

# Execute a Recuperação de desastres NC 6000 sem usar o USB

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## Introdução

Este documento descreve uma maneira de recuperar o sistema 6000 da convergência de rede (NCS6K) depois que elevação falhada sem usar uma movimentação USB. A recuperação com movimentação USB exige o acesso físico ao dispositivo que na maioria das vezes pode ser um desafio e demorado.

O procedimento descrito neste documento usaria uma máquina de Linux que atua como um TFTP e um servidor DHCP para recuperar o NCS6K através da porta Ethernet de gerenciamento RP.

## Pré-requisitos

### Requisitos

Cisco recomenda que você tem o conhecimento básico de Linux, de TFTP, de DHCP e de Cisco XR CLI.

### [Componentes Utilizados](#)

Este documento é restringido à plataforma NCS6K.

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. Todos os dispositivos utilizados neste documento foram iniciados com uma configuração (padrão) inicial. Se a sua rede estiver ativa, certifique-se de que entende o impacto potencial de qualquer comando.

## Procedimento passo a passo

1. Transfira o arquivo exigido da bota XR USB da site da Cisco na Web.
2. Transfira arquivos pela rede o arquivo zip transferido ao servidor Linux e abrir-lo o zíper em /tftpboot:

```
root@xxxxr:/tftpboot# unzip ncs6k-usb-boot-5.2.3.zip
```

```
Archive: ncs6k-usb-boot-5.2.3.zip
  inflating: EFI/boot/bootx64.efi
  inflating: EFI/boot/grub.cfg
  inflating: boot/install-image.iso
```

### 3. Encontre o MAC address da porta Ethernet de gerenciamento do route processor (RP) NCS6K. Pode-se encontrar nos logs do console:

```
Press F12 to go to Boot Manager..
```

```
Booting System Host OS..
Verifying Image for Secure Boot failed with status 15
```

```
System Host OS boot failed.
```

```
Booting Int Network 0 for IPv4 (4C-4E-35-B6-63-33)..
>>Start PXE over IPv4.
  PXE-E18: Server response timeout.
```

```
Int Network 0 for IPv4 (4C-4E-35-B6-63-33) boot failed.
```

```
Booting Ext Network 0 for IPv4 (4C-4E-35-B6-63-33)..
```

### 4. Adicionar o seguinte ao arquivo dhcpd.conf. Isto atribuirá um endereço IP estático à porta Ethernet do mgmt RP ao carreg (por exemplo: 10.48.32.160):

```
root@xxrx:/tftpboot/0A3020A0# cat /etc/dhcp/dhcpd.conf
```

```
allow bootp;
allow booting;
```

```
subnet 10.48.32.0 netmask 255.255.255.0 {

    option routers 10.48.32.1;
    next-server 10.48.32.93;
    host pani0-rp {
        hardware ethernet 4c:4e:35:b6:63:33;
        fixed-address 10.48.32.160;
        filename "EFI/boot/bootx64.efi" ;
    }
}
```

**Note:** 10.48.32.93 é o endereço TFTP e de servidor DHCP.

### 5. Faça uma cópia de grub.cfg (arquivo gerado em etapa 2). Nomeie o arquivo depois que o endereço IP de Um ou Mais Servidores Cisco ICM NT NCS6K obterá do DHCP:

```
root@xxrx:/tftpboot# cp /tftpboot/EFI/boot/grub.cfg /tftpboot/10.48.32.160.cfg
```

### 6. Edite o arquivo gerado acima para assegurar-se de que o ISO esteja escolhido da rede (remova a condução/):

```
root@xxrx:/tftpboot# diff /tftpboot/EFI/boot/grub.cfg /tftpboot/10.48.32.160.cfg
11,12c11,12
```

```
<         echo "Booting from USB.."
<         loopback loop /boot/install-image.iso
```

```
---
```

```
>         echo "Booting from network.."
>         loopback loop boot/install-image.iso
```

Para 5.2.3, olharia qualquer outra coisa semelhante:

```
root@xxrx:/tftpboot# cat /tftpboot/10.48.32.160.cfg
set default=0
```

```
serial --unit=0 --speed=115200
```

```
terminal_input console
terminal_output serial
```

```
set timeout=2
```

```

menuentry "System Install OS" {
    echo "Booting from network..."
    loopback loop boot/install-image.iso
    root=loop
    echo "Loading Kernel.."
    linux (loop)/boot/bzImage root=/dev/ram install=/dev/sda console=ttyS0,115200
prod=1 crashkernel=192M@0 bigphysarea=10M quiet pci=assign-busses noissu aer=off
pci=hpmemsize=0M,hpiosize=0M
    echo "Loading initrd.."
    initrd (loop)/boot/initrd.img signfile=/boot/signature.initrd.img
}

```

7. A configuração no servidor Linux está completa. Na tentativa seguinte da bota PXE, o DHCP atribuirá 10.48.32.160 ao NCS6K RP. Obterá então a larva .efi e .cfg usando o TFTP. Após isto, a LARVA começaria automaticamente e carregaria o ISO usando o TFTP.

