Voisus Cold Start Guide

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Product Name: Voisus

Voisus Cold Start Guide

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Revision history

Date	Revision	Version	Comments
10/7/2016	L	2	Completed internal reorganization and made minor edits for grammar, consistency, and style; moved " (Optional) Media check" after "BIOS setup."
7/13/2017	M	0	Added download client instructions to "System restoration" and added new run-time license content to "Voisus in a virtual machine." Updated screenshots of **Backup/Restore** page.
1/12/2018	N	0	Added "Voisus on customer or government equipment" appendix.
8/14/2018	N	1	Fixed Voisus login credentials in "iSCSI cold-start procedure for Voisus 6.X;" updated screenshot of **Downloads** page; updated grammar and style.
9/15/2018	O	0	(7.0.1) Added Red Hat 7.X cold-start procedures for standard Voisus and iSCSI. Moved legacy cold-start procedures to appendices.
10/16/2018	O	1	(7.1.0) Updated required equipment; added note to BIOS. Fixed condition display error in legacy iSCSI cold start instructions; fixed page display error in appendices.
1/22/2019	P	0	Added "BIOS Q17MX or Q17AX" configuration instructions. Added licensing reminder to "System restoration."
3/13/2019	P	1	(7.2.0) Removed **Second Super IO Configuration** interface element from "BIOS Q17MX or Q17AX."
3/20/2019	P	2	Fixed a condition error resulting in a missing period in "System restoration."
4/26/2019	P	3	Made minor edits to BIOS for clarity and added cross reference to "iSCSI cold-start procedure for Voisus 6.X."
11/6/2019	P	4	Fixed minor condition error in "(Optional) Media check."
12/6/2019	P	5	Clarified media check verification process. Fixed minor errors in "iSCSI cold-start procedure for Voisus 6.X" and "Intel iSCSI boot firmware installation."
6/25/2020	Q	0	(7.7.0) Removed "Disable ACENet on the Voisus server" and added boot method to "Minimum host server specifications."

Date	Revision	Version	Comments
9/16/2020	R	0	(8.3.0) Updated screenshots of the Voisus web interface.
2/15/2021	R	1	Updated 2U chassis image(s) throughout document.
3/10/2021	R	2	Removed deprecated BIOS identification instructions in "BIOS setup."
8/10/2021	S	0	Updated the 2U hardware chassis diagram in "Required equipment." Updated screenshots of the top-right toolbar. Updated the workflow in "System restoration." Updated all screenshots of table styles.
6/23/2022	S	1	Updated the 2U chassis diagram to include the Power and Hard Drive LEDs.
9/14/2022	S	2	Edited "Minimum host server specifications" and "Voisus in a VM specifications."
10/7/2022	S	3	Removed "license" references from the Red Hat Enterprise Linux export statement in the front matter. Updated the 2U chassis diagram to move the Eth card to the third slot.
3/8/2023	T	0	(8.3.0) Added RHEL 8.X cold-start procedure to "Cold-start procedure for Voisus 7.X or 8.X." Updated **Network Configuration** screenshots in "Record network data" and "System restoration." Updated the **Downloads** screenshot in "System restoration." Updated the Red Hat Enterprise Linux subscription and export statement in the front matter.

Date	Revision	Version	Comments
10/2/2023	U	1	Edited the title of "Legacy cold-start procedures" and classified "ASTi USB cold-start procedure" and "Cold-start procedure for Voisus 6.X" as legacy cold-start procedures. Clarified that the "ASTi USB cold-start procedure" is only compatible with RHEL 7.X and earlier. Updated ASTi software versions in the "BIOS setup." Specified USB drives as acceptable installation media in "Required equipment" and "Cold-start procedure for Voisus 7.X or 8.X." Added UEFI support to "(Optional) Media check" and "Memory Test (Voisus 7.X and 8.X)." Added "Broadcom iSCSI setup and cold-start procedure" documentation. Updated **Disk Space** to 80 GB in "Minimum host server specifications" and "ESXi virtual machine specifications."
12/14/2023	V	0	Updated a screenshot of the **Downloads** page in "System restoration." Fixed incorrect network settings command and updated the recommended image flash utility in "Cold-start procedure for Voisus 7.X or 8.X."
3/11/2024	W	0	Added "BIOS HW-1XXXXX-1XX or HW-2XXXXX-1XX." Fixed chassis number typo in "Broadcom iSCSI setup and cold-start procedure" and added required equipment to "Intel iSCSI setup and cold-start procedure" for consistency. Added the ASTI-SRV chassis diagram to "Required equipment."

Contents

1.0 Introduction

The cold-start procedure(s) described in this document allow you to build Voisus systems from scratch. There are three main reasons for using the cold-start procedure:

- Installing the latest software version
- Rebuilding a damaged hard drive
- Creating a spare hard drive

The following steps outline the cold-start procedure:

1. To back up the Voisus server, go to Section 3.0, "System backups" on page 5.
2. To set up the BIOS, ensuring the cold-start procedure runs properly, go to Section 4.0, "BIOS setup" on page 7.
3. *(Optional)* To perform a media check, go to Section 5.0, "(Optional) Media check" on page 17.
4. Complete the Voisus cold-start procedure, erase the hard drive, and install the Red Hat and Voisus software. For cold-start procedure instructions, go to Section 6.0, "Cold-start procedure for Voisus 7.X or 8.X" on page 18.
5. To restore the Voisus server, go to Section 8.0, "System restoration" on page 25.

2.0 Required equipment

To complete the Voisus cold-start procedure, you will need the following items:

- A Voisus 2U platform with a removable hard drive
- Keyboard
- Monitor

> ***Note**: The keyboard and monitor are required for setup and debugging but not for normal operation.*

- *(Optional)* Mouse
- Voisus installation media (i.e., DVD, USB drive, ISO)

Figure 1, "Voisus (P/N: VS-SRV) 2U chassis" below shows the Voisus (P/N: VS-SRV) 2U chassis:

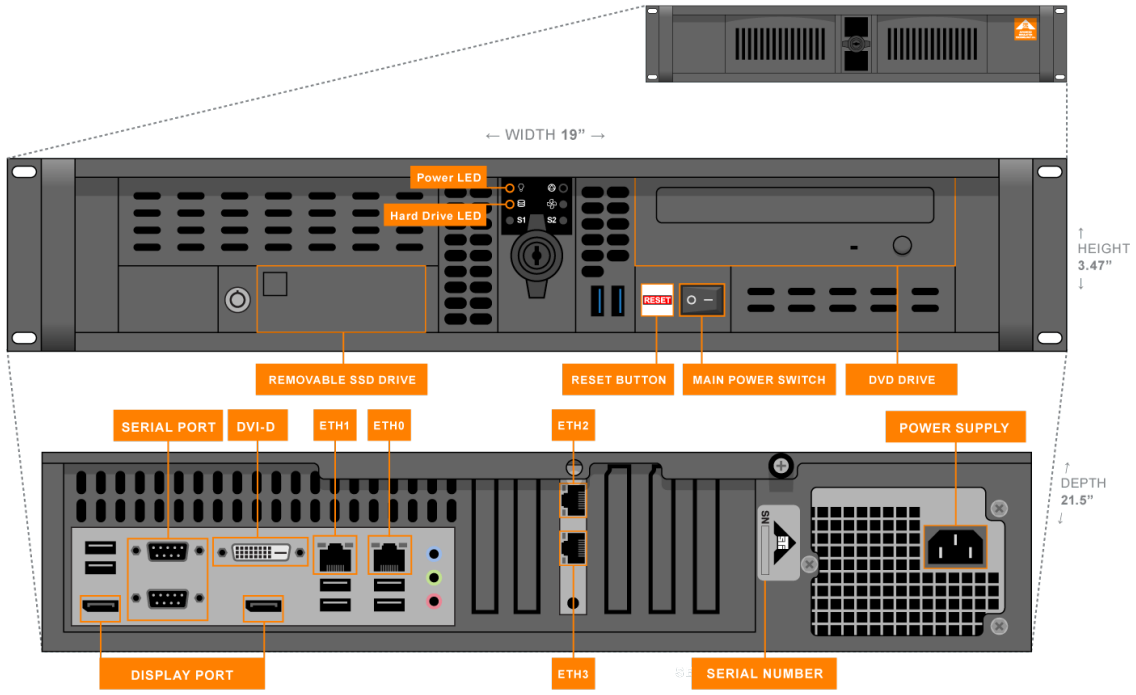

Figure 1: Voisus (P/N: VS-SRV) 2U chassis

Figure 2, "Voisus (P/N: ASTI-SRV) 2U chassis" below shows the Voisus (P/N: ASTI-SRV) 2U chassis diagram:

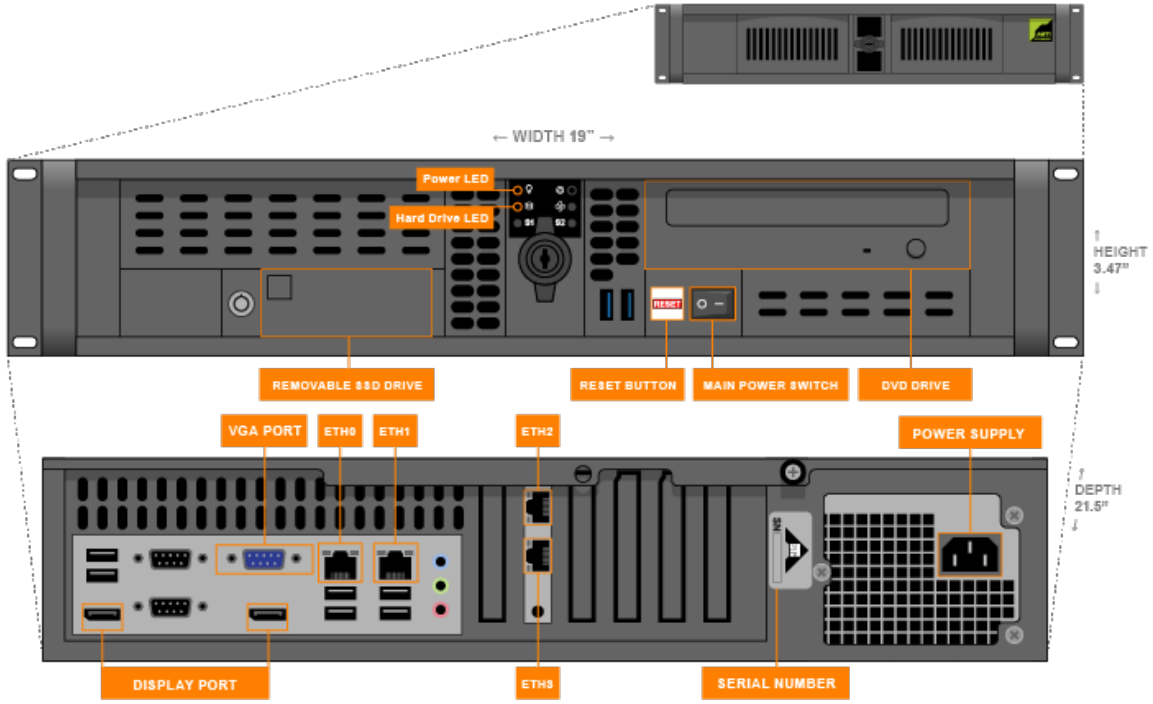

Figure 2: Voisus (P/N: ASTI-SRV) 2U chassis

***Note**: The chassis and connections shown here are for general representation only; the location(s) of cards, ports, and slots may vary. For specific designations, consult the included engineering drawings and labels on the rear of your chassis.*

2.1 Record network data

To record your server's network data, follow these steps:

1. From the top right, go to **Manage** ( ) > **Network Configuration**.

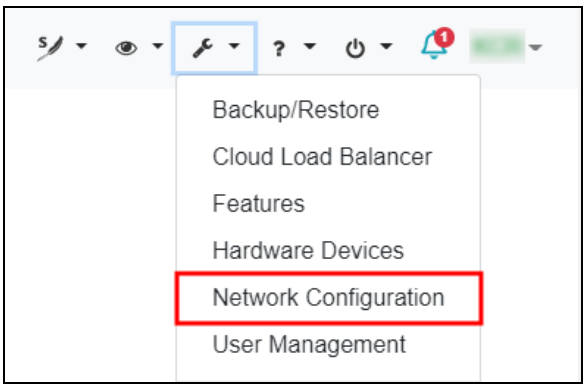

Figure 3: Network Configuration navigation

2. Record your device's **IPv4 Address** and **Subnet Mask** for future reference.

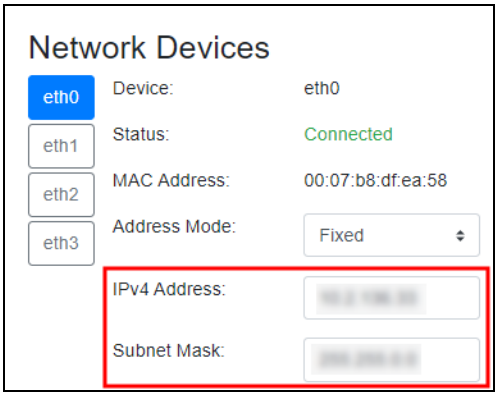

Figure 4: Voisus server network information

3.0 System backups

The cold-start procedure completely erases the Voisus server's hard drive, including scenarios, system users, and Distributed Interactive Simulation (DIS) settings. To back up your data in the Voisus web interface, follow these steps:

1. Open a web browser on a computer or tablet sharing a network with the Voisus server.
2. In the address bar, enter the Voisus server's IP address.
3. Log into the Voisus server using the following default credentials:

Username	Password
admin	astirules

4. From the top right, go to **Manage** ( ) > **Backup/Restore**.

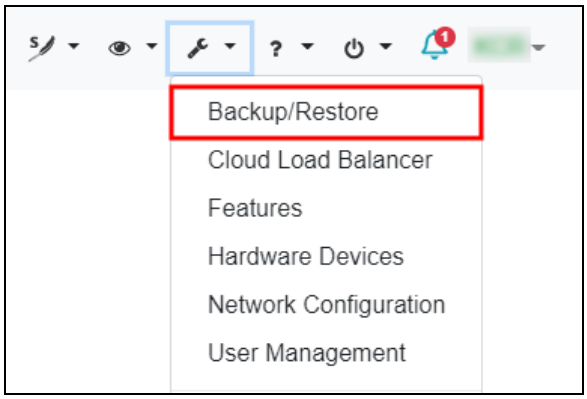

Figure 5: Backup/Restore navigation

5. To create a new backup of your Voisus server, select New.
6. To download the backup to your computer's local hard drive, choose a backup to save.

