

R421

R422

R422-INF

HOW TO: Install Windows
Using a Virtual Media Drive

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HOW TO: Install Windows Using a
Virtual Media Drive

Hardware

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Preface

This HOW TO explains how to use Virtual Media, one of the features offered by the AOC-SIMSO+ Add_On Card for the following servers:

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

All items, including firmware, BIOS, tools, packages or manuals, which are included in this manual with an * character can be downloaded from the Bull web site:

Bull S.A.S. support Web site

<http://support.bull.com>

Intended readers

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

Terminology

Before using this mini user's guide, it is necessary to read firstly,

Bull's *NovaScale R42x AOC-SIMSO/SIMSO + Installation and User's Guide* (86 A1 96ET 00),

and secondly, the *IPMI View User's Guide* (**CDR-SIMIPMI-1.10\Manuals\IPMIView20.pdf**) and to familiarize yourself with the following terms:

Term	Definition
Technician computer	A computer connected to the AOC-SIMSO+ of the Destination Computer. This computer contains IPMI tools for AOC-SIMSO+, the Windows CD Image and the 'third party OEM disk driver' Floppy Image.
Destination Computer	A computer on which you want to have Virtual Media. This computer is equipped with the AOC-SIMSO+ Add-On Card.
Virtual Media	<p>This is one of the features of AOC-SIMSO+ card and creates a Virtual Media Drive (Virtual Floppy Disk or Virtual CDROM) on the Destination Computer based on the image files on the Technician Computer.</p> <p>The Virtual Media may be created on the Destination Computer by sharing the physical Floppy Disk or CDROM drive attached to the Technician Computer. In this case, this Virtual Media technology is called Media Redirection.</p>

Chapter 1. Overview of the Installation process

1.1 Prepare the Destination computer

- Install the AOC-SIMSO+ Add-On card
- Configure the IP Address of AOC-SIMSO+
- Connect the AOC-SIMSO+ to the Technician Computer Network (directly through the crossed RJ45 Cable or through the hub with a parallel cable)

All the above operations are described in the *AOC-SIMSO+ User's Guide*.

1.2 Prepare the Technician Computer

- Install and Configure the IPMI View tools.
- Create the **.ISO** image of the Windows CD you want to install.
- Create the **.img** image of the Floppy Disk containing the OEM third Party disk Driver (Intel ESB2 SATA Driver in case of the R421/R422 the Destination Computer)
- Create an IPMI View Session to control the Destination Computer remotely.
- Under the IPMI View session, create the Virtual CDROM based on the **.ISO** image, above, and also create the Virtual Floppy based on the **.IMG** image, above.
- All the above operations (except Image Creation) are described in the *IPMI View User's Guide*.

The majority of tools used to burn the CDROM support the creation of the **.ISO** image of the Windows CD.

To create the Floppy Disk image containing the Intel ESB2 SATA driver

- Format the floppy disk.
- Copy the content of the **R421-R422-Drivers\Intel_ESB2_SATA\ directory** (except OEMDISK_421_422.IMG) to the floppy disk.
- Use the Disk Copy utility of FreeDos or equivalent to create the **.IMG** image

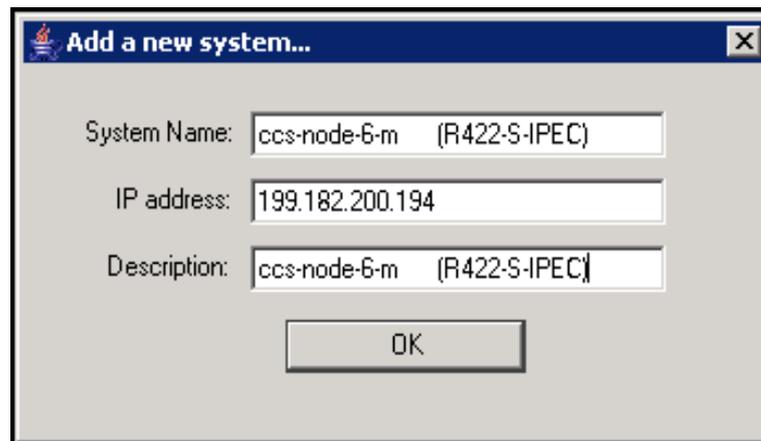
The **R421-R422-Drivers\Intel_ESB2_SATA\OEMDISK_421_422.IMG** file is the **.IMG** image of Intel ESB2 SATA Driver, version 6.0.1.1002 (date 07/06/2006) we created for you.

