R421 R422 R422-INF HOW TO: Replace the BIOS

NOVASCALE UNIVERSAL



REFERENCE Rev04v01

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R421 R422 R422-INF HOW TO: Replace the BIOS

Hardware

July 2007

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Preface

This HOW TO explains how to replace the BIOS for the motherboards of the following servers:

- NovaScale Universal R421
- Novascale Universal R422
- Novascale Universal R422-INF

Intended readers

This HOW TO is written for very qualified user's or Bull SAS support technicians.

Chapter 1. Introduction

There are 3 motherboard types:

- The Novascale R421 motherboard is the X7DBR-i model
- The Novascale R422 motherboard is the X7DBT model
- The Novascale R422-INF motherboard is the X7DBT-INF model

The BIOS is the same for both the X7DBT and X7DBT-INF motherboards, however, a different BIOS is used for the X7DBR-i motherboard.

Bull S.A.S. resells these servers with either:

• Windows Compute Cluster Server 2003 (WCCS) operating system which must be pre-actived

or

• Linux XHPC Bull Advanced Server operating system (BAS4 for Xeon)

or

• Without an operating system.

Consequently there are 6 different BIOS's, each of which can be included on a floppy disk:

Target	BIOS file name	Floppy Disk name	Virtual Floppy Disk Name
R421 and WCCS	R421Wxxx.ROM	R421Wxxx	R421Wxxx.IMG
R421 and Redhat XBAS	R421Xxxx.ROM	R421Xxxx	R421Xxxx.IMG
R421 w/o OS	R421Nxxx.ROM	R421Nxxx	R421Nxxx.IMG
R422/R422-INF and WCCS	R422Wxxx.ROM	R422Wxxx	R422Wxxx.IMG
R422/R422-INF and Redhat XBAS	R422Xxxx.ROM	R422Xxxx	R422Xxxx.IMG
R422/R422-INF w/o OS	R422Nxxx.ROM	R422Nxxx	R422Nxxx.IMG

xxx = version (from 001 to 999)

A floppy disk image must be used, by means of the **Virtual Floppy disk** feature for the AOC-SIMSO or AOC-SIMSO+ card.

The BIOS floppy disk images should be downloaded from the Bull S.A.S. Support Site

http://support.bull.com/ols/product/platforms/ns/uline/r400/r421/dl/index.html

http://support.bull.com/ols/product/platforms/ns/uline/r400/r422/dl/index.htm

We assume in this document that the BIOS will be replaced on a server named **TARGET** and that it exists on a portable PC named **SUPPORT** which can access the network 192.168.1.*

The BIOS floppy disk images will have been downloaded onto

- (SUPPORT)C:\R421R422\BIOS\R421\WCCS\R421W001.IMG
- (SUPPORT)C:\R421R422\BIOS\R422\WCCS\R422W001.IMG
- (SUPPORT)C:\R421R422\BIOS\R421\XBAS\R421X001.IMG
- (SUPPORT)C:\R421R422\BIOS\R422\XBAS\R422X001.IMG
- (SUPPORT)C:\R421R422\BIOS\R421\NOS\R421N001.IMG
- (SUPPORT)C:\R421R422\BIOS\R422\NOS\R422N001.IMG

Three different procedures are used to replace a BIOS:

- 1. Use a WEB browser application on the **SUPPORT** PC that can access the AOC-SIMSO or AOC-SIMSO+ IP address.
- 2. Use the IPMI View application on the **SUPPORT** PC that can access the AOC-SIMSO or AOC-SIMSO+ IP address.
- 3. Use the C:\DOS\BIOS\upgrade.bat tool from a bootable USB key (this procedure is reserved for Bull S.A.S. support technicians when, for example, a motherboard has been replaced).

Chapter 2. Replacing the BIOS by means of a Web browser

Note:

For more information see the Bull NovaScale R42x AOC-SIMSO/SIMSO+ Installation and User's Guide (86 A1 96ET 00)

To replace the BIOS for a NovaScale Universal R421, R422 or R422-INF server carry out the following steps.

