

# CN8K 系列交换机升级手册

(SoftwareVersion: 7.3.14)

2023 年 11 月

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## 1、适用产品型号：

CN8K 系列：CN8696Q；CN8672；

## 2、适用环境：

适用于 CN8K 系列交换机下挂设备均通过双上联的方式连接到一组 CN8K 系列交换机上；对于单链路设备，建议先对其进行双链路改造；

## 3、软件镜像相关信息：

### 3.1 文件大小及 MD5 值

#### 3.1.1 软件版本构成

Kickstart-image 名称为：cn8000-uk9-kickstart.7.3.14.N1.1.bin

System-image 名称为：cn8000-uk9.7.3.14.N1.1.bin

#### 3.1.2 MD5 值：

可通过 show file bootflash: cn8000-uk9.7.3.14.N1.1.bin md5sum 命令获取到版本 MD5 值。MD5:

KickStart: 9b7f513f459157ff22ec82012ae5aedb

System-image: 9dc79cf222175ed56ab6c4c276ea4659

## 4、传输镜像：

### 4.1 通过 FTP/TFTP 传输镜像：

4.1.1 电脑侧开启 FTP-Server 或 Tftp-server；推荐使用 FTP-server

4.1.2 通过命令使用交换机下载 image

示例：`copy ftp://192.168.1.1/cn8000-uk9-kickstart.7.3.14.N1.1.bin bootflash:// vrf management`

### 4.2 通过 SFTP 传输镜像(推荐)：

4.2.1 交换机侧开始 SFTP-Server：

Feature sftp-server

```
CN8672up-1(config)# feature sftp-server
CN8672up-1(config)#
```

