瞭解增強型快速軟體升級- Catalyst 6500 VSS上的Quad-SUP

目錄

簡介

本文檔介紹在VSS模式下的Cisco Catalyst 6500系列交換機上使用帶有四管理引擎設定中的雙宿的Supervisor 6T的逐步ISSU/eFSU過程。

必要條件

需求

思科建議您瞭解以下主題：

- QUAD-SUP虛擬交換系統(VSS)設定和配置catalyst 6500的基本知識
- 使用TFTP/USB/WebUI方法複製映像

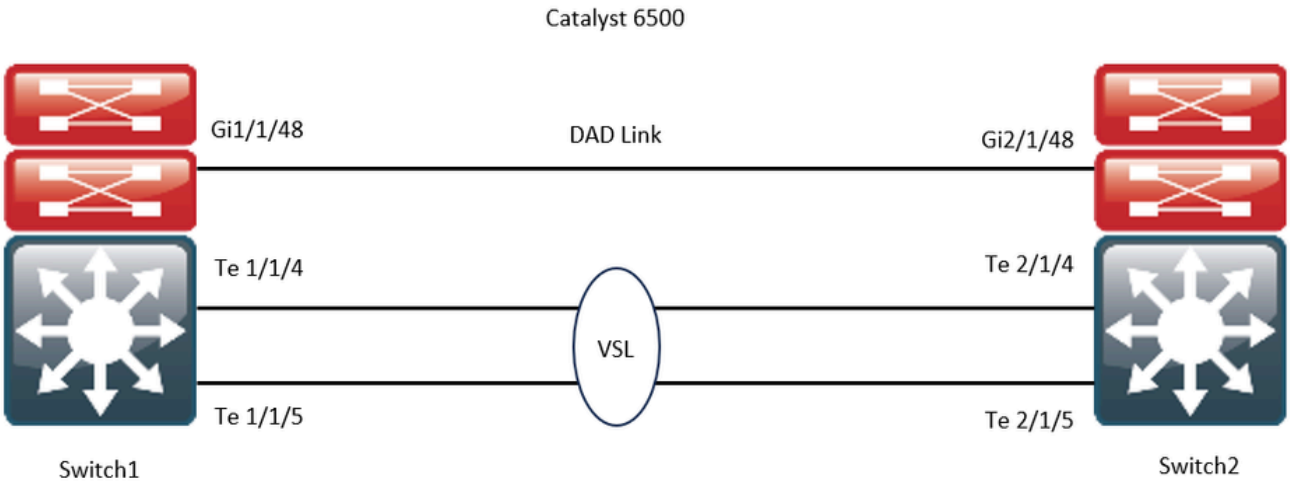
採用元件

本檔案中的資訊是根據Cisco IOS®軟體版本15.5(1)SY12或更新版本上的Cisco Catalyst 6500虛擬交換系統

軟體和硬體版本。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

拓撲



相容性矩陣檢查

步驟 1.請參閱本文檔的https://www.cisco.com/c/en/us/support/switches/catalyst-6500-series-switches/products-release-notes-list.html#anchor142。

步驟 2.使用裝置CLI中的命令進行驗證：

<#root>

```
WS-C6504-E-1#

show issu comp-matrix stored


Number of Matrices in Table = 1

(1) Matrix for s2t54-ADVENTERPRISEK9-M(10) - s2t54-ADVENTERPRISEK9-M(10)
=========================================
Start Flag (0xDEADBABE)

My Image ver: 15.5(1)SY13
Peer Version Compatibility
------------ -------------
15.1(2)SY Incomp(1)
15.1(2)SY1 Incomp(1)
15.1(2)SY2 Incomp(1)
15.5(1)SY Dynamic(0)
15.5(1)SY1 Dynamic(0)
15.1(2)SY12 Incomp(1)
15.2(1)SY6 Incomp(1)
15.4(1)SY4 Incomp(1)
15.5(1)SY2 Dynamic(0)

15.5(1)SY3 Dynamic(0)
```

15.5(1)SY4 Dynamic(0)

15.5(1)SY5 Dynamic(0)

15.5(1)SY6 Dynamic(0)

15.5(1)SY7 Dynamic(0)

15.5(1)SY8 Dynamic(0)

15.5(1)SY9 Dynamic(0)