**Note:** O arquivo ISO é normalmente em torno de 700Mb. Tomará alguma hora (até os minutos 10) após “carreg da rede.” a mensagem é indicada. Termine logs da atividade:

```

Cisco BIOS version : SB.Panini.0014.00
BIOS Build Date : 07/10/2014 by lchinnad
System Memory Speed : 1600 MHz
Processor Type : Intel(R) Xeon(R) CPU E5-2448L @ 1.80GHz

```

Press F12 to goto Boot Manager..

Booting System Host OS..

Verifying Image for Secure Boot failed with status 15

System Host OS boot failed.

Booting Int Network 0 for IPv4 (4C-4E-35-B6-63-33)..

**Start PXE over IPv4.**

PXE-E18: Server response timeout.

Int Network 0 for IPv4 (4C-4E-35-B6-63-33) boot failed.

Booting Ext Network 0 for IPv4 (4C-4E-35-B6-63-33)..

**Start PXE over IPv4.**

Station IP address is 10.48.32.160

Server IP address is 10.48.32.93

NBP filename is bootx64.efi

Downloading NBP file...

Succeed to download NBP file.

GNU GRUB version 2.00

Press F2 to goto grub Menu..

Booting from network..

[ 6.338259] i8042: No controller found

Starting udev: [ OK ]

Actual changes:

large-receive-offload: off [requested on]

ntuple-filters: on

Setting hostname host: [ OK ]

Checking filesystems:[ OK ]

Remounting root filesystem in read-write mode: [ OK ]

Entering non-interactive startup

Bringing up loopback interface: [ OK ]

Starting system logger: [ OK ]

Starting kernel logger: [ OK ]

```
Starting kdump:[ OK ]
Starting system message bus: [ OK ]
Starting smartd: [ OK ]
Generating SSH1 RSA host key: [ OK ]
Generating SSH2 RSA host key: [ OK ]
Generating SSH2 DSA host key: [ OK ]
Starting sshd: [ OK ]
Starting xinetd: [ OK ]
Checking PCI block device /dev/sdb disk space
Thu Jun 25 14:07:13 UTC 2015: Detected /iso/host.iso
mount: block device /iso/host.iso is write-protected, mounting read-only
Thu Jun 25 14:07:13 UTC 2015: Mounted /iso/host.iso to /tmp/isomnt.iV1833
Thu Jun 25 14:07:13 UTC 2015: Found /tmp/isomnt.iV1833/rpm/ncs6k-sysadmin-hostos.all-5.2.3-Default.x86_64.rpm in host.iso
Thu Jun 25 14:07:13 UTC 2015: Installing /tmp/isomnt.iV1833/rpm/ncs6k-sysadmin-hostos.all-5.2.3-Default.x86_64.rpm
Preparing packages for installation...
ncs6k-sysadmin-hostos.all-5.2.3-Default.x86_64
hushd_static: no process killed
hushd restarted
Thu Jun 25 14:07:13 UTC 2015: Did not detect new pxe install script, keep going with old xrnginstall
Thu Jun 25 14:07:13 UTC 2015: Running in Data LV support model
/etc/rc3.d/S60xrnginstall: line 239: SIMULATION: readonly variable
Thu Jun 25 14:07:13 UTC 2015: Prepping System with calvados.iso
Thu Jun 25 14:07:13 UTC 2015: Installer will install image on sda
Thu Jun 25 14:07:13 UTC 2015: Running in LVM support model
Thu Jun 25 14:07:15 UTC 2015: Partition creation on /dev/sda took 1 seconds
Thu Jun 25 14:07:15 UTC 2015: File system creation on /dev/sda1 took 0 seconds
Thu Jun 25 14:07:15 UTC 2015: Install host image on /dev/sda1
Thu Jun 25 14:07:23 UTC 2015: Installing host image size of 183M took 8 seconds
Thu Jun 25 14:07:33 UTC 2015: File system creation on /dev/sda2 took 4 seconds
Thu Jun 25 14:08:38 UTC 2015: Copying XR iso to repository took 65 seconds
Partitioning PCI block device /dev/sdb
Added VLAN with VID == 513 to IF -:eth-pf1:-
Thu Jun 25 14:08:40 UTC 2015: Copying boot/install-image.iso from tftpserver 10.48.32.93
Thu Jun 25 14:16:58 UTC 2015: Copying Pxeboot files from tftpserver 10.48.32.93 took 498 seconds
Thu Jun 25 14:17:28 UTC 2015: File system creation on /dev/panini_vol_grp/calvados_lv0 took 5 seconds
Thu Jun 25 14:17:28 UTC 2015: Install sysadmin-vm image on /dev/panini_vol_grp/calvados_lv0
mount: block device /iso/ncs6k-sysadmin.iso is write-protected, mounting read-only
Thu Jun 25 14:17:35 UTC 2015: sysadmin-vm: RP based installation
Thu Jun 25 14:18:22 UTC 2015: Installing sysadmin-vm image size of 444M took 54 seconds
Install EFI on /dev/sda4
Thu Jun 25 14:18:24 UTC 2015: Install finished on sda
Resetting BIOS Boot Mode register ...
Automatic rebooting system after installation ...

Cisco BIOS version : SB.Panini.0014.00
BIOS Build Date : 07/10/2014 by lchinnad
System Memory Speed : 1600 MHz
Processor Type : Intel(R) Xeon(R) CPU E5-2448L @ 1.80GHz

Press F12 to goto Boot Manager..

Booting System Host OS..

GNU GRUB version 2.00
Press F2 to goto grub Menu..
Booting from Disk..
Loading Kernel..
Loading initrd..
Starting udev: [ OK ]
```

```
Setting hostname sysadmin-vm: [ OK ]
Checking filesystems:[ OK ]
Mount /dev/vdd at /misc/disk1
Entering non-interactive startup
Bringing up loopback interface: [ OK ]
Starting system logger: [ OK ]
Starting kernel logger: [ OK ]
Starting system message bus: [ OK ]
Starting smartd: [FAILED]
Generating SSH1 RSA host key: [ OK ]
Generating SSH2 RSA host key: [ OK ]
Generating SSH2 DSA host key: [ OK ]
Starting sshd: [ OK ]
Starting xinetd: [ OK ]
Starting crond: [ OK ]
Starting libvirtd daemon: [ OK ]
Starting NCS6k programs for RP on sysadmin-vm: [ OK ]
starting pm
sysadmin_startup: Starting Cisco Login Program on ttyS0
sysadmin initialized
sysadmin_startup: Starting Cisco Login Program on ttys1
sysadmin initialized
```

```
0_0_0Jun 25 14:19:32 : Send To Helper Failed - Msg : aaad[2600]: %MGBL-AAAD-7-DEBUG : AAA
Init successful
0_0_0Jun 25 14:19:33 : Send To Helper Failed - Msg : vm_manager[2628]: %INFRA-VM_MANAGER-4-
INFO : Info: VM Manager started. arguments -W
0_0_0Jun 25 14:19:34 : Send To Helper Failed - Msg : sdr_mgr[2619]: %SM-SDR_MANAGER-4-INFO
: Info: SDR Manager started.
```

