ISSU-Upgrade für Catalyst Switches der Serie 6500 mit Verbindung zum 6800IA (FEX)

Inhalt

Einführung

Dieses Dokument beschreibt ein schrittweises ISSU-Verfahren (In-Service Software Upgrade) für Cisco Catalyst Switches der Serie 6500 im VSS-Modus (Virtual Switching System) unter Verwendung der Supervisor 2T mit angehängten Dual-Homed Cisco Catalyst 6800 Instant Access Switches (FEX).

Voraussetzungen

Anforderungen

Für dieses Dokument bestehen keine speziellen Anforderungen.

Verwendete Komponenten

Die Informationen in diesem Dokument basieren auf Cisco Catalyst Switches der Serie 6500 im VSS-Modus, auf denen die Supervisor Engine 2T mit einem Dual-Homed 6800IA auf WS-X6904-40G Linecards ausgeführt wird.

Die Informationen in diesem Dokument wurden von den Geräten in einer bestimmten Laborumgebung erstellt. Alle in diesem Dokument verwendeten Geräte haben mit einer leeren (Standard-)Konfiguration begonnen. Wenn Ihr Netzwerk in Betrieb ist, stellen Sie sicher, dass Sie die potenziellen Auswirkungen eines Befehls verstehen.

Upgrade-Verfahren

Ersteinrichtung

Das Upgrade-Verfahren wird für die Cisco IOS® Softwareversion 15.1(2)SY auf Version 15.1(2)SY1 durchgeführt.

Die Statistiken vor dem ISSU-Prozess sind wie folgt:

- Das Gehäuse des Catalyst 6500 mit Switch-ID 1 ist aktiv, und der Switch mit ID 2 ist Standby (Hot).
- Beide Chassis sind in der Cisco IOS Software Version 15.1(2)SY verfügbar.
- Ein einzelnes 6800IA, das die Cisco IOS Software Version 15.0(2)EX2 ausführt, ist auf WS-X6904-40G-Linecards mit einer Dual-Home-Verbindung mit VSS verbunden. Die FEX-Port-Channel-Nummer lautet 99 und die FEX-ID 110.

```
6K1#show mod sw all
 Switch Number:     1   Role:   Virtual Switch Active
----------------------  -----------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 2    5  Supervisor Engine 2T 10GE w/ CTS (Acti VS-SUP2T-10G       SAL1632K9P2
 3   20  DCEF2T 4 port 40GE / 16 port 10GE      WS-X6904-40G       SAL1741E4ZA

Mod MAC addresses                        Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
 2  c471.fe7c.de96 to c471.fe7c.de9d   1.3   12.2(50r)SYS 15.1(2)SY    Ok
 3  e02f.6d6a.698c to e02f.6d6a.699f   1.0   12.2(50r)SYL 15.1(2)SY    Ok

Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ----------- ------- -------
 2  Policy Feature Card 4       VS-F6K-PFC4        SAL1637MCQQ  1.2    Ok
 2  CPU Daughterboard           VS-F6K-MSFC5       SAL1637MKX8  1.4    Ok
 3  Distributed Forwarding Card WS-F6K-DFC4-E      SAL1745FSD6  1.0    Ok

Mod  Online Diag Status
---- -------------------
 2  Pass
 3  Pass

 Switch Number:     2   Role:  Virtual Switch Standby
----------------------  -----------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 2    5  Supervisor Engine 2T 10GE w/ CTS (Hot) VS-SUP2T-10G       SAL1650UC8L
 3   20  DCEF2T 4 port 40GE / 16 port 10GE      WS-X6904-40G       SAL17173QD3

Mod MAC addresses                        Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
 2  2c54.2dc4.2f3a to 2c54.2dc4.2f41   1.4   12.2(50r)SYS 15.1(2)SY    Ok
 3  70ca.9b8f.510c to 70ca.9b8f.511f   1.0   12.2(50r)SYL 15.1(2)SY    Ok

Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ----------- ------- -------
 2  Policy Feature Card 4       VS-F6K-PFC4        SAL1651UG8P  1.2    Ok
 2  CPU Daughterboard           VS-F6K-MSFC5       SAL1651UEBY  1.5    Ok
```

```
 3  Distributed Forwarding Card WS-F6K-DFC4-E      SAL17173QHY  1.2    Ok

Mod  Online Diag Status
---- -------------------
 2  Pass
 3  Pass

 Switch Number:   110   Role:                     FEX
---------------------  -----------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 1   48  C6800IA 48GE                            C6800IA-48TD       FOC1736W1A6

Mod MAC addresses                       Hw     Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
 1  c025.5cc2.2d00 to c025.5cc2.2d33   0.0   Unknown      15.0(2)EX2   Ok

Mod  Online Diag Status
---- -------------------
 1  Pass


6K1#show switch virtual
Switch mode                  : Virtual Switch
Virtual switch domain number : 100
Local switch number          : 1
Local switch operational role: Virtual Switch Active
Peer switch number           : 2
Peer switch operational role : Virtual Switch Standby
```

