



File System

This module describes additional enhancement to file system commands. File System commands are instructions that can be used to manage and manipulate files and directories within a file system.

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Secure File Transfer

Table 1: Feature History Table

Feature Name	Release Information	Feature Description
Secure File Transfer	Release 7.9.1	<p>Now, you can securely transfer router files to an archive server. It's made possible because the copy command now supports SFTP (Secure File Transfer Protocol) and SCP (Secure Copy Protocol using the underlying SSH protocol implementation). Secure transfer of files from the router maintains the integrity, confidentiality, and availability of network configurations.</p> <p>This feature modifies the copy command.</p>

You can duplicate files or data in the router from one location to another using the **copy** command. This functionality helps to create a copy of a file, folder, or data set and place it in a specific destination. You can use the copy functionality to back up files, move data between directories, create duplicates of the files for editing or distribution without modifying the original content. It also allows you to retain the original data while making a duplicate that you can further manipulate independently.

Starting with Cisco IOS XR Release 7.9.1, we've enhanced the functionality of the copy command to support secure file transfer from the router. Secure file transfer protects data during transit using the SFTP (Secure File Transfer Protocol) and SCP (Secure Copy Protocol) when sharing files within or across networks. The SFTP and SCP functionalities in the copy feature use the SSH protocol implementation in the router to secure transfer the files to a remote server.

You can use the following options in the **copy** command for secure file transfer:

- **sftp**: You can transfer the files to a remote location using the **SFTP** file transfer protocol. SFTP is a secure file transfer protocol for transferring large files.
- **scp**: You can transfer the files to a remote location using the **SCP** file transfer protocol. SCP is a secure copy protocol to transfer files between servers.

Starting Cisco IOS XR Software Release 7.10.1, you can use public-key authentication while copying the running configuration. To know more about using public-key authentication with **copy** refer the *Auto-Save and Copy Router Configuration Using Public Key Authentication* in Configuration Management Commands chapter in General Administration Guide.

Prerequisites:

Enable the SSH Server in the router as follows:

```
Router# config
Router(config)# ssh server v2
Router(config)# ssh server vrf default
Router(config)# ssh server netconf vrf default
Router(config)# commit
```

Copy Files Using SCP

Step 1 Copy the running configuration file from the router to a remote server using SCP using the **copy** command.

```
Router# copy running-config scp://root:testpassword@192.0.4.2//var/opt/run_conf_scp.txt
```

```
Destination file name (control-c to cancel): [/var/opt/run_conf_scp.txt]?
```

```
.
```

```
215 lines built in 1 second
[OK]Connecting to 192.0.4.2...22
Password:
```

```
Transferred 3271 Bytes
3271 bytes copied in 0 sec (0)bytes/sec
```

Step 2 Verify if the copied files are available in the SCP server using the **ls** utility.

```
[root@scp_server ~]# ls -ltr /var/opt/run_conf_scp.txt
-rw-r--r-- 1 root root 3271 Mar 21 18:07 /var/opt/run_conf_scp.txt
```

Copy files Using SFTP

Step 1 Copy the running configuration file from the router to a remote server using SFTP using the **copy** command.

```
Router#copy running-config sftp://root:testpassword@192.0.2.1//var/opt/run_conf_sftp.txt
```

```
Destination file name (control-c to cancel): [/var/opt/run_conf_sftp.txt]?
```

```
.
```

```
215 lines built in 1 second
[OK]Connecting to 192.0.2.1...22
Password:
sftp> put /tmp/tmpsmlink/nvgen-34606-_proc_34606_fd_75 /var/opt/run_conf_sftp.txt
```

```
/tmp/tmpsmlink/nvgen-34606-_proc_34606_fd_75
```

```
Transferred 3271 Bytes
3271 bytes copied in 0 sec (3271000)bytes/sec
sftp> exit
```

Step 2 Verify if the copied files are available in the SFTP server using the **ls** utility

```
[root@sftp_server ~]# ls -ltr /var/opt/run_conf_sftp.txt
-rw-r--r-- 1 root root 3271 Mar 21 18:07 /var/opt/run_conf_sftp.txt
```