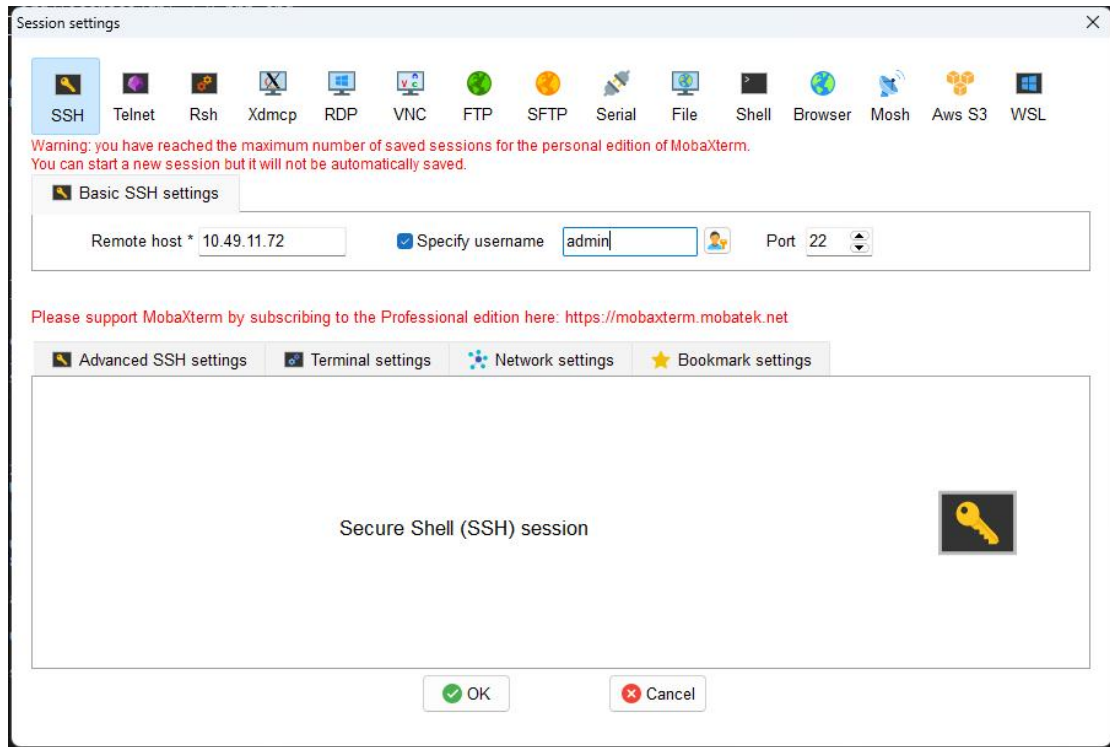
4.2.2 Sftp 软件推荐

Windows: winscp、FileZilla、MobaXterm 等

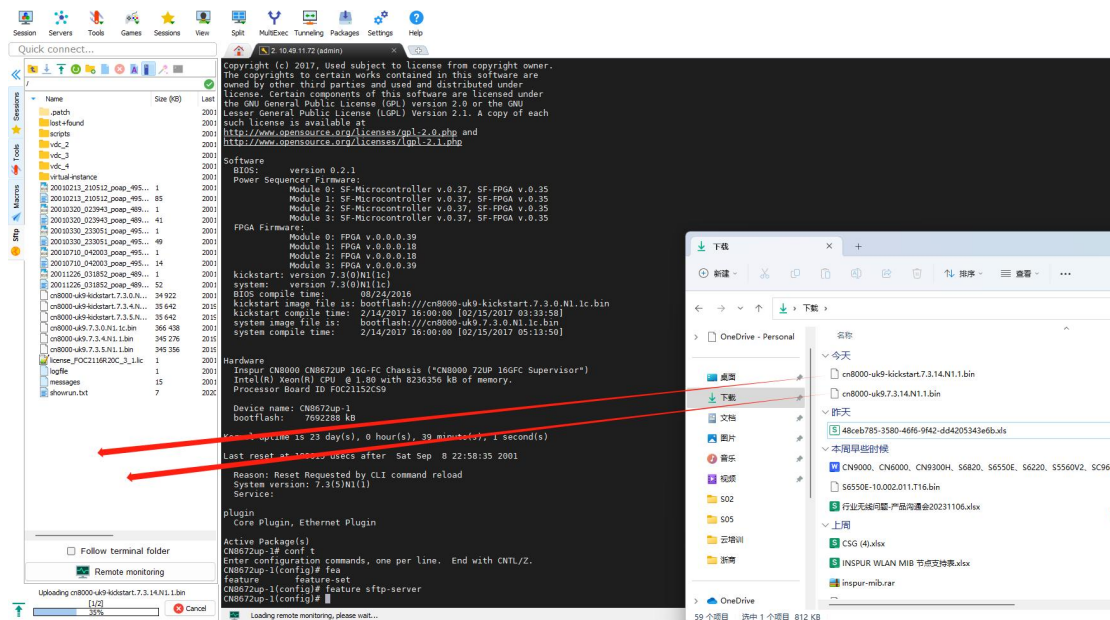
MAC: Filezilla 等

## 4.2.3 使用 MobaXterm 上传镜像

### (1) 选择确定连接设备



### (2) 通过拖拽的方式触发上传任务



## 4.2.4 使用 Filezilla 上传镜像

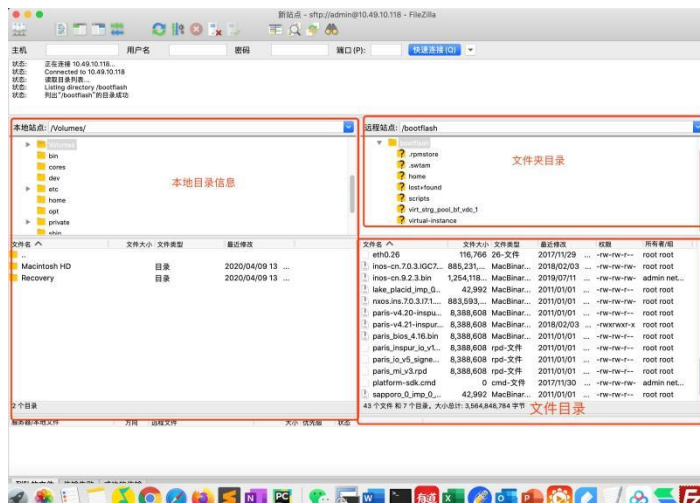
### (3) 新建站点，选择 SFTP 协议，填写设备地址及端口号 22，账户及密码，选择连接