Upgrade-Schritte

1. Stellen Sie sicher, dass das neue Cisco IOS-Image (Cisco IOS-Softwareversion 15.1(2)SY1) auf dem Bootdisk und der Slavebootdisk vorhanden ist.

```
6K1#dir bootdisk: | in s2t54
   5  -rw-   120035816  Jan 23 2014 22:35:12 +00:00
s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   8  -rw-   119792104  Feb 10 2014 19:42:12 +00:00
s2t54-adventerprisek9-mz.SPA.151-2.SY.bin

6K1#dir slavebootdisk: | in s2t54
   5  -rw-   120035816  Jan 23 2014 22:26:14 +00:00
s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   8  -rw-   119792104  Feb 10 2014 19:46:14 +00:00
s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
```

2. (Optional) Verwenden Sie diese Befehle, um zu überprüfen, ob das VSS zur Ausführung des Aktualisierungsvorgangs bereit ist:
   show issu state detailRedundanz anzeigenshow module switch all6K1#**Show-Ausgabe-Statusdetails**

   Das System ist so konfiguriert, dass es im gestaffelten Modus aktualisiert wird.
   Zwei Supervisor-Knoten sind online.
   Zusammenfassung: Das System wird im Tandem-Modus aktualisiert.

```
               Slot = 1/2
          RP State = Active
         ISSU State = Init
       Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.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.151-2.SY.bin


               Slot = 2/2
          RP State = Standby
         ISSU State = Init
       Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.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.151-2.SY.bin


This system is Fex-capable


Fex-ID   ISSU Status

  110    FEX_INIT

6K1#

6K1#show redundancy
Redundant System Information :
------------------------------
      Available system uptime = 36 minutes
Switchovers system experienced = 0
             Standby failures = 0
       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 1/2
       Current Software state = ACTIVE
      Uptime in current state = 36 minutes
                Image Version = Cisco IOS Software, s2t54 Software
                (s2t54-ADVENTERPRISEK9-M),
                Version 15.1(2)SY, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 04-Sep-13 12:37 by prod_rel_team
                         BOOT = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;
                  CONFIG_FILE =
                      BOOTLDR =
       Configuration register = 0x2102

Peer Processor Information :
```

```
----------------------------
            Standby Location = slot 2/2
       Current Software state = STANDBY HOT
      Uptime in current state = 34 minutes
                Image Version = Cisco IOS Software, s2t54 Software
                 (s2t54-ADVENTERPRISEK9-M),
                Version 15.1(2)SY, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 04-Sep-13 12:37 by prod_rel_team
                          BOOT = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;
                   CONFIG_FILE =
                       BOOTLDR =
       Configuration register = 0x2102
```

