

对C9800上的ISSU升级进行故障排除

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简介

本文档介绍ISSU升级预检查表以及如何排除Cisco Catalyst 9800系列无线控制器上的潜在问题。

先决条件

要求

Cisco 建议您了解以下主题：

- 思科Catalyst 9800无线控制器
- 高可用性状态化切换(HA SSO)

使用的组件

本文档中的信息基于以下软件和硬件版本：

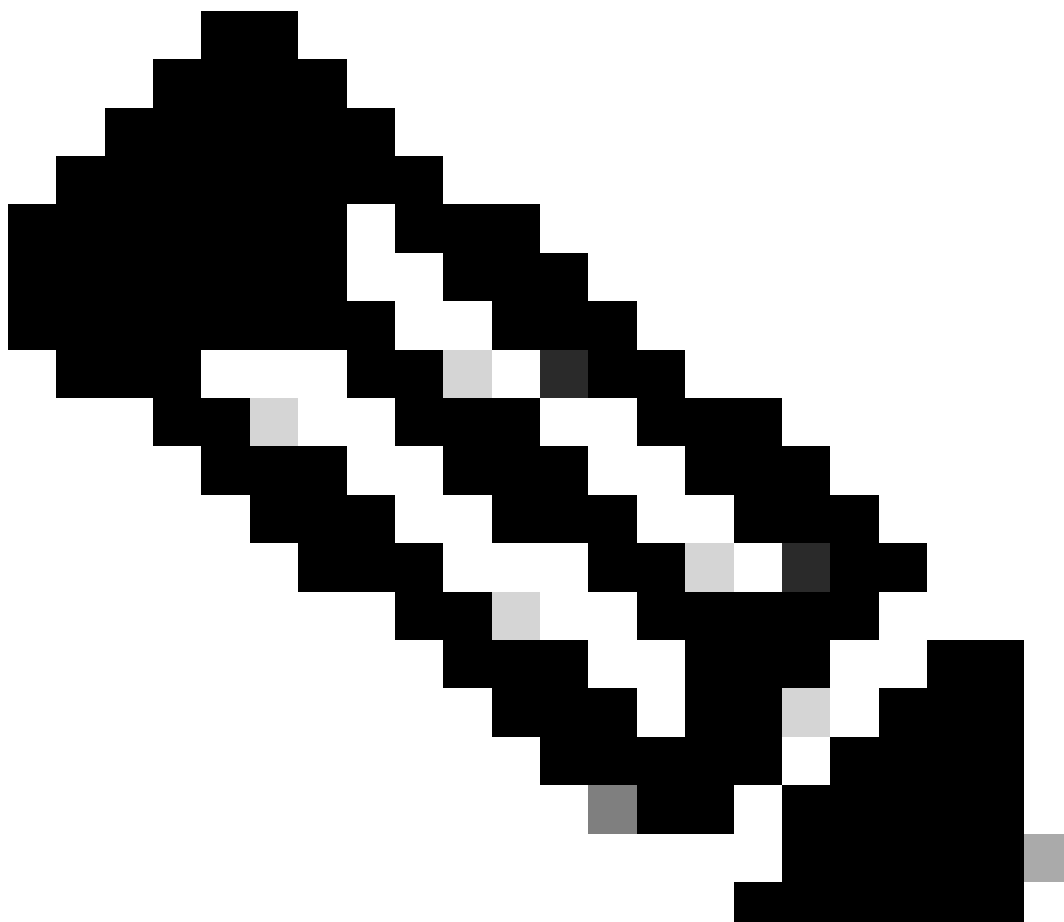
- 高可用性SSO对版本思科IOS 17.9.4a和17.9.5中的思科Catalyst 9800-L无线控制器
- AP型号(C9130AXI、C9120AXI/E、C9115AXI、AIR-AP4800、AIR-AP3802I/E、AIR-LAP3702I、AIR-AP1852I)

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始(默认)配置。如果您的网络处于活动状态,请确保您了解所有命令的潜在影响。

背景信息

要执行ISSU,需要遵循一系列背景信息:

- 设备必须位于HA SSO对中。
- 仅支持ISSU在这些设备中升级, Cisco Catalyst 9800-80、9800-40、9800-L、9800-CL(私有云)
- Cisco Catalyst 9800系列无线控制器平台不支持ISSU降级。
- 基本映像必须是Cisco IOS 17.3及更高版本。
- 在同一主版本中的长寿命版本之间支持ISSU。示例:支持Cisco IOS 17.6.x到17.6.y或17.6.x到17.9.x。
- 主要版本之间不支持ISSU。示例:不支持Cisco IOS 16.x.x到17.x.x或17.x.x到18.x.x。



注意：有关各版本之间的ISSU支持的详细信息，请访问不中断服务软件升级(ISSU)。

预检查表

确保系统做好充分准备，将当前软件升级到更高版本，同时网络继续使用9800控制器上的服务中软件升级选项转发数据包。

- 验证主用和备用控制器是否均处于安装模式并从bootflash : packages.conf启动

```
<#root>
```

```
WLC#
```

```
show version | i Installation mode
```

```
Installation mode is
```

```
INSTALL
```

WLC#

show boot

BOOT variable =

bootflash:packages.conf

,12;