15.5(1)SY10 Dynamic(0)

15.5(1)SY11 Dynamic(0)

15.5(1)SY12 Dynamic(0)

15.5(1)SY13 Comp(3)

升級程式

步驟 1.確保新的Cisco IOS映像(Cisco IOS軟體版本15.5(1)SY13)存在於bootdisk,slavebootdisk,ics-bootdisk,slave-ics-bootdisk中。

WS-C6504-E-1#dir bootdisk: | i SY13
8 -rw- 167430292 Apr 16 2024 22:55:58 +00:00 s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
WS-C6504-E-1#dir slavebootdisk: | i SY13
19 -rw- 167430292 Apr 16 2024 00:37:58 +00:00 s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
WS-C6504-E-1#dir ics-bootdisk: | i SY13
11 -rw- 167430292 Apr 16 2024 23:06:18 +00:00 s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
WS-C6504-E-1#dir slave-ics-bootdisk: | i SY13
5 -rw- 167430292 Apr 16 2024 23:20:18 +00:00 s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

步驟 2. 使用以下命令以驗證VSS是否已準備好運行升級過程：

<#root>

WS-C6504-E-1#show redundancy
Redundant System Information :

Available system uptime = 1 day, 4 hours, 41 minutes
Switchovers system experienced = 0
Standby failures = 1
Last switchover reason = none
Hardware Mode = Duplex

Configured Redundancy Mode = sso

Operating Redundancy Mode = sso

Maintenance Mode = Disabled
Communications = Up
Current Processor Information :

Active Location = slot 1/1
Current Software state =

ACTIVE >> Switch 1 Slot 1 is active

Uptime in current state = 1 day, 4 hours, 41 minutes
Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2023 by Cisco Systems, Inc.
Compiled Tue 05-Sep-23 11:24 by mcpre
BOOT =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

,12;
CONFIG_FILE =
BOOTLDR =
Configuration register = 0x2102
Peer Processor Information :

Standby Location = slot 2/1
Current Software state =

STANDBY HOT >> Switch 2 Slot 1 is standby

Uptime in current state = 19 hours, 43 minutes
Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2023 by Cisco Systems, Inc.
Compiled Tue 05-Sep-23 11:24 by mcpre
BOOT =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

,12;
CONFIG_FILE =
BOOTLDR =
Configuration register = 0x2102

<#root>

WS-C6504-E-1#show issu state detail
The system is configured to be upgraded in staggered mode.
4 supervisor nodes are found to be online.
Summary: the system will be upgraded in staggered mode.

Slot = 1/1
RP State = Active
ISSU State = Init
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
Operating Mode =

sso

ISSU Sub-State =

No Upgrade Operation in Progress

Starting Image = N/A
Target Image = N/A
Current Version =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

Slot = 2/1
RP State = Standby
ISSU State = Init
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
Operating Mode =

sso

ISSU Sub-State =

No Upgrade Operation in Progress

Starting Image = N/A
Target Image = N/A
Current Version =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

Slot = 1/2
RP State = Active-ICS
ISSU State = Init
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
Operating Mode =

sso

ISSU Sub-State =

No Upgrade Operation in Progress

Starting Image = N/A
Target Image = N/A
Current Version =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

```
Slot = 2/2
RP State = Standby-ICS
ISSU State = Init
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
      Operating Mode =
```

sso

```
      ISSU Sub-State =
```

No Upgrade Operation in Progress

```
      Starting Image = N/A
        Target Image = N/A
     Current Version =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

步驟 3. 請使用issu loadversion命令以開始升級過程。

在此步驟中，VSS備用機箱將重新啟動，使用新映像重新載入，並在狀態切換(SSO)冗餘模式下初始化為VSS備用機箱，同時運行新映像。如**批次同步成功**消息中所示，當機箱配置同步時，此步驟完成。載入新映像和VSS備用機箱轉換到SSO模式可能需要幾秒到幾分鐘的時間。

<#root>

WS-C6504-E-1#issu loadversion 1/1 bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin 2/1 slavebootdisk

```
System configuration has been modified. Save? [yes/no]: y
Building configuration...
[OK]
```

***Apr 17 00:43:14.195: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion sequence will begin in 60 seconds. En**

***Apr 17 00:43:44.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Resetting Standby shortly**

***Apr 17 00:43:44.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Resetting Standby ICS shortly**

