Configure Console Port on C9800-CL hosted on ESXi

Contents

Introduction

This document describes how to configure a console port on a Catalyst 9800 Wireless LAN Controller (WLC) hosted on ESXi.

Contributed by Irving Mancera, Cisco TAC Engineer.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Catalyst 9800 WLC
- 9800 basic configuration knowledge.

Components Used

- C9800-CL on Cisco IOS®-XE version 17.3.2a.
- Virtual enviroment and hypervisors.
- vSphere Client versión 7.0.0.10100.

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.
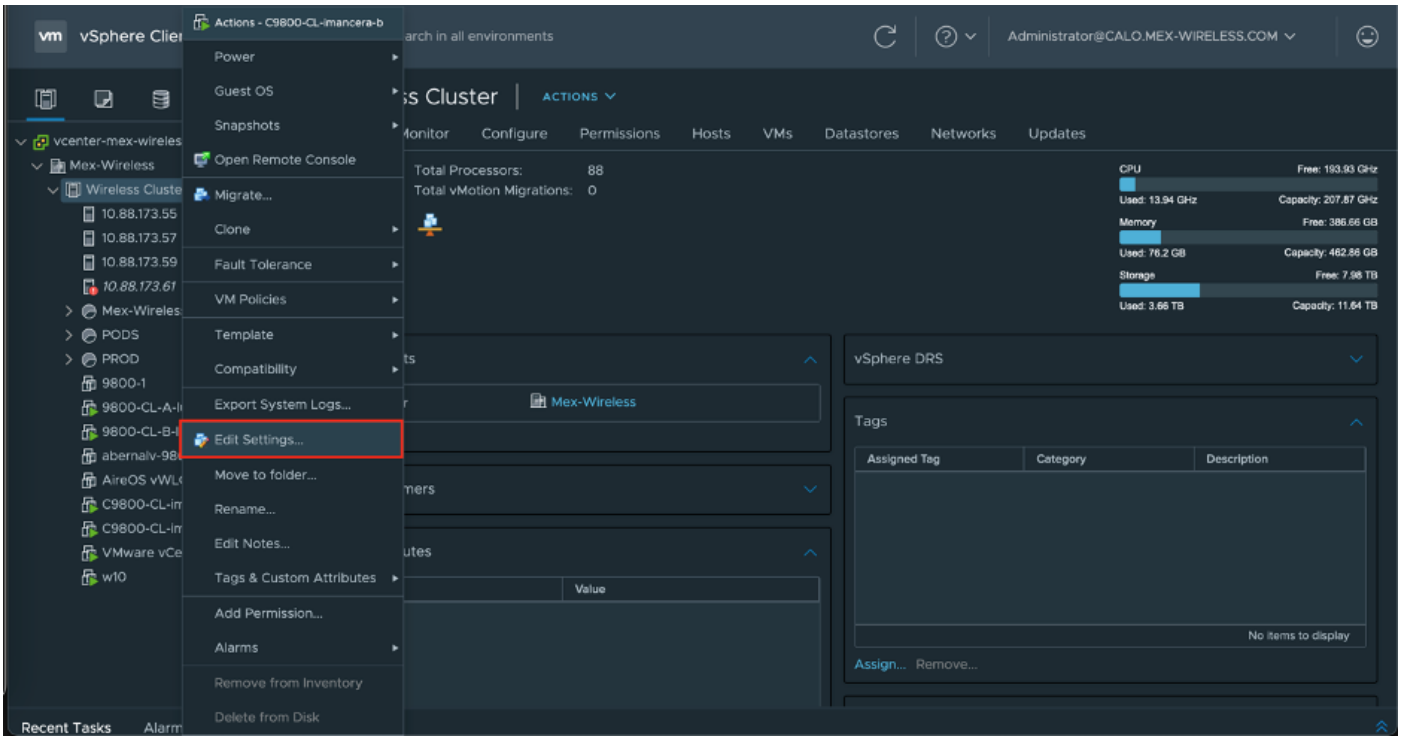
Configure