3. Verwenden Sie den Befehl **issu loadversion**, um den Aktualisierungsvorgang zu starten.

   In diesem Schritt wird das VSS-Standby-Chassis neu gestartet, mit dem neuen Image neu geladen und als VSS-Standby-Chassis im SSO-Redundanzmodus initialisiert, um das neue Image auszuführen. Dieser Schritt ist abgeschlossen, wenn die Chassis-Konfiguration synchronisiert wurde, wie in der Meldung **Bulk sync Succeded (**Bulk synchronisiert**) angegeben**. Das Laden des neuen Images und der Wechsel des VSS-Standby-Chassis in den SSO-Modus kann mehrere Sekunden bis einige Minuten dauern.

```
6K1#issu loadversion 1/2 bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
2/2 slavebootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin

System configuration has been modified. Save? [yes/no]: yes
Building configuration...
[OK]
%issu loadversion initiated successfully, upgrade sequence will begin shortly


6K1#
*Feb 11 05:24:40.091: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion sequence
will begin in 60 seconds. Enter 'issu abortversion' to cancel.

*Feb 11 05:25:10.091: %ISSU_PROCESS-SW1-6-LOADVERSION_INFO: Resetting Standby shortly

<..output truncated..>

*Feb 11 05:29:46.075: %VS_GENERIC-SW1-6-VS_HA_HOT_STANDBY_NOTIFY: Standby switch
is in Hot Standby mode
*Feb 11 05:29:46.079: %HA_CONFIG_SYNC-SW1-6-BULK_CFGSYNC_SUCCEED: Bulk Sync succeeded
*Feb 11 05:29:46.079: %RF-SW1-5-RF_TERMINAL_STATE: Terminal state reached for (SSO)

*Feb 11 05:30:25.091: %ISSU_PROCESS-SW1-3-LOADVERSION: Loadversion has completed.
Please issue the 'issu runversion' command after all modules come online.

!
! Boot variable for standby should point to new Image in "show issu state detail" output.

6K1#show issu state det
        The system is configured to be upgraded in staggered mode.
        2 supervisor nodes are found to be online.
        Summary: an in-tandem upgrade is in progress.

               Slot = 1/2
          RP State = Active
         ISSU State = Load Version
```

```
      Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;
     Operating Mode = sso
     ISSU Sub-State = Load Version Completed
     Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
       Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
    Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin


               Slot = 2/2
         RP State = Standby
        ISSU State = Load Version
      Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
     Operating Mode = sso
     ISSU Sub-State = Load Version Completed
     Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
       Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
    Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin


This system is Fex-capable


Fex-ID   ISSU Status

 110    FEX_UPGRADE_INIT


6K1#show redundancy states
      my state = 13 -ACTIVE
    peer state = 8  -STANDBY HOT
          Mode = Duplex
          Unit = Secondary
       Unit ID = 18

Redundancy Mode (Operational) = sso
Redundancy Mode (Configured)  = sso
Redundancy State              = sso
    Maintenance Mode = Disabled
   Manual Swact = enabled
 Communications = Up

  client count = 144
 client_notification_TMR = 30000 milliseconds
         keep_alive TMR = 9000 milliseconds
       keep_alive count = 1
   keep_alive threshold = 19
          RF debug mask = 0x0
```

4. Wenn das VSS-Standby-Chassis das neue Image im SSO-Redundanzstatus erfolgreich ausführt und alle Linecards im VSS-Standby-Chassis aktiv und online sind, geben Sie den Befehl **issu runversion** ein, um einen Switchover zu erzwingen. Das aktualisierte VSS Standby-Chassis übernimmt das neue aktive Chassis und führt das neue Image aus. Das zuvor aktive Chassis wird neu geladen und als neues VSS-Standby-Chassis im SSO-Modus initialisiert, wobei das alte Image ausgeführt wird (falls das Software-Upgrade abgebrochen und das alte Image wiederhergestellt werden muss). Dieser Schritt ist abgeschlossen, wenn die Chassis-Konfiguration synchronisiert wurde, wie in der Meldung **Bulk sync Succeded (**Bulk synchronisiert**) angegeben**.

