

## Image Versions

- **Bootloader**
  - used to select the appropriate bootimage
- **System**
  - image that is currently booted and running
- **Backup**
- **Startup**
  - image that the bootloader will load the next time system boots

© 2008 Cisco Systems Inc. All rights reserved.

UCS system Product Overview—data center and Server Trends 4

Each UCS system component can store 2 images (each with a different version). This can be useful for “staging” an upgrading where the first stage involves installing the new version (which can be done without service interruption) and the second stage involves activating the new version (which requires a component reboot).

### **Bootloader**

The bootloader is a small program that is used to select the appropriate image to boot at startup. The bootloader is not upgradable via the UCSM interface.

### **System**

The system version is the name of the image that is currently booted and running right now.

### **Backup**

The backup version is the name of the other image (i.e. the one that is *not* currently booted and running right now).

### **Startup**

The startup version is the name of the image that the bootloader will load the *next* time this component boots.

## Activation Parameters

- Ignoring compatibility checks
  - Failed compatibility checks will abort activation
  - Ignoring amounts to a “force” of the activation
- System keeps a startup and backup image
- Resetting on activation
  - Choice of rebooting component now or later
  - Know which resources will be unavailable during reboot

### Ignoring compatibility checks

When performing an upgrade of a UCS system component, the UCSM software will attempt to determine if this new version is compatible with the version of UCSM running. If UCSM determines it is incompatible, then the upgrade will abort. You can instruct the upgrade process to ignore the result of this compatibility check to “force” the upgrade.

### Resetting on activation

When performing an upgrade of a UCS system component, recall that there are 2 images stored for each component (the startup version and the backup version). You have the choice of either staging the activation to a later time (at which point you can reboot that component for the startup version to take effect) OR you can reboot the component now (at the time you activate the image). The default is to reboot now when activating. Make sure you understand what resources may be unavailable while the component you are upgrading is rebooting.

# Managing Firmware

Name	Running Version	Startup Version	Backup Version	Update Status	Activate Status
UCS Manager	1.0(0.45n)	1.0(0.45n)	N/A	N/A	ready
Chassis 1					
IO Module 1	1.0(0.45n)	1.0(0.45n)	1.0(0.45j)	ready	ready
Server 1					
Interface Card 1	1.0(0.85)	1.0(0.85)	1.0(0.85)	ready	ready
BMC Controller	1.0(0.45n)	1.0(0.45n)	1.0(0.45n)	ready	ready
Server 2					
Interface Card 1	1.0(0.85)	1.0(0.85)	1.0(0.85)	ready	ready
BMC Controller	1.0(0.45n)	1.0(0.45n)	1.0(0.45n)	ready	ready
Server 3					
Interface Card 1	1.0(0.85)	1.0(0.85)	1.0(0.85)	ready	ready
BMC Controller	1.0(0.45n)	1.0(0.45n)	1.0(0.45n)	ready	ready
Server 4					
Interface Card 1	1.0(0.85)	1.0(0.85)	1.0(0.85)	ready	ready
BMC Controller	1.0(0.45n)	1.0(0.45n)	1.0(0.45n)	ready	ready
Server 5					

© 2008 Cisco Systems Inc. All rights reserved.

UCS system Product Overview—data center and Server Trends 6

To begin to manage and view current firmware on the UCS system you can select “Equipment” from the Nav Pane, and then in the Content Pane select the “Firmware Management” tab. This view will display all the current firmware for all the components in the UCS system. If you wish to see only the firmware for a given component you can select that object in the Nav Pane and it will have a tab in the Content Pane labeled “Installed Firmware”.