Configure the 9800-CL ports

Step 1. Once the Virtual Machine(VM) has been deployed on the ESXi, power off the VM. Navigate to the VM, right click to get the menu, click on arrow for Power and select **Power Off**.
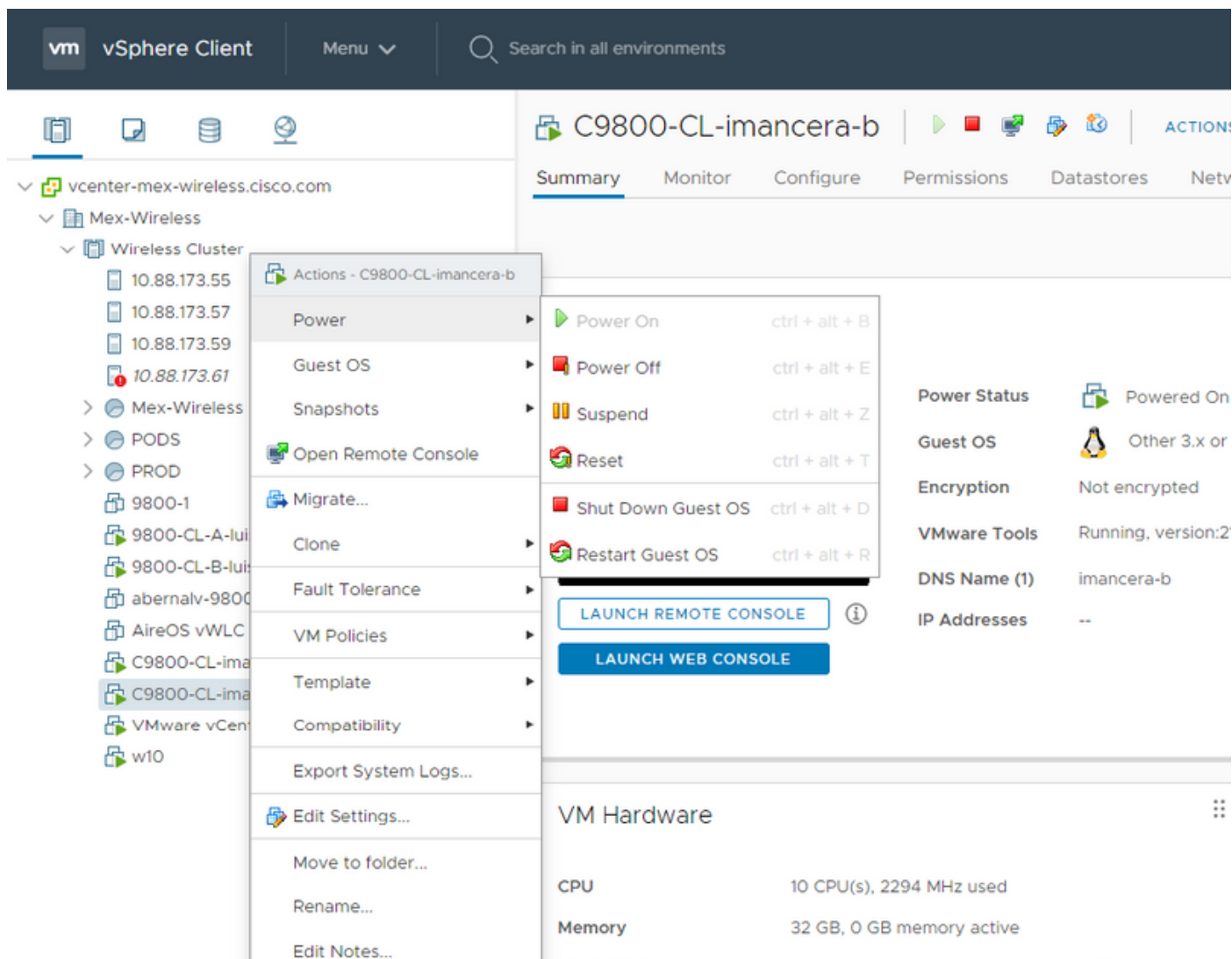
Step 2. Once VM is powered off, navigate to VM again and right click. In the menu that pops-up, select **Edit Settings**.

