

微型闪存升级程序

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简介

本文描述步骤升级在激活和备用Supervisor的N7K-SUP2/E Bootflash固件永久解决在软件缺陷讨论的固件问题[CSCus22805](#) : N7K-SUP2/E : eUSB闪存故障或无法保存配置。更改

背景信息

此步骤升级在两个Supervisor的Bootflash固件在连结7000个机箱，当在您的当前软件版本时。作为替代方案，您可以升级到NX-OS包含[CSCus22805](#)的固件修正的软件版本。

另一个选项是使用闪存恢复工具(下载的联机)并且能自动地改正所有单个闪存错误，当存在。这不是永久的修正。用本文突出显示的此步骤永久升级Bootflash固件，以便内置嵌入式闪存设备不再是易受RAID失败。

每个N7K Supervisor 2/2E配备有在RAID1配置，一主要的和一镜像的2个eUSB闪存设备。同时他们为启动镜像、启动配置和不变应用程序数据提供非易变信息库。

什么能发生在几个月内是或几年在使用中，这些设备之一可能从USB总线被断开，造成RAID软件从配置丢弃设备。设备能用1/2设备通常仍然作用。然而，当第二个设备退出阵列时，Bootflash被重登上如只读，含义我们不能保存配置或文件到Bootflash，或者请允许待机同步到在重新加载的事件的激活。

没有在运行在一双重闪存故障状态的系统的操作影响，然而受影响的Supervisor的重新加载是需要的从此状态恢复。此外，在断电情形下，对运行的配置的任何变化不会反射在启动上，并且丢失。

注意： [CSCus22805](#)只影响连结7000请运行从版本6.1(1)的NX-OS版本6.2(12)的Supervisor2 (N7K-SUP2)和Supervisor 2E (N7K-SUP2E)模块

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- Cisco 7000系列交换机，版本6.2(10)
- N7K SUP2

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

升级程序

1. 控制到激活和备用Supervisor。
2. 复制在激活和备用Supervisor上Bootflash的NX-OS 7.2(1)D1(1)。
3. 设置在待机的kickstart和系统引导变量为NX-OS 7.2(1)D1(1)。

```
N7K-1(config)# boot kickstart bootflash:n7000-s2-kickstart.7.2.1.D1.1.bin sup-2
Performing image verification and compatibility check, please wait...
Note: system and kickstart bootvars are pointing to incompatible images
```

```
N7K-1(config)# boot system bootflash:n7000-s2-dk9.7.2.1.D1.1.bin sup-2
Performing image verification and compatibility check, please wait...
```

4. 保存所有VDCs的配置并且确认在下次重新加载的引导变量设置为在备用Supervisor的NX-OS 7.2(1)D1(1)。

```
N7K-1# copy running-config startup-config vdc-all
[#####] 100%
Copy complete.
```

```
N7K-1# show mod
Mod  Ports  Module-Type                Model                Status
---  -
1    0      Supervisor Module-2       N7K-SUP2             active *
2    0      Supervisor Module-2       N7K-SUP2             ha-standby
4    48     1/10 Gbps Ethernet Module N7K-F248XP-25E      okN7K-1# show boot
Current Boot Variables:
```

```
sup-1
kickstart variable = bootflash:/n7000-s2-kickstart.6.2.10.bin
system variable = bootflash:/n7000-s2-dk9.6.2.10.bin
sup-2
kickstart variable = bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin
system variable = bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin
No module boot variable set
```

Boot Variables on next reload:

```
sup-1
kickstart variable = bootflash:/n7000-s2-kickstart.6.2.10.bin
system variable = bootflash:/n7000-s2-dk9.6.2.10.bin
sup-2
```

```
kickstart variable = bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin
system variable = bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin
```

No module boot variable set

5. 重新加载备用Supervisor。

```
N7K-1# reload module 2
```

```
This command will reboot standby supervisor module. (y/n)? [n] y
```

