# Configure Console Port on C9800-CL hosted on ESXi

## Contents

Introduction Prerequisites Requirements Components Used Configure Configure the 9800-CL ports Configure the VM to give the console output Access the VM by Telnet Verify Troubleshoot

## Introduction

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

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# 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**.

vm vSphere Client	t Menu 🗸 🔍 S	Search in all environments			
<ul> <li>vcenter-mex-wireless.</li> <li>Mex-Wireless</li> <li>Wireless Cluster</li> <li>10.88.173.55</li> <li>10.88.173.57</li> </ul>	Cisco.com	C9800-CL-im Summary Monitor	Configure	Permissions	S 🕄 ACTION
<ul> <li>□ 10.88.173.59</li> <li>□ 10.88.173.61</li> <li>&gt; ⊘ Mex-Wireless</li> <li>&gt; ⊘ PODS</li> <li>&gt; ⊘ PROD</li> <li>⊕ 9800-CL-A-Iui</li> <li>⊕ 9800-CL-B-Iui</li> <li>⊕ abernalv-9800</li> <li>⊕ AireOS vWLC</li> <li>⊕ C9800-CL-ima</li> <li>⊕ C9800-CL-ima</li> <li>⊕ C9800-CL-ima</li> <li>⊕ VMware vCen</li> </ul>	Guest OS Snapshots Open Remote Console Migrate Clone Fault Tolerance VM Policies Template Compatibility	<ul> <li>Power Off</li> <li>Suspend</li> <li>Reset</li> <li>Shut Down Guest OS</li> <li>Restart Guest OS</li> <li>LAUNCH REMOTE CON</li> <li>LAUNCH WEB CONS</li> </ul>	ctrl + alt + E ctrl + alt + Z ctrl + alt + T ctrl + alt + D ctrl + alt + R	Power Status Guest OS Encryption VMware Tools DNS Name (1) IP Addresses	Powered On Other 3.x or Not encrypted Running, version:2° imancera-b 
₩10	Export System Logs  Edit Settings  Move to folder  Rename Edit Notes	VM Hardware CPU Memory	10 CPU(s), 2 32 GB, 0 GE	294 MHz used 3 memory active	

Step 2. Once VM is powered off, navigate to VM again and right click. In the menu that pops-up, select **Edit Settings**.

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Step 3. On the Edit Settings page, choose Virtual Hardware tab and click on Add New Device

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10 c s Q	Virtual Hardware VM Options			
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✓ 📳 Wireless Cluster				d: 13 94 GHz Capacity: 207 87 GHz
10.88.173.55	> Memory	` <u>GB `</u>		nony Free: 386.66 GB
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> 🖉 PODS				
> PROD	> Network adapter 2		Connected	
10 9800-1			Connected	
B 9800-CL-A-luisgzm	> Network adapter 3	HA VLAN V	Connected	
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AireOS vWLC	> CD/DVD drive 2	Datastera ISO Eila	Connected	
🔂 C9800-CL-imancera-A			Connected	
🔂 C9800-CL-Imancera-b	> Video card			
VMware vCenter Server7	VMCI device			
t∰ w10	AMCI GEVICE			
		Heshlehuark 🗖 Connected		
			CANCEL	
Recent Tasks Alarms				

Step 4. On the  $\ensuremath{\text{Add}}$   $\ensuremath{\text{New Device}}$  menu, select Serial Port

				×
vm vSphere Client Me	Edit Settings   C9800-CL-i	imancera-b		
	Virtual Hardware VM Options			
			ADD NEW DEVICE	
✓	> CPU		Disks, Drives and S	
	> Memory	× GB ×	Hard Disk Existing Hard	
	> Hard disk 1		RDM Disk	d: 13.73 GHz Capacity: 207.87 GHz nory Free: 388.86 GB
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	> Network adapter 3	HA VLAN V	USB Controll Other Devices	
👘 9800-CL-A-luisgzm 🔂 9800-CL-B-luisgzm	> CD/DVD drive 1	Datastore ISO File 🗸 🗸	PCI Device	
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	VMCI device			
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**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.

		Bienvenido al cluster de virtualización d	e Mex-Wireless. Por favor asegurate de leer y seguir las r	reglas.			×
		Edit Settings   C9800-CL-imancera-	A				
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		> Video card					
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	Guest OS	✓ Serial port 1	Use Network v Connected				
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**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.

Protocol: Telnet © Hostname: 10.88.173.61 Port: 1894 Firewall: None © Show quick connect on startup © Save session © Open in tab
Protocol: Telnet 😨 Hostname: 10.88.173.61 Port: 1894 Firewall: None 😨 Show quick connect on startup 🖉 Save session 😨 Open in tab
Hostname: 10.88.173.61 Port: 1894 Firewall: None C Show quick connect on startup C Save session C Open in tab
Port: 1894 Firewall: None 🕞 Show quick connect on startup 💟 Save session
Show quick connect on startup 💟 Save session

**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

#5ep 29 15:31:05.460: %IOSXE800T-4-FACTORY_RESET: (rp/0): This was not selected via cli. Rebooting like normal
GNU GRUB version 0.97 (638K lower / 3143488K upper memory)
VMLC - packages.conf VMLC - 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 'WALC - packages.conf'
root (nde,0) Filesyste type is ext2fs, partition type 0x03 kernet /packages.conf rw rootv/dev/ram max_loop+04 MADDWARE=virtual quiet cons oles SR_BODT-oosTlashipackages.conf Calculating SN4-1 hashdone SM4-1 hashi calculating S1x4-1 hashi calc
KIOSXEBOOT-4-PART_VERIFY: (local/local): Verifying partition table for device /dev/bootflash KIOSXEBOOT-4-PART_VERIFY: (local/local): Selected MBR v1 partition layout.
*Sep 29 15:31:29.882: %10SXE800T-4-800T_SRC: (rp/8): Checking for grub upgrade
<pre>x5ep 29 15:31:38.112: 4105XE800T-4-B00T_SRC: (rp/0): Checking grub versions 1.1 vs 1.1</pre>
<pre>x5ep 29 15:31:38.118: %105XE800T-4-B00T_SRC: (rp/0): Bootloader upgrade not necessary.</pre>
Naiting for remote chassis to join
Chassis number is 1 All chassis in the stack have been discovered. Accelerating discovery Sep 29 15:31:164.511: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger Sep 29 15:31:154.991: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger Sep 29 15:32:44.245: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger Sep 29 15:32:44.245: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger Sep 29 15:32:14.245: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger Sep 29 15:32:15:27: MPMAN-3-PROC_DMPT_EXEC_FILE: RAVe: pxp: Entry executable used for process bt_logger
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## Troubleshoot

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

```
Jsername: 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.

%IOSXEB00T-4-PART\_VERIFY: (local/local): Verifying partition table for device /dev/bootflash... %IOSXEB00T-4-PART\_VERIFY: (local/local): Selected MBR v1 partition layout. \*Sep 29 15:31:29.882: %IOSXEB00T-4-B00T\_SRC: (rp/0): Checking for grub upgrade \*Sep 29 15:31:30.112: %IOSXEB00T-4-B00T\_SRC: (rp/0): Checking grub versions 1.1 vs 1.1 \*Sep 29 15:31:30.118: %IOSXEB00T-4-B00T\_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 15:32:04.245: %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 Sep 29 15:32:11.527: %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 Sep 29 15:32:11.527: %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 Sep 29 15:32:11.527: %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 Sep 29 15:32:11.527: %PMAN-3-PROC\_EMPTY\_EXEC\_FILE: R0/0: pvp: Empty executable used for process bt\_logger Sep 29 1

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