Step 3. On the **Edit Settings** page, choose Virtual Hardware tab and click on **Add New Device**
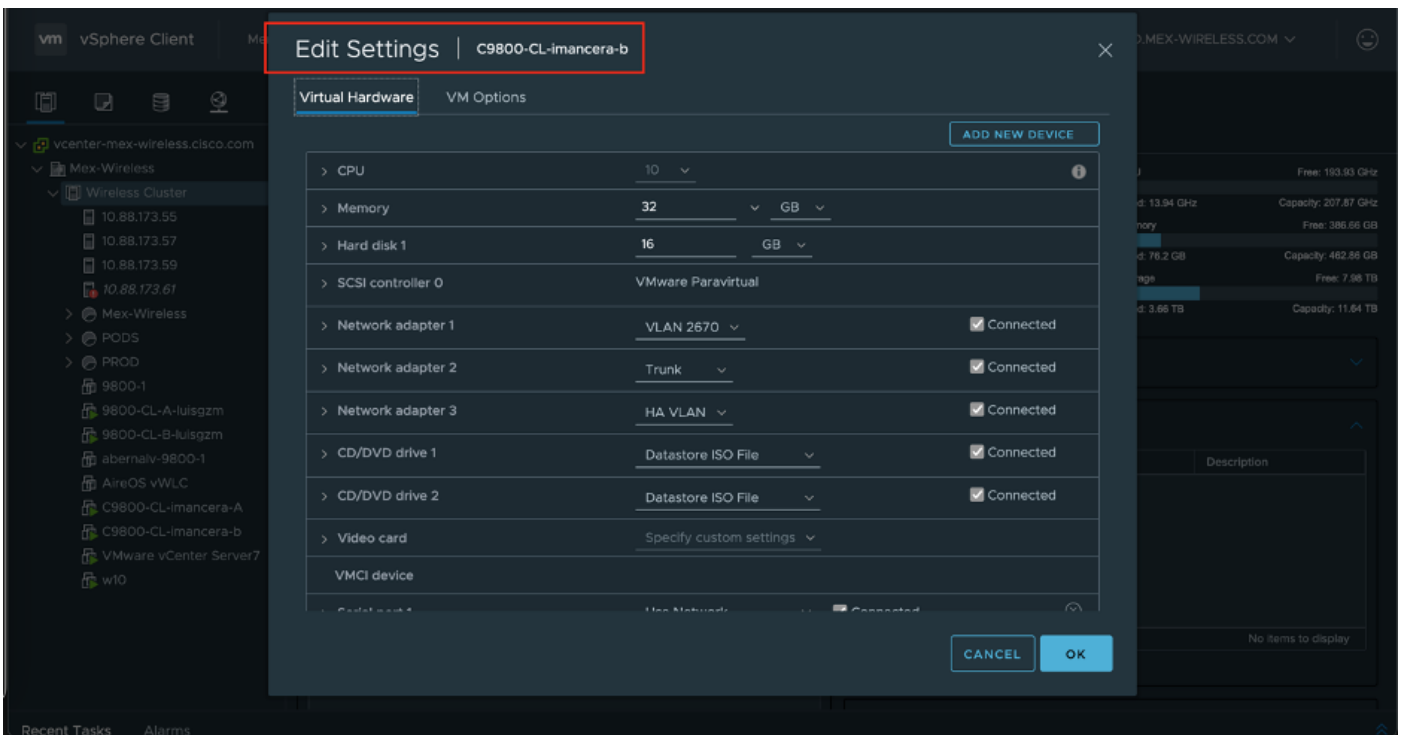
Step 4. On the **Add New Device** menu, select Serial Port

