

Troubleshoot Stack of Cat9k Switches Missing Standby Role

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Background Information](#)

[Problem](#)

[Solution](#)

[Option 1: Clear Stack mode](#)

[Step 1: Clear the Stack Mode](#)

[Step 2: Reload the Stack](#)

[Step 3: Verify](#)

[Option 2: AssignSwitch with the Standby Role](#)

[Step 1: Setup Switch 2 as Standby](#)

[Step 2: Reload the Stack](#)

[Step 3: Verify](#)

[Related Information](#)

Introduction

This document describes how to troubleshoot a stack of Catalyst 9000 switches missing Standby role.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Basic understanding of LAN Switching technologies
- Familiarity with Catalyst 9000 switch models

Components Used

The information in this document is based on these software and hardware versions:

- Hardware: Cisco Catalyst 9000 Series Switches
- Software Version: Cisco IOS XE

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

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.

In a network environment using Cisco Catalyst 9000 Series switches, an issue was observed where the standby switch role is missing. This document provides a detailed analysis of the problem and the steps to resolve it.

Problem

The problem was identified when the stack of switches does not have the standby role.

This is the output showing the issue:

```
<#root>
Switch#
show switch

Switch/Stack Mac Address : 8c44.a5a4.9d00 - Local Mac Address
Mac persistency wait time: Indefinite

Switch#   Role   Mac Address      Priority H/W   Current
-----
*1        Active 8c44.a5a4.9d00   15     V03   Ready
2

Member

8c44.a5a5.2380  14     V03   Ready

<<< Missing Standby Mode
```

In the ROMMON variables, this value was observed:

```
<#root>
Switch#
show romvar switch all

<SNIP>
RET_2_RTS=
ROMMON_AUTOBOOT_ATTEMPT=3

STACK_1_1=1_0
```

<<< This indicates that switch 1 is Active and no switch is marked for the Standby role

```
STACK_HIGH_SPEED=1  
SWITCH_DISABLE_PASSWORD_RECOVERY=0  
SWITCH_NUMBER=2  
<SNIP>
```

This variable can be present on all or only 1 member of the stack. Can cause problems in both cases.

Solution

Option 1: Clear Stack mode

The stack mode needs to be cleared on the switches in the stack. Take these steps:

Step 1: Clear the Stack Mode

```
<#root>
```

```
Switch#
```

```
switch clear stack-mode
```

WARNING: Clearing the chassis HA configuration will result in both the chassis move into Stand Alone mode after clearing its HA configuration and coming up with all interfaces in shutdown mode. Do you wish to
Switch#

```
copy running-config startup-config
```

Step 2: Reload the Stack

```
<#root>
```

```
Switch#
```

```
reload
```

Step 3: Verify

```
<#root>
```

```
Switch#
```

```
show romvar switch all
```

```
<SNIP>
```

```
RET_2_RTS=
```

```
ROMMON_AUTOBOOT_ATTEMPT=3
```

```
STACK_1_1=0_0 <<< This indicate that no switch in the stack is marked as Active nor Standby
```

```
STACK_HIGH_SPEED=1  
SWITCH_DISABLE_PASSWORD_RECOVERY=0  
SWITCH_NUMBER=2  
<SNIP>
```

This is the default value where the stack chooses the active and the standby role based on priority. If the stack mode has not been changed in the switch previously, the variable "**STACK_1_1**" does not show up in the ROMMON variables, indicating the value is in default (**STACK_1_1=0_0**).

Option 2: Assign Switch with the Standby Role

You can use the **switch switch-number role** command to set the 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 this example, switch 2 is assigned the standby role.

Step 1: Setup Switch 2 as Standby

```
<#root>  
Switch#  
switch 2 role standby
```

WARNING: Changing the switch role may result in redundancy mode being configured to 1+1 mode for this stack.

Step 2: Reload the Stack

```
<#root>  
Switch#  
reload
```

Step 3: Verify

```
<#root>  
Switch#  
show romvar switch all  
  
<SNIP>  
RET_2_RTS=  
ROMMON_AUTOBOOT_ATTEMPT=3
```

```
STACK_1_1=1_2 <<< This indicates that switch 1 is Active and switch 2 is the Standby
```

```
STACK_HIGH_SPEED=1  
SWITCH_DISABLE_PASSWORD_RECOVERY=0  
SWITCH_NUMBER=2  
<SNIP>
```

Related Information

- [Cisco Technical Support & Downloads](#)
- [Stack Manager and High Availability Configuration Guide](#)