- 1. From the **SUPPORT** PC, that can access the network (192.168.1.*), type the IP address you want to connect to into the address bar of the browser.
- 2. Once the connection is made, the Log In screen appears, as shown below

🚰 Authentication - Microsoft Internet Explorer	
Eichier Edition Affichage Favoris Qutils ?	A
🌀 Précédente 🔹 🕥 - 😰 🐔 🔎 Rechercher 🤺 Favoris 🚱 🔗 🎍 🖬 🔹 🛄 ૣ	
Adresse http://192.168.1.103	💌 🔁 OK 🛛 Liens 🌺
	<u> </u>
Authenticate with Login and Password!	
Username	
Password	
Login	
	_
🙆 Terminé	Intranet local //,

- 3. To log in;
- type in your Username in the Username box (the default is ADMIN)
- type in your password in the **Password** box (the default is ADMIN)
- Click on the Login button

4. The Home Page will appear, as shown below.



- 5. Click on the Virtual Media icon on the Home Page to activate its submenus
- 6. Click on the Floppy Disk icon to activate its submenus.

- 7. In the Floppy Image Upload box,
 - Select Virtual Drive = Drive 1
 - Floppy Image = C:\R421R422\BIOS\R422\WCCS\R422W001.IMG
 (for example)
 - Wait 5 minutes.

🚰 Home - Microsoft Internet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp	A
🔇 Back 🝷 🕥 👻 😰 🐔 🔎 Search	📩 Favorites 🜒 Media 🤬 🔗 - 😓 🚍
Address 🕘 http://ccs-node-8-m/home.asp	💌 🋃 Go 🛛 Links 🌺
Home Console	Remote Console connected!
	Floppy image uploaded successfully.
Remote Control	Active Image (Drive 1)
🔿 Virtual Media	Floppy Image
	Image Name: C:\R421R422\BIOS\R422
 Floppy Disk CD ROM Image 	- WVCCSIR422W001.IM/6
Drive Redirection	Reactivate Download Discard
 Options 	- Active Image (Drive 2)
System Health	No disk emulation set.
User Management	Floppy Image Upload
KVM Settings	This option allows you to upload a binary image (e.g. example.img) with a maximum size of 1.44MB to the Supermicro Daughter Card.
Page 2 Device Settings	This image will be emulated to the host as USB device.
	Virtual Drive Drive 1 💌
Maintenance	Floppy Image File Browse
	L
Applet nn.pp.rc.RemoteConsoleApplet started	Trusted sites

8. Now click on the **Home** icon to return to the Home Page.

🖉 Home - Microsoft Internet Exp	lorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> o	ols <u>H</u> elp	A
🚱 Back 🝷 🕤 👻 📓 🐔 🍃	🔎 Search 🛭 👷 Favorites 🛛 😵 Media 🤣 📄 🖘 🎭 🔜	
Address 🕘 http://ccs-node-8-m/hor	ne.asp	🔽 🄁 Go 🛛 Links 🎽
Console	Remote Console connected!	Logout
Remote Control	Remote Console Preview	
🔗 Virtual Media	<u>Click to open</u>	
System Health User Management KVM Settings Device Settings	The state of the	
	Desktop size: 1024 x 768	
	Power Control via IPMI Power On Power Down Reset	
🕘 Applet nn.pp.rc.RemoteConsoleAp	plet started 🖉	Trusted sites //

9. Click on the **Remote console preview**.-> **Click to Open** button to open the remote console screen.



10. Shutdown and Restart Windows (or any other operating system).

Or click on **Remote console preview.->Reset** button to reboot the server **TARGET**.

Warning:

When the Bull Logo displays on the remote console screen, press "Del" to enter setup.



- 11. Place the USB LS120:PepperC Virtual Disc 1 in first position in the Boot list.
 - Remove all other devices from the boot list.
 - Press F10, Save configuration changes and exit now.

The server **TARGET** reboots on the Virtual Floppy disk.

Supermicro Da Ctrl+Alt+Delete	ughter Card	Remote Co	ssole	- 🗆 🗙
			PhoenixBIOS Setup Utility	<u> </u>
Mair		Advan	ced Security Boot Exit	
1:	USB	LS12):PepperC Virtual Disc 1	Item Specific Help
2: 3: 4:				Keys used to view or configure devices:
5:				Up and Down arrows
6:			-	device.
7:			Setup Confirmation	-> moves
8:		0:	Save configuration changes and exit	e up or down. t now? ⟨r> specifies
	IDE	2:	[Yes] [No]	e line of e. de or include
	TDE	4:		the deutce to boot.
	TDE	5:		$\langle \text{Shift} + 1 \rangle$ enables or
	USB	FDC:		disables a device.
	USB	KEY :		<1 - 4> Loads default
:	USB	HDD :	₩ ₩	boot sequence.
Console(): Deskto	o size is 1 00	24 x 768		Fps: 0 In: 0 B/s Out: 0 B/s