CONFIG_FILE variable =

BOOTLDR variable does not exist

Configuration register is 0x2102

Standby BOOT variable =

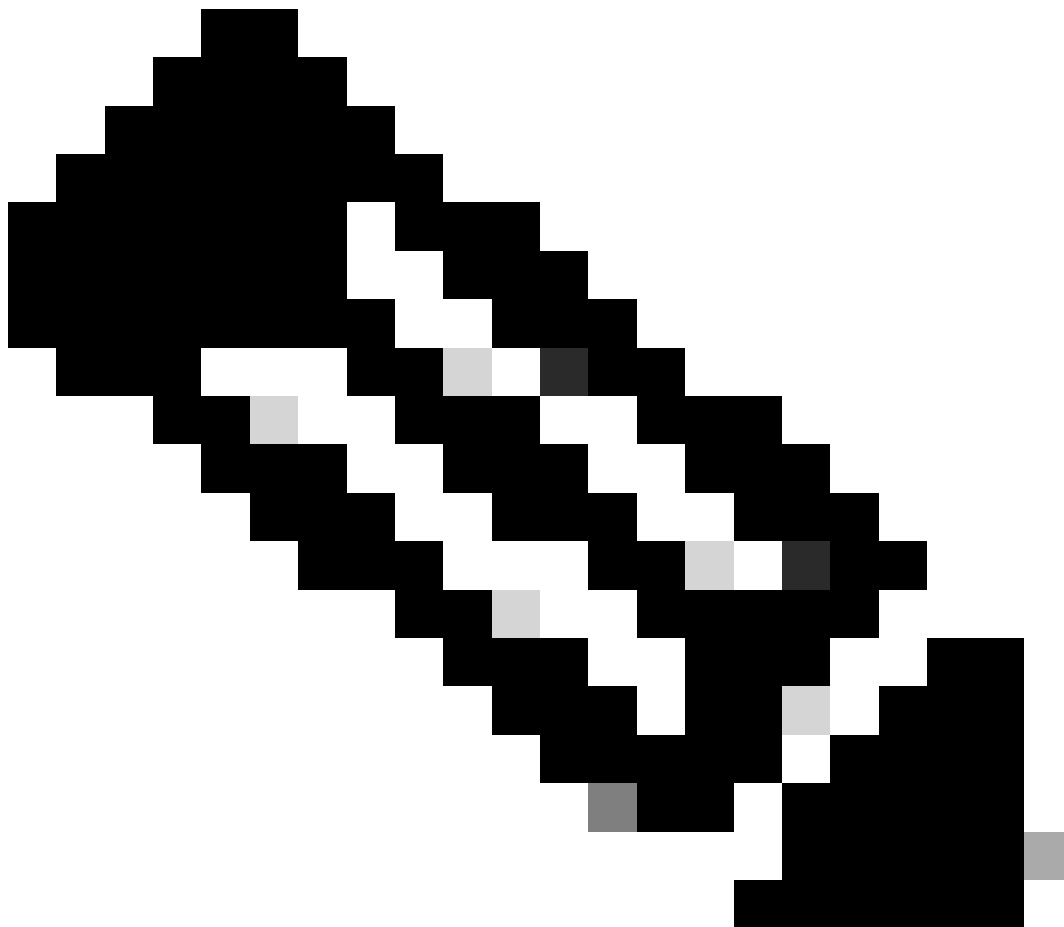
bootflash:packages.conf

,12;

Standby CONFIG_FILE variable =

Standby BOOTLDR variable does not exist

Standby Configuration register is 0x2102



注意：捆绑包模式不支持ISSU。有关如何进行转换的信息，请参阅更改Catalyst 9800无线控制器上的安装模式技术说明。

- 确保两个机箱具有相同和最新的ROMMON版本。此要求仅适用于物理设备。

```
<#root>
```

```
WLC#
```

```
show rom-monitor chassis active r0
```

```
=====
System Bootstrap,
Version 16.12(3r)
, RELEASE SOFTWARE
Copyright (c) 1994-2019 by cisco Systems, Inc.
```

```
WLC#
```

```
show rom-monitor chassis standby r0
```

```
=====
System Bootstrap,
Version 16.12(3r)
, RELEASE SOFTWARE
Copyright (c) 1994-2019 by cisco Systems, Inc.
```

注意：请参阅升级Cisco Catalyst 9800的现场可编程硬件设备以检查最新的rommon信息和升级过程。

- 确保HA SSO已启动且运行正常。

```
<#root>
```

```
WLC#
```

```
show chassis rmi
```

```
Chassis/Stack Mac Address : f4bd.9e57.9d80 - Local Mac Address  
Mac persistency wait time: Indefinite  
Local Redundancy Port Type: Twisted Pair
```

Chassis#	Role	Mac Address	Priority	H/W Version	Current State	IP	RMI-IP
*1	Active	f4bd.9e57.9d80	2	V02			

```
Ready
```

```
169.254.10.2      NA
<--Both Chassis in Ready state

2      Standby f4bd.9e57.8b20      1      V02
Ready

169.254.10.4      NA
```

始终检查冗余信息，确保对等控制器处于“热备用”和“通信正常”状态。此外，请始终进入Standby peer controller命令行并确保其未处于Recovery状态。

<#root>

WLC#

show redundancy

Redundant System Information :

```
-----
Available system uptime = 8 hours, 38 minutes
Switchovers system experienced = 0
Standby failures = 0
Last switchover reason = none
Hardware Mode = Duplex
Configured Redundancy Mode = sso
Operating Redundancy Mode = sso
Maintenance Mode = Disabled
Communications =
```

Up

Current Processor Information

```
:
-----
Active Location = slot 1
Current Software state =
```

ACTIVE

```
Uptime in current state = 8 hours, 38 minutes
Image Version = Cisco IOS Software [Cupertino], C9800 Software (C9800_IOSXE-K9), Versi
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2023 by Cisco Systems, Inc.
Compiled Fri 20-Oct-23 10:28 by mcpre
BOOT =
```

bootflash:packages.conf

```
,12;
CONFIG_FILE =
Configuration register = 0x2102
Recovery mode = Not Applicable
Fast Switchover = Enabled
```

Initial Garp = Enabled

Peer Processor Information

:

Standby Location = slot 2
Current Software state =

STANDBY HOT

Uptime in current state = 8 hours, 35 minutes

Image Version = Cisco IOS Software [Cupertino], C9800 Software (C9800_IOSXE-K9), Versi

Technical Support: <http://www.cisco.com/techsupport>

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Compiled Fri 20-Oct-23 10:28 by mcpre

BOOT =

bootflash:packages.conf

,12;

CONFIG_FILE =
Configuration register = 0x2102

- 对于C9800-CL，请使用show romvar命令验证两个机箱是否具有相同的HA接口

<#root>

WLC_CL#

show romvar

ROMMON variables:

SWITCH_NUMBER = 1

CHASSIS_HA_IFNAME = GigabitEthernet3

<<< Same HA interface

CHASSIS_HA_IFMAC = XX:XX:XX:XX:XX:XX

SWITCH_PRIORITY = 2

WLC_CL-stby#

show romvar

ROMMON variables:

SWITCH_NUMBER = 2

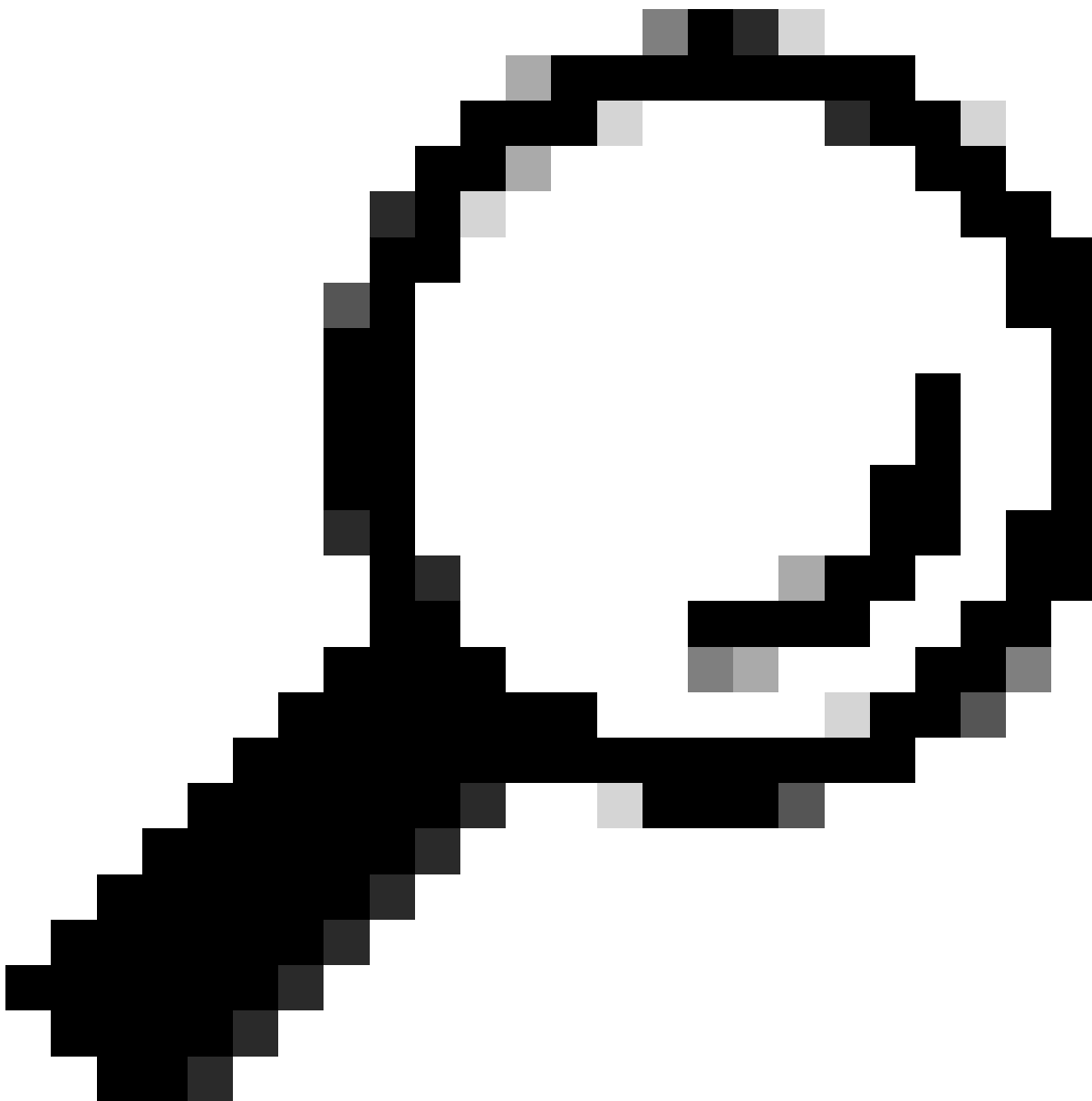
CHASSIS_HA_IFNAME = GigabitEthernet3

<<< Same HA interface

CHASSIS_HA_IFMAC = YY:YY:YY:YY:YY:YY

SWITCH_PRIORITY = 1

如果HA接口编号不同，则不继续执行ISSU。请参阅本文档的潜在问题部分。



提示：有关HA SSO设置和验证的更多详细信息，请查看Catalyst 9800上的High Availability SSO Quick Start Guide（高可用性SSO快速入门指南）。

- 确保有足够的可用引导闪存将映像存储在主用和备用控制器中，确保有空间容纳至少三倍于新代码大小的映像。

```
<#root>
```

```
WLC#
```

```
dir bootflash: | in free
```

```
26458804224 bytes total (
```

```
21142224896 bytes free
)
WLC#
dir stby-bootflash: | in free
```

```
26458804224 bytes total (
21293092864 bytes free
)
```

如果Bootflash中没有足够的空间，请考虑使用install remove inactive命令清理旧的安装文件。

```
<#root>
```

```
WLC#
install remove inactive
```

```
install_remove: START Mon Feb 12 18:40:00 UTC 2024
install_remove: Removing IMG
Cleaning up unnecessary package files
...
```

```
The following files will be deleted:
```

```
<-- Review files to be deleted
```

```
[R0]: /bootflash/C9800-CL-rpboot.17.09.04.SPA.pkg
[R1]: /bootflash/C9800-CL-rpboot.17.09.04.SPA.pkg
[R0]: /bootflash/C9800-CL-universalk9.17.12.01.SPA.bin
[R1]: /bootflash/C9800-CL-universalk9.17.12.01.SPA.bin
[R0]: /bootflash/C9800-CL-mono-universalk9.17.09.04.SPA.pkg
[R1]: /bootflash/C9800-CL-mono-universalk9.17.09.04.SPA.pkg
```

```
Do you want to remove the above files? [y/n] y
```

- 检查当前的安装状态。确保控制器上没有非活动或未提交的软件，当前版本必须标记为“C”，即其为“已激活并已提交”。
要查看系统中活动软件包的摘要，请使用show install summary命令：

```
<#root>
```

```
WLC#
show install summary
```

```
[ Chassis 1/R0 ] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
```

```
-----
```

```
Type St  Filename/Version
```

```
-----  
IMG  C   17.09.04a.0.6  <-- Only one version can be activated and committed.  
-----
```

```
Auto abort timer: inactive  
-----
```

- 使用show issu state detail命令验证ISSU状态，确保没有“ISSU操作正在进行”。

```
<#root>
```

```
WLC#
```

```
show issu state detail
```

```
Current ISSU Status: Enabled
```