7. To save your backup, select **Download Selected** ( ).

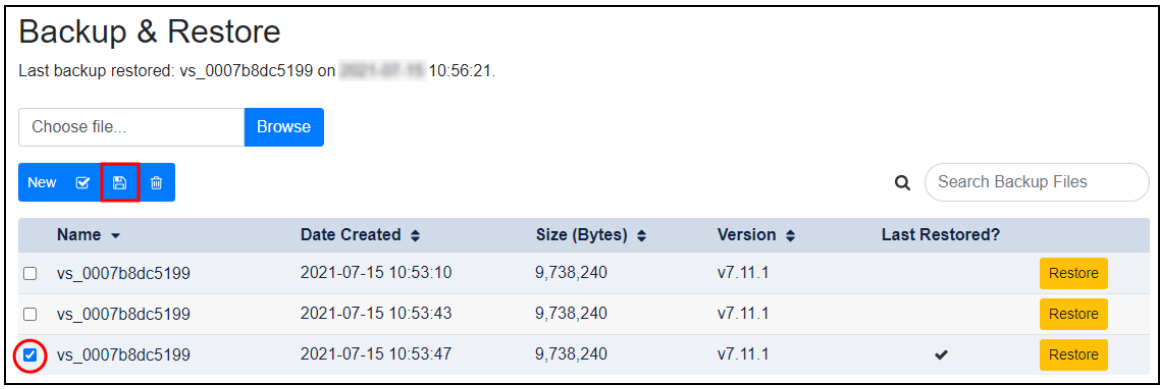

Figure 6: Backup & Restore settings

4.0 BIOS setup

Before completing the cold-start procedure, you will need to set up your system's Basic Input/Output System (BIOS) settings, as described below. To determine which BIOS version your Voisus server uses, refer to the table below:

BIOS Version	Voisus Software Version
BIOS Q17MX or Q17AX	7.1.0–7.16.0, 8.X.Y
BIOS Q67AX 2.02.1205 and earlier	5.6.1–5.34.0, 7.X.Y, 8.X.Y
BIOS Q67AX 2.14.1219 and later	
BIOS Q67IX 2.02.1205 and earlier	
BIOS Q35AX American Megatrends	5.X.Y, 7.X.Y
Visual BIOS Intel NUC Board NUC5i3MYBE	5.25.0–5.34.0, 7.X.Y
Visual BIOS D33217GKE Intel	5.14.0–5.34.0, 7.X.Y
BIOS BLH6710H	5.6.0–5.34.0
BIOS JGIBX10J	5.2.0–5.34.0

Table 1: Voisus BIOS compatibility matrix

4.1 BIOS HW-1XXXXX-1XX or HW-2XXXXX-1XX

To set up the BIOS for the HW-1XXXXX-1XX or HW-2XXXXX-1XX chassis configuration, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Press F9 to open **Load Optimal Defaults?**, and select **Yes**.
3. On **Main**, set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Advanced** > **Power & Performance**, and set **C states** to **Disabled**.
5. To save and reset, press F10. When **Save & reset** appears, select **Yes**. Wait as the server reboots.

4.2 BIOS Q17MX or Q17AX

To set up BIOS version Q17MX or Q17AX, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Press F3 to open **Load Optimal Defaults?**, and select **Yes**.

3. On **Main**, set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Chipset** > **PCH-IO Configuration**, and set the following:
    a. **Onboard LAN1 Controller** to **Enabled**
    b. **Onboard LAN2 Controller** to **Enabled**
    c. **System State After Power Failure** to **Always On**
5. Press Esc. Go to to **Chipset** > **System Agent (SA) Configuration**, and set **VT-d** to **Enabled**.
6. Press Esc. Go to **Advanced** > **CSM Configuration**, and set **Network** to **Legacy**.
7. To save and reset, press F4. When the "Save configuration and reset?" message appears, select **Yes**. Wait as the server reboots.
8. As the system reboots, press Del to return to **BIOS Setup Utility**.
9. Go to **Advanced** > **CPU Configuration**, and set the following:
    a. **Hyper-threading** to **Disabled**
    b. **Intel Virtualization Technology** to **Enabled**
10. Press Esc. Go to **Advanced** > **SATA Configuration**, and set **SATA Mode Selection** to **AHCI**.
11. Press Esc. Go to **Super IO Configuration** > **Serial Port 1 Configuration**, and set **Serial Port** to **Disabled**.
12. Press Esc. Go to **Serial Port 2 Port Configuration**, and set **Serial Port** to **Disabled**.
13. Press Esc. Go to **Serial Port 3 Port Configuration**, and set **Serial Port** to **Disabled**.
14. Press Esc. Go to **Serial Port 4 Port Configuration**, and set **Serial Port** to **Disabled**.
15. Press Esc. Go to **Serial Port 5 Port Configuration**, and set **Serial Port** to **Disabled**.
16. Press Esc. Go to **Serial Port 6 Port Configuration**, and set **Serial Port** to **Disabled**.
17. Press Esc twice, go to **Boot**, and set the **Boot Option Priorities** as follows:
    a. **Boot Option #1** to the *DVD drive*

***Important**: If available, do not select the Unified Extensible Firmware Interface (UEFI) option for DVD or USB.*

    b. **Boot Option #2** to the *hard drive* option
    c. **Boot Option #3** to the *network* option

d. **Boot Option #4** to **Disabled**

***Note**: Hardware names and model numbers may vary depending on your hardware type.*

18. To save and reset, press F4. When the "Save configuration and reset?" message appears, select **Yes**. Wait as the server reboots.

4.3 BIOS Q67AX 2.14.1219 and later

To set up BIOS Q67AX 2.14.1219 and later, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Press F3, and set "Load Optimized Defaults?" to **Yes**.
3. On **Main**, set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Chipset** > **PCH-IO Configuration**, and set the following:
   a. **Onboard LAN1 Controller** to **Enabled**
   b. **Onboard LAN2 Device** to **Enabled**
   c. **Restore AC Power Loss** to **Power On**
5. Press Esc. Go to **Chipset** > **System Agent (SA) Configuration**, and set **VT-d** to **Enabled**.
6. Press Esc. Go to **Boot** > **CSM parameters**, and set **Launch PXE OpROM policy** to **Legacy only.**
7. To save and reset, press F4. A confirmation message requests, "Save configuration and reset?" Select **Yes**.
8. As the system reboots, press Del to return to **BIOS Setup Utility**.
9. Press Esc. Go to **Advanced** > **CPU Configuration**, and set the following:
   a. **Hyper-threading** to **Disabled**
   b. **Intel Virtualization Technology** to **Enabled**
10. Press Esc. Go to **SATA Configuration**, and set **SATA Mode Selection** to **AHCI.**
11. Press Esc. Go to **SMART Settings**, and set **SMART Self Test** to **Enabled.**
12. Press Esc. Go to **Super IO Configuration** > **COM1 Port Configuration**, and set **Serial Port** to **Disabled**.
13. Press Esc. Go to **COM2 Port Configuration**, and set **Serial Port** to **Disabled**.