12. When the BIOS has been upgraded the following screen appears.

CtH+Alt+Delete Phoenix Phlash16 Utility Version 1.6.1.9 Phoenix Phlash16 Status Flash memory has been successfully programmed PRESS ANY KEY TO RESTART THE SYSTEM If the system does not restart TURN THE POWER OFF, THEN ON Restore block	ptions
Phoenix Phlash16 Utility Version 1.6.1.9 Phoenix Phlash16 Status Flash memory has been successfully programmed PRESS ANY KEY TO RESTART THE SYSTEM If the system does not restart TURN THE POWER OFF, THEN ON Restore block	
Restore block	
Erase block JJJJJJJJJJJJJJJJJJJ Program block JJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJ	
Console(): Desktop size is 1 024 x 768 Fps: 5 In: 14 KB/s Out: 50 B/s 1	

- 13. Then, in order to prevent that BIOS from being replaced again at the next reboot, click straight away on **Virtual Media**
 - Click on Floppy Disk
 - click on Active Image (Disk 1). ->Discard

🚰 Home - Microsoft Internet Explorer	
Eile Edit View Favorites Tools Help	🦧 🖉
🔇 Back 👻 🕤 👻 😰 🐔 🔎 Search	📩 Favorites 🜒 Media 🔣 😥 🗟
Address 🕘 http://ccs-node-8-m/home.asp	🗾 ラ Go 🛛 Links 🂙
Home Console	Remote Console connected!
Demete Control	r toppy mage uptoaded successions.
Remote Control	Active Image (Drive 1)
🔿 Virtual Media	Floppy Image
Floppy Disk	Image Name: C:\R421R422\BIOS\R422 \WCCS\R422WDD1.IMG
⊖ CD-ROM Image	Reactivate Download Discard
Drive Redirection	
© Options	Active Image (Drive 2)
System Health	No disk emulation set.
User Management	- Floppy Image Upload
KVM Settings	This option allows you to upload a binary image (e.g. example.img) with a maximum size of 1.44MB to the Supermicro Daughter Card.
Bevice Settings	This image will be emulated to the host as USB device.
C Device Settings	Vitual Drive Drive 1
Maintenance	
/3	Floppy Image File Browse
	Upload
Applet nn.pp.rc.RemoteConsoleApplet started	Trusted sites

14. Click on Remote Control

- Click on Remote Power
- Click Power Down to power down the remote host TARGET



15. Click on Power On to power on the remote host TARGET

Warning:

When the Bull Logo displays into remote console screen, press "Del" to enter setup.

- Restore the Boot device list as shown below.
- Click on F10, save configuration changes and exit now.

Supermicro Daug	hter Card Remote	e Console					
			Dhases (v.DT.O.S	Catur	114 : 1 : 4		
M	A 1		Phoenixbius	Setup			
nain	Науа	inced	Security	BOOL	LXIT		
						Item	Specific Help
1:	USB KEY	t:					
2:	USB FDC	:					
3:	USB CDF	ROM :				Keys us	ed to view or
4:	PCI SCS	SI: Intel	RAIDO-O			configu	re devices:
5:	PCI BEU	J: IBA G	E Slot 0400 u	1236		Up and	Down arrows
6:						-	device.
7:			Setup Co	nfirmat	tion		<-> moves
8:							e up or down.
:	IDE 0:	Save c	onfiguration	changes	s and exit	t now?	⟨r> specifies
:	IDE 1:		-	-			e fixed or
:	IDE 2:		[Yes]		[No]		8.
:	IDE 3:						de or include
:	IDE 4:					the dev	ice to boot.
:	IDE 5:					<shift< td=""><td>+ 1> enables or</td></shift<>	+ 1> enables or
:	USB HDI):				disable	s a device.
:	PCI SCS	SI: Intel	RAIDO-1			<1 - 4>	Loads default
:	USB ZIF	2:			T	boot se	quence.
1							
Console(): Desktop s	ize is 1 024 x 768					Fps: 0 I	n: 0 B/s Out: 4 B/s 👔 🏻 🕍

The BIOS upgrade is terminated.