SYSTEM IS NOT READY FOR LOGIN

!!!NO root-system username is configured. Need to configure root-system username!!!

--- Administrative User Dialog ---

```
Enter root-system Username: 0_0_0Jun 25 14:20:58 : Send To Helper Failed - Msg :
plx_fpd[2616]: %INFRA-FPD_Driver-1-UPGRADE_ALERT : Driver missing fpd obfl log function for
fpd PLX-8748, FPD init continues but debugability impacted
0/RP0/ADMIN0:Jun 25 14:20:58.410 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT0-PM0:
0/RP0/ADMIN0:Jun 25 14:20:58.417 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT0-PM1:
0/RP0/ADMIN0:Jun 25 14:20:58.418 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT0-PM2:
0/RP0/ADMIN0:Jun 25 14:20:58.434 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT3-PM0:
0/RP0/ADMIN0:Jun 25 14:20:58.445 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT3-PM1:
0/RP0/ADMIN0:Jun 25 14:20:58.451 : envmon[2609]: %PKT_INFRA-FM-4-FAULT_MINOR : ALARM_MINOR
:Unsupported power module detected :DECLARE :0/PT3-PM2:
0/RP0/ADMIN0:Jun 25 14:20:58.517 : zen[2630]: %INFRA-FPD_Driver-1-UPGRADE_ALERT : Driver
missing fpd obfl log function for fpd CPU Complex FPGA, FPD init continues but debugability
impacted
```

Enter root-system Username: root

Enter secret:

Enter secret again:

Successfully created root-system user

System Admin Username: root

Password:

root connected from 127.0.0.1 using console on sysadmin-vm:0\_RP0

sysadmin-vm:0\_RP0# show platform

Thu Jun 25 14:21:33.150 UTC

Location	Card Type	HW State	SW State	Config State
0/1	NC6-60X10GE-M-S	POWERED_ON	SW_INACTIVE	NSHUT
0/7	NC6-10X100G-M-P	POWERED_ON	SW_INACTIVE	NSHUT
0/RP0	NC6-RP	OPERATIONAL	OPERATIONAL	NSHUT
0/RP1	NC6-RP	POWERED_ON	SW_INACTIVE	NSHUT
0/FC0	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/FC1	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/FC2	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/FC3	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/FC4	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/FC5	P-L-FC-S	POWERED_ON	N/A	NSHUT
0/CI0	NCS-CRFT=	OPERATIONAL	N/A	NSHUT
0/FT0	NC6-FANTRAY	OPERATIONAL	N/A	NSHUT
0/FT1	NC6-FANTRAY	OPERATIONAL	N/A	NSHUT
0/PT0	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT
0/PT1	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT
0/PT2	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT
0/PT3	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT
0/PT4	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT
0/PT5	NCS-AC-PWRTRAY	OPERATIONAL	N/A	NSHUT

Após alguma hora, outros RP e placas de linha igualmente começarão carreg.