```
*Apr 17 00:43:44.199: %ISSU_PROCESS-SW2_STBY-6-SELF_RELOAD: slot 33 countdown to self-reload started, 3
*Apr 17 00:43:44.199: %ISSU_PROCESS-SW2-2_STBY-6-SELF_RELOAD: slot 34 countdown to self-reload started,
*Apr 17 00:44:29.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby ICS has gone offline
*Apr 17 00:44:29.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby has gone offline
*Apr 17 00:46:59.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby has come online, wait for Standby I
*Apr 17 00:47:44.503: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby ICS has come online
*Apr 17 00:49:15.363: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby reached terminal state
*Apr 17 00:49:29.199: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Standby ICS reached terminal state, wait fo
```

***Apr 17 00:49:59.195: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion has completed. Please issue the 'issu**

***Apr 17 00:49:59.195: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion has completed. Please issue the 'issu**

步驟 4.standby的引導變數必須指向show issu state detail輸出中的新映像。

<#root>

WS-C6504-E-1#

show issu state detail

```
 The system is configured to be upgraded in in-tandem mode.
 4 supervisor nodes are found to be online.
         Summary: an in-tandem upgrade is in progress.

Slot = 1/1
RP State = Active
ISSU State = Load Version
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;bootdisk:s2t54-adventerprisek9-
      Operating Mode = sso
      ISSU Sub-State = Load Version Completed
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

Slot = 2/1
RP State = Standby
ISSU State =
```

Load Version

```
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin,12;bootdisk:s2t54-adventerprisek9-
      Operating Mode = sso
      ISSU Sub-State = Load Version Completed
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

>> Standby Chassis has been upgraded to latest code

```
Slot = 1/2
RP State = Active-ICS
ISSU State = Load Version
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;bootdisk:s2t54-adventerprisek9-
      Operating Mode = sso
      ISSU Sub-State = Load Version Completed
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
```

```
Slot = 2/2
RP State = Standby-ICS
ISSU State =
```

Load Version

```
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin,12;bootdisk:s2t54-adventerprisek9-m
      Operating Mode = sso
      ISSU Sub-State = Load Version Completed
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin >> Standby Chassis has been upgraded to latest code

步驟 5. 當VSS備用機箱以SSO冗餘狀態成功運行新映像，並且VSS備用機箱上的所有板卡都啟動並聯機時，輸入**issu runversion**命令以強制切換。升級後的VSS備用機箱將取代新的活動機箱，運行新的映像。以前的活動機箱在SSO模式下重新載入並初始化為新的VSS備用機箱，運行舊映像（在需要中止軟體升級並恢復舊映像的情況下）。如**批次同步成功**消息中所示，當機箱配置同步時，此步驟完成。

<#root>

WS-C6504-E-1#

issu runversion

```
This command will reload the Active unit.  Proceed ? [confirm]y
%issu runversion initiated successfully
*Apr 17 00:54:42.707: %ISSU_PROCESS-SW1-2_STBY-6-SELF_RELOAD: slot 18 countdown to self-reload started,
*Apr 17 00:54:44.715: %RF-SW1-5-RF_RELOAD: Self reload. Reason: Admin ISSU runversion CLI
*Apr 17 00:54:46.719: %SYS-SW1-5-SWITCHOVER: Switchover requested by Exec. Reason: Admin ISSU runversio
Initializing as Virtual Switch STANDBY processor
*Apr 17 00:57:14.023: %VSLP-5-VSL_UP:  Ready for control traffic
*Apr 17 00:57:24.919: %PFREDUN-SW1_STBY-6-STANDBY: Initializing for SSO mode in Default Domain
```

步驟 6.切換完成後檢驗狀態。

<#root>

WS-C6504-E-1#show issu state detail
The system is configured to be upgraded in in-tandem mode.
4 supervisor nodes are found to be online.
Summary: an in-tandem upgrade is in progress.

Slot = 2/1
RP State = Active
ISSU State =

Run Version

```
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin,12;bootdisk:s2t54-adventerprisek9-m
      Operating Mode = sso
```

```
      ISSU Sub-State = Run Version after Switchover
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin >> Switch 2 became the active after switchover

```
Slot = 1/1
RP State = Standby
ISSU State = Run Version
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
      Operating Mode = sso
      ISSU Sub-State = Run Version in Progress
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin

Slot = 2/2
RP State = Active-ICS
ISSU State =
```