- 16. Now, click on X to close the Remote console screen
- 17. Return to the Home Page and click on the **Logout** lcon to log out from the **Remote Console Interface**.

Chapter 3. Replacing the BIOS by means of the IPMI View application

- 1. Launch the IPMI View application on a server which can access the AOC-SIMSO or AOC-SIMSO+ network (default: 192.168.1.*)
- 2. Log in to the target AOC-SIMSO or APC-SIMSO+ card
 - Type in Login ID in Login ID box
 - Type in Password in **Password** box.
 - Click on Login button.

IPMI View V2.5.2 (build 061219) - Super Micro Computer, Inc.	
File Edit Session Manage Help	
SUPERMICE The Server Solutions Manufacturer	
Image: PMI Domain Image: PMI Domain Image: PMI Domain Image: Cosmode-10m [R422:INF-S-SDD] Image: Cosmode-11m [R422:INF-S-IPEC] Image: Cosmode-4m [R422:INF-S-IPEC]	
B Ccsnode-9-m (R421-SDD) IP Address 199.182.200.192 B ccsnode-6-m (R422-SIPEC)	
cosinode-7-m (R422-INF-P-IPEC) Cosinode-3-m (R422-INF-S-IPEC) Logis ID ADMIN	
Password ****	
⊽ save ID and Password	
Login Logout 副 Groups 局 盐金令 IPMI Domain (8/8)	
Login Ready	

The Home Page, below, appears.

1PMI View V2.5.2 (build 061219) - Super Micro Computer, Inc.					
File Edit Session Manage Help					
SUPERMICRO The Server Solutions Manufacturer					
IPMI Domain ▲ ♥ Ecsnode-10-m (R422-INF-S-SIDD) System Name ccsnode-8-m (R422-INF-S-IPEC)					
IP Address 199.162.200.192 IP cosmode-5m (R421-SDD)					
Ccs-node-5-m (R422-PJPEC) Ccs-node-6-m (R422-INF-PJPEC) Ccs-node-7-m (R422-INF-PJPEC) Ccs-node-6-m (R422-INF-PJPEC)					
Login ID ADMIN					
Password ****					
I⊽ save ID and Password					
Login Logout					
受 Groups 回 台 金 令 IPUI Deceder (8/2)					
Version : IPMI 2.0 For Standard RMCP+ Cipher Suite : (RAKP-HMAC:SHA1, HMAC:SHA1-96, AES-CBC-128)					
Login Event Log Sensors IPM Device BMC Setting Users Text Console Virtual Media					

- 3. Click on the Virtual Media tab (at the bottom on the right)
 - Click on the **Open** button.
 - Type in the floppy image path in the Floppy image File box.

