

Содержание

[Введение](#)

[Предварительные условия](#)

[Требования](#)

[Используемые компоненты](#)

[Процедура обновления](#)

[Первоначальная конфигурация](#)

[Шаги обновления](#)

[Проверка](#)

Введение

Этот документ описывает пошаговую процедуру In-Service Software Upgrade (ISSU) на коммутаторах Cisco Catalyst серии 6500 в режиме Системы виртуальной коммутации (VSS) с использованием Супервизора 2Т с размещенным двойным образом Cisco Catalyst 6800 Мгновенных Коммутаторов доступа подключенный (FEX).

Предварительные условия

Требования

Для этого документа отсутствуют особые требования.

Используемые компоненты

Сведения в этом документе основываются на коммутаторах Cisco Catalyst серии 6500 в режиме VSS, которые выполняют Supervisor Engine 2Т с размещенным двойным образом 6800IA подключенный на WS-X6904-40G линейных платах.

Сведения, представленные в этом документе, были получены от устройств, работающих в специальной лабораторной среде. Все устройства, описанные в этом документе, были запущены с чистой (стандартной) конфигурацией. В рабочей сети необходимо изучить потенциальное воздействие всех команд до их использования.

Процедура обновления

Первоначальная конфигурация

Процедура обновления выполнена для SY Выпуска 15.1 (2) программного обеспечения Cisco IOS к Выпуску 15.1 (2) SY1.

Вот статистические данные перед процессом ISSU:

- Шасси Catalyst 6500 с ID 1 Коммутатора Активно, и Коммутатор с ID 2 является (Горячим) Резервом.
- Оба из шасси подключены на Cisco IOS Software Release 15.1 (2) SY.
- Сингл 6800IA, который выполняет Cisco IOS Software Release 15.0 (2) EX2, связан с VSS на WS-X6904-40G линейных платах с двойным домашним соединением. Номер port-channel FEX равняется 99, и ID FEX равняется 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

```

Шаги обновления

1. Удостоверьтесь, что новый образ ПО Cisco IOS (Cisco IOS Software Release 15.1 (2) SY1) присутствует в загрузочном диске и slavebootdisk.

```

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. (Необязательно) Используют эти команды, чтобы проверить, что VSS готов выполнить процедуру обновления:
подробность show issu stateshow redundancыкоммутатор команды "show module" все6K1#show issu сообщают подробность

Система настроена, чтобы быть обновленной в ступенчатом режиме.
 Два узла супервизора, как находят, являются онлайнowymi.
 Сводка: система будет обновлена в режиме в тандеме.

```

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. Используйте команду `issu loadversion` для начала процесса обновления.

В этом шаге, перезагрузках резервного шасси VSS, повторных загрузках с новым образом, и инициализирует как резервное шасси VSS в режиме резервирования SSO, выполняя новый образ. Когда конфигурация стоек синхронизируется, как обозначено сообщением **Объемного синхронизования**, за которым следуют, этот шаг завершен. Могло бы потребоваться несколько секунд к нескольким минутам для нового образа для загрузки и для резервного шасси VSS к переходу к режиму SSO.

```
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. Когда резервное шасси VSS успешно выполняет новый образ в состоянии избыточности SSO, и все линейные платы на резервном шасси VSS являются подключенными и являются онлайнными, вводят команду **issu runversion** для принуждения переключателя. Обновленное резервное шасси VSS вступает во владение как новое активное шасси, выполняя новый образ. Раньше активное шасси повторно загружает и инициализирует как новое резервное шасси VSS в режиме SSO, выполняя старый образ (в случае, если обновление программного обеспечения должно быть прервано, и старый образ восстановлен). Когда конфигурация стоек синхронизируется, как обозначено сообщением **Объемного синхронизования, за которым следуют**, этот шаг завершен.

6K1#issu runversion

Эта команда повторно загрузит Активный модуль.

```
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. Используйте команду **issu acceptversion** для остановки Таймера Отката. Это необходимо, потому что, если таймер истекает, обновленное шасси перезагружается и возвращается к версии предшествующего программного обеспечения.

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

6. Используйте **issu runversion fex** вся команда для начала загрузки образа и процедуры обновления на FEX (6800IA). FEX инициирует загрузку образа от нового программного пакета Supervisor2T (здесь Cisco IOS Software Release 15.2 (2) SY1). При использовании стеки FEX, ведущее устройство ответственно для извлечения образа его участникам. Сервер TFTP достигает 192.1.1.1.

```
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.

```
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. Для продолжения введите команду **issu commitversion**, чтобы обновить резервное шасси VSS и завершить последовательность ISSU. Перезагрузки резервного шасси VSS, повторные загрузки с новым образом, и инициализируют как резервное шасси VSS в состоянии избыточности SSO, выполняя новый образ. Этот шаг завершен, когда конфигурация стоек синхронизируется, как обозначено сообщением **Объемного синхронизования, за которым следуют**, и все линейные платы на новом Резерве VSS являются подключенными и являются онлайнowymi.

```
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.SY1.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.SY1.bin,12
          CONFIG_FILE =
          BOOTLDR =
Configuration register = 0x2102

```

Проверка

Чтобы проверить, что обновление было успешно, используйте эти команды:

- **подробность show issu state**
- **show redundancy**
- **коммутатор команды "show module" все**

Вот текущее состояние после процесса ISSU:

- 6500 шасси с ID 2 Коммутатора Активны, и Коммутатор с ID 1 является (Горячим) Резервом. Они находятся теперь на версии программного обеспечения Cisco IOS 15.1 (2) SY1.
- Мгновенный клиент Доступа (6800IA) теперь выполняет Cisco IOS Software Release 15.0 (2) EX4.

```
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