

Recover a Catalyst 9800 Controller from ROMMON Mode

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Introduction

This document describes how to recover a Catalyst 9800 controller based on ROMMON mode and no image in the flash.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Catalyst Wireless Controllers 9800

Components Used

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

- Catalyst 9800 version 16.10.1

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.

Configure

Password Recovery Procedure for Virtual 9800 (9800-CL)

Step 1. Reboot the 9800-CL. You quickly see a boot selection screen:

```
GNU GRUB  version 0.97  (638K lower / 3143552K upper memory)

WLC - packages.conf
WLC - GOLDEN IMAGE

Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, or 'c' for a command-line.
```

Step 2. Press **C** on this screen to get the grub prompt.

Step 3. You can change the config register in that prompt with the `config 0x2142` command.

```
grub> confreg 0x2142

Configuration Register: 0x2142

grub> _
```

Step 4. Press the **ESC** key to return to the boot selection prompt and chose the `packages.conf` to boot on the regular image.

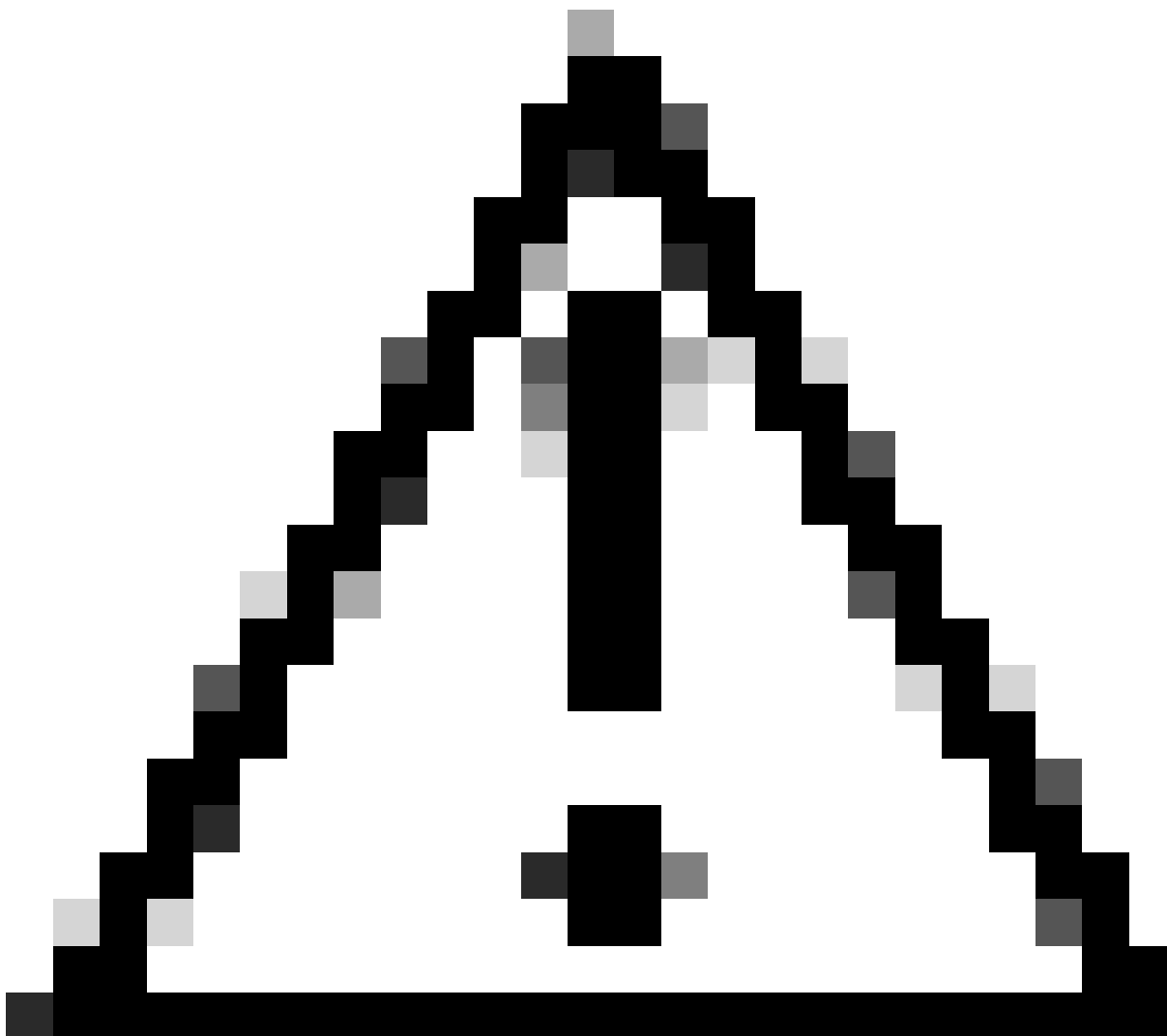
Step 5. Your WLC boots without configuration. Recover it.