File Edit Session Marage Help Image: Server Solutions Manufacture Image: Conceled Bm (R422/NFS-SPEC) Image: Server Solutions Manufacture Drive 1 Drive 2 Image: Server Solutions Manufacture Drive 1 Set Solutions Manufacture Image: Server Solutions Manufacture Drive 1 Set Solutions Manufacture Image: Server Solutions Manufacture Drive 1 Set Solutions Manufacture Image: Server Solutions Manufacture Drive 1 Set Solutions Manufacture Image: Server Solutions Manufacture Drive 1 Set Solutions Manufacture Image: Solutions Manufacture Drive 1 Set Solutions Manufacture Drive Redirection <t< th=""><th>🛅 IPMI View V2.5.2 (build 061219) -</th><th>Super Micro Computer, Inc.</th></t<>	🛅 IPMI View V2.5.2 (build 061219) -	Super Micro Computer, Inc.
Image: Concepts Image: Concepts	File Edit Session Manage Help	
SUPERINCE Image: Connode-Brm [R422HFF:S-HPEC] Image: Connode-Image: Connect Connect Image: Connode-Image: Connect Connect Drive 1 Image: Connect Connect Image: Connode-Image: Connect Connect Drive 1 Image: Connect Connect Image: Connect Connect Drive 1 Image: Connect Image: Connect Connect Drive Redirection disconnected Drive Redirection disconnected		
■ PMI Domain ▲ ♥ ♥ ■ ■ ccsmode-10m (F422-INF-S-SDD) □ ccsmode-4m (F421-INF-SDD) □ ccsmode-5m (F422-INF-SDD) □ ccsmode-5m (F422-INF-SIDE) □ ccsmode-9m (F422-INF-SIDE) □ ccsmode-9m (F422-INF-SIDE) □ ccsmode-5m (F422-INF-SIDE) □ ccsmode-9m (F422-INF-SIDE)	SUPERMICRO The Server Solutions Manufacturer	
Ccs:node-6-m [R422-SIPEC) Ccs:node-6-m [R422-NF-SIPEC) Dive: 1 (Page Upload) Dive:	IPMI Domain ▲ ▼ 9 ⊕ Image: Costrade-10m [R422-INF-S-SDD] Image: Costrade-11m [R422-INF-P-SDD] Image: Costrade-11m [R422-INF-P-SDD] Image: Costrade-11m [R421-IPEC] Image: Costrade-12m [R421-IPEC] Image: Costrade-12m [R421-SDD]	Emply Emply
C:\R421R422\BIOS\R422\WCCS\R422W001.IMG Share name: Path to image: User (optional): Password (optional): Drive Redirection Drive 1; A: (Removable) ▼ Refresh List Write support Connect Drive Redirection disconnected. Drive 2 A: (Removable) ▼ Refresh List Write support Connect Drive Redirection disconnected. Drive Redirection disconnected. Drive Redirection disconnected. Drive Redirection disconnected.	B ccs+node-6-m (R422-S-IPEC) B ccs+node-5-m (R422-PI-PEC) B ccs+node-7-m (R422-VI-P-PI-PEC) B ccs+node-8-m (R422-VI-P-S-IPEC)	Floppy Image Upload CD-ROM Image on Windows Share Drive: 1 <
Drive Redirection Drive 1: A: (Removable) Refresh List Write support Connect Drive Redirection disconnected. Drive 2: A: (Removable) Refresh List Write support Connect Drive Redirection disconnected.		C:\R421R422\BI05\R422\WCCS\R422W001.IMG Share name: Path to image: User (optional): Password (optional): Password (optional):
	题 Groups 다 삼 金 令	Drive Redirection Drive 1: A. (Removable) ▼ Refresh List
Stop Drive 1 Stop Drive 2 Refresh Login Event Log Sensors IPM Device BMC Setting Users Text Console Virtual Media		Stop Drive 1 Stop Drive 2 Refresh Login Event Log Sensors IPM Device BMC Setting Users Text Console KVM Console Vatual Media
Get Virtual Media information done	Get Virtual Media information done	

4. Click on the **Upload** button and wait a few minutes.

Note:

When the file has been uploaded the Stop Drive 1 button becomes available.

IPMI View V2.5.2 (build 061219) -	Super Micro Computer, Inc.	- 🗆 ×
File Edit Session Manage Help		
10.00	<u>R</u>	
SUPERMICR [•]	Seconde-8-m (R422INF-S-IPEC)	- 1
The Server Solutions Manufacturer	Virtual Media Status	
🛄 IPMI Domain 🛛 🗢 👻 😭	Drive I Drive 2	
Ccs-node-10-m (R422-INF-S-SDD)	Type : Floppy image Empty	
😤 ccs-node-11-m (R422-INF-P-SDD)	Read / Write mode: Writable	
🛃 ccs-node-4-m (R421-IPEC)	File name : R422w/001.IMG (1474560 bytes)	
ccs-node-9-m (R421-SDD)		
Cos-node-5-m (R422-S-IPEU)	Floppy Image Upload CD-ROM Image on Windows Share	
ccs-node-7-m (R422-INF-P-IPEC)		
ccs-node-8-m (R422-INF-S-IPEC)	Unive: 2 V G Upen Upload Unive: 2 V Set	
	Floppy Image file: Share host:	
	C:\R421R422\BIOS\R422\WCCS\R422W001.IMG Share name:	
	Path to image:	
	Upload floppy image done	
	Bassword (optional):	
	C Drive Redirection	
	Drive 1: A: (Removable) Befresh List	
	Drive Pedifection asconnected.	
Personal Contraction Contract	Drive Z. A. (Hernovable) - Herear List Write support Connect	
L IPMI Domain (8/8)		
	Stop Drive 1 Stop Drive 2 Refresh	
	Login Event Log Sensors IPM Device BMC Setting Users Text Console KVM Console Virtual Martia	
Bet Virtual Media information dono		

- 5. To start Video Console Redirection
 - Click on the KVM Console tab (At the bottom on the right)
 - Click on Start Video Redirection icon in the toolbar.

