Step 2	<b>ip rcmd remote-username <i>username</i></b>  <b>Example:</b> Switch(config)# <code>ip rcmd remote-username netadmin1</code>	(Optional) Specifies the remote username.
Step 3	<b>end</b>  <b>Example:</b> Switch(config)# <code>end</code>	Returns to privileged EXEC mode.
Step 4	<b>copy</b> <b>rcp:[[[//[<i>username@</i>]<i>location</i>]/<i>directory</i>]/<i>filename</i>]</b> <b>system:running-config</b>  or  <b>copy</b> <b>rcp:[[[//[<i>username@</i>]<i>location</i>]/<i>directory</i>]/<i>filename</i>]</b> <b>nvrn:startup-config</b>  <b>Example:</b> Switch# <code>copy rcp: system:running-config</code>	Using RCP, copies the configuration file from a network server to the running configuration or to the startup configuration file.

This example shows how to copy a configuration file named *host1-config* from the *netadmin1* directory on the remote server with an IP address of 172.16.101.101 and load and run those commands on the switch:

```
Switch# copy rcp://netadmin1@172.16.101.101/host1-config system:running-config
Configure using host1-config from 172.16.101.101? [confirm]
Connected to 172.16.101.101
Loading 1112 byte file host1-config:![OK]
Switch#
%SYS-5-CONFIG: Configured from host1-config by rcp from 172.16.101.101
```

This example shows how to specify a remote username of *netadmin1* and copy the configuration file *host2-config* from the *netadmin1* directory on the remote server with an IP address of 172.16.101.101 to the startup configuration:

```
Switch# configure terminal
Switch(config)# ip rcmd remote-username netadmin1
Switch(config)# end
Switch# copy rcp: nvrn:startup-config
Address of remote host [255.255.255.255]? 172.16.101.101
Name of configuration file[rtr2-config]? host2-config
Configure using host2-config from 172.16.101.101? [confirm]
Connected to 172.16.101.101
Loading 1112 byte file host2-config:![OK]
[OK]
Switch#
%SYS-5-CONFIG_NV:Non-volatile store configured from host2-config by rcp from
172.16.101.101
```

## Uploading a Configuration File Using RCP

Beginning in privileged EXEC mode, follow these steps to upload a configuration file by using RCP:

	Command	Purpose
Step 1	<b>configure terminal</b>  <b>Example:</b> Switch# <code>configure terminal</code>	(Optional) Enters global configuration mode.  This step is required only if you override the default remote username.
Step 2	<b>ip rcmd remote-username <i>username</i></b>  <b>Example:</b> Switch(config)# <code>ip rcmd remote-username netadmin1</code>	(Optional) Specifies the remote username.
Step 3	<b>end</b>  <b>Example:</b> Switch(config)# <code>end</code>	Returns to privileged EXEC mode.
Step 4	<b>copy system:running-config</b> <b>rcp:[[/[<i>username@</i>]<i>location</i>]/<i>directory</i>]/<i>filename</i>]</b>  or  <b>copy nvram:startup-config</b> <b>rcp:[[/[<i>username@</i>]<i>location</i>]/<i>directory</i>]/<i>filename</i>]</b>  <b>Example:</b> Switch# <code>copy system:running-config rcp:</code>	Using RCP, copies the specified configuration file from the switch running to the specified network server.

This example shows how to copy the running configuration file named *switch2-config* to the *netadmin1* directory on the remote host with an IP address of 172.16.101.101:

```
Switch# copy system:running-config rcp://netadmin1@172.16.101.101/switch2-config
Write file switch-config on host 172.16.101.101? [confirm]
Building configuration... [OK]
Connected to 172.16.101.101
Switch#
```

This example shows how to store a startup configuration file on a server:

```
Switch# configure terminal
Switch(config)# ip rcmd remote-username netadmin2
Switch(config)# end
Switch# copy nvram:startup-config rcp:
Remote host []? 172.16.101.101
Name of configuration file to write [switch2-config]?
Write file switch2-config on host 172.16.101.101? [confirm]
! [OK]
```

## Clearing Configuration Information

You can clear the configuration information from the startup configuration. If you reboot the switch with no startup configuration, the switch enters the setup program so that you can reconfigure the switch with new settings.

## Clearing the Startup Configuration File

To clear the contents of your startup configuration, use the **erase nvram:** or the **erase startup-config** privileged EXEC command.

**Caution**

---

You cannot restore the startup configuration file after it has been deleted.

---

## Deleting a Stored Configuration File

To delete a saved configuration from flash memory, use the **delete flash:filename** privileged EXEC command. Depending on the setting of the **file prompt** global configuration command, you might be prompted for confirmation before you delete a file. By default, the switch prompts for confirmation on destructive file operations.

**Caution**

---

You cannot restore a file after it has been deleted.

---

## Replacing and Rolling Back Configurations

The configuration replacement and rollback feature replaces the running configuration with any saved Cisco IOS configuration file. You can use the rollback function to roll back to a previous configuration.