Step 6. Do not forget to repeat the Procedure from step 1 and to set the config register back to the original value of `0x2002` so that the configuration gets saved and loaded upon reboots.

Password Recovery Procedure for Appliance via ROMMON

Step 1. Send **break** key when you see `#####` printed on the console for the system that loads the image. Then, the system breaks the bootup process and goes to the ROMMON prompt. You can either do this when you press **break** or **ctrl+break** on the keyboard. You can also send the break from terminal program (for

example, **Putty Special Command > Break, Teraterm Control > Send Break**).



Caution: Password recovery requires the system to be dropped into ROMMON. In classic Cisco IOS®, the config-register setting determines whether the system could return to ROMMON. A config-register of 0x2102 would prevent return to ROMMON when break is issued. By default, all 9800 appliances (9800-40, 9800-80, 9800-L) have the config-register set 0x2102. However, since they run Linux based Cisco IOS XE®, this is ignored and the only way to prevent return to ROMMON is to configure the command **no service password-recovery**.

Caveat: On 9800-L that runs ROMMON older than 16.12(3r), this bit in config-register prevents break into ROMMON to do password-recovery.

Fix: If you run older ROMMON, upgrade ROMMON with instructions documented at: [Upgrade Field Programmables for Cisco Catalyst 9800-L Wireless Controller](#)

Workaround: If upgrade cannot be done; modify the config-register to 0x2002 as a workaround and prevent lock out of ROMMON.

File size is 0x01d191f3

Located C9800-rpboot.16.10.01.SPA.pkg

Image size 30511603 inode num 874837, bks cnt 7450 blk size 8*512

```
#####  
#####  
#####  
#####  
Boot image size = 30511603 (0x1d191f3) bytes
```

```
ROM:RSA Self Test Passed  
ROM:Sha512 Self Test Passed
```

```
Package header rev 3 structure detected  
Calculating SHA-1 hash...done  
validate_package_cs: SHA-1 hash:  
  calculated e36f46af:2c06b38d:eeb6e65b:ffaeb429:a6982d29  
  expected  e36f46af:2c06b38d:eeb6e65b:ffaeb429:a6982d29  
Validating main package signatures
```

```
monitor: command "boot" aborted due to user interrupt
```

```
rommon 1 >
```

Step 2.Change config register to 0x2142 with the `confreg 0x2142` command from ROMMON prompt.

```
<#root>
```

```
rommon 1 >
```

```
confreg 0x2142
```

You must reset or power cycle for new config to take effect

Step 3. To save rommon config change, execute `sync` at the rommon prompt, `reset` rommon to applied change from rommon prompt.

```
<#root>
```

```
rommon 2 >
```

```
sync
```

```
rommon 3 >
```

```
reset
```

```
Resetting .....
```

```
Initializing Hardware ...
```

```
System integrity status: 90170200 12030107
```

System Bootstrap, Version 16.10(2r), RELEASE SOFTWARE
Copyright (c) 1994-2018 by cisco Systems, Inc.