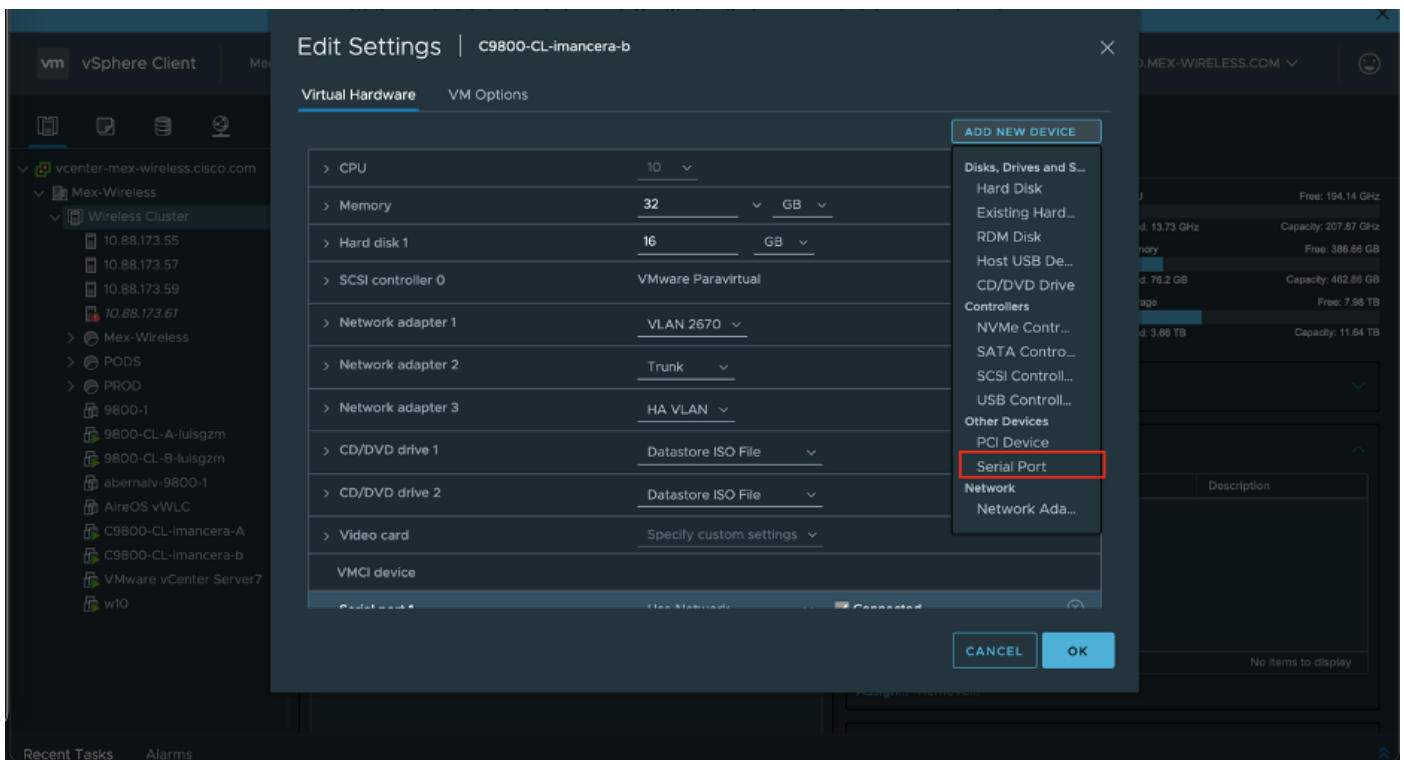**Note**: On the VMs, the serial port first configured works as a console port and the second serial port works as an auxillary port. You are required to have both in order to use the console port.

Step 5. Configure the first serial port

Step 5.1 From the **Serial Port** drop-down list, choose **Use Network** and then check the **Connected** check box.

Step 5.2 For Status, check the **Connect At power On** check box.

Step 5.3 From the **Direction** drop-down list, choose **Server.**

Step 5.4 In the **Port URI** field, type **telnet://<ip address of the host in which the VM is in>:1892**.