(4) 选择确定连接设备

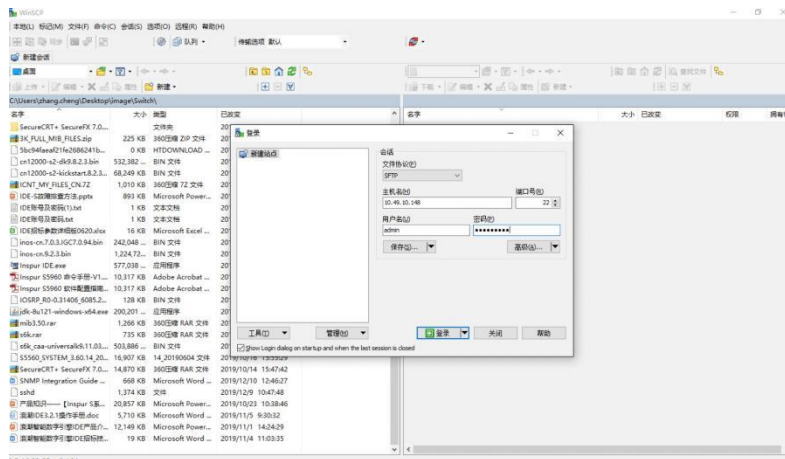


(5) 选择本地目录，通过拖拽的方式触发上传任务

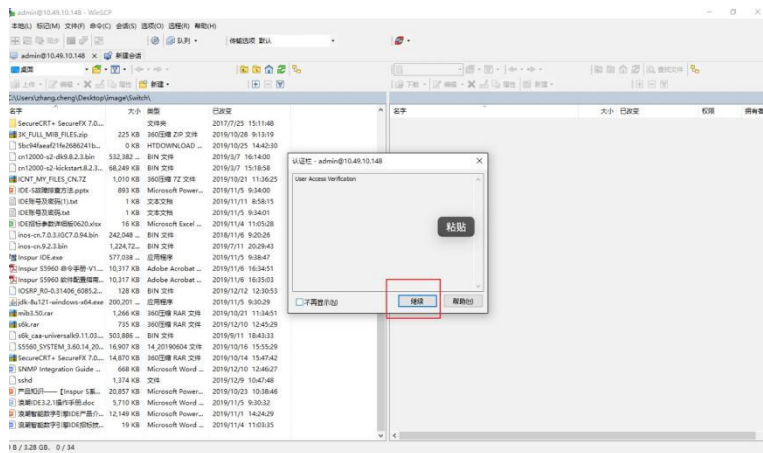


4.2.5 使用 winscp 上传镜像

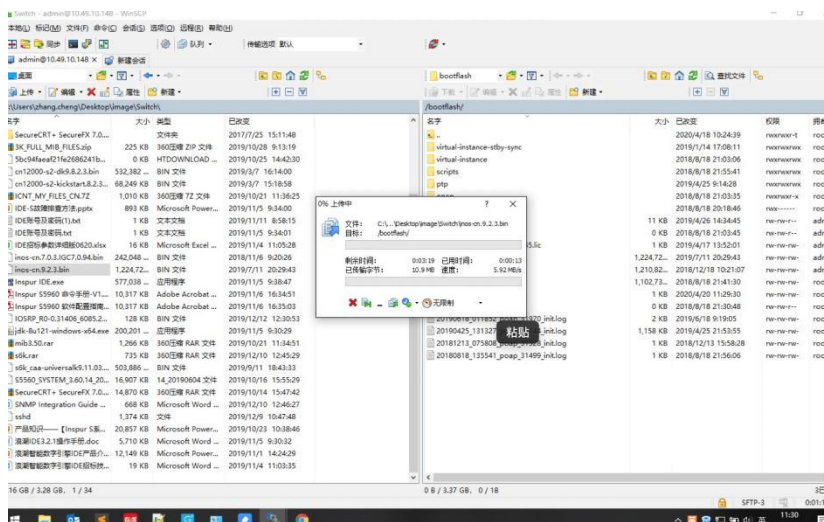
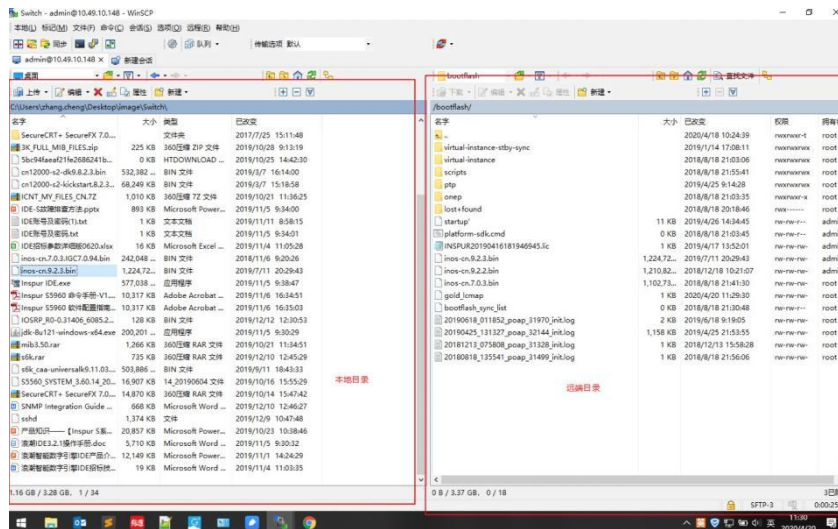
(1) 新建站点



