

在Catalyst 9800无线控制器上的安装和捆绑之间转换安装模式

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[背景信息](#)

[安装模式](#)

[捆绑包模式](#)

[开始使用前](#)

[配置](#)

[从安装模式到捆绑模式](#)

[从捆绑包到安装模式](#)

[验证](#)

[安装模式](#)

[捆绑包模式](#)

[故障排除](#)

[相关信息](#)

简介

本文档介绍如何通过命令行界面(CLI)在Catalyst 9800无线控制器(WLC)上转换不同类型的安装模式。此过程也可用于升级9800 WLC。

先决条件

要求

Cisco 建议您了解以下主题：

- Catalyst 9800无线LAN控制器和接入点(AP)平台
- Catalyst 9800无线LAN控制器软件功能集

使用的组件

本文档中的信息基于以下软件和硬件版本：

- C9800-40-K9版本16.11.01c

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

在Catalyst 9800 WLC上运行IOS®-XE、捆绑和安装模式有两种方式。

安装模式

安装模式使用从二进制文件预提取的文件到闪存中以启动控制器。控制器将从抽取中创建的packages.conf文件用作引导变量。

捆绑包模式

如果控制器以二进制映像(.bin)作为引导变量引导，则系统在捆绑模式下工作。在此模式下，控制器将.bin文件提取到RAM中，并从中运行。此模式使用的内存比安装模式多，因为从启动中提取的软件包会复制到RAM。

提示：安装模式是运行WLC的推荐模式。

注意：在9800 WLC上配置高可用性(HA SSO)之前，请确保两台设备具有相同的安装模式，否则您可能会遇到V-Mismatch错误：“%BOOT-3-BOOTTIME_INCOMPATIBLE_SW_DETECTED:R0/0:issu_stack:检测到软件不兼容。”

开始使用前

验证9800 WLC的操作模式，以确定在模式之间转换时必须遵循的步骤。运行show version | include installation mode命令查看当前安装模式。

```
9800-40#show version | include Installation mode
Installation mode is INSTALL
```

配置

从安装模式到捆绑模式

步骤1.确保闪存中有足够的空间以扩展新映像。

```
9800-40#show flash:
...
277 42838080 Oct 08 2018 14:22:06.0000000000 +00:00 wlc9500C-rpboot.2018-10-
05_08.14_prabhask.SSA.pkg
278 10633472 Oct 09 2018 20:58:55.0000000000 +00:00 system-report_20181009-205853-
Universal.tar.gz
279 19921673 Dec 13 2018 19:27:45.0000000000 +00:00 system-report_20181213-192546-Pacific.tar.gz
235937792 bytes available (5746528256 bytes used)
```

步骤2.在空间不足时清除旧安装文件，并丢弃已添加的包。

```
9800-40#install remove inactive
```

```
Cleaning up unnecessary package files
Scanning boot directory for packages ... done.
Preparing packages list to delete ...
C9800-CL-universalk9.2019-12-28_15.32_saurasi3.SSA.bin
File is in use, will not delete.
done.
```

The following files will be deleted:

```
[chassis 2]:
/bootflash/C9800-CL-mono-universalk9.16.10.01.SPA.pkg
/bootflash/C9800-CL-rpboot.16.10.01.SPA.pkg
/bootflash/C9800-CL-universalk9.16.10.01.SPA.conf
/bootflash/packages.conf
/bootflash/wlc9500C-mono-universalk9.2018-10-05_08.14_prabhask.SSA.pkg
/bootflash/wlc9500C-mono-universalk9.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg
/bootflash/wlc9500C-rpboot.2018-10-05_08.14_prabhask.SSA.pkg
/bootflash/wlc9500C-rpboot.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg
/bootflash/wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.bin
/bootflash/wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.conf
```

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

```
[chassis 2]:
Deleting file bootflash:C9800-CL-mono-universalk9.16.10.01.SPA.pkg ... done.
Deleting file bootflash:C9800-CL-rpboot.16.10.01.SPA.pkg ... done.
Deleting file bootflash:C9800-CL-universalk9.16.10.01.SPA.conf ... done.
Deleting file bootflash:packages.conf ... done.
Deleting file bootflash:wlc9500C-mono-universalk9.2018-10-05_08.14_prabhask.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-mono-
universalk9.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-rpboot.2018-10-05_08.14_prabhask.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-
rpboot.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.bin ... done.
Deleting file bootflash:wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.conf ... done.
SUCCESS: Files deleted.
--- Starting Post_Remove_Cleanup ---
Performing Post_Remove_Cleanup on all members
[2] Post_Remove_Cleanup package(s) on chassis 2
[2] Finished Post_Remove_Cleanup on chassis 2
Checking status of Post_Remove_Cleanup on [2]
Post_Remove_Cleanup: Passed on [2]
Finished Post_Remove_Cleanup
```