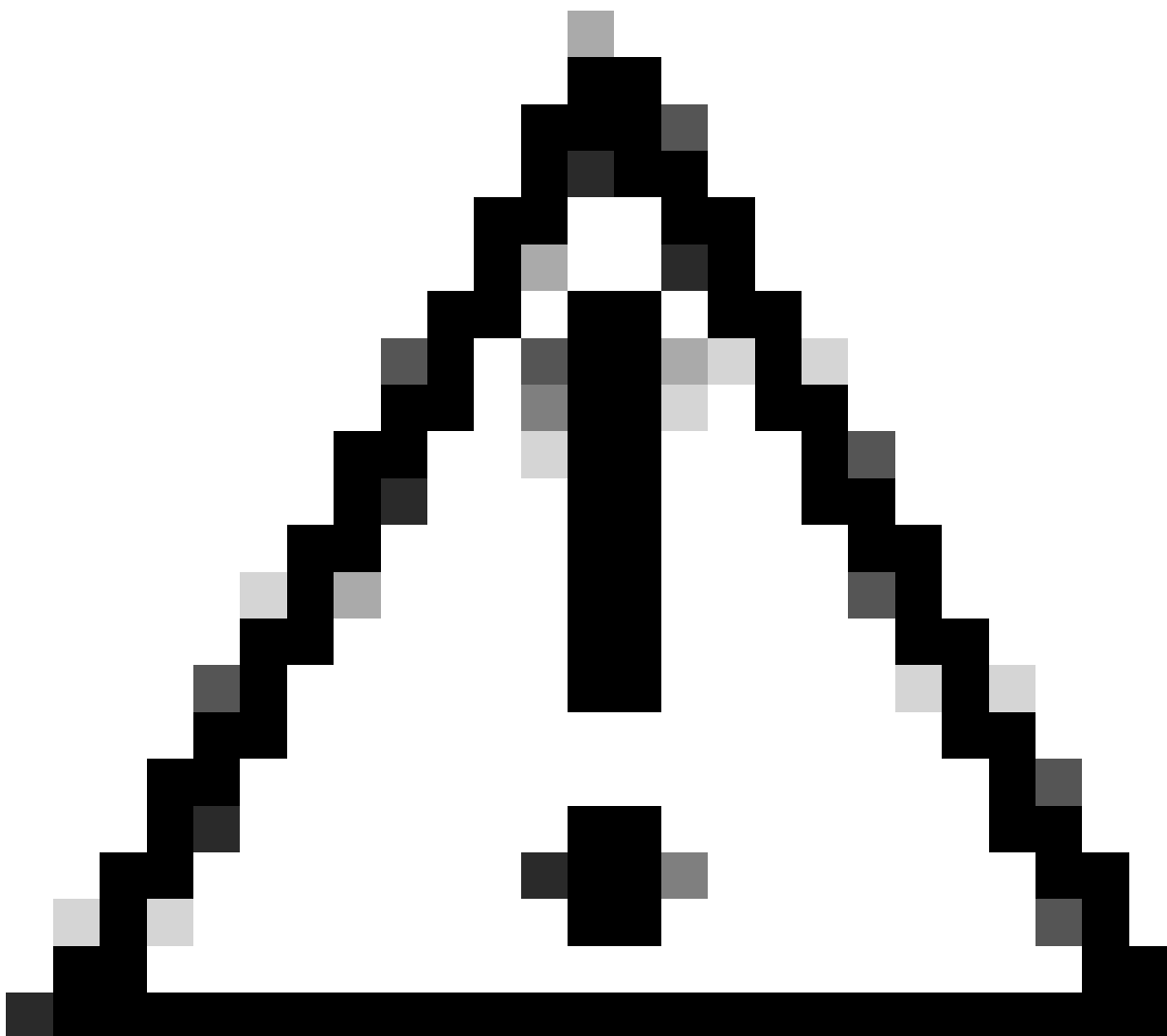
```
Previous ISSU Operation: N/A
```

```
=====
```

System Check	Status
Platform ISSU Support	Yes
Standby Online	Yes
Autoboot Enabled	Yes
SSO Mode	Yes
Install Boot	Yes
Valid Boot Media	Yes
Operational Mode	HA-REMOTE

```
=====
```

```
No ISSU operation is in progress  <-- If different consider abort any previous ISSU process.
```



注意：在网络稳定且稳定时安排升级，并避免在ISSU升级过程中出现任何电源中断。

注：有关ISSU升级的信息，请参阅本章中的运行中软件从Cisco Catalyst 9800系列无线控制器软件配置指南升级的说明。或者，在ISSU升级后，您可以使用redundancy force-switchover命令回退到主控制器。

潜在问题

问题1：连接超时

如果TFTP服务器无法访问，则可能发生连接超时。

```
<#root>
```

```
install_add: START Tue Feb 6 18:12:02 Pacific 2024  
Downloading file tftp://10.31.104.72//ayhusain/C9800-L-universalk9_wlc.17.09.05.SPA.bin  
FAILED:
```

```
Failed to download file
```

```
tftp://10.31.104.72//ayhusain/C9800-L-universalk9_wlc.17.09.05.SPA.bin:
```

```
Timed out
```

解决方案：确保TFTP服务器已启动且可访问，或者更改为其他传输类型以重新开始文件传输过程。

问题2：文件无效或损坏

如果升级由于文件损坏或无效文件而中断。

```
<#root>
```

```
install_add: START Tue Feb 6 18:54:46 Pacific 2024
```

```
FAILED: install_add : bootflash:C9800-L-universalk9_wlc.corrupt_17.09.05.SPA.bin
```

```
is not valid file
```

```
or cannot be handled by install CLI.
```

解决方案：使用verify /md5命令确保映像MD5校验和匹配。如果代码不匹配，请从官方Cisco软件下载站点重新下载映像，并将其上传到控制器。如果使用tftp服务器，请确保文件以二进制模式发送以避免文件修改。

```
<#root>
```

```
WLC#
```