6K1#**issu-Runversion**

Dieser Befehl lädt die aktive Einheit neu.

```
Proceed ? [confirm]
%issu runversion initiated successfully

*Feb 11 05:35:19.035: %RF-SW1-5-RF_RELOAD: Self reload. Reason: Admin ISSU
runversion CLI
<..output truncated..>

Feb 11 05:35:21.411: %SYS-SW1-5-SWITCHOVER: Switchover requested by Exec.
Reload Reason: Admin ISSU runversion CLI.
Resetting .......

!
!Standby chassis now becomes active. Below logs are from new active switch.
!

Initializing as Virtual Switch ACTIVE processor
.
.

*Feb 11 05:37:36.107: %PFREDUN-SW2-6-ACTIVE: Standby initializing for SSO mode


*Feb 11 05:39:56.563: %HA_CONFIG_SYNC-SW2-6-BULK_CFGSYNC_SUCCEED: Bulk Sync succeeded
*Feb 11 05:39:56.563: %RF-SW2-5-RF_TERMINAL_STATE: Terminal state reached for (SSO)
*Feb 11 05:39:56.555: %PFREDUN-SW1_STBY-6-STANDBY: Ready for SSO mode in Default Domain

! Wait till all the modules and Fex Port-channel 99 links come up
!

*Feb 11 05:41:28.467: %ISSU_PROCESS-SW2-6-RUNVERSION_INFO: Runversion has completed.
Please issue the 'issu acceptversion' command
Feb 11 05:43:13.034: %LINK-3-UPDOWN: Interface TenGigabitEthernet1/0/2, changed
state to up (FEX-110)
Feb 11 05:43:14.033: %LINEPROTO-5-UPDOWN: Line protocol on Interface
TenGigabitEthernet1/0/2, changed state to up (FEX-110)
*Feb 11 05:43:14.491: %SATMGR-SW2-5-FABRIC_PORT_UP: SDP up on interface Te1/3/5,
connected to FEX 110, uplink 52
*Feb 11 05:43:14.491: %SATMGR-SW2-5-DUAL_ACTIVE_DETECT_CAPABLE: channel group 99
is now dual-active detection capable

6K1#show issu state
        The system is configured to be upgraded in staggered mode.
        2 supervisor nodes are found to be online.
        Summary: an in-tandem upgrade is in progress.

              Slot = 2/2
           RP State = Active
         ISSU State = Run Version
      Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12

              Slot = 1/2
           RP State = Standby
         ISSU State = Run Version
      Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;

This system is Fex-capable
```

```
Fex-ID   ISSU Status

 110    FEX_UPGRADE_INIT


6K1#show fex 110 detail
FEX: 110        Description: FEX0110     state: online
 FEX version: 15.0(2)EX2
 Extender Model: C6800IA-48TD, Extender Serial: FOC1736W1A6
 FCP ready: yes
 Image Version Check: enforced
 Fabric Portchannel Ports: 2
 Fabric port for control traffic: Te2/3/5
 Fabric interface state:
    Po99       - Interface Up.
    Te1/3/5    - Interface Up.      state: bound
    Te2/3/5    - Interface Up.      state: bound
```

5. Verwenden Sie den Befehl **issu accept**, um den Rollback Timer zu beenden. Dies ist erforderlich, da bei Ablauf des Timers das aktualisierte Chassis neu geladen und auf die vorherige Softwareversion zurückgesetzt wird.

```
6K1#issu acceptversion
% Rollback timer stopped. Please issue the 'issu commitversion' command.
```