Run Version

```
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin,12;bootdisk:s2t54-adventerprisek9-m
      Operating Mode = sso
      ISSU Sub-State = Run Version in Progress
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
Slot = 1/2
RP State = Standby-ICS
ISSU State = Run Version
Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12;
      Operating Mode = sso
      ISSU Sub-State = Run Version in Progress
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin
```

<#root>

```
WS-C6504-E-1#sh redundancy
Redundant System Information :
------------------------------
      Available system uptime = 44 minutes
Switchovers system experienced = 1
            Standby failures = 0
       Last switchover reason = user forced
             Hardware Mode = Duplex
   Configured Redundancy Mode = sso
    Operating Redundancy Mode = sso
          Maintenance Mode = Disabled
            Communications = Up
```

Current Processor Information :

Active Location = slot 2/1

Current Software state =

ACTIVE

Uptime in current state = 7 minutes

Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version

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Compiled Tue 19-Mar-24 06:59 by mcpre

BOOT =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12

CONFIG_FILE =

BOOTLDR =

Configuration register = 0x2102

Peer Processor Information :

Standby Location = slot 1/1

Current Software state =

STANDBY HOT

Uptime in current state = 2 minutes

Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version

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BOOT =

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12

.bin,12;

CONFIG_FILE =

BOOTLDR =

Configuration register = 0x2102

步驟 7. 請使用**issu acceptversion**命令停止回滾計時器。這是必要的，因為如果計時器過期，升級的機箱會重新載入並恢復到以前的軟體版本。

<#root>

WS-C6504-E-1# show issu rollback-timer

Rollback Process State = In progress

Configured Rollback Time = 00:45:00

Automatic Rollback Time = 00:37:28

<#root>

WS-C6504-E-1# issu acceptversion
% Rollback timer stopped. Please issue the commitversion command.
View the rollback timer to see that the rollback process has been stopped:
WS-C6504-E-1# show issu rollback-timer

Rollback Process State = Not in progress >> Rollback Process is stopped after the acceptversion

步驟 8.如果設定中使用了交換矩陣擴展器(FEX)，請使用**issu runversion fex all**命令以開始FEX(6800IA)上的映像下載和升級過程。FEX會觸發從Supervisor6T的新軟體捆綁包下載映像(此處，Cisco IOS軟體版本15.5(1)SY13)。如果使用FEX堆疊，則由主裝置負責從其成員中提取影象。

步驟 9. 要繼續，請輸入**issu commitversion**命令以升級VSS備用機箱並完成服務中軟體升級(ISSU)序列。VSS備用機箱重新啟動，使用新映像重新載入，並初始化為處於SSO冗餘狀態的VSS備用機箱，運行新映像。如**批次同步成功**消息中所示，當機箱配置已同步，並且新VSS-Standby上的所有板卡都處於打開和聯機狀態時，此步驟便已完成。

<#root>

WS-C6504-E-1# issu commitversion

%issu commitversion initiated successfully, upgrade sequence will continue shortly

WS-C6504-E-1#
*Apr 17 01:02:57.607: %ISSU_PROCESS-SW2-3-COMMITVERSION: issu commitversion; Commitversion sequence will begin in 60 seconds. Enter 'iss
*Apr 17 01:03:27.607: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Resetting Standby shortly
*Apr 17 01:03:27.607: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Resetting Standby ICS shortly
*Apr 17 01:03:27.611: %ISSU_PROCESS-SW1-2_STBY-6-SELF_RELOAD: slot 18 countdown to self-reload started, 30 second delay
*Apr 17 01:03:27.611: %ISSU_PROCESS-SW1_STBY-6-SELF_RELOAD: slot 17 countdown to self-reload started, 30 second delay
*Apr 17 01:04:12.607: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby ICS has gone offline
*Apr 17 01:04:12.607: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby has gone offline
*Apr 17 01:06:42.607: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby has come online, wait for Standby ICS
*Apr 17 01:07:28.315: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby ICS has come online
*Apr 17 01:08:59.623: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby has reached terminal state
*Apr 17 01:09:12.699: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby ICS reached terminal state
*Apr 17 01:09:12.751: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Upgrade has completed, updating boot configuration
Building configuration...
[OK]