You will now have on the Destination computer the Windows CD to install in the Virtual CD-ROM drive, and the Intel ES2 Driver in the virtual floppy drive. So the Windows Installation may now be started.

Chapter 2. Installing Windows on the Destination Computer

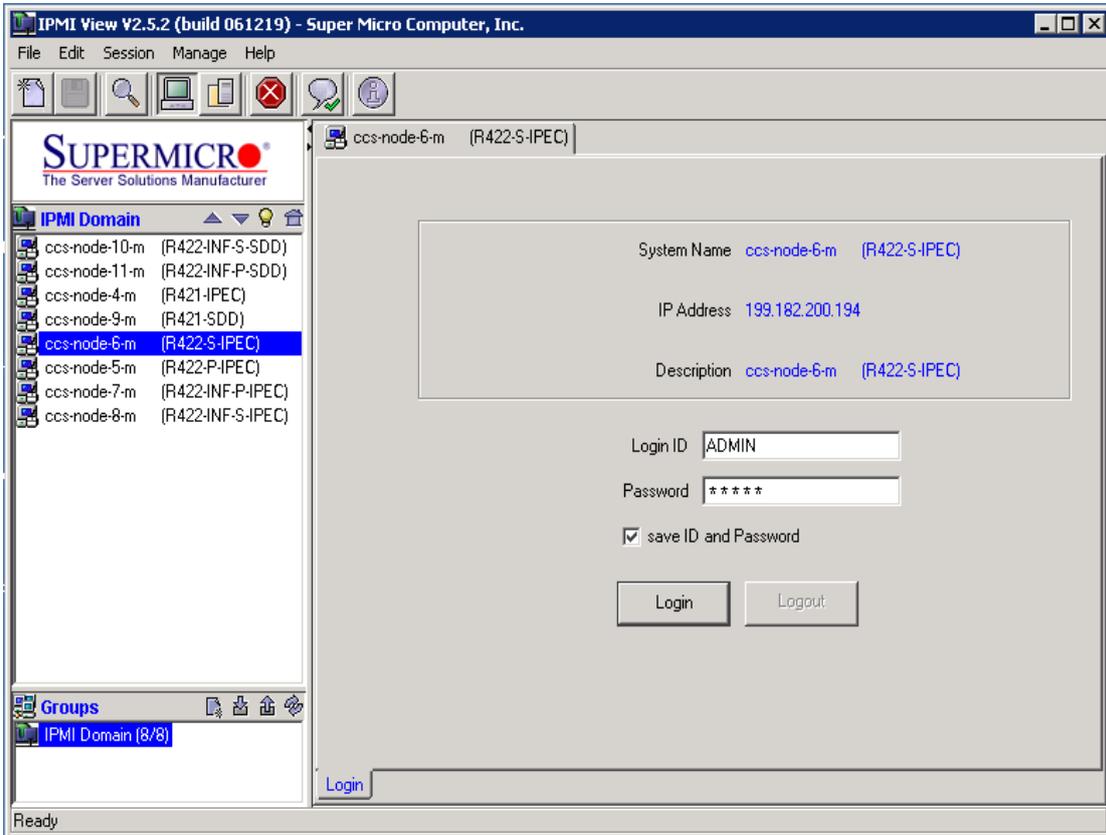
Once the Destination computer and the Technician computer have been prepared, Windows is installed on the Destination Computer as follows:

1. Switch on the Destination computer
2. On the Technician computer, under IMPI View, click **File ->New...->System** to include the destination computer in IMPI View. When the **Add a new system** dialog box appears, enter the AOC-SIMSO+ IP address of the Destination computer



The new system is added to IMPI View (left panel)