SUCCESS: install_remove Fri Feb 14 15:06:14 Pacific 2020

9800-40#show flash:

```
...
297 30983948 Jan 07 2019 04:46:03.0000000000 +00:00 system-report_20190107-044600-
Pacific.tar.gz
298 10633472 Oct 09 2018 20:58:55.0000000000 +00:00 system-report_20181009-205853-
Universal.tar.gz
299 19921673 Dec 13 2018 19:27:45.0000000000 +00:00 system-report_20181213-192546-
Pacific.tar.gz
```

2931425280 bytes available (3051040768 bytes used)

步骤3.将新映像复制到闪存。

9800-40#copy tftp: flash:

```
Address or name of remote host []? 10.152.200.238
Source filename []? C9800-40-universalk9_wlc.16.11.01c.SPA.bin
Destination filename [C9800-40-universalk9_wlc.16.11.01c.SPA.bin]?
```



```
/bootflash/C9800-CL-universalk9.16.10.01.SPA.conf
/bootflash/packages.conf
/bootflash/wlc9500C-mono-universalk9.2018-10-05_08.14_prabhask.SSA.pkg
/bootflash/wlc9500C-mono-universalk9.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg
/bootflash/wlc9500C-rpboot.2018-10-05_08.14_prabhask.SSA.pkg
/bootflash/wlc9500C-rpboot.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg
/bootflash/wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.bin
/bootflash/wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.conf
```

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

```
[chassis 2]:
Deleting file bootflash:C9800-CL-mono-universalk9.16.10.01.SPA.pkg ... done.
Deleting file bootflash:C9800-CL-rpboot.16.10.01.SPA.pkg ... done.
Deleting file bootflash:C9800-CL-universalk9.16.10.01.SPA.conf ... done.
Deleting file bootflash:packages.conf ... done.
Deleting file bootflash:wlc9500C-mono-universalk9.2018-10-05_08.14_prabhask.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-mono-
universalk9.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-rpboot.2018-10-05_08.14_prabhask.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-
rpboot.BLD_POLARIS_DEV_LATEST_20180812_104316_V16_10_0_83.SSA.pkg ... done.
Deleting file bootflash:wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.bin ... done.
Deleting file bootflash:wlc9500C-universalk9.2018-10-05_08.14_prabhask.SSA.conf ... done.
SUCCESS: Files deleted.
--- Starting Post_Remove_Cleanup ---
Performing Post_Remove_Cleanup on all members
  [2] Post_Remove_Cleanup package(s) on chassis 2
  [2] Finished Post_Remove_Cleanup on chassis 2
Checking status of Post_Remove_Cleanup on [2]
Post_Remove_Cleanup: Passed on [2]
Finished Post_Remove_Cleanup
```

SUCCESS: install_remove Fri Feb 14 15:06:14 Pacific 2020

9800-40#**show flash:**

```
...
297  30983948 Jan 07 2019 04:46:03.0000000000 +00:00 system-report_20190107-044600-
Pacific.tar.gz
298  10633472 Oct 09 2018 20:58:55.0000000000 +00:00 system-report_20181009-205853-
Universal.tar.gz
299  19921673 Dec 13 2018 19:27:45.0000000000 +00:00 system-report_20181213-192546-
Pacific.tar.gz
2931425280 bytes available (3051040768 bytes used)
```

步骤3.将新映像复制到闪存。

9800-40#**copy tftp: flash:**

```
Address or name of remote host []? 10.152.200.238
Source filename []? C9800-40-universalk9_wlc.16.11.01c.SPA.bin
Destination filename [C9800-40-universalk9_wlc.16.11.01c.SPA.bin]?
Accessing tftp://10.152.200.238/C9800-40-universalk9_wlc.16.11.01c.SPA.bin...
Loading C9800-40-universalk9_wlc.16.11.01c.SPA.bin from 10.152.200.238 (via Vlan210):
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

步骤4.运行此命令以确认映像是否已成功复制到闪存。

9800-40#**dir flash:*.bin**

```
Directory of bootflash:/*.bin
Directory of bootflash:/
 16  -rw-   884905681  Aug 13 2019 22:29:34 +00:00  C9800-40-universalk9_wlc.16.11.01c.SPA.bin
```

步骤5.检查当前引导变量 (如果它显示image.bin文件) , 将其删除, 并将**packages.conf**设置为新引导变量。删除之前的引导变量并保存非常重要, 对于新变量, 您还必须保存新配置, 否则不会进行更改。

```
9800-40#show boot
BOOT variable = bootflash:C9800-40-universalk9_wlc.16.11.01c.SPA.bin,12;
CONFIG_FILE variable =
BOOTLDR variable does not exist
Configuration register is 0x2102
9800-40(config)#no boot system
9800-40(config)#do write
9800-40(config)#boot system bootflash:packages.conf
9800-40(config)#do write
```

步骤6.运行此命令以验证引导变量是否设置为**bootflash:packages.conf**。

输出显示**BOOT变量= flash:packages.conf**。