Step 6. Repeat Steps 1 through Step 5.4 to add second Serial Port to operate as the aux port. Ensure you use a different port number for telnet in Step5.4 for the aux port.
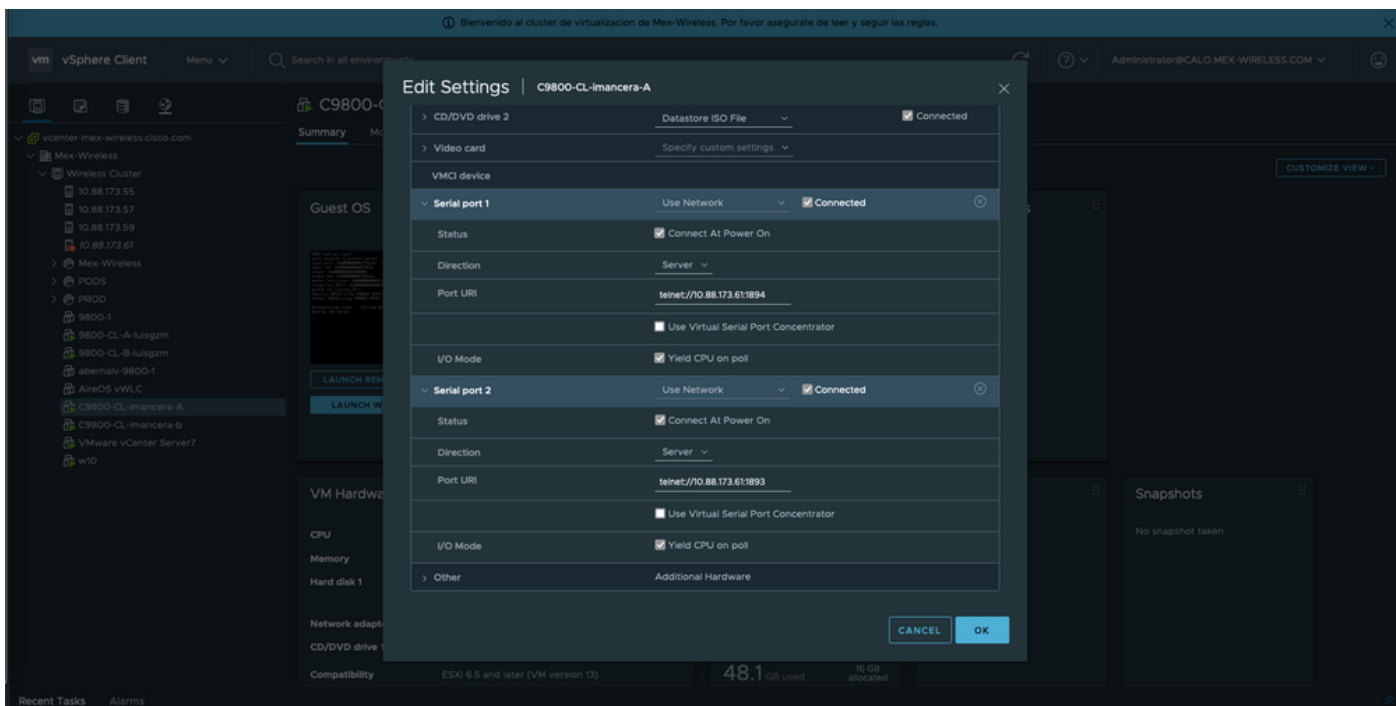
Note: In case of a HA deployment, you can use these ports numbers for the serial line - 1892(Console VM1), 1891(AUX VM1), 1894(Console VM2) and 1893(AUX VM2).

Configure the VM to give the console output

Once you have configured the serial port on the VM, you need to power on the VM and access the VM by the web console or remote console of vSphere. Once the VM boots correctly you need to enter the command **platform console serial** and then do a **write memory**, as seen in the image.

```
imancera-b#config
Sep 28 13:47:31.248: %SYS-5-CONFIG_I: Configured from console by console
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
imancera-b(config)#platform console serial
imancera-b(config)#
```

Access the VM by Telnet

Open the terminal emulator of your preference, and point to the serial port that uses Telnet on your terminal emulator as seen in the image.
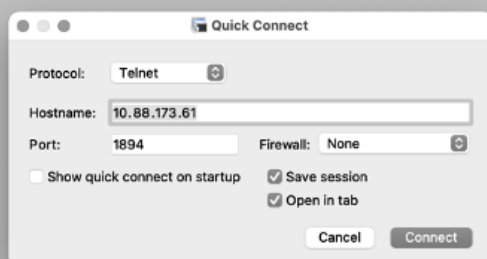
Note: Remember to point to the port number of first serial port in order to access the console.