Current image running: Boot ROM0
Last reset cause: LocalSoft

C9800-40-K9 platform with 33554432 Kbytes of main memory

File size is 0x000015c9
Located packages.conf
Image size 5577 inode num 874834, bks cnt 2 blk size 8*512
#

File size is 0x01d191f3
Located C9800-rpboot.16.10.01.SPA.pkg
Image size 30511603 inode num 874837, bks cnt 7450 blk size 8*512

#####

Boot image size = 30511603 (0x1d191f3) bytes

ROM:RSA Self Test Passed
ROM:Sha512 Self Test Passed

Package header rev 3 structure detected
Calculating SHA-1 hash...done
validate_package_cs: SHA-1 hash:
 calculated e36f46af:2c06b38d:eeb6e65b:ffaeb429:a6982d29
 expected e36f46af:2c06b38d:eeb6e65b:ffaeb429:a6982d29
Validating main package signatures

RSA Signed RELEASE Image Signature Verification Successful.
Image validated

Jun 21 02:30:21.565: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger
Jun 21 02:30:24.561: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger

Both links down, not waiting for other chassis
Chassis number is 1

Jun 21 02:30:25.327: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger
Jun 21 02:30:27.293: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger
Jun 21 02:30:33.770: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger
Jun 21 02:30:37.045: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable u
sed for process bt_logger

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cisco C9800-40-K9 (1GL) processor (revision 1GL) with 7866660K/6147K bytes of memory.

FIPS: Flash Key Check : Key Not Found, FIPS Mode Not Enabled

Processor board ID TTM22500DAL
1 Virtual Ethernet interface
4 Ten Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
33554432K bytes of physical memory.
26255359K bytes of eUSB flash at bootflash:.
234365527K bytes of SATA hard disk at hard disk:.
0K bytes of WebUI ODM Files at webui:.

Base Ethernet MAC Address : D4:C9:3C:CC:F2:E0

Installation mode is INSTALL

Press RETURN to get started!

*Jun 21 02:31:00.165: %IOS_XE_PLATFORM-3-WDC_NOT_FOUND: WDC returned length: 0
*Jun 21 02:31:00.185: %SMART_LIC-6-EXPORT_CONTROLLED: Usage of export controlled features is not allowedAdding registry invocations for the WLC platform
*Jun 21 02:31:01.743: %SMART_LIC-6-AGENT_READY: Smart Agent for Licensing is initialized

*Jun 21 02:31:01.743: %SMART_LIC-6-AGENT_ENABLED: Smart Agent for Licensing is enabled

*Jun 21 02:31:01.743: %SMART_LIC-6-EXPORT_CONTROLLED: Usage of export controlled features is not allowed

*Jun 21 02:31:04.732: mcp_pm_subsys_init : Init done successfullyRA Tracing tool registry return: OSID Manager, starting initialization ...

*Jun 21 02:31:05.511: Notifications initializedSID Manager, completed initialization ...

*Jun 21 02:31:07.298: %SPANTREE-5-EXTENDED_SYSID: Extended SysId enabled for type vln

*Jun 21 02:31:08.999: %CRYPTO-4-AUDITWARN: Encryption audit check could not be performed

*Jun 21 02:31:09.081: %VOICE_HA-7-STATUS: CUBE HA-supported platform detected.

*Jun 21 02:31:09.317: %IOSXE_VMAN-3-MSGINITFAIL: Failed to initialize required Vmirt-manager resource: Initialize MQIPC

*Jun 21 02:31:09.333: mcp_pm_init_done : Called

*Jun 21 02:31:09.338: %LINK-3-UPDOWN: Interface Lsmpi0, changed state to up

*Jun 21 02:31:09.345: %LINK-3-UPDOWN: Interface EOBC0, changed state to up

*Jun 21 02:31:09.345: %LINEPROTO-5-UPDOWN: Line protocol on Interface VoIP-Null0, changed state to up

*Jun 21 02:31:09.346: %LINEPROTO-5-UPDOWN: Line protocol on Interface LI-Null0, changed state to up

*Jun 21 02:31:09.346: %LINK-3-UPDOWN: Interface GigabitEthernet0, changed state to down