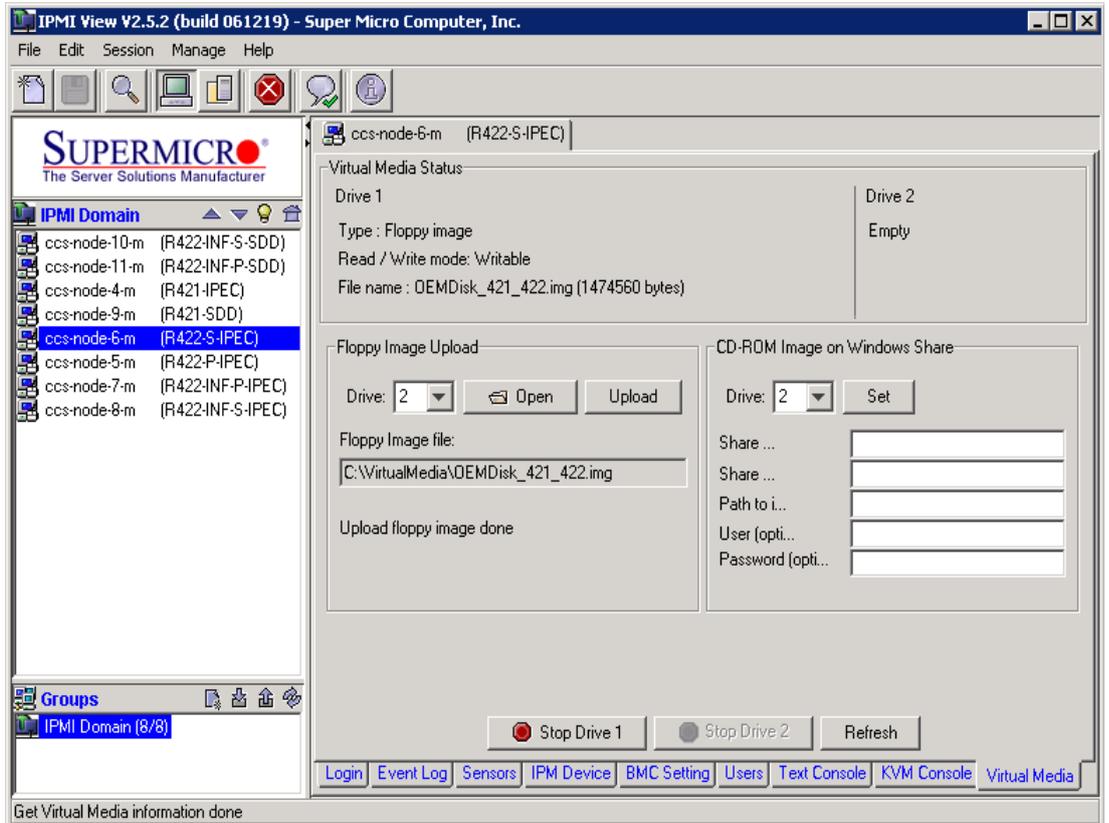
3. Double Click on the newly added system to open a session for the Destination computer



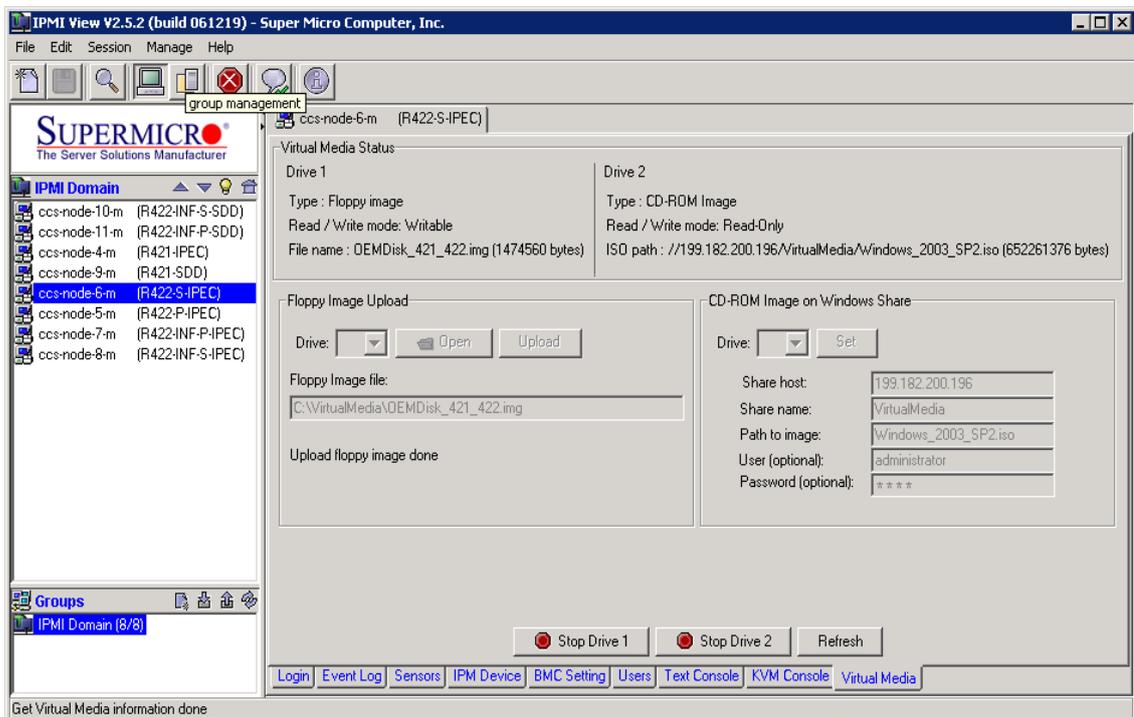
The default Login ID is **ADMIN**, and the default password of ADMIN. Both the Login ID and Password are case-sensitive.