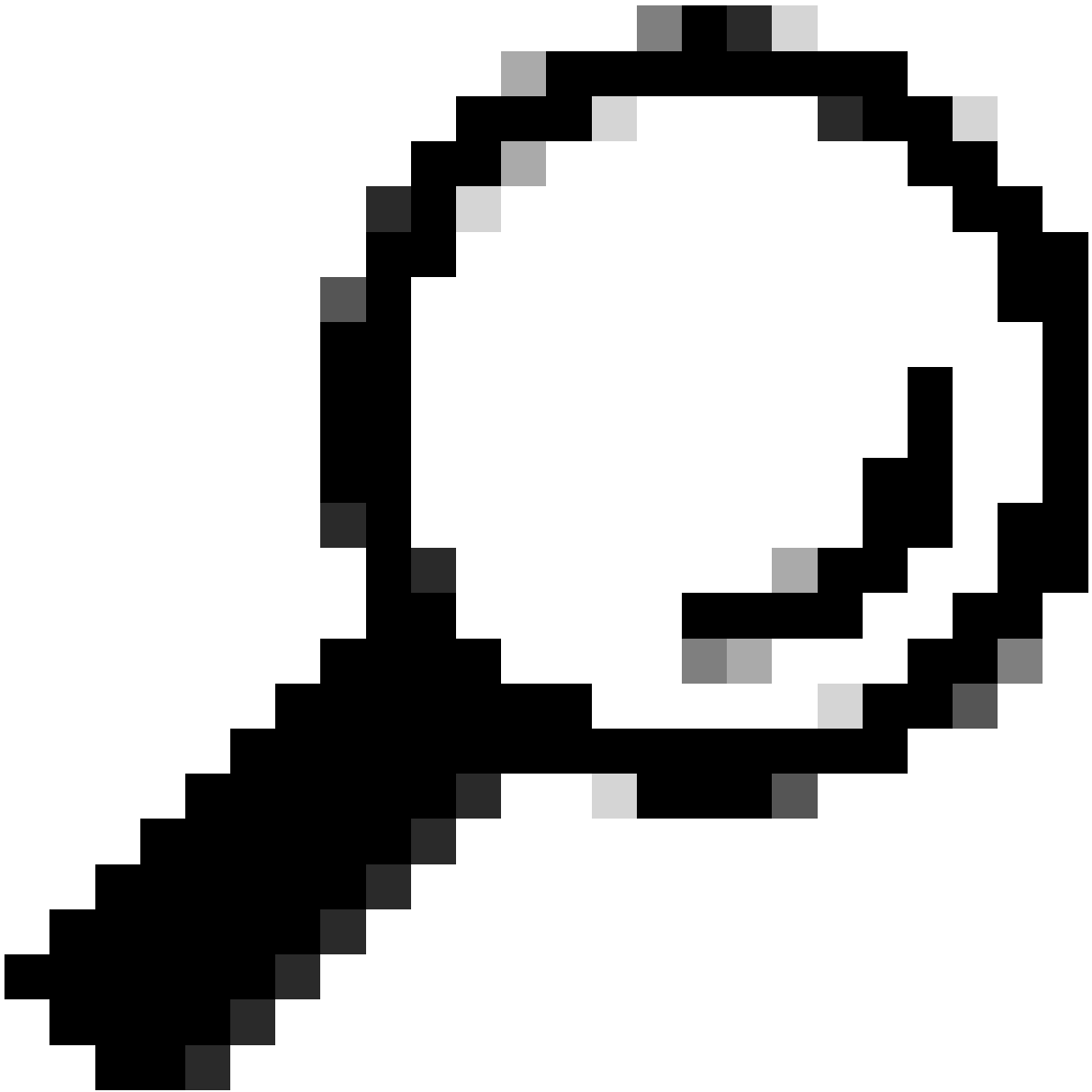
```
verify /md5
```

```
bootflash:C9800-L-universalk9_wlc.17.09.05.SPA.bin
```

```
.....Done!
```

```
verify /md5 (bootflash:C9800-L-universalk9_wlc.17.09.05.SPA.bin) =
```

```
07ff2f59787530d2814874ea39416b46
```



提示：为避免在升级维护窗口期间出现连接问题并节省时间，请预先将bin文件传输到C9800闪存。

问题3：不允许安装操作。

如果在完成AP预下载之前发出install activate issu命令，则此场景适用。

<#root>

```
install_activate: START Tue Feb 6 19:09:10 Pacific 2024
System configuration has been modified.
Press Yes(y) to save the configuration and proceed.
Press No(n) for proceeding without saving the configuration.
Press Quit(q) to exit, you may save configuration and re-enter the command. [y/n/q]
y
```

```
Building configuration...
[OK]Modified configuration has been saved
install_activate: Activating ISSU
NOTE: Going to start Activate ISSU install process
STAGE 0: System Level Sanity Check
=====
--- Verifying install_issu supported ---
--- Verifying standby is in Standby Hot state ---
--- Verifying booted from the valid media ---
--- Verifying AutoBoot mode is enabled ---
--- Verifying Platform specific ISSU admission criteria ---
CONSOLE: FAILED: Install operation is not allowed.
```

Reason -> AP pre-image download is mandatory for hitless software upgrade.

Action -> Trigger AP pre-image download.
FAILED: Platform specific ISSU admission criteria
ERROR: install_activate exit(2) Tue Feb 6 19:09:43 Pacific 2024

解决方案：在这种情况下，请运行ap image pre-download命令，然后仅在AP预下载完成后继续激活。如果AP下载缓慢，请验证AP和控制器之间的链路。

<#root>

```
WLC#terminal monitor
WLC#
```

```
ap image predownload
```

```
*Feb 12 13:26:21.829: %UPGRADE-5-AP_SW_UPDATE_LOG_MSG: Chassis 1 R0/0: wncmgrd: AP SW update PREPARE:
predownload is in progress
```

```
WLC#
```

```
show ap image
```

```
Total number of APs : 9
Number of APs
Initiated : 0
Downloading : 0
Predownloading : 0
Completed downloading : 1
Completed predownloading : 1
Not Supported : 0
Failed to Predownload : 0
```

```
Predownload in progress : Yes
```

```
AP Name Primary Image Backup Image Predownload Status Predownload Version Next Retry Time Retry Count M
-----
AP00f6.63c8.6a14 17.9.4.27 17.9.5.47 Complete 17.9.5.47 0 0 CAPWAP
```



```

AP38ED.18C6.0C60 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
AP70D3.79D6.0A00 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
AP7488.BB66.1CF2 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
AP4C71.0DC8.9D3A 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
AP6C71.0DF4.29CC 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
APA4B2.3986.C900 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
APC828.E56F.6190 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
APA453.0E5B.3E30 17.9.4.27 17.9.5.47 None 0.0.0.0 N/A 0 N/A
WLC#
*Feb 12 13:36:32.832: %UPGRADE-5-AP_SW_UPDATE_LOG_MSG: Chassis 1 R0/0: wncmgrd:

AP SW update Predownload is successful

.

<--AP predownload completed

```

WLC#

```

install activate issu                                     <-- Then activate ISSU upg

install_activate: START Mon Feb 12 13:26:50 Pacific 2024
install_activate: Activating ISSU
*Feb 12 13:26:50.895: %INSTALL-5-INSTALL_START_INFO: Chassis 1 R0/0: install_engine: Started install ac
NOTE:

Going to start Activate ISSU install process

```

问题4：系统回滚到以前的版本。

在ISSU升级期间，一个常见事件是，升级完成后，系统显然会自行回滚到以前的版本。当系统在激活新映像后重新加载时，会触发auto-abort-timer。如果计时器在提交新映像之前过期，则安装过程将中止；设备将重新加载并使用旧版本的软件映像启动。