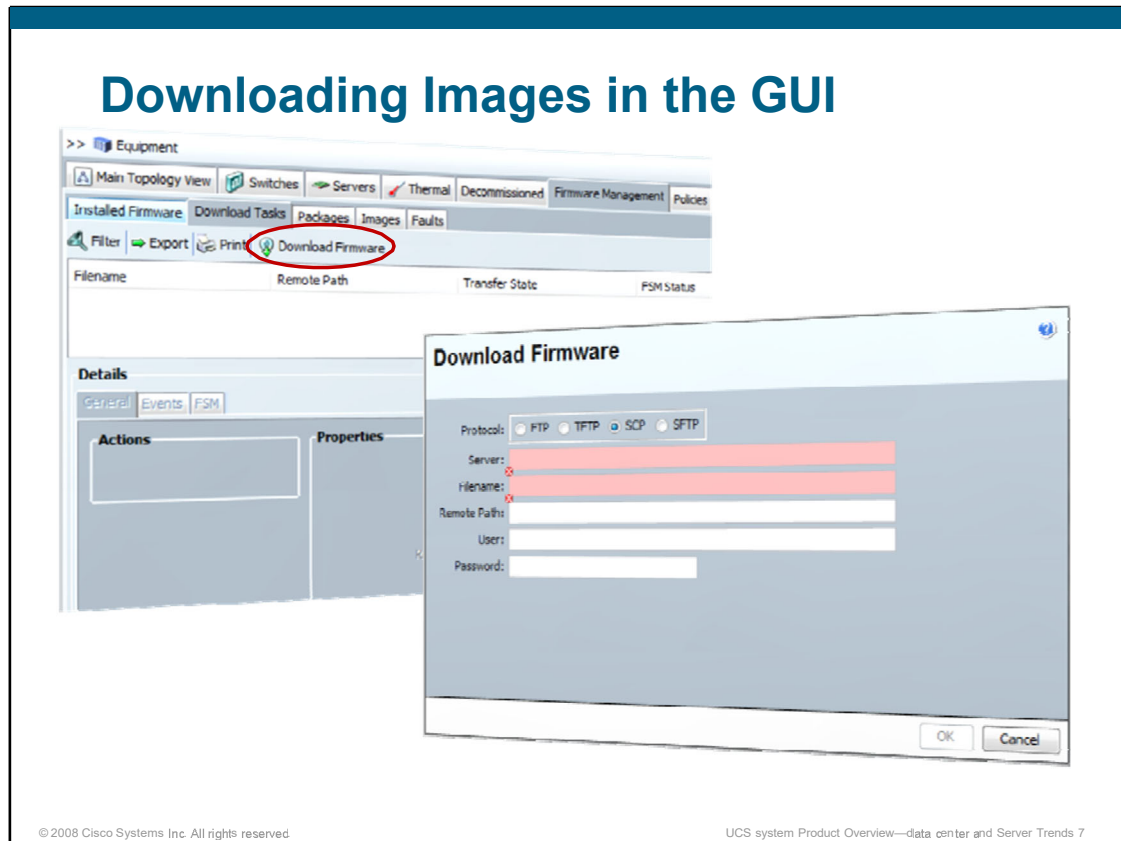
In this view you see that components have the following versions:

- Running Version – The version currently running.
- Startup Version – The version that will load at the next restart of the object.
- Backup Version – The version loaded on the object that you can switch over too, this requires an activation to make the switch.

You will also see the following statuses:

- Update status – Status of an update process, this is changing the backup version.
- Activate status – Status of an activate process, this is switching between the backup and startup/running versions.

## Downloading Images in the GUI



Next to the “Firmware Management” tab is a tab labeled “Download Tasks”. By selecting this you can see current download tasks, or create new ones. Just below the tab for “Download Tasks” there is a “Download Firmware” button that will bring up a pop up to create a download task.

Depending on the protocol and user that you use for the download, the remote path will differ. For example, if using FTP or TFTP, then use the path that is *relative* to the directory that server is configured to server (e.g /tftpboot or /pub). If using FTP, SFTP, or SCP, all of which require a user name and password, then make sure that the credentials you provide are valid on the file server. Also depending on the protocol, some of the fields in the above form may not appear. For example, you will not be prompted for a user and password when using TFTP.

While downloading, UCSM will put a copy of the image in the /bootflash/tmp directory. Once the download is complete, UCSM will put the image under the /bootflash/installable directory and create links under the /bootflash/distributable directory. UCSM creates a “\*.hdr” file along with each installable image. Without the “\*.hdr” file, you cannot install an image through the UCSM interface. In other words, you cannot simply use UNIX commands to place the image in the appropriate directory and expect UCSM to be able to install that image.

## Downloading Images from the CLI

### - Using the SCP protocol -

```
yournode > pwd
/SPACE/IMAGES
yournode > ls
45a          861d
45b          978a
45c          978b
45d          978c
45e          978d
45f          978e
45g          978f
45h          978g
45j          978h
45l          978i
45n          978j
68          ucs-k9-bundle.1.0.0.45n.gbin
```

Bundle location on the file server

Download command syntax at UCSM CLI

```
devha-A# scope firmware
devha-A /firmware # download image scp://root@10.193.180.252/SPACE/IMAGES/ucs-k9-bundle.1.0.0.45n.gbin
Password:
devha-A /firmware # show download-task detail

Download task:
File Name: ucs-k9-bundle.1.0.0.45n.gbin
Protocol: Scp
Server: 10.193.180.252
Userid: root
Path: /SPACE/IMAGES
State: Downloading
Current Task: downloading image /SPACE/IMAGES/ucs-k9-bundle.1.0.0.45n.gbin from 10.193.180.252(FSM-STAGE:sam:dme:FirmwareDownloaderDownload:Local)
```

© 2008 Cisco Systems Inc. All rights reserved.