4. Create a shared directory (**C:\VirtualMedia**), shared using the same name, on the Technician computer.
5. Copy **Windows_2003_SP2_CD.iso** and **OEMDisk_421_422.IMG** into **C:\VirtualMedia** (**Windows_2003_SP2_CD.iso** is the image of Windows CD to install and **OEMDisk_421_422.IMG** is the image of Floppy Disk image containing the Intel ESB2 SATA driver).

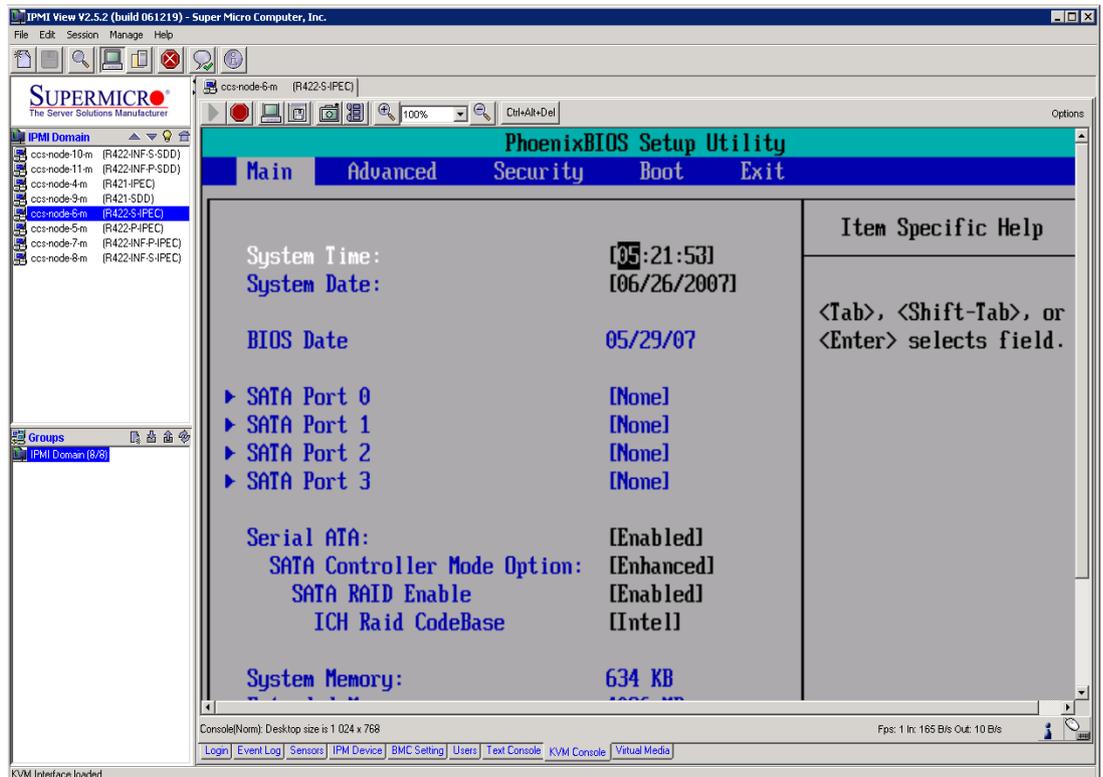
6. In the **Virtual Media** tab, Floppy Media Uploaded zone, Open **C:\VirtualMedia\OEMDisk_421_422.IMG** and click on **Upload** to create the Virtual Floppy on the Destination computer.