解决方案：要避免此问题，请确保在“install activate issu”命令发出后的6小时（默认时间）内发出“install commit”命令，否则系统可以恢复到原始的提交位置。

<#root>

WLC#

```
show issu state detail
```

```
Current ISSU Status: In Progress
```

```
Previous ISSU Operation: N/A
```

```

=====
System Check                Status
-----
Platform ISSU Support       Yes
Standby Online              Yes
Autoboot Enabled           Yes
SSO Mode                    Yes

```

Install Boot Yes
Valid Boot Media Yes
Operational Mode HA-REMOTE

=====

Added Image:	
Name	Compatible

17.09.05.0.6450	Yes

Operation type: Step-by-step ISSU
Install type : Image installation using ISSU
Current state : Activated state
Last operation: Switchover

Completed operations:
Operation Start time

Activate location standby chassis 2/R0	2024-02-12:13:27:12
Activate location active chassis 1/R0	2024-02-12:13:38:43
Switchover	2024-02-12:13:43:10
State transition:	Added -> Standby activated -> Active switched-over

Auto abort timer: automatic, remaining time before rollback: 04:25:37 <-- Remaining time before rol

Abort Reason: N/A
Running image: bootflash:packages.conf
Operating mode: sso, terminal state reached

WLC#

show install summary

[Chassis 1/R0 2/R0] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
C - Activated & Committed, D - Deactivated & Uncommitted

Type	St	Filename/Version
------	----	------------------

IMG U 17.09.05.0.6450

<-- System is activated but uncommitted

Auto abort timer: active , time before rollback - 04:25:52

<-- Remaining time before rollback

WLC#

install commit

<-- Commit the new code

install_commit: START Mon Feb 12 15:20:35 Pacific 2024
install_commit: Committing ISSU

*Feb 12 15:20:36.362: %INSTALL-5-INSTALL_START_INFO: Chassis 2 R0/0: install_engine: Started install commit process
NOTE: Going to start Commit ISSU install process

STAGE 0: System Level Sanity Check

```
=====
--- Verifying install_issu supported ---
--- Verifying standby is in Standby Hot state ---
--- Verifying booted from the valid media ---
--- Verifying AutoBoot mode is enabled ---
--- Verifying Platform specific ISSU admission criteria ---
Finished Initial System Level Sanity Check
```

STAGE 1: Dispatching the commit command to remote

```
=====
--- Starting install_commit_remote ---
Performing install_commit_remote on Chassis remote
[1] install_commit_remote package(s) on chassis 1/R0
[1] Finished install_commit_remote on chassis 1/R0
install_commit_remote: Passed on [1/R0]
Finished install_commit_remote
```

SUCCESS: install_commit Mon Feb 12 15:21:12 Pacific 2024

WLC#

*Feb 12 15:21:12.367: %INSTALL-5-INSTALL_COMPLETED_INFO: Chassis 2 R0/0: install_engine: Completed install commit process

WLC#

show issu state detail

<-- Verify ISSU state is successful

Current ISSU Status: Enabled

Previous ISSU Operation: Successful

```
=====
System Check Status
-----
```

```
Platform ISSU Support Yes
Standby Online Yes
Autoboot Enabled Yes
SSO Mode Yes
Install Boot Yes
Valid Boot Media Yes
Operational Mode HA-REMOTE
=====
```

No ISSU operation is in progress

WLC#

show install summary

```
<-- Verify new code is Activated & Committed
```

```
[ Chassis 1/R0 2/R0 ] Installed Package(s) Information:  
State (St): I - Inactive, U - Activated & Uncommitted,  
C - Activated & Committed, D - Deactivated & Uncommitted
```

```
-----  
Type St Filename/Version  
-----
```

```
IMG C 17.09.05.0.6450
```

```
-----  
Auto abort timer: inactive  
-----
```

(可选) 要停止自动中止计时器，请使用install auto-abort-timer stop命令。 这将停止终止计时器，以使升级过程在默认自动中止时间后不会终止。

```
<#root>
```

```
WLC#
```

```
install auto-abort-timer stop
```

```
install_auto_abort_timer: START Mon Feb 12 15:13:59 Pacific 2024  
Abort timer cancelled, auto-rollback will not take place  
Please use 'install abort issu' to rollback the ISSU upgrade  
SUCCESS: install_auto_abort_timer Mon Feb 12 15:14:00 Pacific 2024
```

```
WLC#
```

```
show install summary
```

```
[ Chassis 1/R0 2/R0 ] Installed Package(s) Information:  
State (St): I - Inactive, U - Activated & Uncommitted,  
C - Activated & Committed, D - Deactivated & Uncommitted
```

```
-----  
Type St Filename/Version  
-----
```

```
IMG U 17.09.05.0.6450
```

```
<-- You still need to commit new image to persist
```

```
-----  
Auto abort timer: inactive <-- Remaining time before rollback. Commit still needed for new image to per  
-----
```

(可选) 要修改自动中止计时器，请使用activate issu auto-abort-timer命令。此操作可以在激活映像之前完成。

```
<#root>
```

```
WLC#
```

```
install activate issu auto-abort-timer
```