*Jun 21 02:31:09.351: %LINK-3-UPDOWN: Interface LIIN0, changed state to up

*Jun 21 02:30:33.738: %PMAN-3-PROC_EMPTY_EXEC_FILE: Chassis 1 R0/0: pvp: Empty executable used for process bt_logger

*Jun 21 02:30:37.011: %PMAN-3-PROC_EMPTY_EXEC_FILE: Chassis 1 R0/0: pvp: Empty executable used for process bt_logger

*Jun 21 02:30:39.576: %CMFP-6-CRYPTO_MODULE: Chassis 1 R0/0: cman_fp: Crypto Hardware Module is present

*Jun 21 02:31:01.754: %LMRP-3-RTU_UNINITIALIZED: Chassis 1 R0/0: lman: RTU not yet initialized: stack enabled 0

*Jun 21 02:31:09.489: %SMART_LIC-6-HA_ROLE_CHANGED: Smart Agent HA role changed to Active.

*Jun 21 02:31:10.295: %IOSXE_MGMTVRF-6-CREATE_SUCCESS_INFO: Management vrf Mgmt-intf created with ID 1, ipv4 table-id 0x1, ipv6 table-id 0x1E000001

*Jun 21 02:31:10.344: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down

*Jun 21 02:31:10.345: %LINEPROTO-5-UPDOWN: Line protocol on Interface Lsmpi0, changed state to up

*Jun 21 02:31:10.394: %LINEPROTO-5-UPDOWN: Line protocol on Interface EOBC0, changed state to up

*Jun 21 02:31:10.394: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0, changed state to down

*Jun 21 02:31:10.394: %LINEPROTO-5-UPDOWN: Line protocol on Interface LIIN0, changed state to up

*Jun 21 02:31:10.966: %ONEP_BASE-6-SS_ENABLED: ONEP: Service set Base was enabled by Default

*Jun 21 02:31:12.842: %SYS-6-STARTUP_CONFIG_IGNORED: System startup configuration is ignored based on the configuration register setting.

*Jun 21 02:31:12.854: %IOSXE_OIR-6-REMSPA: SPA removed from subslot 0/0, interfaces disabled

*Jun 21 02:31:12.913: %SPA_OIR-6-OFFLINECARD: SPA (BUILT-IN-4X10G/1G) offline in subslot 0/0