7. In the **Virtual Media** tab, **CD-ROM Image on Windows share**, specify the Windows image to install :
 - **share host** is the technician computer IP address,
 - **share name** is the Windows directory share name (**VirtualMedia**) where is the Windows CD-ROM image is located
 - **path to image** is the .ISO image of Windows CD to be installed (**Windows_2003_SP2.ISO**)
 - **user/password** is the login/password used to access the above shared directory on the Technician computer



8. On the Destination computer or using the KVM console tab of IPMI View Session of the Destination computer, restart the computer and hit the **DEL** key to enter the BIOS setup and configure the BIOS for Intel ESB2 SATA as shown in the screens which follow :

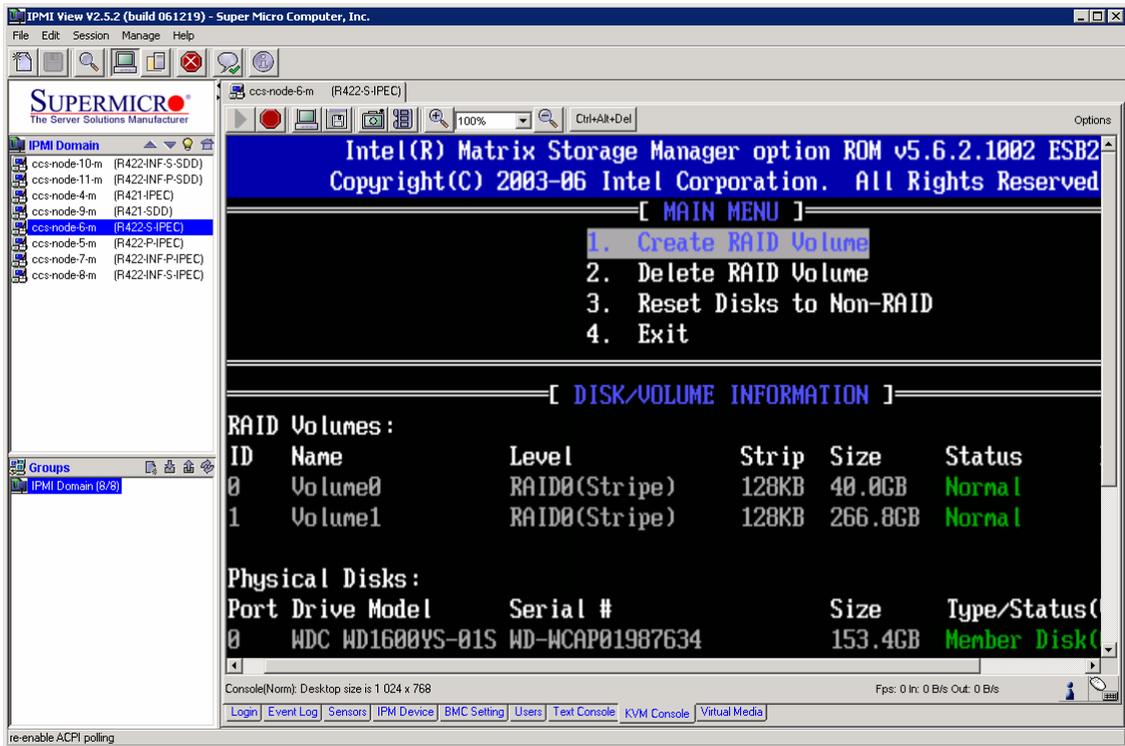


If the destination computer has only one SATA disk, go to the next operation

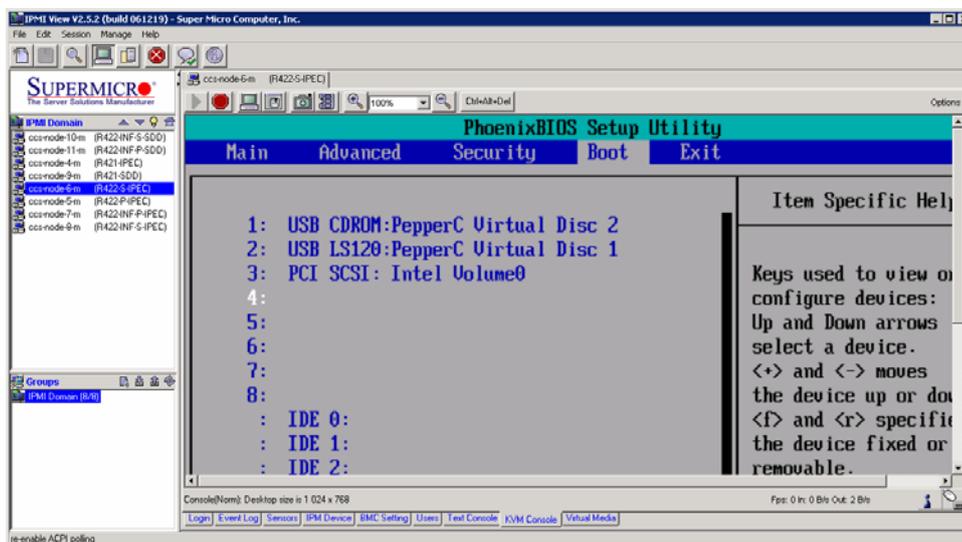
- Save and restart the Destination computer again and press the **Ctrl+I** keys to configure the SATA disk in RAID.