Verify

You can enable console logging on C9800-CL using **logging console** config command and use any feature or functionality of WLC that generates syslogs to test out console logging. However, the two use cases where the console logging is most beneficial is

- to capture bootup log of 9800-CL in standalone mode
- capture the logs from Stateful Switchover (SSO) event for a 9800CL paired for High Availability (HA).

In this example is the bootup log of 9800-CL as seen on terminal emulator connected to serial console

```
*Sep 29 15:31:05.460: %IOSXEBOOT-4-FACTORY_RESET: (rp/0): This was not selected via cli. Rebooting like normal

    GNU GRUB  version 0.97  (638K lower / 3143488K upper memory)

 +------------------------------------------------------------+
 | vWLC - packages.conf                                       |
 | vWLC - GOLDEN IMAGE                                        |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 |                                                            |
 +------------------------------------------------------------+
      Use the ^ and v keys to select which entry is highlighted.
      Press enter to boot the selected OS, or 'c' for a command-line.

   The highlighted entry will be booted automatically in 1 seconds.
   Booting 'vWLC - packages.conf'

root (hd0,0)
 Filesystem type is ext2fs, partition type 0x83
kernel /packages.conf rw root=/dev/ram max_loop=64 HARDWARE=virtual  quiet cons
ole= SR_BOOT=bootflash:packages.conf
Calculating SHA-1 hash...done
SHA-1 hash:
        calculated   7b963311:30cff8e6:ff99c2de:2db6409b:3929af0c
        expected     7b963311:30cff8e6:ff99c2de:2db6409b:3929af0c
package header rev 3 structure detected
Calculating SHA-1 hash...done
SHA-1 hash:
        calculated   79533c46:8da69c2b:e84dd53a:93f05327:d5297b0c
        expected     79533c46:8da69c2b:e84dd53a:93f05327:d5297b0c
Package type:0x7531, flags:0x0
  [Linux-bzImage, setup=0x3c00, size=0x682dc8]
  [isord @ 0x7d9b1000, 0x263ecba bytes]

%IOSXEBOOT-4-PART_VERIFY: (local/local): Verifying partition table for device /dev/bootflash...
%IOSXEBOOT-4-PART_VERIFY: (local/local): Selected MBR v1 partition layout.

*Sep 29 15:31:29.882: %IOSXEBOOT-4-BOOT_SRC: (rp/0): Checking for grub upgrade

*Sep 29 15:31:30.112: %IOSXEBOOT-4-BOOT_SRC: (rp/0): Checking grub versions 1.1 vs 1.1

*Sep 29 15:31:30.118: %IOSXEBOOT-4-BOOT_SRC: (rp/0): Bootloader upgrade not necessary.

Waiting for remote chassis to join

Chassis number is 1
All chassis in the stack have been discovered. Accelerating discovery
Sep 29 15:31:49.511: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
Sep 29 15:31:50.991: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
Sep 29 15:31:52.074: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
Sep 29 15:32:04.245: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
Sep 29 15:32:07.764: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
Sep 29 15:32:11.527: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger

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```

Troubleshoot

Problem: On the terminal emulator, the output does not match the console.

```
Username: imancera
Password:
grep: /usr/binos/conf/packages.conf: No such file or directory
Patch present -
[?1limancera-b(diag)#
```

Solution: Check to see if the terminal emulator is pointed to the port mapped to console. In this case, port mapped to the AUX port was used.

Problem: The boot log is not complete and only shows a section of the log.

```
%IOSXEBOOT-4-PART_VERIFY: (local/local): Verifying partition table for device /dev/bootflash...
%IOSXEBOOT-4-PART_VERIFY: (local/local): Selected MBR v1 partition layout.

*Sep 29 15:31:29.882: %IOSXEBOOT-4-BOOT_SRC: (rp/0): Checking for grub upgrade

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Sep 29 15:32:11.527: %PMAN-3-PROC_EMPTY_EXEC_FILE: R0/0: pvp: Empty executable used for process bt_logger
```

Solution: Enter the **platform console serial** command , as seen in Step 2.