>	<u></u>	Host Name:	SATURNE
y Documents	IPMI View V2.5.2 (build 061219) - 9	Super Micro Computer, Inc.	
-	File Edit Session Manage Help		
	1999	<u>R</u>	
	SUDEDMICD	🔀 ccs-node-8-m (R422-INF-S-IPEC)	
	The Server Solutions Manufacturer	▶ ● ■ 🖻 🗃 ۹ 100% 💽 🔍 Ctri+Alt+Del	Options
	📴 IPMI Domain 🛛 🔺 👻 🖗 🛱		
y Network	Cos-node-10-m (R422-INF-S-SDD)		
Places	ccs-node-4-m (R421-IPEC)		
9	Cos-node-9-m (R421-SDD)		
Remote	ccs-node-5-m (R422-P-IPEC)		
esktop	ccs-node-7-m (R422-INF-P-IPEC)		
TRM			
Hiew			
PMIView20		Commenter	
-		SUPERMICRO The Server Solutions Manufacturer	
.			
Notepad			
	题 Groups La 备 金 参		
	IPMI Domain (8/8)		
			₽
			Lit be
		RER: terminated socket closed Ere: 0 to 0 B/c Out: 0 B/c	• O U
1		Login Event Log Sensors IPM Device BMC Setting Users Text Console KVM Console Virtual Media	
	KVM Interface loaded		2
MINISTR			e Bir
Start	19 🥭 🗒 🏶 🗄 🖓 🖬 🖇	C:\R421R422 IPMI View V2.5.2 (buil] 🖪 😏 19

- 6. To maximize the size of the remote video screen in the local computer screen
 - Click on **Full screen** icon in toolbar.

Note:

You may press Alt+Enter to go back to the original mode





- 7. Shutdown and then Restart Windows (or any operating system).
 - Or click on **Remote console preview** ->.**Reset** button to reboot the server **TARGET**.



When the Bull Logo displays into remote console screen, press "Del" to enter setup.



- 8. Place the USB LS120:PepperC Virtual Disc 1 in first position in the Boot list.
 - Remove all other devices from the boot list.
 - Press F10, Save configuration changes and exit now.

The server TARGET reboots on the Virtual Floppy disk

Supermicro Daugi	nter Card Remote	e Console					
- All Delete			PhoenixBTO	Setun	lltilitu		
Main	Adua	inced	Securitu	Boot	Exit		
					_	Item	Specific Help
1:	USB LS1	l20:Pepp	erC Virtual D	isc 1			
2:						v	1.4 .
3:						Keys us	ed to view or
4:						Contigu	Te devices:
6.						טף מווע	
7:			Setun C	onfirmat	tion		-> moves
8:			betup o				e up or down.
	IDE 0:	Save	configuration	changes	s and exit	now?	<pr>specifies</pr>
	IDE 1:		-	-			ce fixed or
1.1	IDE 2:		[Yes]		[No]		8.
:	IDE 3:						ude or include
:	IDE 4:					the dev	ice to boot
:	TUE 5:					<shift< td=""><td>+ 1> enables or</td></shift<>	+ 1> enables or
	U28 FUU						s a device.
	USB HDI	1. 1.				hoot se	
•	זעוד מכט				•		quence.

9. When the BIOS has been replaced the following screen is displayed.



- 10. When the previous screen appears, type in **Alt+Enter** immediately to quit full screen mode.
 - Click on the **Stop Drive 1** button in order to prevent the BIOS from being updated again at the next reboot.

Dial PMI View V2.5.2 (build 061219) - 9	iuper Micro Computer, Inc.	
File Edit Session Manage Help		
SUPERMICE The Server Solutions Manufacturer IPMI Domain	ccs-node-8-m (R4224NF-S-IPEC) Virtual Media Status Drive 1 Type : Floppy image Read / Write mode: Writable File name : R422W001.IMG (1474560 bytes)	Drive 2 Empty
高 ccshode-5-m (R422-SHPEC) 第 ccs-node-5-m (R422-SHPEC) 第 ccs-node-7-m (R422-HFPC) 第 ccs-node-7-m (R422-INF-SHPEC) 副 ccs-node-8-m (R422-INF-SHPEC)	Floppy Image Upload CD-ROM Image of Drive: 2 CD-ROM Image of Floppy Image file: Share host: C:\R421R422\BIOS\R422\WCCS\R422\/001.IMG Share host: Upload floppy image done User (optional): Password (opti Password (optional):	on Windows Share
2 Groups	Drive Redirection Drive 1: A: (Removable) Refresh List Drive Redirection disconnected. Drive 2: A: (Removable) Refresh List Drive Redirection disconnected.	Apport Connect Apport Connect Refresh M Console Virtual Media
KVM Interface loaded		