For a **Windows Compute Cluster Server 2003** Compute Node, create two RAID0 virtual disks using all physical disks as follows:

- RAID0-0 40GB
- RAID0-1 Available space remaining



- In the BIOS Setup, go to the Boot tab and configure the boot order as follows:



Where

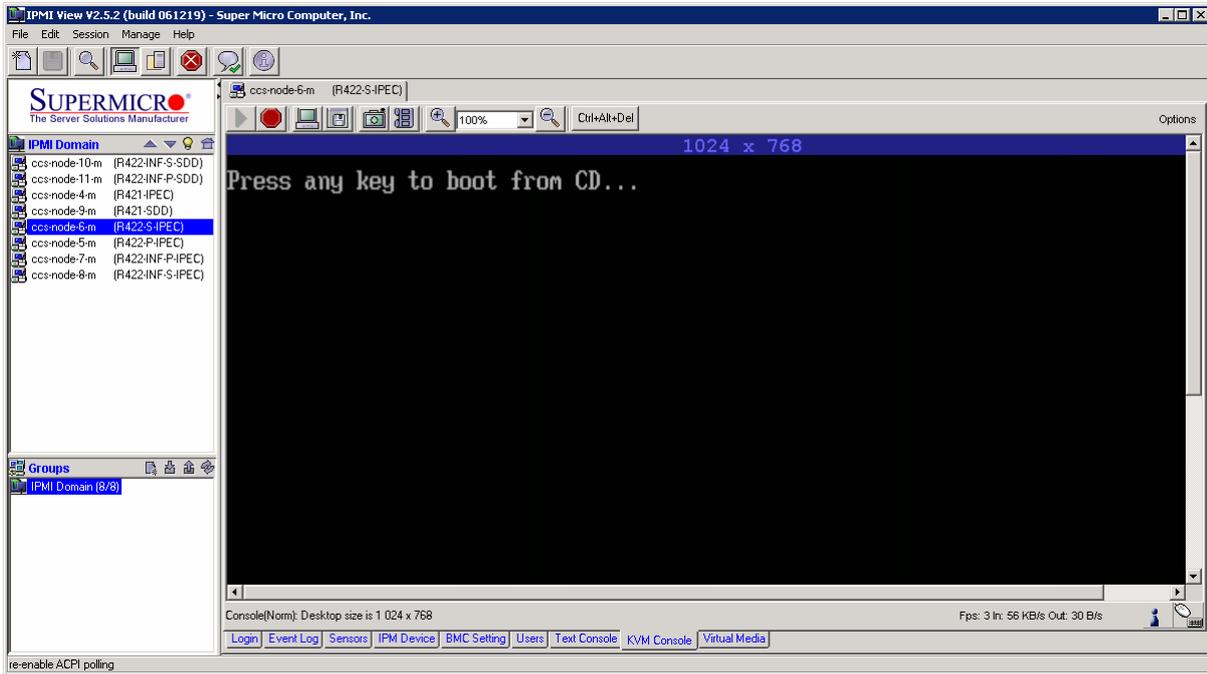
- USB CDROM : **PepperC Virtual Disc 2** is the virtual CD-ROM
- USB LS120 : **PepperC Virtual Disc 1** is the Virtual Floppy Disk
- PCI SCSI : Intel Volume0 is the RAID0-0 volume created above (when **Ctrl+I** were entered)



Note:

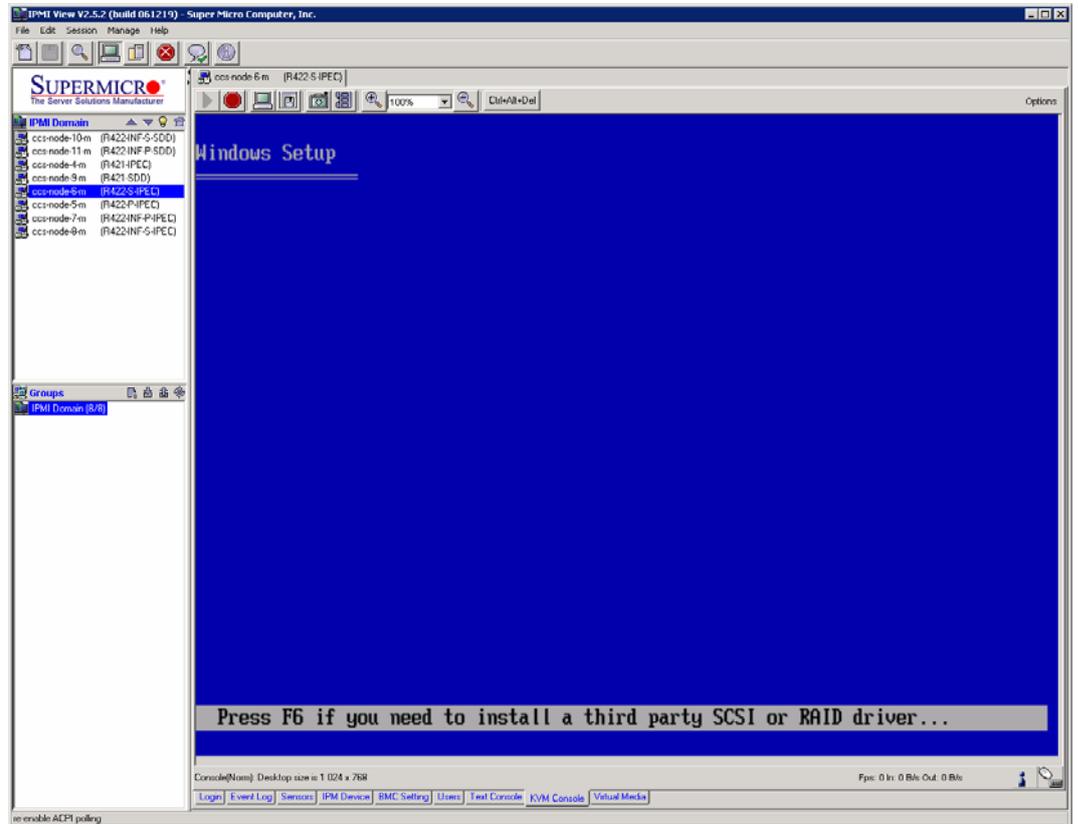
If Virtual Media does not appear in the boot order, reset the Destination computer