*Jun 21 02:31:12.919: %IOSXE_OIR-6-INSCARD: Card (fp) inserted in slot F0

*Jun 21 02:31:12.920: %IOSXE_OIR-6-ONLINECARD: Card (fp) online in slot F0

*Jun 21 02:31:12.946: %IOSXE_OIR-6-INSCARD: Card (cc) inserted in slot 0

*Jun 21 02:31:12.946: %IOSXE_OIR-6-ONLINECARD: Card (cc) online in slot 0

*Jun 21 02:31:13.111: % Redundancy mode change to SSO

```
*Jun 21 02:31:13.112: %VOICE_HA-7-STATUS: NONE->SSO; SSO mode can not take effect until after a platform reload.
*Jun 21 02:31:13.231: %IOSXE_OIR-6-INSSPA: SPA inserted in subslot 0/0
*Jun 21 02:31:14.793: %SYS-5-RESTART: System restarted --
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Technical Support: http://www.cisco.com/techsupport
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Compiled Mon 19-Nov-18 08:27 by mcpre
*Jun 21 02:31:14.834: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Jun 21 02:31:14.834: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Jun 21 02:31:16.976: %LINK-3-UPDOWN: Interface GigabitEthernet0, changed state to up
*Jun 21 02:31:17.079: %SYS-6-BOOTTIME: Time taken to reboot after reload = 325 seconds
*Jun 21 02:31:17.977: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0, changed state to up
*Jun 21 02:31:21.579: %SPA_OIR-6-ONLINECARD: SPA (BUILT-IN-4X10G/1G) online in subslot 0/0
*Jun 21 02:31:21.638: %IOSXE_SPA-6-UPDOWN: Interface TenGigabitEthernet0/0/0, link down due to remote fault
*Jun 21 02:31:21.708: %IOSXE_SPA-6-UPDOWN: Interface TenGigabitEthernet0/0/1, link down due to local fault
*Jun 21 02:31:21.748: %IOSXE_SPA-6-UPDOWN: Interface TenGigabitEthernet0/0/2, link down due to local fault
*Jun 21 02:31:21.788: %IOSXE_SPA-6-UPDOWN: Interface TenGigabitEthernet0/0/3, link down due to local fault
*Jun 21 02:31:21.855: %PNP-6-PNP_DISCOVERY_STOPPED: PnP Discovery stopped (Start up Config Present)
*Jun 21 02:31:23.541: %LINK-3-UPDOWN: Interface TenGigabitEthernet0/0/0, changed state to down
*Jun 21 02:31:23.571: %LINK-3-UPDOWN: Interface TenGigabitEthernet0/0/1, changed state to down
*Jun 21 02:31:23.572: %LINK-3-UPDOWN: Interface TenGigabitEthernet0/0/2, changed state to down
*Jun 21 02:31:23.575: %LINK-3-UPDOWN: Interface TenGigabitEthernet0/0/3, changed state to down
*Jun 21 02:31:24.680: %IOSXE_SPA-6-UPDOWN: Interface TenGigabitEthernet0/0/0, link down due to local fault
*Jun 21 02:31:23.618: %LINK-3-UPDOWN: SIP0/0: Interface TenGigabitEthernet0/0/0, changed state to down
*Jun 21 02:31:29.036: %PKI-2-NON_AUTHORITATIVE_CLOCK: PKI functions can not be initialized until an authoritative time source, like NTP, can be obtained.
*Jun 21 02:31:29.491: %LINK-3-UPDOWN: Interface TenGigabitEthernet0/0/0, changed state to up
*Jun 21 02:31:30.492: %LINEPROTO-5-UPDOWN: Line protocol on Interface TenGigabitEthernet0/0/0, changed state to up
*Jun 21 02:31:29.491: %LINK-3-UPDOWN: SIP0/0: Interface TenGigabitEthernet0/0/0, changed state to up
*Jun 21 02:31:30.495: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
*Jun 21 02:31:37.119: %CRYPTO_ENGINE-5-KEY_ADDITION: A key named CISCO_IDEVID_SUDI_LEGACY has been generated or imported by pki-sudi
*Jun 21 02:31:39.050: %CRYPTO_ENGINE-5-KEY_ADDITION: A key named CISCO_IDEVID_SUDI has been generated or imported by pki-sudi
```

Step 4. Now system boots without any config. Ignore startup config wizard.

Step 5. Once system comes up, copy startup-config to running-config.

Step 6. Reconfigure enable password or log in credentials, and check if you can access the device via telnet or ssh.

```
<#root>
```

```
C9800-40#
```

```
telnet 172.22.175.1
```

```
Trying 172.22.175.1 ... Open
```

```
User Access Verification
```

```
Username: admin
```

```
Password:
```

```
C9800-40#
```

Step 7. Change config-register back to 0x2002.

```
<#root>
```

```
C9800-40(config)#
```

```
config-register 0x2002
```



Note: Do not use 0x2102. With 0x2102, you are not allowed to send break anymore.

Step 8. Save **config**.

```
<#root>
```

```
C9800-40#
```

```
write memory
```

```
Building configuration...
```

```
[OK]
```

Password Recovery Procedure for Appliance via USB

Boot the WLC from ROMMON

If you get stuck in ROMMON and boot does not work:

```
<#root>
rommon 12 >
boot
File size is 0x0001dfe6
Located memleak.tcl
Image size 122854 inode num 12, bks cnt 30 blk size 8*512
##
Boot image size = 122854 (0x1dfe6) bytes

Unsigned package found, aborting package loading...

Failed to Free memory block at address 0x00000000cd50b000
File size is 0x00000023
Located pnp-tech-time
Image size 35 inode num 13, bks cnt 1 blk size 8*512

Boot image size = 35 (0x23) bytes

Unsigned package found, aborting package loading...

Failed to Free memory block at address 0x00000000cd4d3000
File size is 0x0001ad3f
Located pnp-tech-discovery-summary
Image size 109887 inode num 14, bks cnt 27 blk size 8*512
#
Boot image size = 109887 (0x1ad3f) bytes

Unsigned package found, aborting package loading...

Failed to Free memory block at address 0x00000000cd49b000
File size is 0x00000268
Located vlan.dat
Image size 616 inode num 15, bks cnt 1 blk size 8*512

Boot image size = 616 (0x268) bytes

Unsigned package found, aborting package loading...

Failed to Free memory block at address 0x00000000cd463000
boot: cannot determine first file name on device "bootflash:/"
rommon 13 >
```

