

# Configurar um Switch Catalyst 9600

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## Introduction

Este documento descreve a configuração inicial e o procedimento de verificação para configurar o switch Catalyst 9600.

## Prerequisites

### Requirements

A Cisco recomenda que você tenha conhecimento destes tópicos:

Verifique se o chassi e o supervisor estão instalados de acordo com os guias de instalação.

- [Guia de instalação do gabinete](#)
- [Guia de instalação do supervisor](#)

### Componentes Utilizados

As informações neste documento são baseadas e configuradas nestas versões de software e hardware:

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

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. Se a rede estiver ativa, certifique-se de que você entenda o impacto potencial de qualquer comando.

## Informações de Apoio

Você pode inicializar, configurar e verificar o Catalyst 9600 em três etapas.

## Levante

- Conectar o console
- Ligue o sistema
- Observar mensagens do console
- Selecionar opção de diálogo de configuração

## Configurar

- Gerenciamento de dispositivos
- Hostname
- Relógio
- Salve a configuração

## Verificar

- Versão e pacote de software
- Hardware do sistema, alimentação e assim por diante.
- Conectividade IP de gerenciamento
- Integridade do sistema
- Tempo



## Levante

- Conecte o PC ao console do Catalyst 9600 com RJ45 ou USB
- Ligue o sistema
- Observe que o console imprime a inicialização do hardware do sistema e outras informações na tela

## Inicialização 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
```

Aguarde até ver a caixa de diálogo **Configuração do Sistema**. Selecione a opção **Não** para entrar no modo de configuração manual e selecione **Sim** para terminar a instalação automática, para

acessar a configuração manual simples.

```
--- 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

**Note:** Use o comando **show running-config** a qualquer momento no modo "enable" para verificar os valores configurados.

Configure a porta de gerenciamento com um endereço IP de sua rede e ative a porta.

```
Switch#configure terminal  
Enter configuration commands, one per line. End with CNTL/Z.  
Switch(config)#interface gigabitEthernet 0/0  
Switch(config-if)#ip address 10.122.186.8 255.255.255.240  
Switch(config-if)#no shutdown
```

Configure uma rota estática para acessar o Gateway padrão para a rede de gerenciamento, use o IP e o Gateway da rede.

```
Switch(config)#ip route vrf Mgmt-vrf 10.122.157.250 255.255.255.255 10.122.186.1
```

Configure Line VTY, Virtual terminal para acessar via telnet e defina uma senha de sua escolha.

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

A **entrada de transporte de todos** permite todos os protocolos (por exemplo, ssh, telnet) para acessar o dispositivo por meio de sessões VTY.

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

Configure a senha do modo usuário para acesso ao console.

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

Configure uma senha do modo de ativação forte.

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

Ajuste o relógio do sistema.

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

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

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

```
*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 o nome do host para o sistema.

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

Salve a configuração configurada até agora na configuração de inicialização.

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

```
Building configuration...
```

```
[OK]
```

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

## Verificar

Verifique a versão do software no sistema, observe o tempo de atividade, os detalhes do sistema e assim por diante.

```
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.  
All rights reserved. Certain components of Cisco IOS-XE software are  
licensed under the GNU General Public License ("GPL") Version 2.0. The  
software code licensed under GPL Version 2.0 is free software that comes  
with ABSOLUTELY NO WARRANTY. You can redistribute and/or modify such  
GPL code under the terms of GPL Version 2.0. For more details, see the  
documentation or "License Notice" file accompanying the IOS-XE software,  
or the applicable URL provided on the flyer accompanying the IOS-XE  
software.
```

```
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](mailto: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 os pacotes 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 a rota para o VRF de gerenciamento.

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

**S\* 0.0.0.0/0 [1/0] via 10.122.186.1 <--- the default gateway**  
10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks  
S 10.122.157.250/32 [1/0] via 10.122.186.1  
C 10.122.186.0/28 is directly connected, GigabitEthernet0/0  
L 10.122.186.8/32 is directly connected, GigabitEthernet0/0

Verifique a acessibilidade à rede por meio do gateway padrão.

Switch#**ping vrf Mgmt-vrf 10.122.186.1**

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to **10.122.186.1**, timeout is 2 seconds:

!!!!

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

Switch#

Verifique os módulos instalados no 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
4	70B3.175A.5600 to 70B3.175A.567F	0.10	17.3.1r[FC2]	16.12.03a	ok
6	6C8B.D307.6680 to 6C8B.D307.66FF	0.10	17.3.1r[FC2]	16.12.03a	ok

Mod	Redundancy Role	Operating Redundancy Mode	Configured Redundancy Mode
3	Active	sso	sso
4	Standby	sso	sso

Chassis MAC address range: 64 addresses from 6cb2.ae4a.70c0 to 6cb2.ae4a.70ff

Verifique a integridade do sistema usando o POST (Power-On Self Test [teste automático de ligação]) e os resultados do diagnóstico.

Catalyst-9600#show post

Stored system POST messages:

Switch C9606R  
-----

Thu Nov 5 15:34:27 2020 POST: Module: 6 Mac Loopback Begin  
Thu Nov 5 15:34:27 2020 POST: Module: 6 Mac Loopback: loopback Test: End, Status Passed  
  
Thu Nov 5 15:34:27 2020 POST: Module: 1 Mac Loopback Begin  
Thu Nov 5 15:34:27 2020 POST: Module: 1 Mac Loopback: loopback Test: End, Status Passed

Catalyst-9600#show diagnostic result module all

Current bootup diagnostic level: minimal

module 1: SerialNo : CAT2252L0PY

**Overall Diagnostic Result for module 1 : 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	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

module 3: SerialNo : CAT2252L0SH

**Overall Diagnostic Result for module 3 : PASS**

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
```

Verifique se o relógio está ajustado corretamente.

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

Verifique as fontes de alimentação instaladas e sua integridade.

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

## Informações Relacionadas

- Siga o [guia de configuração de gerenciamento do sistema](#) para ver as opções de configuração detalhadas.
- [Suporte Técnico e Documentação - Cisco Systems](#)