14. Press Esc. Set **CIR Controller** to **Disabled**.
15. Press Esc. Go to **Second Super IO Configuration** > **COM3 Port Configuration**, and set **Serial Port** to **Disabled**.
16. Press Esc. Go to **COM4 Port Configuration**, and set **Serial Port** to **Disabled**.
17. Press Esc. Go to **COM5 Port Configuration**, and set **Serial Port** to **Disabled**.
18. Press Esc. Go to **COM6 Port Configuration**, and set **Serial Port** to **Disabled**.
19. Press Esc twice, and go to **Third Super IO Configuration** > **COM7 Port Configuration**. Set **Serial Port** to **Disabled**.
20. Press Esc. Go to **COM8 Port Configuration**, and set **Serial Port** to **Disabled**.
21. Press Esc. Go to **COM9 Port Configuration**, and set **Serial Port** to **Disabled**.
22. Press Esc. Go to **COM10 Port Configuration**, and set **Serial Port** to **Disabled**.
23. Press Esc twice, go to **Boot**, and set **Boot Option Priorities** as follows:
    a. **Boot Option #1** to the *DVD drive* option
    b. **Boot Option #2** to the *hard drive* option
    c. **Boot Option #3** to the *network* option

***Note**: Hardware names and model numbers may vary depending on your hardware type.*

24. Press Esc. Go to **Network Device BBS Priorities**, and set the following:
    a. **Boot Option #2** to **Disabled**
    b. **Boot Option #3** to **Disabled** (if present)
    c. **Boot Option #4** to **Disabled** (if present)
    d. **Boot Option #5** to **Disabled** (if present)
    e. **Boot Option #6** to **Disabled** (if present)

***Note**: The number of boot options may vary depending on your external Ethernet configuration.*

25. To save and reset, press F4. When the "Save configuration and reset?" message appears, select **Yes**. Wait as the server reboots.

4.4 BIOS Q67AX 2.02.1205 and earlier

To set up BIOS Q67AX 2.02.1205 and earlier, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Press F3, and set "Load Optimized Defaults?" to **Yes**.
3. On **Main**, set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Advanced**, and set the following:
   a. **Launch LAN1 PXE OpROM** to **Enabled**
   b. **Launch LAN2 PXE OpROM** to **Enabled**
5. Go to **Save & Exit** > **Save Changes and Reset**. A message confirms, "Save configuration and reset?" Select **Yes**, and wait as the server reboots.
6. As the system reboots, press F2 to return to **BIOS Setup Utility**.
7. Go to **Advanced** > **SATA Configuration**, and set the following:
   a. **SATA Mode** to **IDE Mode**
   b. **Serial-ATA Controller 0** to **Enhanced**
8. Press Esc. Go to **CPU Configuration**, and set the following:
   a. **Hyper-threading** to **Disabled**
   b. **Intel Virtualization Technology** to **Enabled**
9. Press Esc, and go to **Chipset** > **North Bridge**. Set **VT-d** to **Enabled**.
10. Press Esc. Go to **Boot**, and set **Boot Option Priorities** as follows:
    a. **Boot Option #1** to the *DVD drive* option
    b. **Boot Option #2** to the *hard drive* option
    c. **Boot Option #3** to the *IBA GE* slot

    

    ***Note**: Hardware names and model numbers may vary depending on your hardware type.*
11. Go to **Save & Exit** > **Save Changes and Reset**. A message confirms, "Save configuration and reset?" Select **Yes**, and wait as the server reboots.

4.5 BIOS Q67IX 2.02.1205 and earlier

To set BIOS version Q67IX 2.02.1205 and earlier, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Go to **Main**, and set the date and time using Greenwich Mean Time.
3. Go to the **Advanced** tab, and set the following:
   a. **Launch LAN1 PXE OpROM** to **Enabled**
   b. **Launch LAN1 PXE OpROM** to **Enabled**
4. Go to **Save and Exit**, and select **Save Changes and Reset**. When the "Save configuration and reset?" message appears, select **Yes.**
5. As the system reboots, press F2 to return to the **BIOS Setup Utility**.
6. Go to **Advanced** > **SATA Configuration**, and set the following:
   a. **SATA Mode** to **IDE Mode**
   b. **Serial-ATA Controller 0** to **Enhanced**
7. Press Esc, and go to **Advanced** > **CPU Configuration**. Set the following:
   a. **Intel Virtualization Technology** to **Enabled**
   b. **Hyper-threading** to **Disabled**
8. Press Esc, and go to **Chipset** > **North Bridge**. Set **VT-d** to **Enabled**.
9. Press Esc, and go to **Boot**. Set the **Boot Option Priorities** as follows:
   a. **Boot Option #1** to the *DVD drive* option
   b. **Boot Option #2** to the *hard drive* option
   c. **Boot Option #3** to the *IBA GE* slot
10. Go to **Save and Exit** > **Save Changes and Reset**. When the" Save configuration and reset?" message appears, select **Yes**. Wait as the server reboots.

4.6 BIOS Q35AX American Megatrends

To set up BIOS version Q35AX American Megatrends, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Go to **Exit**, and select **Load Optimal Defaults**.
3. Go to **Main**, and set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Advanced** > **CPU Configuration**, and set the following:
   a. **Intel® SpeedStep™ tech** to **Disabled**
   b. **Hardware Prefetcher** to **Disabled**
   c. **Adjacent Cache Line Prefetch** to **Disabled**
5. Go to **Advanced** > **IDE Configuration**, and set the following:
   a. **SATA#1 Configuration** to **Enhanced**
   b. **Configure SATA#1** to **IDE**
6. Go to **Advanced** > **SuperIO Configuration**, and set the following:
   a. **Serial Port 1 Address** to **Disabled**
   b. **Serial Port 2 Address** to **Disabled**
7. Go to **Chipset** > **SouthBridge Configuration**, and set **GbE LAN Boot** to **Enabled**.
8. Go to **Exit**, and select **Exit and Save**.
9. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
10. Go to **Boot** > **Boot Device Priority**, and set the following:
    a. **1st Boot Device** to the *CD/DVD* option
    b. **2nd Boot Device** to the *SATA* option
    c. **3rd Boot Device** to the *network* option (e.g., **IBA GE SLOT DOC8 V1327**)

    

    ***Note**: Hardware names and model numbers may vary depending on your hardware type.*

    d. **4th Boot Device** to **Disabled**
11. Go to **Boot** > **Interrupt 19 Capture**, and select **Enabled**.

12. Go to **Exit**, and select **Save Changes and Exit**.

4.7 Visual BIOS Intel NUC Board NUC5i3MYBE

***Note**: ASTi recommends using a mouse for configuration. The instructions assume the use of a mouse.*

To set up Visual BIOS Intel NUC Board NUC5i3MYBE, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Select **Load Defaults**, and select **Yes** to confirm.
3. Select **Advanced Setup**.
4. Go to **Main**, and **System Date** and **System Time** using Greenwich Mean Time.
5. Go to **Cooling** > **CPU Fan Header**, and set **Fan Control Mode** to **Balanced**.
6. Go to **Power** > **Secondary Power Settings**, and set **After Power Failure** to **Power On**.
7. Select **Exit**, and select **Yes** to save changes.