```
9800-40# show boot
BOOT variable = bootflash:packages.conf,12;
CONFIG_FILE variable =
BOOTLDR variable does not exist
Configuration register is 0x2102
```

步骤7.软件将映像安装到闪存。**install add file bootflash:<image.bin> activate commit** 命令将交换机从捆绑模式移至安装模式。

```
9800-40#install add file bootflash:C9800-40-universalk9_wlc.16.11.01c.SPA.bin activate commit
```

步骤8.对所有提示键入**yes**。 安装完成后, 控制器将继续重新加载。

```
install_add_activate_commit: START Tue Aug 13 23:10:24 Central 2019
Aug 13 23:10:25.685: %INSTALL-5-INSTALL_START_INFO: Chassis 1 R0/0: install_engine: Started
install one-shot bootflash:C9800-40-
universalk9_wlc.16.11.01c.SPA.bininstall_add_activate_commit: Adding PACKAGE
This operation requires a reload of the system. Do you want to proceed?
Please confirm you have changed boot config to bootflash:packages.conf [y/n]y
```

```
--- Starting initial file syncing ---
Info: Finished copying bootflash:C9800-40-universalk9_wlc.16.11.01c.SPA.bin to the selected
chassis
Finished initial file syncing
```

```
--- Starting Add ---
Performing Add on all members
```

```
[1] Add package(s) on chassis 1
[1] Finished Add on chassis 1
Checking status of Add on [1]
Add: Passed on [1]
Finished Add
```

```
Image added. Version: 16.11.1c.0.503
install_add_activate_commit: Activating PACKAGE
```

```
Following packages shall be activated:
/bootflash/C9800-rpboot.16.11.01c.SPA.pkg
/bootflash/C9800-mono-universalk9_wlc.16.11.01c.SPA.pkg
```

/bootflash/C9800-hw-programmables.16.11.01c.SPA.pkg

This operation may require a reload of the system. Do you want to proceed? [y/n]

--- Starting Activate ---

Performing Activate on all members

[1] Activate package(s) on chassis 1

[1] Finished Activate on chassis 1

Checking status of Activate on [1]

Activate: Passed on [1]

Finished Activate

--- Starting Commit ---

Performing Commit on all members

Aug 13 23:14:12.122: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: Chassis 1 R0/0:

rollback_timer: Install auto abort timer will expire in 21600 seconds

Aug 13 23:14:13.350: %IGMP_QUERIER-4-SAME_SRC_IP_ADDR: An IGMP General Query packet with the same source IP address (172.16.76.83) is received in VLAN 1 on port Te0/0/1.

Aug 13 23:14:16.635: %IGMP_QUERIER-4-SAME_SRC_IP_ADDR: An IGMP General Query packet with the same source IP address (172.16.76.83) is received in VLAN 1 on port Te0/0/1. [1] Commit

package(s) on chassis 1

[1] Finished Commit on chassis 1

Checking status of Commit on [1]

Commit: Passed on [1]

Finished Commit

/usr/binos/conf/install_util.sh: line 594: /bootflash/.installer/install_add_pkg_list.txt: No such file or directory

Install will reload the system now!

SUCCESS: install_add_activate_commit Tue Aug 13 23:14:49 Central 2019

Aug 13 23:14:49.485: %INSTALL-5-INSTALL_COMPLETED_INFO: Chassis 1 R0/0: install_engine:

Completed install one-shot PACKAGE bootflash:C9800-40-universalk9_wlc.16.11.01c.SPA.bin
Chassis 1 reloading, reason - Reload command

Aug 13 23:14:51.994: %PMAN-5-EXITACTION: F0/0: pvp: Process manager is exiting:

Aug 13 23:14:52.000: %PMAN-5-EXITACTION: C0/0: pvp: Process manager is exiting:

Aug 13 23:14:53.100: %PMAN-5

Initializing Hardware ...

验证

使用本部分可确认配置能否正常运行。

控制器重新启动后，您可以验证控制器的当前安装模式。运行**show version**命令以确认转换是否成功。

安装模式

```
9800-40#show version | include System image|Installation mode
```

```
System image file is "bootflash:packages.conf"
```

```
Installation mode is INSTALL
```

捆绑包模式

```
9800-40#show version | include System image|Installation mode
```

```
System image file is "bootflash:/C9800-40-universalk9_wlc.16.11.01c.SPA.bin"
```

```
Installation mode is BUNDLE
```

故障排除

目前没有针对此配置的故障排除信息。

相关信息

- [Cisco Catalyst 9800-CL云无线控制器安装指南](#)
- [TAC为无线LAN控制器推荐的IOS-XE版本](#)
- [最终用户指南](#)
- [技术支持和文档 - Cisco Systems](#)