6. 备用Supervisor启动7.2(1)D1(1) kickstart镜像并且升级Bootflash固件。一旦备用Supervisor尝试启动7.2(1)D1(1)系统镜像，将检测版本不匹配并且重新加载与从激活的Supervisor的前一个镜像。

```
NX7k SUP BIOS version ( 2.12 ) : Build - 05/29/2013 11:58:20
PM FPGA Version : 0x00000022
Power sequence microcode revision - 0x00000009 : card type - 10156EEA0
Booting Spi Flash : Primary
CPU Signature - 0x000106e4: Version - 0x000106e0
CPU - 1 : Cores - 4 : HTEn - 1 : HT - 2 : Features - 0xbfebfbff
FSB Clk - 532 Mhz : Freq - 2154 Mhz - 2128 Mhz
MicroCode Version : 0x00000002
Memory - 12288 MB : Frequency - 1067 MHZ
Loading Bootloader: Done
IO FPGA Version : 0x1000c
PLX Version : 861910b5
Bios digital signature verification - Passed
USB bootflash status : [1-1:1-1]
```

```
Reset Reason Registers: 0x0 0x8
Filesystem type is ext2fs, partition type 0x83
```

```
GNU GRUB version 0.97
Autobooting bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin bootflash:/n7000-s2-dk
9.7.2.1.D1.1.bin...
Filesystem type is ext2fs, partition type 0x83
Booting kickstart image: bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin....
.....
Kickstart digital signature verification Successful
Image verification OK
```

```
INIT: version 2boot device node /dev/sdc
Bootflash firmware upgraded successfully
boot device node /dev/sdc
boot mirror device node /dev/sdb
Bootflash mirror firmware upgraded successfully
boot mirror device node /dev/sdb
obfl device node /dev/sda
OBFL firmware upgraded successfully
obfl device node /dev/sda
Checking obfl filesystem.r
Checking all filesystems..r.r.r.retval=[1]
r done.
Starting mcelog daemon
rCreating logflash directories
Loading system software
/bootflash//n7000-s2-dk9.7.2.1.D1.1.bin read done
System image digital signature verification successful.
Uncompressing system image: bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin Wed Mar 2 15:56:21 UTC 2016
blogger: nothing to do.
C
..done Wed Mar 2 15:56:27 UTC 2016
INIT: Entering runlevel: 3
```

7. 一旦备用Supervisor是回到HA待机状态，请更改引导变量回到正确NX-OS版本并且执行对故障切换的一个Supervisor切换Supervisor。

```
N7K-1# show module
Mod  Ports  Module-Type                Model                Status
----  -
1     0      Supervisor Module-2       N7K-SUP2             active *
2     0      Supervisor Module-2       N7K-SUP2             ha-standby
4     48     1/10 Gbps Ethernet Module N7K-F248XP-25E      ok
```

```
N7K-1(config)# boot kickstart bootflash:n7000-s2-dk9.6.2.10.bin sup-2
Performing image verification and compatibility check, please wait...
Note: system and kickstart bootvars are pointing to incompatible images
```

```
N7K-1(config)# boot system bootflash:n7000-s2-dk9.6.2.10.bin sup-2
Performing image verification and compatibility check, please wait...
```

```
N7K-1# copy running-config startup-config vdc-all
[#####] 100%
Copy complete.
```

```
N7K-1# system switchover
```

8. 确认上一个激活的Supervisor启动到HA待机状态并且设置在待机的引导变量为NX-OS 7.2(1)D1(1)。

```
N7K-1# show module
Mod  Ports  Module-Type                Model                Status
----  -
1     0      Supervisor Module-2       N7K-SUP2             ha-standby
2     0      Supervisor Module-2       N7K-SUP2             active *
4     48     1/10 Gbps Ethernet Module N7K-F248XP-25E      ok
```

```
N7K-1(config)# boot kickstart bootflash:n7000-s2-kickstart.7.2.1.D1.1.bin sup-1
Performing image verification and compatibility check, please wait...
Note: system and kickstart bootvars are pointing to incompatible images
```

```
N7K-1(config)# boot system bootflash:n7000-s2-dk9.7.2.1.D1.1.bin sup-1
Performing image verification and compatibility check, please wait...
```

9. 保存所有VDCs的配置并且确认在下次重新加载的引导变量设置为备用Supervisor的NX-OS 7.2(1)D1(1)。

```
N7K-1# copy running-config startup-config vdc-all
[#####] 100%
Copy complete.
```

```
N7K-1# show boot
```

```
Current Boot Variables: sup-1 kickstart variable = bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin
system variable = bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin sup-2 kickstart variable =
bootflash:/n7000-s2-kickstart.6.2.10.bin system variable = bootflash:/n7000-s2-dk9.6.2.10.bin No
module boot variable set Boot Variables on next reload: sup-1 kickstart variable =
bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin
system variable = bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin
```

```
sup-2
```

```
kickstart variable = bootflash:/n7000-s2-kickstart.6.2.10.bin
system variable = bootflash:/n7000-s2-dk9.6.2.10.bin
No module boot variable set
```