11. The Destination computer starts and displays the screen below.

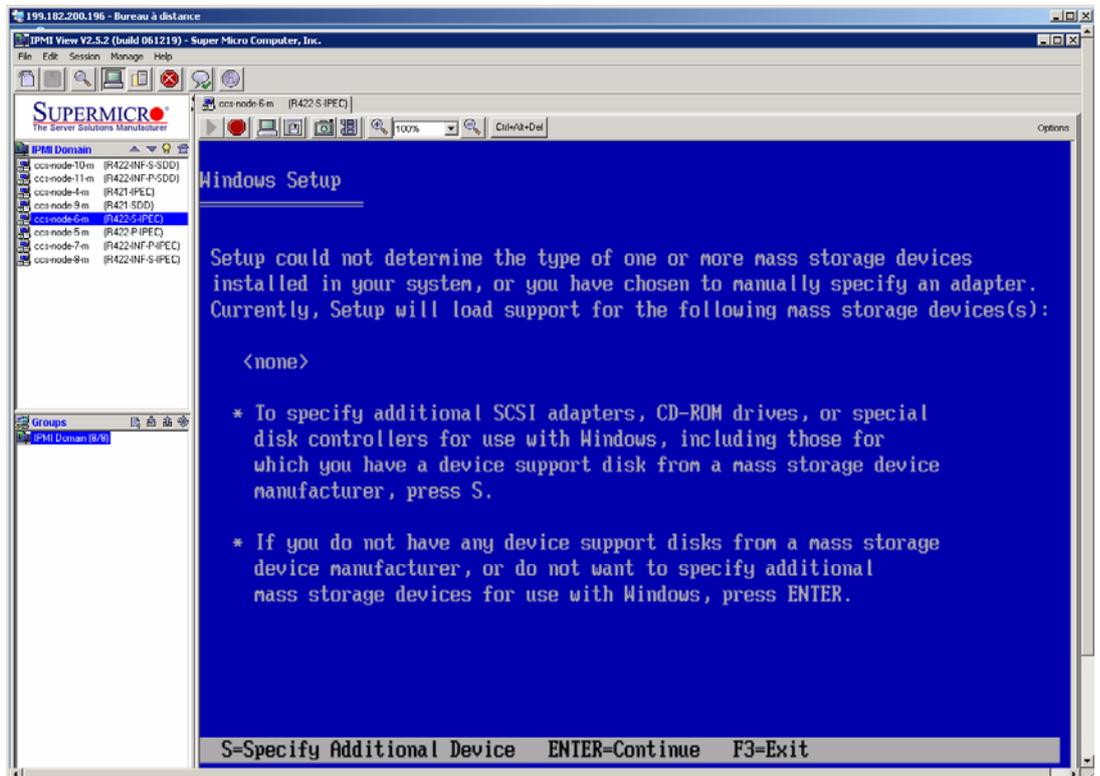


Press any key to boot from the virtual CD-ROM

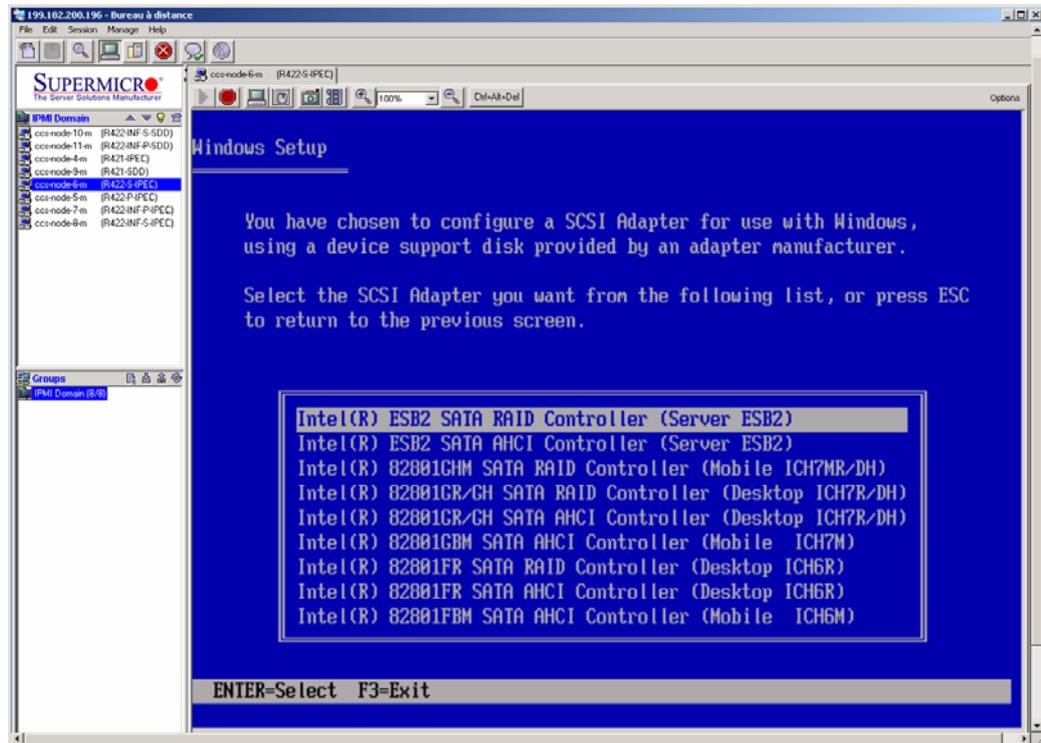
12. During Windows Setup, hit the "F6" key when the screen below appears. Install the Intel ESB2 SATA driver.



13. Press the "S" key when the following screen appears.



14. Then choose the driver listed for the ESB2 SATA RAID Controller, as shown below.



15. When Windows has been completely installed, some hardware devices remain uninstalled, including, the motherboard chip set, network adapters, and the **InfinBand** adapter. Complete the Windows installation by installing the corresponding drivers from the Resources CD. Transfer these drivers to the Destination computer and execute their install programs. The following table lists the hardware device, the driver location on the resource CD and the install program to run.

Hardware Device	Driver Location on the Resource CD-ROM	Install Program to run
Chip Set	R421-R422-Drivers\Intel_Chipset_v8.1.1.1010\	infinst_autol.exe
LAN	R421-R422-Drivers\nic\Intel\	Auto_run.exe
Mellanox Infiniband	R421-R422-Drivers\nic\Mellanox\	WinIB_x64_1_3_0_2000.msi
Voltaire Infiniband	R421-R422-Drivers\nic\Voltaire\	Voltaire_WinIB64_2_5_615_765.msi

16. Stop the 2 virtual drives in the **IPMI View** session for the Destination computer, Virtual Media tab. Close the IPMI View session. Close the IPMI View application.

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