- 11. Click on the **IPMI Device** tab.
 - Click on the **Power Down** button to power down the remote host **TARGET**

IPMI View V2.5.2 (build 061219) - Super Micro Computer, Inc.
File Edit Session Manage Help
1 0 0 0
IPMI Domain IPMI Domain
Chassis Power Control Power Down Power Up Power Cycle Reset

12. Click on the Power Up button to power on the remote host TARGET

Warning: When the Bull Logo displays into remote console screen, press "Del" to enter setup.

Restore the Boot devise list as below.

- Click on F10, save configuration changes and exit now.

Supermicro Daugi Ctrl+Alt+Delete	nter Card Remote	Console					- D i
			PhoenixBIOS	Setup	Utility		-
Main	Adva	inced	Security	Boot	Exit		
1.						Item S	Specific Help
1:	USD ME						
3:	USB CDI	ROM :				Keus use	ed to view or
4:	PCI SCS	SI: Intel	RAIDO-0			configur	re devices:
5:	PCI BEU	J: IBA GH	E Slot 0400 u	1236		Up and I)own arrows
6:							dev ice .
7:			Setup Co	nfirmat	ion		<-> moves
8:	IDE 0:	Save co	onfiguration	changes	and exit	: now?	ce up or down. <r> specifies</r>
	IDE 1: IDE 2: IDE 3:		l <mark>Yes</mark> l	I	[No]		De fixed or E. Ide or include
	TDE 4:					the deui	re to hoot.
	IDE 5:					<shift td="" ↔<=""><td>1 enables or</td></shift>	1 enables or
:	USB HDI):				disables	s a device.
:	PCI SCS	SI: Intel	RAIDO-1			<1 - 4>	Loads default
:	USB ZI	2:			▼	boot seq	luence.
Innsoleů: Desktopis	ize is 1 024 x 768					Eps: 0 in:	n B/s Out: 4 B/s 🕴 🛇

The BIOS upgrade is terminated.

13. Click on the **Login** tab.

Click on the Logout button to disconnect from the TARGET server.

Chapter 4. Replacing the BIOS by means of a bootable USB key

This procedure is reserved for Bull S.A.S. support technicians when, for example, a motherboard has been replaced.

Note:

The technician must have a portable PC with the Windows operating system running on it.

4.1 How to create your 'Bootable USB Key'

1. Download the Bootable-USB-Key-kit.zip from the Bull S.A.S. support WEB site.

http://support.bull.com/ols/product/platforms/ns/uline/r400/r421/dl/index.html

http://support.bull.com/ols/product/platforms/ns/uline/r400/r422/dl/index.htm

2. Deploy (extract all files) from the Bootable-USB-Key-kit.zip into the local directory

C:\R421R422\

- 3. Change to the C:\R421R422\ClefUSBbootable-Tools directory
- 4. Mount an USB Key for your PC (for Windows sees the USB key on drive J, for example).

Warning: All data on this USB key will be lost.

- 5. Run the following command to create your **Bootable USB Key**.
- C:\CreateBootableUSBkey.bat J

And follow the directions which appear.

4.2 How to use a 'Bootable USB Key'

- From the SUPPORT server Log in to the TARGET server either by means of a web browser application or by means of the IPMI View application and switch to Full screen mode.
- 2. Mount the **Bootable USB Key** into a **NovaScale R421**, **R422** or **R422-INF** server USB port.
- 3. If necessary stop the operating system.
- 4. Reboot the system and press **Del** to run the setup.