9. 重新加载备用Supervisor。

```
N7K-1# reload module 1
```

```
This command will reboot standby supervisor module. (y/n)? [n] y
```

10. 备用Supervisor将启动7.2(1)D1(1) kickstart镜像并且升级Bootflash固件。一旦备用Supervisor尝试启动7.2(1)D1(1)系统镜像将检测版本不匹配并且重新加载与从激活的Supervisor的前一个镜像。

```
NX7k SUP BIOS version ( 2.12 ) : Build - 05/29/2013 11:58:20 PM FPGA Version : 0x00000022 Power
sequence microcode revision - 0x00000009 : card type - 10156EAA0 Booting Spi Flash : Primary
CPU Signature - 0x000106e4: Version - 0x000106e0 CPU - 1 : Cores - 4 : HTEn - 1 : HT - 2 :
Features - 0xbfebfbbf FSB Clk - 532 Mhz : Freq - 2154 Mhz - 2128 Mhz MicroCode Version :
0x00000002 Memory - 12288 MB : Frequency - 1067 MHZ Loading Bootloader: Done IO FPGA
Version : 0x1000c PLX Version : 861910b5 Bios digital signature verification - Passed
USB bootflash status : [1-1:1-1] Reset Reason Registers: 0x0 0x8 Filesystem type is ext2fs,
partition type 0x83 GNU GRUB version 0.97 Autobooting bootflash:/n7000-s2-
kickstart.7.2.1.D1.1.bin bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin... Filesystem type is ext2fs,
partition type 0x83 Booting kickstart image: bootflash:/n7000-s2-kickstart.7.2.1.D1.1.bin....
.....
..... Kickstart digital signature verification
Successful Image verification OK ~ INIT: version 2boot device node /dev/sdc Bootflash firmware
upgraded successfully boot device node /dev/sdc boot mirror device node /dev/sdb Bootflash
mirror firmware upgraded successfully boot mirror device node /dev/sdb obfl device node /dev/sda
OBFL firmware upgraded successfully obfl device node /dev/sda
Checking obfl filesystem.r
Checking all filesystems..r.r.r.retval=[1]
r done.
Starting mcelog daemon
rCreating logflash directories
Loading system software
/bootflash//n7000-s2-dk9.7.2.1.D1.1.bin read done
System image digital signature verification successful.
Uncompressing system image: bootflash:/n7000-s2-dk9.7.2.1.D1.1.bin Wed Mar 2 15:56:21 UTC 2016
blogger: nothing to do.
C
```

11. 当备用Supervisor回到HA待机状态，您将要更改引导变量回到NX-OS 6.2(10)和保存配置。

```
N7K-1# show module
Mod  Ports  Module-Type                Model                Status
---  ---
1    0      Supervisor Module-2       N7K-SUP2             ha-standby
2    0      Supervisor Module-2       N7K-SUP2             active *
4    48     1/10 Gbps Ethernet Module N7K-F248XP-25E      ok
```

```
N7K-1(config)# boot kickstart bootflash:n7000-s2-dk9.6.2.10.bin sup-2
Performing image verification and compatibility check, please wait....
Note: system and kickstart bootvars are pointing to incompatible images
```

```
N7K-1(config)# boot system bootflash:n7000-s2-dk9.6.2.10.bin sup-2
Performing image verification and compatibility check, please wait....
```

```
N7K-1# copy running-config startup-config vdc-all
[#####] 100%
Copy complete.
```

12. 一旦完成在vPC复杂的一个成员的上述步骤，您将要验证服务和继续执行在vPC对的第二个成员的同一步骤。

警告

步骤要求非中断的Supervisor切换。然而，在更改窗口时执行这些步骤，为了避免所有惊奇是可行的。

相关信息

- [Field Notice : FN - 63975](#) -连结7000 Supervisor2和2E被嵌入的闪存写错误
- [连结7000 Supervisor2闪存恢复工具](#)。欲了解更详细的信息请参阅在tarfile的Flash_Recovery_Tool_ReadMe文件。
- [技术支持和文档 - Cisco Systems](#)