

Configuración de un switch Catalyst 9600

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Introducción

Este documento describe el procedimiento de configuración y verificación inicial necesario para configurar el sistema Catalyst 9600.

prerrequisitos

Requisitos

Cisco recomienda que tenga conocimiento sobre estos temas:

Asegúrese de que el chasis y el supervisor están instalados de acuerdo con las guías de instalación.

- [Guía de instalación del chasis](#)
- [Guía de instalación del supervisor](#)

Componentes Utilizados

La información de este documento se basa y configura en estas versiones de software y hardware:

- Hardware Switch Catalyst 9600
- Software: Cisco IOS®-XE 16.12.3a

La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si tiene una red en vivo, asegúrese de entender el posible impacto de cualquier comando.

Antecedentes

Puede iniciar, configurar y verificar Catalyst 9600 en tres pasos.

Traer

- Conectar la consola
- Encienda el sistema
- Observar mensajes de consola
- Seleccionar opción de diálogo de configuración

Configurar

- Gestión de dispositivos
- Hostname
- Reloj
- Guarde la configuración

Verificación

- Versión y paquete de software
- Hardware del sistema, alimentación, etc.
- Conectividad IP de administración
- Estado del sistema
- Hora



Traer

- Conecte el PC a la consola de Catalyst 9600 con RJ45 o USB
- Encienda el sistema
- Observe que la consola imprime la inicialización del hardware del sistema y otra información en la pantalla

Inicio inicial:

```
Initializing Hardware...
Initializing Hardware.....
System Bootstrap, Version 17.3.1r[FC2], RELEASE SOFTWARE (P)
Compiled 30-04-2020 12:00:00.00 by rel

Current ROMMON image : Primary Rommon Image

Last reset cause:LocalSoft
C9600-SUP-1 platform with 16777216 Kbytes of main memory

Preparing to autoboot. [Press Ctrl-C to interrupt] 0
boot: attempting to boot from [bootflash:packages.conf]
boot: reading file packages.conf
<truncated>
#####
<truncated>

Base Ethernet MAC Address      : 6c:b2:ae:4a:70:c0
Motherboard Assembly Number    : 4C57
Motherboard Serial Number      : FXS230103TN
Model Revision Number          : V02
Motherboard Revision Number    : 3
Model Number                    : C9606R
System Serial Number           : FXS2302Q2EP
```

Espere hasta que vea el cuadro de diálogo **Configuración del sistema**. Seleccione la opción **No**

para ingresar al modo de configuración manual y seleccione **Sí** para terminar la autoinstalación, para entrar en la configuración manual simple.

```
--- System Configuration Dialog ---
```

```
Would you like to enter the initial configuration dialog? [yes/no]: no
Would you like to terminate autoinstall? [yes]: yes
```

```
Press RETURN to get started
```

```
*Nov 5 15:40:26.909: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to
down *Nov 5 15:40:26.909: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0,
changed state to down
```

Configurar

Nota: Utilice el comando **show running-config** en cualquier momento en el modo "habilitar" para verificar los valores configurados.

Configure el puerto de administración con una dirección IP de la red y habilite el puerto.

```
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface gigabitEthernet 0/0
Switch(config-if)#ip address 192.168.1.1 255.255.255.0
Switch(config-if)#no shutdown
Switch(config-if)#exit
```

Configure una ruta estática para alcanzar la puerta de enlace predeterminada para la red de administración, utilice la red IP y la puerta de enlace.

```
Switch(config)#ip route vrf Mgmt-vrf 172.16.10.0 255.255.0.0 192.168.1.254
```

Configure Line VTY (Línea VTY), Virtual Terminal (Terminal virtual) para acceder a través de telnet y establecer una contraseña de su elección.

```
Switch(config)#line vty 0 4
Switch(config-line)#password cisco
Switch(config-line)#login
```

Transport **input all** permite todos los protocolos (p. ej. ssh, telnet) para acceder al dispositivo a través de sesiones VTY.

```
Switch(config-line)#transport input all
Switch(config-line)#exit
```

Configure la contraseña de modo de usuario para el acceso a la consola.

```
Switch(config)#line console 0
Switch(config-line)#password cisco
Switch(config-line)#login
Switch(config-line)#exit
```

Configure una contraseña de modo de habilitación fuerte.

```
Switch(config)#enable secret cisco
```