4.8 Visual BIOS D33217GKE Intel

***Note**: ASTi recommends using a mouse for configuration. The instructions assume the use of a mouse.*

To set up Visual BIOS D33217GKE Intel, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Select **Load Defaults**, and select **Yes** to confirm.
3. Select **Advanced Setup**.
4. Go to **Main**, and **System Date** and **System Time** using Greenwich Mean Time.
5. Go to **Cooling** > **Settings**, and set **System Fan Control** to **Balanced**.
6. Go to **Power** > **Secondary Power Settings**, and set **After Power Failure** to **Power On**.
7. Select **Exit**, and select **Yes** to save changes.

4.9 BIOS BLH6710H

To set up BIOS version BLH6710H, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. When the **BIOS Setup Utility** opens, press F9 to **Load Defaults**. Select **Y** to load BIOS defaults.
3. Go to **Main**, and set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Configuration** > **SATA Drives**, and press Enter. Set the following:
    a. **Chipset SATA** to **Enable**
    b. **Chipset SATA Mode** to **AHCI**
    c. **S.M.A.R.T.** to **Enable**
    d. **eSATA Ports** to **Disable**
5. To return to **Configuration**, press Esc.
6. Go to **Fan Control & Real-Time Monitoring** > **CPU Fan**, and press Enter. Set the following:
    a. **Control Mode** to **Manual**
    b. **Minimum Duty Cycle** to **100**
7. Go to **Security**, and set the following:
    a. **Execute Disable Bit** to **Enable**
    b. **Intel® Virtualization Technology** to **Enable**
8. Go to **Power**, and set the following:
    a. **Enhanced Intel SpeedStep® Technology** to **Enable**
    b. **After Power Failure** to **Last State**
9. Go to **Boot**, and set the following:
    a. **Boot Device Priority** to the *optical drive*, *hard drive,* or *network*
    b. **Boot to Removable Devices** to **Disable**
    c. **USB Boot** to **Disable**
10. Go to **Exit** > **Exit Saving Changes**, and select **Y**.

4.10 BIOS JGIBX10J

To set up BIOS version JGIBX10J, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. When **BIOS Setup Utility** opens, press F9 to initiate **Load Defaults**. Select **Y** to load BIOS defaults.
3. Go to **Main**, and set **System Date** and **System Time** using Greenwich Mean Time.
4. Go to **Configuration** > **On-board Drive**, and press Enter. Set **Serial Port** to **Disable**.
5. Press Esc. Go to **Configuration** > **SATA Drives**, and press Enter. Set the following:
    a. **Chipset SATA** to **IDE**
    b. **S.M.A.R.T.** to **Enable**
    c. **eSATA Ports** to **Disable**
6. Go to **Security**, and set the following:
    a. **XD Technology** to **Enable**
    b. **Intel® Virtualization Technology** to **Enable**
7. Go to **Power**, and set the following:
    a. **Enhanced Intel SpeedStep® Technology** to **Enable**
    b. **After Power Failure** to **Last State**
8. Go to **Boot**, and set the following:
    a. **Boot Device Priority** to the *optical drive*, *hard drive*, or *network*
    b. **Boot to Removable Devices** to **Disable**
    c. **USB Boot** to **Disable**
9. Go to **Exit** > **Exit Saving Changes**, and select **Y**.

5.0 (Optional) Media check

Follow the instructions below to verify the integrity of the Voisus installation media. This procedure is useful if you suspect a problem with your DVD. The verification will fail if a file on the DVD is unreadable due to scratches or marks. You only need to verify the DVD contents once, whether you are cold-starting one or several systems with the same DVD.

***Caution**: If verification succeeds, the cold-start procedure automatically starts, erasing your hard drive. You cannot perform a media check separately from the cold-start procedure.*

To verify DVD contents, follow these steps:

1. Turn on the Voisus server. As it boots, insert the Voisus Software Installation DVD into the disc drive within 10 seconds of turning it on.

   

   ***Important**: If the Voisus server boots from the hard drive, reboot the system, and hold the Alt key as it restarts.*

2. Depending on your configuration, do one of the following:

   a. Basic Input/Output System (BIOS): at the boot prompt, run **mediacheck**.

   b. Unified Extensible Firmware Interface (UEFI): select **Install Voisus w/ mediacheck**, and press Enter.

   

   ***Note**: Voisus 8.X and later supports UEFI boot.*

3. The screen displays “Starting media check on *device,*” where *device* represents the hardware device's name. To abort the check, press Esc. The test takes approximately five to ten minutes to complete.

4. If the media check passes, the cold-start procedure automatically begins. If DVD verification fails, the screen displays a “System halted” message. In that case, contact ASTi to receive new software DVDs.

6.0 Cold-start procedure for Voisus 7.X or 8.X

***Note**: Voisus supports cold-starting with USB media in addition to a DVD. To install Voisus software on a USB, flash the ISO image using third-party software of your choice (e.g., Fedora Media Writer at github.com/FedoraQt/MediaWriter) before beginning the cold-start procedure.*

***Caution**: Performing a cold-start procedure will completely erase the system hard drive.*

To complete the Voisus cold-start procedure for Voisus 7.X or 8.X, follow these steps:

1. Connect a monitor, keyboard, and mouse to the Voisus server.
2. Turn on the server.
3. Insert or mount the installation media (i.e., the Voisus Software Installation DVD, USB, or ISO file), and reboot the server.
4. When the Voisus welcome screen appears, press Enter to begin installing the software. Wait 10–15 minutes for installation to complete. Depending on your network configuration, iSCSI installation may take 20–25 minutes to complete.
5. Eject or unmount the installation media (i.e., the Voisus Software Installation DVD, USB, or ISO file).
6. Reboot the server.

   ***Important**: If the system hangs after reboot, press the RESET button on the front of the chassis.*

7. Log into the system using the following default credentials:

Username	Password
root	abcd1234

8. *(Optional)* To set the IP address and subnet mask, enter **ace-net-config -a** xxx.xxx.xxx.xxx **-n** yyy.yyy.yyy.yyy, where xxx.xxx.xxx.xxx is the IP address and yyy.yyy.yyy.yyy is the netmask.

   This configuration sets the IP address and netmask for Eth0, which you can use to access the Voisus web interface via a browser to complete the network setup.

9. *(Optional)* For more network settings, enter **ace-net-config -h**, and press Enter.
10. To activate the changes, enter **reboot**, and press Enter.

7.0 Voisus iSCSI cold-start procedure

The iSCSI cold-start procedure involves installing Voisus software on an iSCSI server equipped with either a Broadcom Ethernet Adapter or Intel Network Adapter. The following instructions explain how to configure and initialize the iSCSI server's network settings, ensuring seamless connection to remote storage resources. This chapter guides you through the setup process for both network interface card options, enabling your server to efficiently leverage Voisus software with remote storage.

This chapter discusses the following topics:

- Intel iSCSI setup and cold-start procedure
- Broadcom iSCSI setup and cold-start procedure

7.1 Intel iSCSI setup and cold-start procedure

In this section, you'll learn how to install and configure iSCSI boot firmware and cold-start Voisus software on an iSCSI server using an Intel Ethernet adapter. The following instructions are based on version 20.0 of the INTEL Ethernet Connections Bootutil, reboot images, and EFI drivers. Earlier or later versions of the INTEL Bootutil program may require minor modifications to the process. Refer to INTEL documentation as needed. Required equipment includes a VSH-*XXX*A*X*, VSH-*XXX*B*X* system and a Voisus Software Installation DVD.