6. Verwenden Sie den Befehl **issu runversion fex all**, um den Download- und Aktualisierungsvorgang für das Image auf dem FEX (6800IA) zu starten. Der FEX löst den Image-Download aus dem neuen Softwarepaket von Supervisor2T aus (hier Cisco IOS Softwareversion 15.2(2)SY1). Wenn Sie FEX-Stacks verwenden, ist der Master dafür verantwortlich, das Image auf seine Mitglieder zu extrahieren. Ein TFTP-Server wird mit 192.1.1.1 ausgeführt.

```
6K1#issu runversion fex all

% Successfully initiated 'runversion fex' for Fex IDs: 110.

Use 'show issu state' for more information.


6K1#show issu state det
        The system is configured to be upgraded in staggered mode.
        2 supervisor nodes are found to be online.
        Summary: an in-tandem upgrade is in progress.

              Slot = 2/2
         RP State = Active
        ISSU State = Run Version
      Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;bootdisk:
s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
     Operating Mode = sso
     ISSU Sub-State = Run Version Completed
     Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
       Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
```

```
    Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin


               Slot = 1/2
          RP State = Standby
         ISSU State = Run Version
       Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;
      Operating Mode = sso
      ISSU Sub-State = Run Version Completed
      Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
        Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
    Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin


This system is Fex-capable


Fex-ID   ISSU Status

  110    FEX_UPGRADE_IN_PROGRESS


Following are the logs on from FEX 6800IA console:

!

!192.1.1.1 is the tftp running on FEX controller i.e. VSS active and vlan 1012 is the
control vlan associated with fex.

!
FEX-110#
Loading c6800ia-universalk9-mz.150-2.EX4.bin from 192.1.1.1
(via Vlan1012):  !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
[OK - 15493122 bytes]

examining image...
extracting info (112 bytes)
extracting c6800ia-universalk9-mz.150-2.EX4/info (792 bytes)
extracting info (112 bytes)

Stacking Version Number: 1.55

System Type:             0x00000000
 Ios Image File Size:   0x00EB5200
 Total Image File Size: 0x00EC6A00
 Minimum Dram required: 0x08000000
 Image Suffix:          universalk9-150-2.EX4
 Image Directory:       c6800ia-universalk9-mz.150-2.EX4
 Image Name:            c6800ia-universalk9-mz.150-2.EX4.bin
 Image Feature:         IP|LAYER_2|SSH|3DES|MIN_DRAM_MEG=128
 FRU Module Version:    No FRU Version Specified

Old image for switch 1: flash:/c6800ia-universalk9-mz.150-2.EX2
 Old image will be left alone

Extracting images from archive into flash...

! The console will be waiting for about 5-10 minutes after the above line.

<output truncated>

New software image installed in flash:/c6800ia-universalk9-mz.150-2.EX4

Following are the logs from the 6500 Active supervisor:
```

```
*Feb 11 06:00:30.387: %SATMGR-SW2-5-ONLINE: FEX 110 online
*Feb 11 06:00:30.391: %SATMGR-SW2-5-FEX_MODULE_ONLINE: FEX 110, module 1 online
*Feb 11 06:00:30.395: %OIR-SW2-6-INSREM: Switch 110 Physical Slot 1 - Module
Type LINE_CARD  inserted
*Feb 11 06:00:30.951: %SATMGR-SW2-5-FABRIC_PORT_UP: SDP up on interface Te2/3/5,
connected to FEX 110, uplink 51
*Feb 11 06:00:30.951: %SATMGR-SW2-5-DUAL_ACTIVE_DETECT_CAPABLE: channel group
99 is now dual-active detection capable
*Feb 11 06:01:00.983: %OIR-SW2-6-SP_INSCARD: Card inserted in Switch_number =
110, physical slot 1, interfaces are now online


FEX-110#show ver | in image
System image file is "flash:/c6800ia-universalk9-mz.150-2.EX4/
c6800ia-universalk9-mz.150-2.EX4.bin"


6K1#show issu state det
        The system is configured to be upgraded in staggered mode.
        2 supervisor nodes are found to be online.
        Summary: an in-tandem upgrade is in progress.

              Slot = 2/2
         RP State = Active
        ISSU State = Run Version
     Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
    Operating Mode = sso
    ISSU Sub-State = Run Version Completed
    Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
      Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin


              Slot = 1/2
         RP State = Standby
        ISSU State = Run Version
     Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12;
    Operating Mode = sso
    ISSU Sub-State = Run Version Completed
    Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
      Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin


This system is Fex-capable


Fex-ID   ISSU Status

  110    FEX_UPGRADE_COMPLETE
```