步驟 10.驗證升級是否已完成。

<#root>

WS-C6504-E-1#

sh redundancy

```
Redundant System Information :
------------------------------
       Available system uptime = 55 minutes
Switchovers system experienced = 1
              Standby failures = 1
        Last switchover reason = user forced
                  Hardware Mode = Duplex
    Configured Redundancy Mode = sso
     Operating Redundancy Mode = sso
              Maintenance Mode = Disabled
                Communications = Up
Current Processor Information :
-------------------------------
               Active Location = slot 2/1
        Current Software state = ACTIVE
       Uptime in current state = 17 minutes
                 Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version
Technical Support: http://www.cisco.com/techsupport
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                          BOOT =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13

```
.bin,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
                   CONFIG_FILE =
                       BOOTLDR =
        Configuration register = 0x2102
Peer Processor Information :
------------------------------
              Standby Location = slot 1/1
        Current Software state = STANDBY HOT
       Uptime in current state = 3 minutes
                 Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-M), Version
Technical Support: http://www.cisco.com/techsupport
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Compiled Tue 19-Mar-24 06:59 by mcpre
                          BOOT =
```

bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
```

>> Standby has been upgraded

```
                   CONFIG_FILE =
                       BOOTLDR =
        Configuration register = 0x2102
```

<#root>

WS-C6504-E-1#

show module switch all

```
 Switch Number:     1   Role:  Virtual Switch Standby
---------------------  ------------------------------
```

```
Mod Ports Card Type                                Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
  1    5  Supervisor Engine 2T 10GE w/ CTS (Hot) VS-SUP2T-10G       xxxx
  2    5  Supervisor Engine 2T 10GE w/ CTS (CSSO VS-SUP2T-10G       xxxx
  3   48  CEF720 48 port 10/100/1000mb Ethernet  WS-X6748-GE-TX     xxxx
Mod MAC addresses                       Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
  1  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 1.5   12.2(50r)SYS 15.5(1)SY13  Ok
  2  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 1.3   12.2(50r)SYS 15.5(1)SY13  Ok
  3  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 3.2   12.2(18r)S1  15.5(1)SY13  Ok
Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ------------ ------- -------
  1  Policy Feature Card 4       VS-F6K-PFC4        xxxx 1.2    Ok
  1  CPU Daughterboard           VS-F6K-MSFC5        xxxx 2.0    Ok
  2  Policy Feature Card 4       VS-F6K-PFC4         xxxx 1.2    Ok
  2  CPU Daughterboard           VS-F6K-MSFC5        xxxx 1.4    Ok
  3  Centralized Forwarding Card WS-F6700-CFC    xxxx 4.1    Ok
Mod  Online Diag Status
---- -------------------
  1  Pass
  2  Pass
  3  Pass
 Switch Number:     2   Role:   Virtual Switch Active
----------------------  -----------------------------
Mod Ports Card Type                                Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
  1    5  Supervisor Engine 2T 10GE w/ CTS (Acti VS-SUP2T-10G       xxxx
  2    5  Supervisor Engine 2T 10GE w/ CTS (CSSO VS-SUP2T-10G       xxxx
  3   48  CEF720 48 port 10/100/1000mb Ethernet  WS-X6748-GE-TX     xxxx
Mod MAC addresses                       Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
  1  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 1.5   12.2(50r)SYS 15.5(1)SY13  Ok
  2  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 2.1   12.2(50r)SYS 15.5(1)SY13  Ok
  3  xxxx. xxxx. xxxx to xxxx. xxxx. xxxx 3.6   12.2(18r)S1  15.5(1)SY13  Ok
Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ------------ ------- -------
  1  Policy Feature Card 4       VS-F6K-PFC4        xxxx 1.2    Ok
  1  CPU Daughterboard           VS-F6K-MSFC5       xxxx 2.0    Ok
  2  Policy Feature Card 4       VS-F6K-PFC4        xxxx 3.0    Ok
  2  CPU Daughterboard           VS-F6K-MSFC5       xxxx 3.1    Ok
  3  Centralized Forwarding Card WS-F6700-CFC   xxxx 4.1    Ok
Mod  Online Diag Status
---- -------------------
  1  Pass
  2  Pass
  3  Pass
```