***Important**: Some INTEL ET cards require a slightly different process than is outlined in Section 7.1.1, "Intel iSCSI boot firmware installation" on the next page and Section 7.1.2, "Intel iSCSI boot firmware setup" on page 20. If these instructions fail to complete for your ET card, please contact ASTi for additional instructions.*

This section discusses the following topics:

- Intel iSCSI boot firmware installation
- Intel iSCSI boot firmware setup
- Intel iSCSI cold-start procedure for Voisus 7.X and 8.X

7.1.1 Intel iSCSI boot firmware installation

Important: *To identify the Ethernet port for iSCSI, enter ethtool* ***-p eth****N, where N is the Ethernet port number. Press Enter. Check the rear panel of the server, and note which Ethernet port is blinking.*

If you previously installed Intel's iSCSI boot firmware, skip to Section 7.1.2, "Intel iSCSI boot firmware setup" on page 20. To install the iSCSI boot firmware, follow these steps:

1. Download the Intel Ethernet Flash Firmware Utility program (i.e., BootUtil) from the Intel download center. For more information, go to www.intel.com.
2. Follow the Intel instructions to start up BootUtil on the Voisus server, or contact ASTi for a prebuilt image.
3. Enter **bootutil -FE -NIC**=*X*, where *X* is the iSCSI NIC interface. Press Enter.
4. When the prompt asks you to reboot, instead enter **bootutil -UP=ISCSI -NIC**=*X*, where *X* is the NIC interface for iSCSI. Press Enter.
5. When the prompt asks if you would like to create a restore image of NIC *X*, enter **N**.
6. The prompt confirms, “Continue restore image of NIC X before proceeding?” Enter **Y**.
7. The prompt confirms again, “Would you like to continue?” Enter **Y**.
8. Eject and/or remove the media inserted in Step 2, and reboot the Voisus server.

7.1.2 Intel iSCSI boot firmware setup

To set up Intel's iSCSI boot firmware, follow these steps:

1. To enter the setup, press Ctrl+D at the Boot Firmware prompt.
2. The number of entries shown varies based on the motherboard and NIC interface quantity flashed for iSCSI. From the off-board NIC interface, choose a MAC address.
3. The screen displays two MAC addresses. To set a MAC address to **Primary**, follow the instructions shown on the bottom of the screen.
4. Ensure that the other MAC addresses are set to **Disabled**.

Important*: Do not use Eth1, which is for ACENet traffic only.*

5. To open the iSCSI Port Selection, press Enter.
6. Set the configuration for the iSCSI initiator and Voisus server settings.

7. Save the changes and exit.
8. To boot the Voisus server, press Esc.

7.1.3 Intel iSCSI cold-start procedure for Voisus 7.X and 8.X

The Intel iSCSI cold-start procedure for Voisus 7.X and 8.X is identical to the standard cold-start procedure for Voisus. To cold start a Voisus server for iSCSI, go to Section 6.0, "Cold-start procedure for Voisus 7.X or 8.X" on page 18.

***Important**: Do not cold start the iSCSI server without completing Section 7.1.1, "Intel iSCSI boot firmware installation" on the previous page and Section 7.1.2, "Intel iSCSI boot firmware setup" on the previous page.*

***Important**: If you're unable to boot from the DVD during an iSCSI cold-start procedure for Voisus 7.X, ensure the DVD is set to the first boot device, as described in Section 4.2, "BIOS Q17MX or Q17AX" on page 7. Some Voisus 8.X configurations (e.g., non-UEFI ASTi systems with Intel NIC cards) may support cold-starting iSCSI with a DVD or USB, and you may set either option as the first boot device.*

***Important** Do not connect Keyboard Video Mouse (KVM) switches to the system during the cold-start procedure. If you run into an issue with the procedure while using a KVM, disconnect it, and repeat the cold-start procedure with a dedicated keyboard, monitor, and mouse.*

7.2 Broadcom iSCSI setup and cold-start procedure

In this section, you will learn how to configure Broadcom Ethernet Adapter BIOS and ROM settings and install Voisus software on an iSCSI server using a Broadcom Ethernet adapter. Required equipment includes a VSH-XXX8X, VSH-XXX9X system and a Voisus Software Installation DVD. The Broadcom Ethernet Adapter iSCSI cold-start procedure does not support USB media.

This section discusses the following topics:

- BIOS additions for iSCSI with Broadcom
- Voisus ROM configurations for iSCSI with a Broadcom Ethernet Adapter
- Broadcom iSCSI cold-start procedure

7.2.1 BIOS additions for iSCSI with Broadcom

For Voisus to communicate with an iSCSI server via a Broadcom Ethernet Adapter, you'll need to make a few changes to Voisus's Basic Input/Output System (BIOS) settings. This section explains how to configure Voisus's BIOS so that it boots from the Broadcom Ethernet Adapter option.

To modify Voisus's BIOS for iSCSI with a Broadcom Ethernet Adapter, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Ensure your BIOS settings are configured according to Section 4.2, "BIOS Q17MX or Q17AX" on page 7.
3. Go to **Boot** > **Network Devices** > **BBS Priorities**, and press Enter. Set the following:
   a. **Boot Option #1** to the *Broadcom Ethernet adapter* option
   b. **Boot Option #2** to **Disabled**
   c. **Boot Option #3** to **Disabled**
4. To return to the **Boot** tab, press Esc.
5. Under **Boot Option Priorities**, set the following:
   a. **Boot Option #1** to the *network* option
   b. **Boot Option #2** to the *DVD drive* option

***Important**: If available, do not select the Unified Extensible Firmware Interface (UEFI) option for DVD or USB.*

***Note**: Hardware names and model numbers may vary depending on your hardware type.*

6. To save and reset, press F4. When the “Save configuration and reset?” message appears, select **Yes**. Wait as the server reboots.

7.2.2 Voisus ROM configurations for iSCSI with a Broadcom Ethernet Adapter

To configure the Voisus's read-only memory (ROM) settings for iSCSI a Broadcom Ethernet Adapter, follow these steps:

1. Reboot the Voisus server.
2. When the following screen appears, press Ctrl+S to enter the ROM configuration menu:

```
Broadcom NetXtreme Ethernet Boot Agent
Copyright (C) 2000-2022 Broadcom Limited
All rights reserved.
Press Ctrl-S to enter Configuration Menu
```

3. Under **Device List**, choose a device from which to boot.
4. Under **Main Menu**, select **MBA Configuration**, and set the following:
   a. **Option ROM** to **Enabled**
   b. **Boot Protocol** to **iSCSI**
5. Go to **iSCSI Boot Configuration** > **General Parameters**, and set the following:
   a. **Boot to iSCSI Target** to **Enabled**
   b. **Target as First HDD** to **Disabled**
6. Press Esc to go back.
7. Go to **Initiator Parameters**, and configure your iSCSI server's network configuration, if applicable.
8. Press Esc to go back.
9. Go to **1st Target Parameters** to set your iSCSI server's network and configuration settings.
10. Press Esc and Enter to save and exit.