- 5. Go to the Boot page and put the USB Key device in first position on the list.
- 6. Go to the Exit page and Exit saving changes

擒 Supe	rmicro Daugl	hter Card Remote	e Console					_ 0	l ×
Ctrl+Alt	+Delete							Coptic	ons
				Phoen ixBIO	S Setup	Utility			-
	Main	Adva	inced	Securitu	Boot	Exit			
							Item	Specific Helm	
	1.	USB KEY	μ.				TCOM	opeorrie norp	
	2.		· ·						
	2.		о. ОПМ.				Vous	ad to usou on	
	3:		NUN: 27. T.4-				neys us		
	4:	PUL 303	SI: INCE	T KHIDU-U	4000		Contigu	ire devices:	
	5:	ACT REG	1: TRH	6E Slot 0400 (J123b		Up and	Down arrows	
	6:							device.	
	- 7:			Setup Co	onfirma	tion		<-> moves	
	8:							ce up or down.	
	1.1	IDE 0:	Save	configuration	change	s and exit	t now?	<r≻ specifies<="" td=""><td></td></r≻>	
	1.1	IDE 1:						ce fixed or	
	1.1	IDE 2:		Yes		[No]		е.	
		IDE 3:						de or include	
		TDE 4:					the deu	lice to hoot.	
	1.1	THE 5	_				<shift< td=""><td>+ 1 enables or</td><td>-</td></shift<>	+ 1 enables or	-
	- 1	Lonacu	Flonnu	Driver			digable	e a deuice	
	- 1	που πυ	r roppg	DI 1065				Loodo dofoult	
			р; Эт. т			_			
		TUI SU	or: inte	I KHIDU-I		•	DOOT SE	equence.	-
Console	(): Desktop s	ize is 1 024 x 768					Fps: 0	in: 0 B/s Out: 2 B/s 👔 🧍	۵ <u>ـ</u>

7. Move the USB Key to the first position in the boot list.

- 8. Type F10 and confirm to accept the changes and to reboot the server. The server stops on the C:\ prompt
- 9. Change to the C:\DOS\BIOS directory
- 10. The server reboots on the Bootable USB Key
- 11. Change directory from C:\ to C:\DOS\BIOS
- 12. Run the command

C:\Upgrade.bat BiosFile

Where **BiosFile** is as follows.

- R421W001 :: BIOS dedicated to Windows Compute Cluster Server 2003 on NovaScale R421 servers
- R422W001 :: BIOS dedicated to Windows Compute Cluster Server 2003 on NovaScale R422/R422-INF servers
- R421X001 :: BIOS dedicated to Redhat/BAS4 for Xeon on NovaScale R421 servers

- R422X001 :: BIOS dedicated to Redhat/BAS4 for Xeon on NovaScale R422/R422-INF servers
- R421N001 :: BIOS for NovaScale R421 servers purchased without an Operating System
- R422N001 :: BIOS for NovaScale R422/R422-INF purchased without an Operating System

Examples

Upgrade.bat R421W001

Upgrade.bat R422W001

Upgrade.bat R421X001

Upgrade.bat R422X001

Upgrade.bat R421N001

Upgrade.bat R422N001

13. When the BIOS has been upgraded the following screen appears.



The BIOS upgrade is terminated.

- 14. Power Off the server and dismount the Bootable USB Key
- 15. Power On the server
- 16. When the Bull Logo appears, enter in **Del** to enter Setup
- 17. Go to the **Boot** page and restore the Boot device list as shown below.
 - Click on F10, save the configuration changes and exit now.

Supermicro Daug	hter Card Remot	e Console					- D
			PhoenixBIOS	Setup	Utilitu		
Main	Adva	anced	Security	Boot	Exit		
1.		J.			-	Item S	Specific Help
2:	USB FD USB FD	с: RПM:				Keus iisi	ed to view or
4:	PCI SC PCI BE	SI: Intel V: IBA (l RAIDO-0 GE Slot 0400 u	1236		configur Up and 1	re devices: Down arrows
6: 7:			Setup Co	nfirma	tion		device. <-> moves
8:	IDE 0:	Save o	configuration	change	s and exit	t now?	ce up or down. <r> specifies</r>
	IDE 1: IDE 2:		[Yes]		[No]		e fixed or s. de en include
	IDE 5: IDE 4:					the dev	ice to boot.
	USB HDI	D:				disable	s a device.
	USB ZI	SI: Intel P:	I KHIDO-I		Ŧ	<1 - 4> boot see	LOADS DEFAUIT quence.
Console(): Desktop s	ize is 1 024 x 768	1				Fps: 0 In	: 0 B/s Out: 4 B/s 👔 🎽

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