<#root>

WS-C6504-E-1#

sh issu state detail

```
 The system is configured to be upgraded in in-tandem mode.
 4 supervisor nodes are found to be online.
 Summary: the system will be upgraded in in-tandem mode.
Slot = 2/1
RP State = Active
ISSU State = Init
```

```
Boot Variable = bootdisk:
```

s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
      Operating Mode = sso
      ISSU Sub-State =
```

No Upgrade Operation in Progress

```
      Starting Image = N/A
        Target Image = N/A
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
Slot = 1/1
RP State = Standby
ISSU State = Init
Boot Variable = bootdisk:
```

s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
      Operating Mode = sso
      ISSU Sub-State =
```

No Upgrade Operation in Progress

```
      Starting Image = N/A
        Target Image = N/A
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
Slot = 2/2
RP State = Active-ICS
ISSU State = Init
Boot Variable = bootdisk:
```

s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
      Operating Mode = sso
      ISSU Sub-State =
```

No Upgrade Operation in Progress

```
      Starting Image = N/A
        Target Image = N/A
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
Slot = 1/2
RP State = Standby-ICS
ISSU State = Init
Boot Variable = bootdisk:
```

s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin

```
,12;bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY12.bin,12
      Operating Mode = sso
      ISSU Sub-State =
```

No Upgrade Operation in Progress

```
      Starting Image = N/A
        Target Image = N/A
     Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin
```

故障排除案例研究

案例 1.在缺少跨VSL連線時以交錯模式升級

<#root>

WS-C6504-E-1#

issu loadversion 1/1 bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin 2/1 slavebootdisk:s2t54-advent

WS-C6504-E-1#*Apr 16 23:31:12.528: SW1: Quad-sup ISSU Staggered mode VSL requirement(Parallel/Cross VS

您會收到一則錯誤訊息，指出由於您沒有可繼續執行的跨VSL連線，因此不符合需求。

您可以停用交錯執行升級。

<#root>

WS-C6504-E-1(conf t)#

no issu upgrade staggered

WS-C6504-E-1#issu loadversion 1/1 bootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY13.bin 2/1 slavebootdisk:s2t54-adventerprisek9-mz.SPA.155-1.SY
System configuration has been modified. Save? [yes/no]: y
Building configuration...
[OK]
*Apr 17 00:43:14.195: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion sequence will begin in 60 seconds. Enter 'issu abortversion' to cancel.
*Apr 17 00:43:44.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Resetting Standby shortly
*Apr 17 00:43:44.195: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Resetting Standby ICS shortly

縱排與交錯

升級串聯或雙管理引擎(SUP)的VSS也是可行的，但是，它會在管理引擎整個引導期間使一個機箱離線。

在Sup2T交錯模式的預設模式下，一次重新載入一個管理引擎。這表示在準備重新載入板卡時，存在使用該版本的管理引擎。由於板卡的重新載入速度比管理引擎快得多，因此機箱的停機時間也大大減少。

此外，它還表示可以使用使用過時程式的管理引擎，如有必要，可提供更快的回滾時間。對於Sup2T，預設模式為交錯模式。

使用此命令可以停用交錯升級方法。

案例 2.使用較舊影像進行作用中點選

在這裡，您基本上可以在**ISSU Run Version**上被點選。

對於**ISSU Run Version**，已經啟用了回滾計時器。如果您無法繼續操作，計時器會自動回滾到較舊的映像。

對於**ISSU Commit版本**，自您提供了可接受的版本以來，回滾計時器處於停用狀態。因此，您必須執行此命令才能回滾到較舊的映像。

WS-C6504-E-1# issu abortversion

案例 3. Post Switchover未啟動

斷開虛擬交換機鏈路(VSL)的物理連線，並使用USB/TFTP方法將裝置升級到新映像。

升級後，關閉裝置的電源。連線VSL鏈路並將裝置置於VSS中，以便形成備用裝置。

案例 4. 升級後ICS SUP仍保留在舊版本中

在備用機箱或備用機箱中單獨連線SUP，因為主用機箱工作正常，所以不會造成影響。

使用USB/TFTP方法將裝置升級到新映像。

然後，關閉電源並將其放入同一插槽，以便升級映像，並使用較新的映像重新恢復為機箱內待機(ICS)。

關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。