7.2.3 Broadcom iSCSI cold-start procedure

To complete the Broadcom Ethernet Adapter iSCSI cold-start procedure, follow these steps:

1. Turn on the Voisus server.
2. Insert the Voisus Software Installation DVD.

> ***Note**: If the read-only memory (ROM) option does not detect and connect to the iSCSI server during boot, go to Section 7.2.2, "Voisus ROM configurations for iSCSI with a Broadcom Ethernet Adapter" on the previous page to verify your configuration.*

3. When the “Press CTRL + D within 4s to stop booting” message appears, press Ctrl+D.
4. Wait for the Voisus server to boot from the Voisus Software Installation DVD, and remove the DVD when it ejects from the drive. If the Voisus server does not boot from the DVD, reboot the Voisus server, and repeat Steps 2–3.
5. Complete the Voisus cold-start procedure in Section 6.0, "Cold-start procedure for Voisus 7.X or 8.X" on page 18.

8.0 System restoration

To restore the data saved in Section 3.0, "System backups" on page 5, follow these steps:

1. Open a web browser on a computer or tablet sharing a network with the Voisus server.
2. In the address bar, enter the Voisus server's IP address.
3. Log into the Voisus server using the following default credentials:

Username	Password
admin	astirules

4. From the top right, go to **Manage** ( ) > **Backup/Restore**.

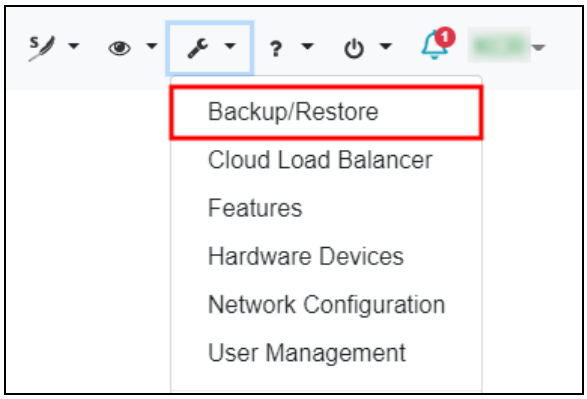

Figure 7: Backup/Restore navigation

5. Select **Browse**, and find the backup on your local system.

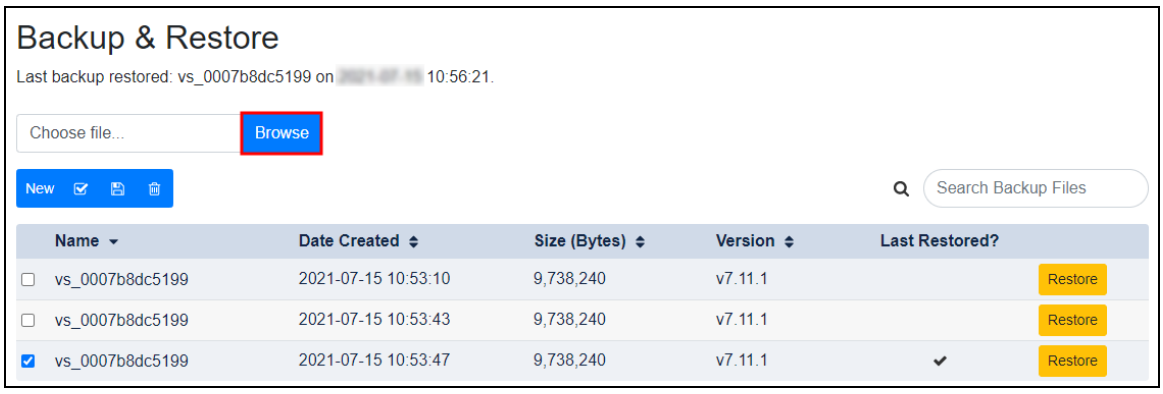

Figure 8: Browse button

6. Select Restore.

7. In **Restore Web Interface Accounts?**, select Yes to overwrite user accounts and credentials. Select No to keep current account information.
8. In **Overwrite Network Settings?**, select Yes to overwrite network settings or No to keep the current network settings.
9. When prompted, reboot the Voisus server.
10. Following reboot, log back into the web interface.
11. In the top right, go to **Scenario** > **Restart**.

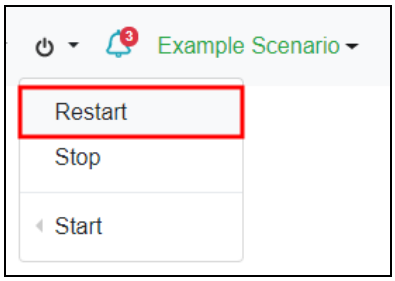

Figure 9: Restart scenario

12. On each client computer or tablet, download the latest version of the Voisus client. On the login page, go to **Downloads**.

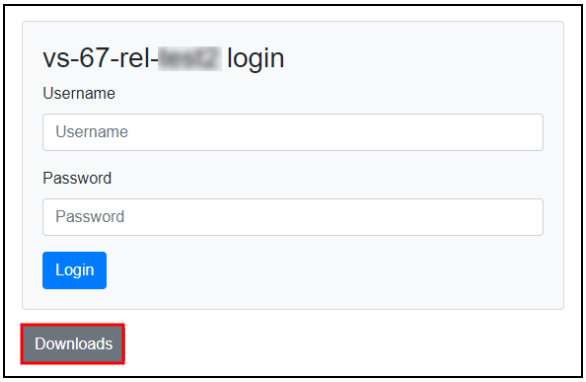

Figure 10: Downloads

Alternatively, log into the Voisus web interface. From the top-right, go to **Manage** ( ) > **Downloads**.

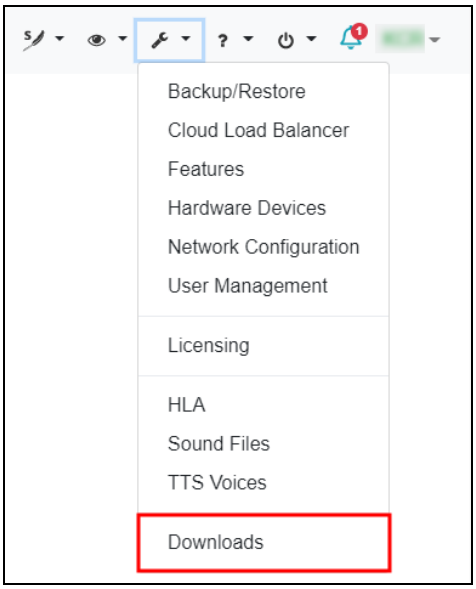

Figure 11: Downloads navigation

On **Downloads**, choose the download link that applies to your client.