The flash does not have any image to boot from:

```
<#root>
rommon 13 >
dir bootflash:
File System: EXT2/EXT3
11          16384      drwx-----      lost+found
850305      4096        drwxr-xr-x       .installer
```

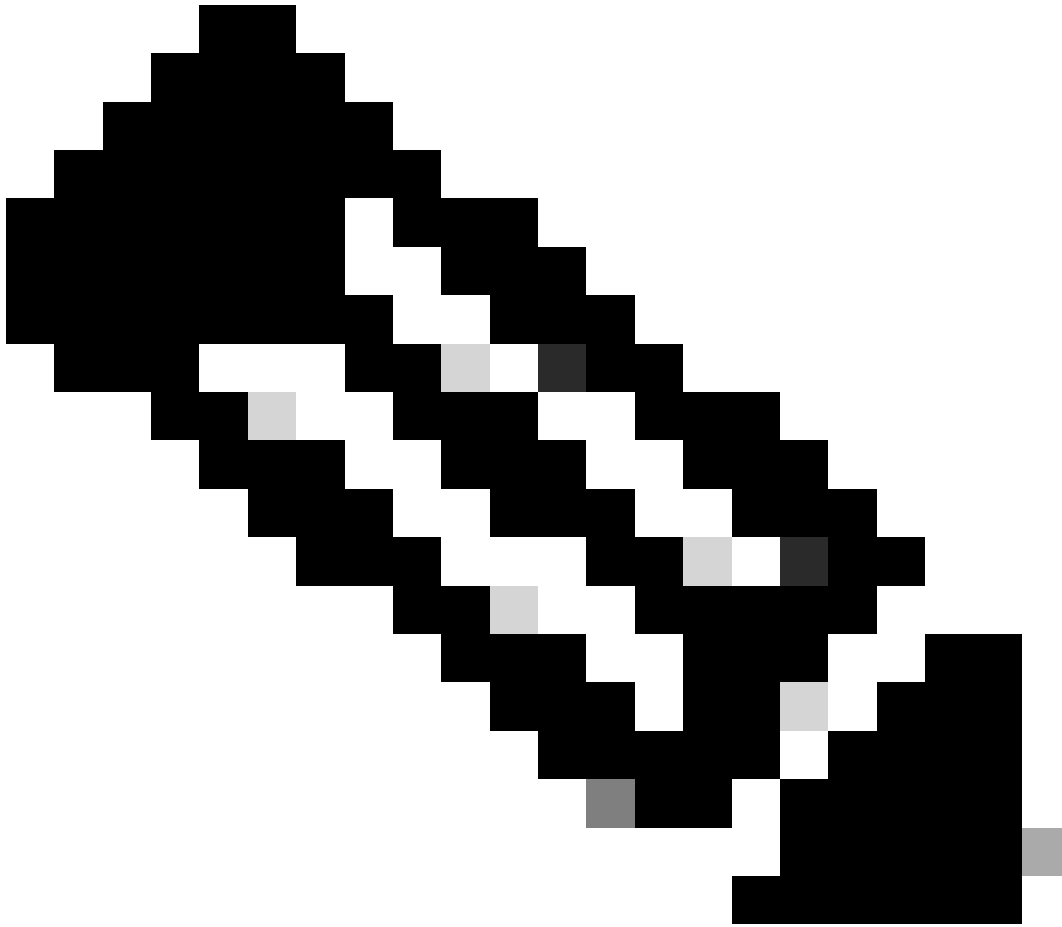
588673	4096	drwxrwxrwx	.prst_sync
948417	4096	drwxr-xr-x	.rollback_timer
1381745	4096	drwxr-xr-x	dc_profile_dir
12	122854	-rw-r--r--	memleak.tcl
506913	4096	drwxr-x---	vman_fdb
670433	4096	drwxr-xr-x	.dbpersist
793073	4096	drwxr-xr-x	onep
13	35	-rw-r--r--	pnp-tech-time
14	109887	-rw-r--r--	pnp-tech-discovery-summary
15	616	-rw-r--r--	vlan.dat