7. Um fortzufahren, geben Sie den Befehl **issu Commitversion** ein, um das VSS Standby-Chassis zu aktualisieren und die ISSU-Sequenz abzuschließen. Das VSS-Standby-Chassis wird neu gestartet, mit dem neuen Image neu geladen und als VSS-Standby-Chassis im SSO-Redundanzstatus initialisiert, wobei das neue Image ausgeführt wird. Dieser Schritt ist abgeschlossen, wenn die Chassis-Konfiguration synchronisiert wurde, wie in der Meldung **Bulk sync Succeded** (**Bulk synchronisiert wurde**) angegeben, und alle Linecards auf dem neuen VSS-Standby sind aktiv und online.

```
6K1#issu commitversion
%issu commitversion initiated successfully, upgrade sequence will continue shortly


6K1#
*Feb 11 06:05:30.839: %ISSU_PROCESS-SW2-3-COMMITVERSION: issu commitversion;
Commitversion sequence will begin in 60 seconds. Enter 'issu abortversion'
to cancel.
*Feb 11 06:06:00.839: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO:
Resetting Standby shortly

*Feb 11 06:08:48.571: %PFREDUN-SW2-6-ACTIVE: Standby initializing for SSO mode
*Feb 11 06:09:01.163: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Standby has
come online, wait for terminal state
.
.
*Feb 11 06:10:41.267: %VS_GENERIC-SW2-6-VS_HA_HOT_STANDBY_NOTIFY: Standby switch
is in Hot Standby mode
*Feb 11 06:10:41.271: %HA_CONFIG_SYNC-SW2-6-BULK_CFGSYNC_SUCCEED:
Bulk Sync succeeded
*Feb 11 06:10:41.271: %RF-SW2-5-RF_TERMINAL_STATE: Terminal state reached for (SSO)

*Feb 11 06:10:46.403: %ISSU_PROCESS-SW2-6-COMMITVERSION_INFO: Upgrade has completed,
updating boot configuration

!

!Boot variable now displays both new and old image in ?show issu state detail? output.

!

6K1#show issu state detail
        The system is configured to be upgraded in staggered mode.
        2 supervisor nodes are found to be online.
        Summary: an in-tandem upgrade is in progress.

              Slot = 2/2
         RP State = Active
        ISSU State = Commit Version
     Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
    Operating Mode = sso
    ISSU Sub-State = Commit Version completed, waiting for system to settle
    Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
      Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin


              Slot = 1/2
         RP State = Standby
        ISSU State = Commit Version
     Boot Variable = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
    Operating Mode = sso
    ISSU Sub-State = Commit Version completed, waiting for system to settle
    Starting Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin
      Target Image = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin
   Current Version = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin


This system is Fex-capable
```

```
Fex-ID   ISSU Status

  110    FEX_UPGRADE_COMPLETE


6K1#show redundancy
Redundant System Information :
------------------------------
      Available system uptime = 1 hour, 28 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 2/2
       Current Software state = ACTIVE
      Uptime in current state = 36 minutes
                Image Version = Cisco IOS Software, s2t54 Software
(s2t54-ADVENTERPRISEK9-M), Version 15.1(2)SY1, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Thu 28-Nov-13 12:58 by prod_rel_team
                         BOOT = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
                  CONFIG_FILE =
                      BOOTLDR =
       Configuration register = 0x2102

Peer Processor Information :
------------------------------
             Standby Location = slot 1/2
       Current Software state = STANDBY HOT
      Uptime in current state = 1 minute
                Image Version = Cisco IOS Software, s2t54 Software (s2t54-ADVENTERPRISEK9-
M),
Version 15.1(2)SY1, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Thu 28-Nov-13 12:58 by prod_rel_team
                         BOOT = bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY1.bin,12;
bootdisk:s2t54-adventerprisek9-mz.SPA.151-2.SY.bin,12
                  CONFIG_FILE =
                      BOOTLDR =
       Configuration register = 0x2102
```