Configure el reloj del sistema.

```
Switch(config)#clock timezone utc +5 30
```

```
Switch(config)#
```

```
*Nov 6 04:34:58.910: %SYS-6-CLOCKUPDATE: System clock has been updated from 10:05:58 utc Fri Nov 6 2020 to 10:04:58 utc Fri Nov 6 2020, configured from console by console.
```

```
Switch(config)#^Z
```

```
*Nov 6 04:35:59.634: %SYS-5-CONFIG_I: Configured from console by console
```

```
Switch#
```

```
Switch#clock set 04:30:00 6 Nov 2020
```

```
Switch#
```

```
*Nov 5 23:00:00.000: %SYS-6-CLOCKUPDATE: System clock has been updated from 10:06:19 utc Fri Nov 6 2020 to 04:30:00 utc Fri Nov 6 2020, configured from console by console.
```

```
Nov 5 23:00:00.000: %PKI-6-AUTHORITATIVE_CLOCK: The system clock has been set.
```

Configure el nombre de host para el sistema.

```
Switch(config)#hostname Catalyst-9600
```

```
Catalyst-9600(config)#
```

Guarde la configuración configurada hasta ahora en startup-config.

```
Catalyst-9600#write memory
```

```
Building configuration...
```

```
[OK]
```

```
*Nov 5 16:11:46.061: %SYS-2-PRIVCFG_ENCRYPT: Successfully encrypted private config file
```

```
Catalyst-9600#
```

Verificación

Compruebe la versión del software en el sistema, observe el tiempo de actividad, los detalles del sistema, etc.

```
Catalyst-9600#show version
```

```
Cisco IOS XE Software, Version 16.12.03a
```

```
Cisco IOS Software [Gibraltar], Catalyst L3 Switch Software (CAT9K_IOSXE), Version 16.12.3a, RELEASE SOFTWARE (fc1)
```

```
Technical Support: http://www.cisco.com/techsupport
```

```
Copyright (c) 1986-2020 by Cisco Systems, Inc.
```

```
Compiled Tue 28-Apr-20 09:37 by mcpre
```

```
Cisco IOS-XE software, Copyright (c) 2005-2020 by cisco Systems, Inc.
```

```
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```

```
ROM: IOS-XE ROMMON
```

```
BOOTLDR: System Bootstrap, Version 17.3.1r[FC2], RELEASE SOFTWARE (P)
```

Catalyst-9600 uptime is 36 minutes
Uptime for this control processor is 37 minutes
System returned to ROM by Reload Command
System image file is "bootflash:packages.conf"
Last reload reason: Reload Command

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/wvl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Technology Package License Information:

```
-----  
Technology-package           Technology-package  
Current                       Type                       Next reboot  
-----  
network-advantage   Smart License           network-advantage  
dna-advantage       Subscription Smart License   dna-advantage  
AIR License Level: AIR DNA Advantage  
Next reload AIR license Level: AIR DNA Advantage
```

Smart Licensing Status: UNREGISTERED/EVAL MODE

cisco C9606R (X86) processor (revision V00) with 1867991K/6147K bytes of memory.
Processor board ID FXS2302Q2EP
1 Virtual Ethernet interface
24 Forty/Hundred Gigabit Ethernet interfaces
48 TwentyFive Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
16009160K bytes of physical memory.
11161600K bytes of Bootflash at bootflash:.
1638400K bytes of Crash Files at crashinfo:.
0K bytes of WebUI ODM Files at webui:.

Base Ethernet MAC Address : 6c:b2:ae:4a:70:c0
Motherboard Assembly Number : 4C57
Motherboard Serial Number : FXS230103TN
Model Revision Number : V02
Motherboard Revision Number : 3
Model Number : C9606R
System Serial Number : FXS2302Q2EP

Configuration register is 0x102

Verifique los paquetes instalados.

Catalyst-9600#**show install summary**

[R0 R1] Installed Package(s) Information:

State (St): I - Inactive, U - Activated & Uncommitted,
C - Activated & Committed, D - Deactivated & Uncommitted

Type St Filename/Version

IMG C 16.12.3a.0.4

Auto abort timer: inactive

Verifique la ruta para el VRF de administración.

Switch#**show ip route vrf Mgmt-vrf**

Routing Table: Mgmt-vrf

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, m - OMP
n - NAT, Ni - NAT inside, No - NAT outside, Nd - NAT DIA
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static route
H - NHRP, G - NHRP registered, g - NHRP registration summary
o - ODR, P - periodic downloaded static route, l - LISP
a - application route
+ - replicated route, % - next hop override, p - overrides from Pfr

Gateway of last resort is not set

11.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 11.10.0.0/16 is directly connected, GigabitEthernet0/0
L 11.10.0.210/32 is directly connected, GigabitEthernet0/0
202.153.144.0/32 is subnetted, 1 subnets
S 172.168.10.0 [1/0] via 11.10.0.1

Verifique el alcance de la red a través del gateway predeterminado.

Switch#**ping vrf Mgmt-vrf 192.168.1.254**

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 192.168.1.254, timeout is 2 seconds:

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms

Switch#

Compruebe los módulos instalados en el sistema.

Catalyst-9600#**show module**

Chassis Type: C9606R

Mod	Ports	Card Type	Model	Serial No.
1	24	24-Port 40GE/12-Port 100GE	C9600-LC-24C	CAT2252L0PY
3	0	Supervisor 1 Module	C9600-SUP-1	CAT2252L0SH
4	0	Supervisor 1 Module	C9600-SUP-1	CAT2252L0SU
6	48	48-Port 10GE / 25GE	C9600-LC-48YL	CAT2302L16G

Mod	MAC addresses	Hw	Fw	Sw	Status
1	70B3.175A.7580 to 70B3.175A.75FF	0.10	17.3.1r[FC2]	16.12.03a	ok
3	70B3.175A.5680 to 70B3.175A.56FF	0.10	17.3.1r[FC2]	16.12.03a	ok

Diagnostic level at card bootup: minimal

Test results: (. = Pass, F = Fail, U = Untested)

- 1) TestOBFL -----> U
- 2) TestFantray -----> .
- 3) TestThermal -----> .
- 4) TestScratchRegister -----> .

module 4: SerialNo : CAT2252L0SU

Overall Diagnostic Result for module 4 : PASS

Diagnostic level at card bootup: minimal

Test results: (. = Pass, F = Fail, U = Untested)

- 1) TestOBFL -----> U
- 2) TestFantray -----> U
- 3) TestThermal -----> .
- 4) TestScratchRegister -----> U

module 6: SerialNo : CAT2302L16G

Overall Diagnostic Result for module 6 : PASS

Diagnostic level at card bootup: minimal

Test results: (. = Pass, F = Fail, U = Untested)

1) TestGoldPktLoopback:

Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Port	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

- 2) TestOBFL -----> U
- 3) TestThermal -----> .
- 4) TestPortTxMonitoring:

Port	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	.	.	U	U	U	.	U	.	U	.	.	.	U	U	.	U	U	U	U	U	U	U	U	U
Port	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	U	U	.	U	U	U	U	U	U	U	U	U	U	U	.	U	.	U	U	U	U	.	.	U

Compruebe si el reloj está configurado correctamente.

Catalyst-9600#show clock
*16:32:55.196 UTC Thu Nov 5 2020

Compruebe las fuentes de alimentación instaladas y su estado.

Catalyst-9600#show power detail

Power					Fan States	
Supply	Model No	Type	Capacity	Status	1	2
PS1	C9600-PWR-2KWAC	ac	2000 W	active	good	good
PS4	C9600-PWR-2KWAC	ac	2000 W	active	good	good

PS Current Configuration Mode : none

PS Current Operating State : none

Power supplies currently active : 2

Power supplies currently available : 2

Power Summary (in Watts)	Used	Maximum Available
System Power	2800	3940
Total	2800	3940

Power Budget Mode : Dual Sup

Mod	Model No	Power State	Budget	Instantaneous	Peak	Out of Reset	In Reset
1	C9600-LC-24C	accepted	300	0	0	300	10
3	C9600-SUP-1	accepted	950	0	0	950	202
4	C9600-SUP-1	accepted	950	0	0	950	202
6	C9600-LC-48YL	accepted	300	0	0	300	10
FM1	C9606-FAN	accepted	300	--	--	300	--

Total allocated power: 2800

Total required power: 2800

Información Relacionada

- Siga la [guía de configuración de administración del sistema](#) para ver opciones de configuración detalladas.
- [Soporte Técnico y Documentación - Cisco Systems](#)