You can recover the box by either:

- Loading an image through a USB pen drive.
- Loading an image through Gigabit0 (out of band management interface).

Load Image through USB

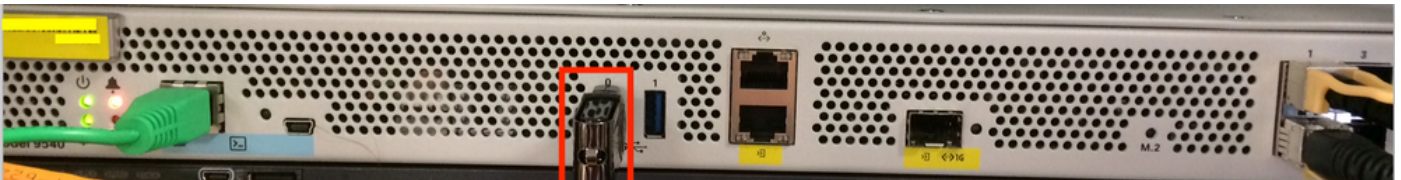
Step 1. Have a USB pen drive with the .bin file to be loaded to the 9800 controller. (on 9800-80, due to Cisco bug ID [CSCvn82287](#), a USB 3.0 flash drive cannot be recognized in ROMMON).



Note: The procedure is the same in case of a virtual 9800-CL, but you have to plug the USB drive on the VMhost and map it to the VM.

Step 2. Connect the USB driver to the USB port 0 of the 9800.

Front view:



Step 3. Log in from the console to the controller and ensure it can read the USB.

```
<#root>  
rommon 19 >  
dir usb0:
```

```
File System: FAT32
!
!--Output omitted--
!
335644 1009389904-rw- <filename>SSA.bin
```

Step 4. Configure the 9800 to boot from the USB image.

```
<#root>

rommon 21 >

boot usb0:<filename>.bin

Located qwlc-universalk9_wlc.BLD_V169_THROTTLE_LATEST_20180601_191011.SSA.bin, start cluster is 335644

#####
#####
#####
```

Step 5. Once the 9800 runs, copy the image from the USB to the bootflash:

```
<#root>

WLC#

copy usb0:<filename>.bin bootflash:

Destination filename [qwlc-universalk9_wlc.BLD_V169_THROTTLE_LATEST_20180601_191011.SSA.bin]?
Copy in progress...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
```

Step 6. Change the 9800 from bundle mode to install mode.

When you boot the controller from a USB, it boots in Bundle mode:

```
!
!--Output omitted--
!
FIPS: Flash Key Check : Key Not Found, FIPS Mode Not Enabled

Processor board ID TTM22071510
1 Virtual Ethernet interface
4 Ten Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
33554432K bytes of physical memory.
26910719K bytes of eUSB flash at bootflash:.
234365527K bytes of SATA hard disk at hard disk:.
15243680K bytes of USB flash at usb0:.
0K bytes of WebUI ODM Files at webui:.

Base Ethernet MAC Address : 00:A3:8E:23:A2:40
```

Installation mode is BUNDLE

%INIT: waited 0 seconds for NVRAM to be available

From 16.12, in the UI, you can chose to move to INSTALL mode at the next upgrade. Provide any software file, which includes current release to move to INSTALL mode.

