Configurer un commutateur Catalyst 9600

Contenu

Introduction

Ce document décrit la procédure de configuration et de vérification initiale pour configurer le commutateur Catalyst 9600.

Conditions préalables

Conditions requises

Cisco vous recommande de prendre connaissance des rubriques suivantes :

Vérifiez que le châssis et le superviseur sont installés conformément aux guides d'installation.

- Guide d'installation du châssis
- Guide d'installation du superviseur

Components Used

Les informations contenues dans ce document sont basées et configurées sur les versions logicielles et matérielles suivantes :

- Matériel : Commutateur Catalyst 9600
- le logiciel Cisco IOS: 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. Si votre réseau est en ligne, assurez-vous de bien comprendre l’incidence possible des commandes.

Informations générales

Vous pouvez démarrer, configurer et vérifier Catalyst 9600 en trois étapes.

Se lever

- Connexion de la console
- Mise sous tension du système
- Observer les messages de console
- Sélectionner l'option de boîte de dialogue de configuration

Configuration

- Gestion des périphériques
- Nom de l'hôte
- Horloge
- Enregistrez la configuration

Vérification

- Version du logiciel et package
- Matériel système, alimentation, etc.
- Connectivité IP de gestion
- Santé du système
- Heure

Se lever

- Connexion du PC à la console du Catalyst 9600 avec RJ45 ou USB
- Mise sous tension du système
- Observer la console imprime l'initialisation matérielle du système et d'autres informations à l'écran

Démarrage initial :

```
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
```

Attendez que la boîte de dialogue **Configuration du système** s'affiche. Sélectionnez l'option **Non** afin de passer en mode de configuration manuelle et sélectionnez **Oui** afin de terminer l'installation

automatique, pour accéder à la configuration manuelle 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
```

Configuration

> **Note**: Utilisez la commande **show running-config** à tout moment en mode « enable » pour vérifier les valeurs configurées.

Configurez le port de gestion avec une adresse IP de votre réseau et activez le port.

```
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
```

Configurez une route statique afin d'atteindre le réseau Default Gateway for Management, utilisez votre adresse IP et votre passerelle réseau.

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

Configurez Line VTY, Virtual Terminal afin d'accéder via telnet et définissez un mot de passe de votre choix.

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

Transport **input all** autorise tous les protocoles (ex. ssh, telnet) afin d'accéder au périphérique via des sessions VTY.

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

Configurez le mot de passe du mode utilisateur pour l'accès à la console.

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

Configurez un mot de passe en mode enable fort.

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

Réglez l'horloge système.

```
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.
```

Configurez le nom d'hôte du système.

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

Enregistrez la configuration configurée jusqu'à présent dans la configuration de démarrage.

```
Catalyst-9600#write memory
Building configuration...
[OK]
*Nov  5 16:11:46.061: %SYS-2-PRIVCFG_ENCRYPT: Successfully encrypted private config file
```

Vérification

Vérifiez la version du logiciel sur le système, observez le temps de fonctionnement, les détails du système, 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


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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/wwl/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
```

Vérifiez les packages installés.

```
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
----------------------------------------------------------------------------
```

Vérifiez la route pour le VRF de gestion.

```
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
```

Vérifiez l'accessibilité au réseau via la passerelle par défaut.

```
Switch#ping vrf Mgmg-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#
```

Vérifiez les modules installés dans le système.

```
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
```

Vérifiez l'état du système à l'aide des résultats de test automatique de mise sous tension (POST) et de diagnostic.

```
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

   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
```

Vérifiez si l'horloge est correctement réglée.

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

Vérifiez les modules d'alimentation installés et leur état.

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


Power Budget Mode           : Dual Sup

                           Power                                    Out of  In
Mod  Model No              State     Budget  Instantaneous  Peak    Reset   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
```

Informations connexes

- Veuillez suivre le guide de configuration de la gestion du système pour obtenir des options de configuration détaillées.
- Support et documentation techniques - Cisco Systems