(2) 部分设备连接会提示该信息，选择继续



(3) 选择本地镜像存放目录，拖拽上传



## 5、升级步骤：

### 5.1 升级前准备工作

#### 5.1.1 上传镜像至设备内部，校验版本信息；

#### 5.1.2 配置保存，通过日志的方式对 show running-config 信息进行采集；

#### 5.1.3 收集设备状态信息

Show ip arp / show ip arp sum

Show mac address-table counter / show mac address-table

Show cdp neighbor / show lldp neighbor

Show interface counter brief

Show vpc

### 5.2 vPC 组网，逐台设备升级

优先升级备设备，当升级完成且确保业务稳定后，按照备设备升级步骤升级主设备。

#### 5.2.1 关闭备设备上、下行接口，关闭 vPC 进程；



5.2.2 删除启动项:

Switch(config)#no boot kickstart

Switch(config)#no boot system

5.2.3 保存配置, 检查确认并重启

```
CN8672up-1# conf t
Enter configuration commands, one per line. End with CNTL/Z.
CN8672up-1(config)# no boot kickstart
CN8672up-1(config)# no boot system
CN8672up-1(config)# copy r s
[#####] 100%
Copy complete, now saving to disk (please wait)...
CN8672up-1(config)# show boot
Current Boot Variables:

kickstart variable not set
system variable not set
Boot POAP Disabled

Boot Variables on next reload:

kickstart variable not set
system variable not set
Boot POAP Disabled
CN8672up-1(config)#
```

5.2.4 加载镜像:

```
loader> boot cn8000-uk9-kickstart.7.3.14.N1.1.bin cn8000-uk9.7.3.14.N1.1.bin
Booting kickstart image: bootflash:cn8000-uk9-kickstart.7.3.14.N1.1.bin
.....
.....Image verification OK

Booting kernel
█
```



```

CN8672up-1# show ver
Network Operating System-Cloud Network (NOS-CN) Software
For technical support, contact - Helpline 400-691-1766
Documents: http://www.icntnetworks.com
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The copyrights to certain works contained in this software are
owned by other third parties and used and distributed under
license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php

Software
BIOS: version 0.2.1
Power Sequencer Firmware:
Module 0: SF-Microcontroller v.0.37, SF-FPGA v.0.35
FPGA Firmware:
Module 0: FPGA v.0.0.0.39
kickstart: version 7.3(14)N1(1)
system: version 7.3(14)N1(1)
BIOS compile time: 08/24/2016
kickstart image file is: bootflash:///cn8000-uk9-kickstart.7.3.14.N1.1.bin
kickstart compile time: 7/31/2023 10:00:00 [07/31/2023 22:21:31]
system image file is: bootflash:///cn8000-uk9.7.3.14.N1.1.bin
system compile time: 7/31/2023 10:00:00 [08/01/2023 01:19:00]

Hardware
Inspur CN8000 CN8672UP 16G-FC Chassis ("CN8000 72UP 16GFC Supervisor")
Intel(R) Xeon(R) CPU @ 1.80 with 8236336 kB of memory.
Processor Board ID F0C21152CS9

Device name: CN8672up-1
bootflash: 7692288 kB

Kernel uptime is 0 day(s), 0 hour(s), 4 minute(s), 23 second(s)

Last reset at 674146 usecs after Tue Oct 2 00:08:53 2001

Reason: Reset Requested by CLI command reload
System version: 7.3(0)N1(1c)
Service:

plugin
Core Plugin, Ethernet Plugin

Active Package(s)
CN8672up-1#
    
```

### 5.2.5 重新加载镜像

```

CN8672up-1(config)# boot kickstart bootflash:///cn8000-uk9-kickstart.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
CN8672up-1(config)# boot system bootflash:///bootflash:///cn8000-uk9.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
Failed to configure bootvar system for sup-1: No such file or directory (0x807B0002)
CN8672up-1(config)# boot system bootflash:///cn8000-uk9.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
CN8672up-1(config)# copy r s
[#####] 100%
Copy complete.
CN8672up-1(config)# show boot
Current Boot Variables:

kickstart variable = bootflash:/cn8000-uk9-kickstart.7.3.14.N1.1.bin
system variable = bootflash:/cn8000-uk9.7.3.14.N1.1.bin
Boot POAP Disabled

Boot Variables on next reload:

kickstart variable = bootflash:/cn8000-uk9-kickstart.7.3.14.N1.1.bin
system variable = bootflash:/cn8000-uk9.7.3.14.N1.1.bin
Boot POAP Disabled
CN8672up-1(config)#
    
```