Überprüfen

Um zu überprüfen, ob das Upgrade erfolgreich war, verwenden Sie die folgenden Befehle:

- show issu state detail
- Redundanz anzeigen
- show module switch all

Der aktuelle Status nach dem ISSU-Prozess ist wie folgt:

- 6500 Chassis mit Switch-ID 2 ist aktiv, und der Switch mit ID 1 ist Standby (Hot). Sie sind jetzt mit der Cisco IOS Software Version 15.1(2)SY1 ausgestattet.
- Der Instant Access-Client (6800IA) führt die Cisco IOS-Softwareversion 15.0(2)EX4 aus.

```
6K1#show mod swi all
 Switch Number:     1   Role:  Virtual Switch Standby
---------------------  ---------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 2    5  Supervisor Engine 2T 10GE w/ CTS (Hot) VS-SUP2T-10G       SAL1632K9P2
 3   20  DCEF2T 4 port 40GE / 16 port 10GE      WS-X6904-40G       SAL1741E4ZA

Mod MAC addresses                       Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
 2  c471.fe7c.de96 to c471.fe7c.de9d   1.3   12.2(50r)SYS 15.1(2)SY1   Ok
 3  e02f.6d6a.698c to e02f.6d6a.699f   1.0   12.2(50r)SYL 15.1(2)SY1   Ok

Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ----------- ------- -------
 2  Policy Feature Card 4       VS-F6K-PFC4        SAL1637MCQQ  1.2    Ok
 2  CPU Daughterboard           VS-F6K-MSFC5       SAL1637MKX8  1.4    Ok
 3  Distributed Forwarding Card WS-F6K-DFC4-E      SAL1745FSD6  1.0    Ok

Mod  Online Diag Status
---- -------------------
 2  Pass
 3  Pass

 Switch Number:     2   Role:   Virtual Switch Active
---------------------  ---------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 2    5  Supervisor Engine 2T 10GE w/ CTS (Acti VS-SUP2T-10G       SAL1650UC8L
 3   20  DCEF2T 4 port 40GE / 16 port 10GE      WS-X6904-40G       SAL17173QD3

Mod MAC addresses                       Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
 2  2c54.2dc4.2f3a to 2c54.2dc4.2f41   1.4   12.2(50r)SYS 15.1(2)SY1   Ok
 3  70ca.9b8f.510c to 70ca.9b8f.511f   1.0   12.2(50r)SYL 15.1(2)SY1   Ok

Mod  Sub-Module                  Model              Serial       Hw     Status
---- --------------------------- ------------------ ----------- ------- -------
 2  Policy Feature Card 4       VS-F6K-PFC4        SAL1651UG8P  1.2    Ok
 2  CPU Daughterboard           VS-F6K-MSFC5       SAL1651UEBY  1.5    Ok
 3  Distributed Forwarding Card WS-F6K-DFC4-E      SAL17173QHY  1.2    Ok

Mod  Online Diag Status
---- -------------------
 2  Pass
 3  Pass

 Switch Number:   110   Role:                    FEX
---------------------  ---------------------------
Mod Ports Card Type                              Model              Serial No.
--- ----- ---------------------------------------- ------------------ -----------
 1   48  C6800IA 48GE                           C6800IA-48TD       FOC1736W1A6

Mod MAC addresses                       Hw    Fw           Sw           Status
--- ---------------------------------- ------ ------------ ------------ -------
```

```
 1  c025.5cc2.2d00 to c025.5cc2.2d33   0.0   Unknown      15.0(2)EX4   Ok

Mod  Online Diag Status
---- --------------------
 1  Pass

6K1#

6K1#show switch virtual
Switch mode                   : Virtual Switch
Virtual switch domain number : 100
Local switch number           : 2
Local switch operational role: Virtual Switch Active
Peer switch number            : 1
Peer switch operational role : Virtual Switch Standby
```