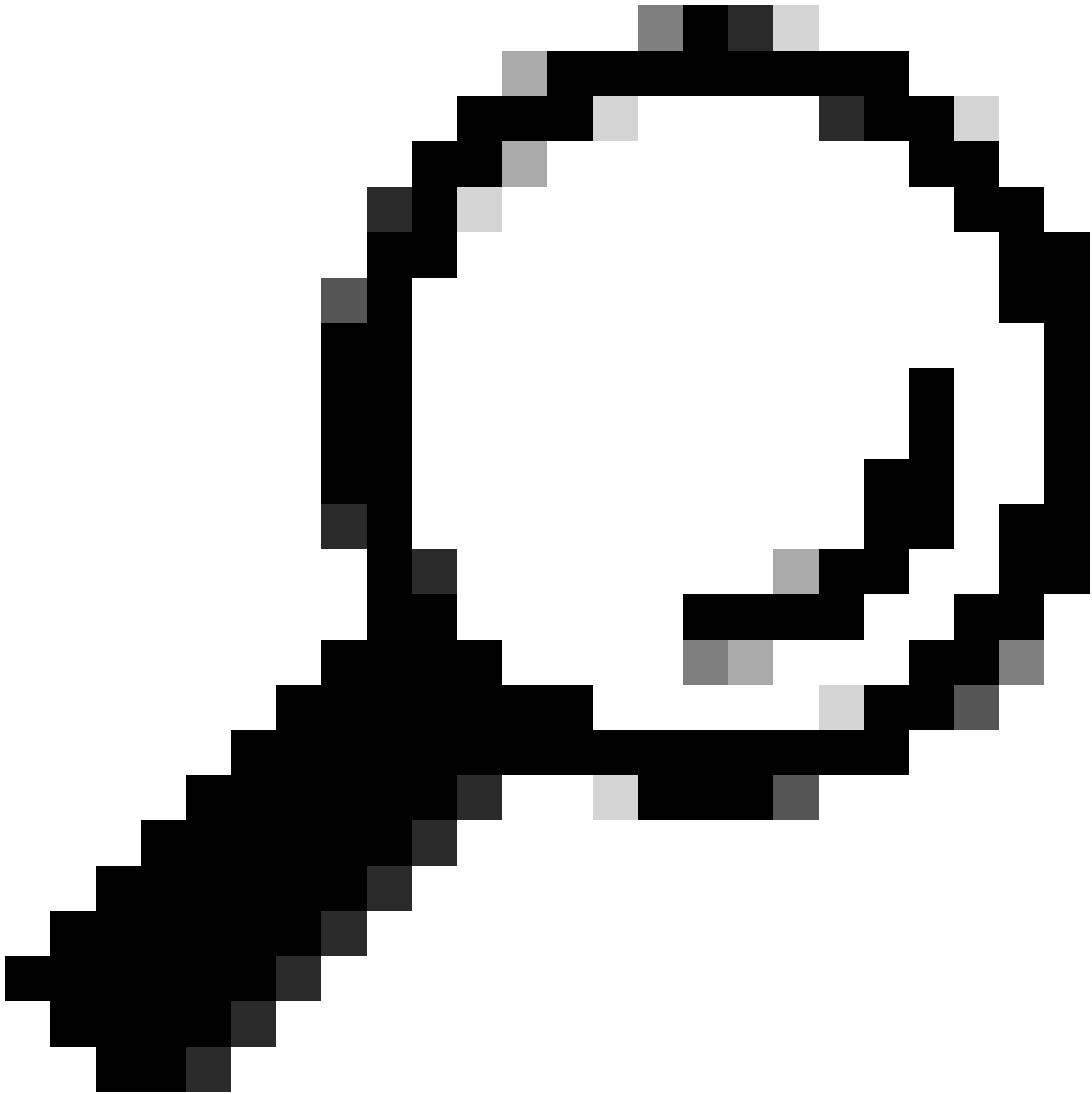
```
?
```

```
<30-1200> Number of minutes the abort-timer is set for
```

问题5：配置兼容性

某些配置无法与新的IOS-XE版本兼容，并且可能会在升级期间导致问题。配置同步失败会导致备用控制器重新加载并回滚到原始软件映像。

要解决配置问题，请删除违规配置。提供了ISSU升级期间出现的最常见配置兼容性问题列表。



提示：请始终查看目标映像发行说明中的“Before You Upgrade”（升级前）部分，以了解有关升级前要考虑的软件更改和配置调整的重要详细信息。

不匹配的命令列表-云控制器中的HA接口错误

ISSU升级中的一个常见错误是，C9800-CL WLC定义了不同的高可用性接口，导致不匹配的命令列表(MCL)终止了活动控制器上的ISSU操作。

解决方案：如果您的控制器具有不同的HA接口，则无法使用ISSU。重新部署控制器，并确保虚拟环境中的HA接口映射对于两个控制器均相同。

注意：请参阅《适用于云部署的Cisco Catalyst 9800-CL无线控制器指南》中的9800-CL网络接口映射部分。

```
<#root>
```

```
WLC#
```

```
show redundancy config-sync failures historic mcl
```

```
Mismatched Command List
```

```
-----
```

```
-interface GigabitEthernet3          <-- Gi3 is detected as MCL leading to config sync failure.
```

```
! <submode> "interface"  
negotiation auto  
no mop enabled  
no mop sysid  
! </submode> "interface"
```

WLC#

```
show romvar
```

ROMMON variables:

SWITCH_NUMBER = 1

CHASSIS_HA_IFNAME = GigabitEthernet3

<-- HA Interface differs

CHASSIS_HA_IFMAC = XX:XX:XX:XX:XX:XX

SWITCH_PRIORITY = 2

WLC-stby#

```
show romvar
```

ROMMON variables:

SWITCH_NUMBER = 2

CHASSIS_HA_IFNAME = GigabitEthernet1

<-- HA Interface differs

CHASSIS_HA_IFMAC = YY:YY:YY:YY:YY:YY

SWITCH_PRIORITY = 1

不匹配的命令列表-域

如果配置了domain命令，则使用ISSU从Cisco IOS 17.3.x升级到任何版本的控制器都可能失败。

解决方案：在开始ISSU升级之前运行no domain命令，因为domain命令已从Cisco IOS 17.6.x中删除。

<#root>

WLC#

```
show redundancy config-sync failures mcl
```

Mismatched Command List

-domain example.local. <-- Run "no domain" from configuration

! <submode> "cent_domain"

! </submode> "cent_domain"

不匹配的命令列表- HSRP陷阱

如果配置了snmp-server enable traps hsrp命令，则使用ISSU从Cisco IOS 17.3.x到任何版本的控制器升级都会失败。

解决方案：在开始ISSU升级之前，从配置中删除snmp-server enable traps hsrp命令，因为该命令已从Cisco IOS 17.4.x中删除。

```
<#root>
```

```
WLC#
```

```
show redundancy config-sync failures mcl
```

```
Mismatched Command List
```

```
-----
```

```
-snmp-server enable traps hsrp
```

```
<-- Remove hsrp trap
```

解析器返回代码-无效的WPA3 AKM

如果有WLAN配置错误，没有配置身份验证密钥管理(AKM)，则控制器升级到Cisco IOS 17.9.x并使用ISSU升级到CISCO IOS 17.9.x以后可能会失败。从Cisco IOS 17.9.x版开始，必须具备有效的组合，这就要求为WPA3实施AKM参数。在ISSU过程中，如果WLC检测到无效的WPA3配置，则会导致配置同步失败。

解决方案：在开始ISSU升级之前，通过为WPA3配置适当的AKM来避免这种情况。

```
<#root>
```

```
WLC#
```

```
show redundancy config-sync failures prc
```

```
PRC Failed Command List
```

```
-----
```

```
wlan test 1 test
```

```
! <submode> "wlan"
```

```
- no shutdown <-- The wlan shuts down due to the invalid WPA3 configuration
```

```
! </submode> "wlan"
```