- [Understanding Configuration Replacement and Rollback, page 2-12](#)
- [Configuration Guidelines, page 2-13](#)
- [Replacing or Rolling Back a Configuration, page 2-14](#)

## Understanding Configuration Replacement and Rollback

- [Archiving a Configuration, page 2-12](#)
- [Replacing a Configuration, page 2-13](#)
- [Rolling Back a Configuration, page 2-13](#)

## Archiving a Configuration

The configuration archive provides a method to store, organize, and manage an archive of configuration files. The **configure replace** privileged EXEC command increases the configuration rollback capability. As an alternative, you can save copies of the running configuration by using the **copy running-config destination-url** privileged EXEC command, storing the replacement file either locally or remotely. However, this method lacks any automated file management. The configuration replacement and rollback feature can automatically save copies of the running configuration to the configuration archive.

The Cisco IOS configuration archive, in which the configuration files are stored and available for use with the **configure replace** command, is in any of these file systems: FTP, HTTP, RCP, TFTP.

## Replacing a Configuration

The **configure replace** privileged EXEC command replaces the running configuration with any saved configuration file. When you enter the **configure replace** command, the running configuration is compared with the specified replacement configuration, and a set of configuration differences is generated. The resulting differences are used to replace the configuration. The configuration replacement operation is usually completed in no more than three passes. To prevent looping behavior, no more than five passes are performed.

You can use the **copy source-url running-config** privileged EXEC command to copy a stored configuration file to the running configuration. When using this command as an alternative to the **configure replace target-url** privileged EXEC command, note these major differences:

- The **copy source-url running-config** command is a merge operation and preserves all the commands from both the source file and the running configuration. This command does not remove commands from the running configuration that are not present in the source file. In contrast, the **configure replace target-url** command removes commands from the running configuration that are not present in the replacement file and adds commands to the running configuration that are not present.
- You can use a partial configuration file as the source file for the **copy source-url running-config** command. You must use a complete configuration file as the replacement file for the **configure replace target-url** command.

## Rolling Back a Configuration

You can also use the **configure replace** command to roll back changes that were made since the previous configuration was saved. Instead of basing the rollback operation on a specific set of changes that were applied, the configuration rollback capability reverts to a specific configuration based on a saved configuration file.

If you want the configuration rollback capability, you must first save the running configuration before making any configuration changes. Then, after entering configuration changes, you can use that saved configuration file to roll back the changes by using the **configure replace target-url** command.

You can specify any saved configuration file as the rollback configuration. You are not limited to a fixed number of rollbacks, as is the case in some rollback models.

## Configuration Guidelines

Follow these guidelines when configuring and performing configuration replacement and rollback:

- Make sure that the switch has free memory larger than the combined size of the two configuration files (the running configuration and the saved replacement configuration). Otherwise, the configuration replacement operation fails.
- Make sure that the switch also has sufficient free memory to execute the configuration replacement or rollback configuration commands.
- Certain 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.
  - A configuration replacement operation cannot remove the **interface interface-id** command line from the running configuration if that interface is physically present on the device.
  - The **interface interface-id** command line cannot be added to the running configuration if that interface is not physically present on the device.

- When using the **configure replace** command, you must specify a saved configuration as the replacement configuration file for the 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).

**Note**

If you generate the replacement configuration file externally, it must comply with the format of files generated by Cisco IOS devices.

## Replacing or Rolling Back a Configuration

Starting in privileged EXEC mode, follow these steps to replace the running configuration file with a saved configuration file:

	Command	Purpose
Step 1	<b>configure replace</b> <i>target-url</i> [ <b>list</b> ] [ <b>force</b> ] [ <b>time seconds</b> ] [ <b>nolock</b> ]  <b>Example:</b> Switch# configure replace flash:startup-config time 120	Replaces the running configuration file with a saved configuration file.  <i>target-url</i> —URL (accessible by the file system) of the saved configuration file that is to replace the running configuration.  <b>list</b> —Displays a list of the command entries applied by the software parser during each pass of the configuration replacement operation. The total number of passes also appears.  <b>force</b> — Replaces the running configuration file with the specified saved configuration file without prompting you for confirmation.  <b>time seconds</b> —Specifies the time (in seconds) within which you must enter the <b>configure confirm</b> command to confirm replacement of the running configuration file. If you do not enter the <b>configure confirm</b> command within the specified time limit, the configuration replacement operation is automatically stopped. (In other words, the running configuration file is restored to the configuration that existed before you entered the <b>configure replace</b> command).  <b>Note</b> You must first enable the configuration archive before you can use the <b>time seconds</b> command line option.  <b>nolock</b> —Disables the locking of the running configuration file that prevents other users from changing the running configuration during a configuration replacement operation.
Step 2	<b>configure confirm</b>  <b>Example:</b> Switch# configure confirm	(Optional) Confirms replacement of the running configuration with a saved configuration file.  <b>Note</b> Use this command only if the <b>time seconds</b> keyword and argument of the <b>configure replace</b> command are specified.
Step 3	<b>show running-config</b>  <b>Example:</b> Switch# show running-config	(Optional) Displays the contents of the running configuration.