# File Mirroring

This chapter details the File mirroring feature, which automatically copies files and directories from an active Route Processor (RP) to a standby RP or RSP. It eliminates manual intervention for file synchronization, ensuring redundancy.



# File mirroring

File mirroring is a file management feature that

- enables the router to copy files or directories automatically from `/harddisk:/mirror` location in active RP to `/harddisk:/mirror` location in standby RP or RSP without user intervention or EEM scripts, and
- enables the feature by using **mirror enable** and **mirror enable checksum** options.

***Table 1: Feature History Table***

| Feature Name | Release Information | Description |
|---|---|---|
| File mirroring | Release 7.0.14 | This feature enables the router to copy files and directories automatically from an active RP to a standby RP thus eliminating the manual intervention or the use of EEM scripts. |

You can use these commands to enable the file mirroring feature:

- **mirror enable** - The **`/harddisk:/mirror`** directory is created by default, but file mirroring functionality is only enabled by executing the `mirror enable` command from configuration terminal. Status of the mirrored files can be viewed with `show mirror status` command.
- **mirror enable checksum** - The **mirror enable checksum** command enables MD5 checksum across active to standby RP to check integrity of the files. This command is optional.

# Restrictions for file mirroring

These restrictions apply to file mirroring:

- Supported only on Dual RP systems.
- Supports syncing only from active to standby RP. If files are copied into standby `/harddisk:/mirror` location, it won't be synced to active RP.
- A slight delay is observed in `show mirror` command output when mirror checksum configuration is enabled.
- Not supported on multichassis systems.

# Configure file mirroring

Use these steps to configure file mirroring:

### Before you begin

File mirroring must be enabled explicitly on the router. It is not enabled by default.

### Procedure

**Step 1** Ensure mirroring is enabled.

**Example:**

```
Router#show run mirror

Thu Jun 25 10:12:17.303 UTC
mirror enable
mirror checksum
```

**Step 2** Copy running configuration to `harddisk:/mirror` location.

**Example:**

```
Router#copy running-config harddisk:/mirror/run_config
Wed Jul  8 10:25:51.064 PDT
Destination file name (control-c to abort): [/mirror/run_config]?
Building configuration..
32691 lines built in 2 seconds (16345)lines/sec
[OK]
```

**Step 3** Verify the syncing of file copied to mirror directory, use the `show mirror` command.

**Example:**

```
Router#show mirror
Wed Jul  8 10:31:21.644 PDT
% Mirror rsync is using checksum, this show command may take several minutes if you have many files.
 Use Ctrl+C to abort
MIRROR DIR: /harddisk:/mirror/
% Last sync of this dir ended at Wed Jul  8 10:31:11 2020
```

```
Location   |Mirrored |MD5 Checksum                       |Modification Time
-------------------------------------------------------------------------
run_config |yes      |76fc1b906bec4fe08ecda0c93f6c7815 |Wed Jul  8 10:25:56 2020
```

***Table 2: Identify issues***

| If.. | Then.. |
|---|---|
| the checksum is disabled | use the **show mirror** command to display the following output:<br>`Router#show mirror`<br>`Wed Jul 8 10:39:09.646 PDT`<br>`MIRROR DIR: /harddisk:/mirror/`<br>`% Last sync of this dir ended at Wed Jul 8 10:31:11 2020`<br>`Location  \|Mirrored \|Modification Time`<br>`----------------------------------------`<br>`run_config \|yes  \|Wed Jul  8 10:25:56 2020` |
| there is a mismatch during the syncing process | use `show mirror mismatch` command to verify:<br>`Router# show mirror mismatch`<br>`Wed Jul  8 10:31:21.644 PDT`<br>`MIRROR DIR: /harddisk:/mirror/`<br>`% Last sync of this dir ended at Wed Jul 8 10:31:11 2020`<br>`Location  \|Mismatch Reason  \|Action Needed`<br>`----------------------------------------------`<br>`test.txt  \|newly created item. \|send to standby` |