Configuring 1:1 Redundancy

Enabling the 1:1 redundancy stack mode allows you to assign active and standby roles to specific switches in the stack.

- Prerequisites for 1:1 Redundancy, on page 1
- Information About 1:1 Redundancy, on page 1
- How to Configure 1:1 Redundancy, on page 2
- Verifying the Stack Mode, on page 2
- Configuration Examples for 1:1 Redundancy, on page 3
- Additional References for 1:1 Redundancy, on page 3
- Feature History for 1:1 Redundancy, on page 4

Prerequisites for 1:1 Redundancy

The following are prerequisites for 1:1 redundancy:

- All the switches in the stack must be running the same license level as the active switch. For information about license levels, see the *System Management Configuration Guide* of the required release.
- All the switches in the stack must be running compatible software versions.

Information About 1:1 Redundancy

1:1 redundancy is used to assign active and standby roles to specific switches in the stack. This overrides the traditional N+1 role selection algorithm, where any switch in the stack can be active or standby. In 1:1 redundancy, the stack manager determines the active and standby role for a specific switch, based on the flash ROMMON variable. The algorithm assigns one switch as active, another switch as standby, designating all remaining switches in the stack as members. When an active switch reboots it becomes standby and the existing standby switch becomes the new active. The existing member switches remain in the same state.

How to Configure 1:1 Redundancy

Enabling 1:1 Redundancy Stack Mode

Follow these steps to enable the 1:1 redundancy stack mode, and set a switch as the active switch in a stack, or as the standby:

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. Enter your password if prompted.
Step 2	**switch** *switch-number* **role** { **active** | **standby** } **Example:** `Device# switch 1 role active`	Changes stack mode to 1:1 mode and designates the switch as active or standby.

Disabling 1:1 Redundancy Stack Mode

On a switch where 1:1 redundancy is enabled, follow these steps to disable the feature. This changes the stack mode to N+1:

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. Enter your password if prompted.
Step 2	**switch clear stack-mode** **Example:** `Device# switch clear stack-mode`	Changes stack mode to the N+1 mode and removes active and standby assignments.

Verifying the Stack Mode

To verify the current stack mode on a switch, enter the **show switch stack-mode** command in priviledged EXEC mode. The output displays detailed status of the currently running stack mode.

```
Device# show switch stack-mode
Switch   Role    Mac Address    Version   Mode    Configured   State
-------------------------------------------------------------------
1       Member 3c5e.c357.c880             1+1'     Active'     Ready
*2      Active 547c.69de.cd00    V05      1+1'     Standby'    Ready
3       Member 547c.6965.cf80    V05      1+1'     Member'     Ready
```

The `Mode` field indicates the current stack mode

The `Configured` field refers to the switch state expected after a reboot.

Single quotation marks (') indicate that the stack mode has been changed.

Configuration Examples for 1:1 Redundancy

Example: Enabling 1:1 Redundancy Stack Mode

You can use the **switch switch-number role** command to set the active and standby switch in 1:1 stack mode. The stack operates in the 1:1 stack mode with the specified active or standby after reboot. In the following example, switch 1 is assigned the active role, and switch 2 is assigned the standby role.

```
Device# switch 1 role active
WARNING: Changing the switch role may result in redundancy mode being configured to 1+1
mode for this stack. If the configured Active or Standby switch numbers do not boot up,
then the stack will not be able to boot. Do you want to continue?[y/n]? [yes]: yes

Device# switch 2 role standby
WARNING: Changing the switch role may result in redundancy mode being configured to 1+1
mode for this stack. If the configured Active or Standby switch numbers do not boot up,
then the stack will not be able to boot. Do you want to continue?[y/n]? [yes]: yes
```

Example: Disabling 1:1 Redundancy

You can use the **switch clear stack-mode** command to remove 1:1 stack mode, and change it back to N+1 stack mode.

```
Device# switch clear stack-mode
WARNING: Clearing the chassis HA configuration will resultin the chassis coming up in Stand
 Alone mode after reboot.The HA configuration will remain the same on other chassis. Do you
 wish to continue? [y/n]? [yes]:
```

Additional References for 1:1 Redundancy

Related Documents

Related Topic	Document Title
For complete syntax and usage information for the commands used in this chapter.	See the *Stacking and High Availability Commands* section of the Command Reference for the release.

Feature History for 1:1 Redundancy

This table provides release and related information for features explained in this module.

These features are available on all releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature	Feature Information
Cisco IOS XE Everest 16.6.1	1:1 Redundancy	Enables the 1:1 redundancy stack mode and enables you to assigns active and standby roles to specific switches in the stack.

Use Cisco Feature Navigator to find information about platform and software image support. To access Cisco Feature Navigator, go to https://cfnng.cisco.com.