Step 7. Edit the boot variable if it does not point towards a packages.conf file already.

```
<#root>
```

```
WLC#
```

```
configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
WLC(config)#
```

```
no boot system
```

```
WLC(config)#
```

```
boot system bootflash:packages.conf
```

```
WLC(config)#
```

```
end
```

```
WLC#
```

```
write
```

```
Building configuration...
```

```
[OK]
```

```
WLC#
```

```
show boot
```

```
BOOT variable = flash:packages.conf,12;
```

```
CONFIG_FILE variable does not exist
```

```
BOOTLDR variable does not exist
```

```
Configuration register is 0x2102
```

```
Standby not ready to show bootvar
```

Make sure that the config register is 0x2002.

Step 8. Reload the WLC:

```
<#root>
```

```
WLC#
```

```
reload
```

After this, the controller boots up in Install mode.

```
<#root>
```

```
WLC#
```

```
show version
```

```
!  
!--Output omitted--  
!  
Installation mode is INSTALL Configuration register is 0x2002
```

Load an Image from TFTP

To load an image from the network, you must have the GigabitEthernet0 management port physically connected to an access port.

From the ROMMON, you can verify the variables at any time with command `set`.

```
<#root>
```

```
rommon 1 >
```

```
set
```

```
PS1=rommon ! >  
?=0  
DEFAULT_GATEWAY=10.1.1.1  
ETHER_SPEED_MODE=4  
TFTP_RETRY_COUNT=36  
SWITCH_NUMBER=1  
DLC_DONE=TRUE  
RET_2_RTS=  
RET_2_RCALTS=  
MCP_STARTUP_TRACEFLAGS=00000000:00000000  
TFTP_MACADDR=00:db:ad:ba:d0:52  
IP_SUBNET_MASK=255.255.255.0  
IP_ADDRESS=10.1.1.152  
TFTP_SERVER=10.1.1.1  
TFTP_FILE=C9800-80-universalk9_wlc.BLD_V1610_1_THROTTLE_LATEST_20181016_174328_2.bin  
BSI=0  
RANDOM_NUM=1650632109
```

You can then set the variables one by one. There is no need to type `set` before the variable name as you do for other devices ROMMON. Avoid typos when you type the variable name as there is no verification of any sort.

```
<#root>
```

```
rommon 2 >
```

```
IP_ADDRESS=10.48.71.113
```



```
rommon 3 >
IP_SUBNET_MASK=255.255.255.128
rommon 4 >
DEFAULT_GATEWAY=10.48.71.5
```

Once the IP settings are in place, you can boot from a TFTP image with the next command:

```
<#root>
rommon 5 >
boot tftp://10.48.39.33/C9800-80-universalk9_wlc.16.10.01.SPA.bin
```

```
IP_ADDRESS: 10.48.71.113
IP_SUBNET_MASK: 255.255.255.128
DEFAULT_GATEWAY: 10.48.71.5
TFTP_SERVER: 10.48.39.33
TFTP_FILE: C9800-80-universalk9_wlc.16.10.01.SPA.bin
TFTP_MACADDR: 70:6d:15:35:99:ff
TFTP_VERBOSE: Progress
TFTP_RETRY_COUNT: 36
TFTP_TIMEOUT: 7200
TFTP_BLKSIZE: 1460
TFTP_CHECKSUM: Yes
ETHER_PORT: 3
ETHER_SPEED_MODE: 1000MB/HD
```

```
link up
Receiving C9800-80-universalk9_wlc.16.10.01.SPA.bin from 10.48.39.33
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

You end up in the Cisco IOS command line. Do not forget to actually copy the Cisco IOS image to the flash or hard disk and set the boot variable correctly. You can resume the procedure from the USB, previous as of step 6, once the file is copied in the flash or hard disk:

Troubleshoot

If you keep seeing the rommon telling you "Please reset before booting" when you try to boot from a file in memory,USB or TFTP like this :

```
rommon 4 > boot bootflash:C9800-L-universalk9_wlc.V176_1.SPA.bin
Please reset before booting
```

All you have to do is to nullify the config register and reset. The problem goes away after reboot and you can boot from any source.

```
confreg 0x0  
reset
```

Other Useful ROMMON Commands

The `dev` command lists the storage devices available (bootflash, harddisk, usb, and so on).

The command `showmon` shows the ROMMON version.

Related Information

- [Cisco Technical Support & Downloads](#)