### 5.2.6 开启 vPC 进程;

5.2.7 在 vPC 进程协商完成后，打开上行接口（该过程接口会被 VPC suspense 120s 左右，需要进行等待接口 UP）;

5.2.8 等待上行接口 UP 后，打开下行接口

5.2.9 确认设备升级完成后，按照以上步骤对另外一台 CN8K 交换机进行操作。

## 5.3 主备同时升级

### 5.3.1 删除设备启动项

Switch(config)#no boot kickstart

Switch(config)#no boot system

### 5.3.2 检查确认并重启

```

CN8672up-1# conf t
Enter configuration commands, one per line. End with CNTL/Z.
CN8672up-1(config)# no boot kickstart
CN8672up-1(config)# no boot system
CN8672up-1(config)# copy r s
[#####] 100%
Copy complete, now saving to disk (please wait)...
CN8672up-1(config)# show boot
Current Boot Variables:

kickstart variable not set
system variable not set
Boot POAP Disabled

Boot Variables on next reload:

kickstart variable not set
system variable not set
Boot POAP Disabled
CN8672up-1(config)#
    
```

### 5.3.3 重新加载镜像

```

loader> boot cn8000-uk9-kickstart.7.3.14.N1.1.bin cn8000-uk9.7.3.14.N1.1.bin
Booting kickstart image: bootflash:cn8000-uk9-kickstart.7.3.14.N1.1.bin
.....
.....Image verification OK

Booting kernel
█
    
```

```

loader> boot cn8000-uk9-kickstart.7.3.14.N1.1.bin cn8000-uk9.7.3.14.N1.1.bin
Booting kickstart image: bootflash:cn8000-uk9-kickstart.7.3.14.N1.1.bin
.....
.....Image verification OK

Booting kernel
█
    
```

```

CN8672up-1(config)# boot kickstart bootflash:///cn8000-uk9-kickstart.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
CN8672up-1(config)# boot system bootflash:///bootflash:///cn8000-uk9.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
Failed to configure bootvar system for su-1: No such file or directory. (0x807B0002)
CN8672up-1(config)# boot system bootflash:///cn8000-uk9.7.3.14.N1.1.bin
Warning: Changing bootvariables and reloading is not recommended on this platform. Use install all command for NOS-CN upgrades/downgrades.
Performing image verification and compatibility check,please wait...
CN8672up-1(config)# copy r s
[#####] 100%
Copy complete.
CN8672up-1(config)# show boot
Current Boot Variables:

kickstart variable = bootflash:/cn8000-uk9-kickstart.7.3.14.N1.1.bin
system variable = bootflash:/cn8000-uk9.7.3.14.N1.1.bin
Boot POAP Disabled

Boot Variables on next reload:

kickstart variable = bootflash:/cn8000-uk9-kickstart.7.3.14.N1.1.bin
system variable = bootflash:/cn8000-uk9.7.3.14.N1.1.bin
Boot POAP Disabled
CN8672up-1(config)#
    
```

### 5.3.4 检查两台设备配置信息及相关状态

## 6、回退方案

### 6.1 镜像加载失败

#### 6.1.1 记录完整信息

#### 6.1.2 使用原有版本重新加载设备

#### 6.1.3 在窗口期充足时，再次进行新版本升级

### 6.2 配置丢失

#### 6.2.1 使用保存配置，重新刷入设备

### 6.3 硬件损坏无法正常启动

#### 6.3.1 备件设备升级至需要使用的版本；

#### 6.3.2 将故障设备的配置导入至备件设备；

#### 6.3.3 除 vPC 互联接口外关闭其它所有端口；

#### 6.3.4 保存配置并将备件设备断电；

#### 6.3.5 连接 vPC 互联线后，将备件设备加电；

#### 6.3.6 等备件设备完成启动且 vPC 状态正常后，打开上行接口该过程接口会被 VPC suspense 120s 左右，需要进行等待接口 UP)；

#### 6.3.7 等上行接口正常 UP 后，打开下行接口；

#### 6.3.8 检查设备配置及设备运行状态。