注意：要配置WPA3，请参阅Cisco Catalyst 9800系列无线控制器软件配置指南的“Wi-Fi保护访问3”一章

中止软件安装

Install abort issu

您可以使用install abort issucommand取消当前进程，手动中止软件映像的激活，并将系统返回到安装新软件之前运行的版本。请在发出install commitcommand之前使用此命令。

```
<#root>
```

```
WLC#terminal monitor  
WLC#
```

```
install abort issu
```

```
install_abort: START Fri Jan XX 16:50:00 EDT 2024
<5>%INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install abort ISSU
```

完成后，验证ISSU状态。

```
<#root>
```

```
WLC#
```

```
show issu state detail
```

```
Current ISSU Status: Enabled
```

```
Previous ISSU Operation: Abort Successful
```

```
=====
System Check Status
-----
```

```
Platform ISSU Support Yes
```

```
Standby Online Yes
```

```
Autoboot Enabled Yes
```

```
SSO Mode Yes
```

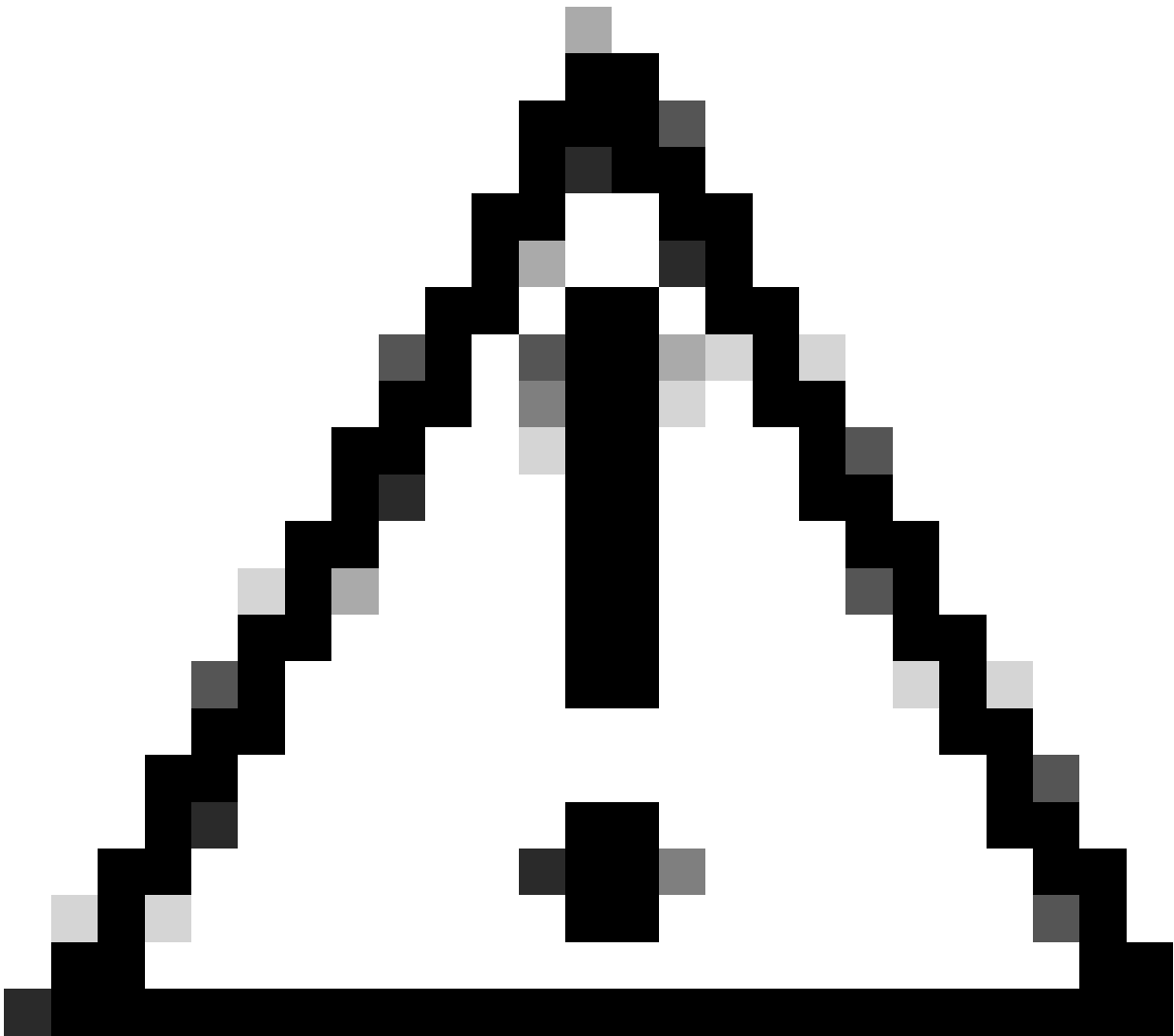
```
Install Boot Yes
```

```
Valid Boot Media Yes
=====
```

```
No ISSU operation is in progress
```

清除安装状态

如果发出abort命令后无法清除不必要的ISSU操作，您可以手动清除内部安装状态。



注意：请谨慎使用此程序，因为清除安装状态进程可能需要重新加载。

1. 在全局配置模式下启用内部服务。

```
<#root>
```

```
WLC#
```

```
conf t
```

```
WLC(config)#
```

```
service internal
```

```
WLC(config)#
```

```
end
```

2. 使用clear install state命令清除ISSU状态。

```
<#root>  
WLC#  
clear install state
```

3. 使用show install summary和show issu state detail命令验证安装状态。

4. 在全局配置模式下禁用内部服务。

```
<#root>  
WLC#  
conf t  
  
WLC(config)#  
no service internal  
  
WLC(config)#  
end
```

验证

验证升级过程并检查不匹配的命令列表。

```
#show install summary  
#show issu state detail  
#show install log  
#show chassis rmi  
#show redundancy  
#show ap image  
#show redundancy config-sync failures mcl  
#show redundancy config-sync failures historic mcl  
#show redundancy config-sync failures bem  
#show redundancy config-sync failures prc
```

相关信息

- [思科无线解决方案软件兼容性列表](#)
- [针对 Catalyst 9800 无线局域网控制器推荐的 Cisco IOS XE 版本](#)

- [Catalyst 9800控制器的升级和降级：提示和诀窍](#)
- [C9800更改安装模式](#)
- [C9800建议的ROMMON版本](#)
- [不同版本间的ISSU支持](#)
- [在Catalyst 9800上配置高可用性SSO | 快速入门指南](#)
- [C9800 ISSU升级过程](#)
- [热修补和ISSU升级指南](#)

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