UCS system Product Overview—data center and Server Trends 8

### On the file server:

When using the SCP protocol to download images, use the absolute path from the root directory to the image name in the download command. If you 'cd' into the image directory and run the 'pwd' command and 'ls' command (as shown in the slide) you can obtain all the information you need.

### From the UCSM CLI:

When running the download command, be careful not to make typos. It is hard to distinguish download failures between wrong command syntax, wrong path and file names, and wrong user credentials. You can repeat the 'show downloader' command until the state of the downloader is "downloaded". Once downloaded, use the 'show image' command to verify that you can install the images. Then you can proceed to upgrade images from within the bundle to the UCS system components. The bundle is approximately 275MB large, so depending on the network traffic and capacity of your file server, the time to download may vary a lot. If the download fails, you must delete that downloader before retrying the same download again, as shown in the slide.

## Displaying Installable Images at the CLI

```
devha-A /firmware # show image
Name
-----
Type
-----
Version
-----
ucs-2100-1.0.0.45h.gbin          Iom          1.0(0.45h)
ucs-2100-1.0.0.45l.gbin          Iom          1.0(0.45l)
ucs-2100-1.0.0.45n.gbin          Iom          1.0(0.45n)
ucs-6100-k9-kickstart.4.0.1a.N2.1.0.45h.gbin  Switch Kernel 4.0(1a)N2(1.0.45h)
ucs-6100-k9-kickstart.4.0.1a.N2.1.0.45l.gbin  Switch Kernel 4.0(1a)N2(1.0.45l)
ucs-6100-k9-kickstart.4.0.1a.N2.1.0.45n.gbin  Switch Kernel 4.0(1a)N2(1.0.45n)
ucs-6100-k9-system.4.0.1a.N2.1.0.45h.gbin    Switch Software 4.0(1a)N2(1.0.45h)
ucs-6100-k9-system.4.0.1a.N2.1.0.45l.gbin    Switch Software 4.0(1a)N2(1.0.45l)
ucs-6100-k9-system.4.0.1a.N2.1.0.45n.gbin    Switch Software 4.0(1a)N2(1.0.45n)
ucs-b200-m1-bios.S5500.86B.01.00.0034-55.040820091819.gbin  Server Bios    S5500.86B.01.00.0034-55.040820091819
.040820091819
ucs-b200-m1-k9-bmc.1.0.0.45a.gbin          Bmc          1.0(0.45a)
ucs-b200-m1-k9-bmc.1.0.0.45h.gbin          Bmc          1.0(0.45h)
ucs-b200-m1-k9-bmc.1.0.0.45l.gbin          Bmc          1.0(0.45l)
ucs-b200-m1-k9-bmc.1.0.0.45n.gbin          Bmc          1.0(0.45n)
ucs-b200-m1-sasctrlr.01.26.00.00_06.24.02.00_03.08.00.00.gbin  Raid Controller 01.26.00.00|06.24.02.00_03.08.00.00
|03.08.00.00
ucs-m71kr-e-cna.1.0.0.45h.gbin             Adapter      1.0(0.45h)
ucs-m71kr-e-cna.1.0.0.45l.gbin             Adapter      1.0(0.45l)
ucs-m71kr-e-cna.1.0.0.45n.gbin             Adapter      1.0(0.45n)
ucs-m71kr-e-hba.2.80A4.gbin                Host Hba     2.80A4
ucs-m71kr-e-optionrom.5.03A8.gbin          Host Hba Optionrom 5.03A8
ucs-m71kr-q-cna.1.0.0.45h.gbin             Adapter      1.0(0.45h)
ucs-m71kr-q-cna.1.0.0.45l.gbin             Adapter      1.0(0.45l)
ucs-m71kr-q-cna.1.0.0.45n.gbin             Adapter      1.0(0.45n)
ucs-m71kr-q-optionrom.2.02.gbin            Host Hba Optionrom 2.02
```

© 2008 Cisco Systems, Inc. All rights reserved.

UCS system Product Overview—Data Center Server Trends 9

A UCS system image bundle includes the following images:

- Kickstart, management, and system images for the switch
- A BMC image
- A CMC image
- Two images for the menlo adapter: emulex and qllogic
- A palo image
- A BIOS image
- An LSI image

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/815333344334011034>