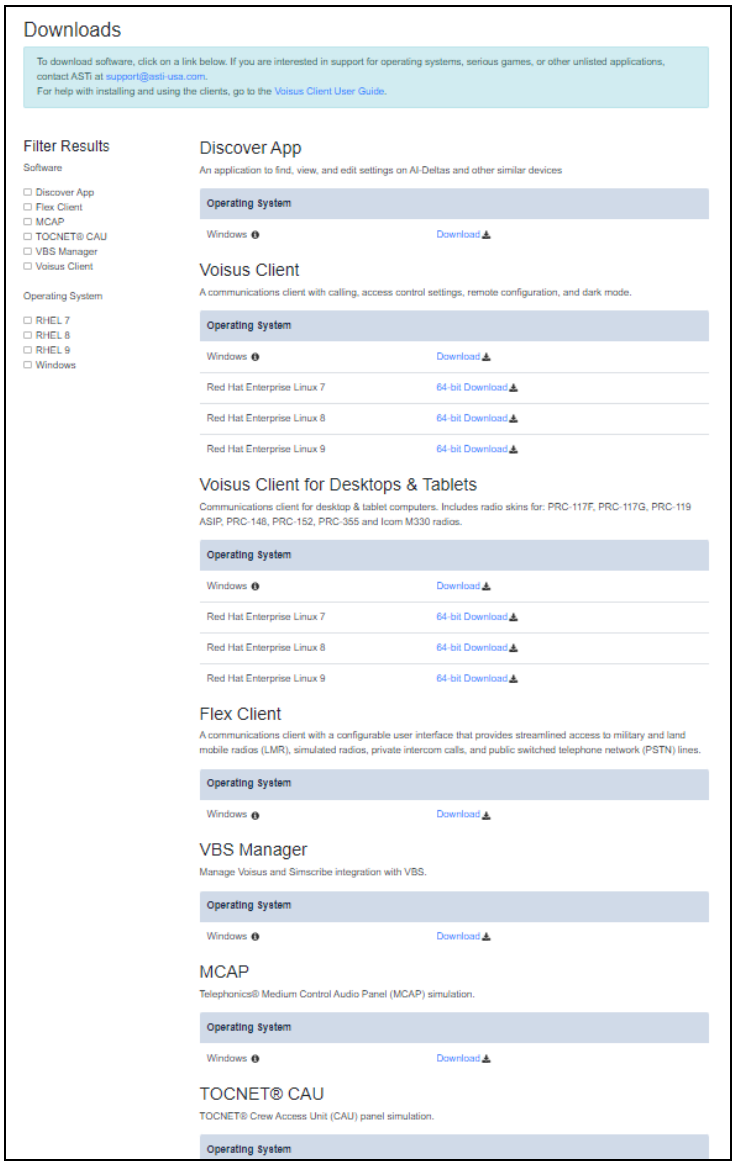

Figure 12: Downloads page

13. Ensure the Voisus server contains a valid USB License Key. For more information about USB License Keys, go to "Licensing" in the *Voisus Quick Start Guide*.

Appendix A: Memory Test (Voisus 7.X and 8.X)

The Memory Test is a useful troubleshooting tool if you are experiencing problems such as system lockup, freezing, random rebooting, or graphics/screen distortion. ASTi recommends running this test several times to ensure that the memory is fully functional. You may wish to run the test overnight.

To perform a Memory Test, follow these steps:

1. Turn on the Voisus server.
2. Insert the Voisus Software Installation DVD, and reboot the Voisus server.
3. Depending on your configuration, do one of the following:
   a. Basic Input/Output System (BIOS): at the prompt, run **memtest86**.
   b. Unified Extensible Firmware Interface (UEFI): select **Memtest**, and press Enter.

   

   ***Note**: Voisus 8.X and later supports UEFI boot.*

   For best results, let the Memory Test run overnight.
4. The Memory Test will run indefinitely until manually stopped. To stop the Memory Test, press the Esc key. If the Memory Test failed, contact ASTi for assistance.
5. To restore the Voisus server to service, remove the DVD, restart the server, and wait for it to reboot.

Appendix B: Voisus in a virtual machine

User requirements and/or deployment needs may require you to install the Voisus software run-time license in a virtual machine (VM) using customer or government-furnished equipment. Virtual servers and cloud implementation offer the following benefits:

- Always-on training capability
- Service delivery to the point of need
- Fast access to operator endpoints
- A quick adaptation and cost-efficient response to training environment changes
- An expedited launch of new products and functions

Voisus in a VM runs on multiple operating systems, including Windows and Linux. This configuration can also run multiple versions of Voisus on the same computer, which reduces the cold-start procedure time.

Intended for customers using Voisus in a VM, this appendix supplements the *Voisus Cold Start Guide* with virtualization requirements and setup. The first component to Voisus run-time license virtualization must include an enterprise class virtualization stack (i.e., Type-1 and/or bare-metal hypervisor). In most cases, ASTi virtualizes VM run-time licenses using ESXi from VMware. However, other Type-1 options (e.g., Hyper-V, Xen, etc.) are available. Consult alternate vendor documentation as needed for setup.

A variety of factors can impact a deployed Voisus software run-time license:

- Host hardware specification
- Virtualization technology
- VM instance definition for a license
- Other VM instances running on the host
- Network operation and conditions
- Simulation software
- Radio communications

For best results, purchase an ASTi support contract to help with installation and/or post deployment tasks. The scope of this contract depends on your program's size and requirements. To discuss your virtualized deployment needs, contact ASTi at support@asti-usa.com.

B-1 Minimum host server specifications

Minimum host server specifications depend on many factors, such as the hardware platform's location. In some cases, the platform may already exist and be running multiple virtual machines (VMs); in other cases, no VM infrastructure or hardware may exist. At a minimum, the host server must be able to run the required number of virtual Voisus instances for this application. To avoid starving the virtual Voisus for CPU time and/or other resources, do not fully provision or over-provision the host server.

Other relevant factors include the VM software (e.g., ESXi, KVM) you are using and the current host system loading (i.e., other VM instances, network load). Before running the Voisus cold-start procedure, ensure your host server meets the VM software's recommended minimum requirements. Consult VM host software documentation for additional guidance.

B-2 Voisus in a VM specifications

Ensure your virtual Voisus server meets the following minimum requirements:

vCPUs:	Four dedicated
Memory:	8,192 MB or 8 GB
Disk Space:	80 GB (application specific)
NIC Count:	1 or greater (application specific)
NIC Speed:	Gigabit

Many factors contribute to the above set of requirements, including but not limited to the following:

- Host hardware performance
- Parallel virtual machine (VM) processing
- Network operation and conditions
- Software and hardware operator endpoints
- Record-and-replay capability
- Other enabled Voisus Live Virtual Constructive (LVC) simulation features

Each environment comes with its own set of unique requirements and dependencies based on the aforementioned metrics. ASTi recommends using the above settings as a starting point for virtualization. Additional tuning may be required once you begin deployment, testing, and run-time operations.

You may need additional disk space if you are installing the Simscribe record-and-replay feature, Terrain database, or another large disk, image-based application. Do not share vCPUs dedicated to the Voisus VM with other non-ASTi VMs on the same host platform.

B-3 Cold-start Voisus in a virtual machine

After configuring the above host server requirements, run the Voisus cold-start procedure in Section 6.0, "Cold-start procedure for Voisus 7.X or 8.X" on page 18.

Appendix C: Voisus on customer or government equipment

User requirements and/or deployment needs may require you to install the Voisus software run-time license on customer-furnished equipment (CFE) or government-furnished equipment (GFE). Intended for customers using Voisus on CFE/GFE, this appendix supplements the *Voisus Cold Start Guide* with CFE/GFE requirements and setup.

The CFE/GFE hardware selection must support Voisus's run-time requirements. A variety of factors can impact a deployed Voisus license:

- CFE/GFE hardware specification
- Basic Input/Output Settings (BIOS) settings
- Network operation and conditions
- Simulation software
- Radio communications

ASTi strongly recommends that you purchase an ASTi support contract to help with installation and/or post deployment tasks. The scope of this contract depends on your program's size and requirements. ASTi may use this contract to evaluate provided CFE or GFE. To discuss your deployment needs, contact ASTi Support at support@asti-usa.com.

C-1 Minimum host server specifications

Ensure your host server meets the following minimum requirements:

CPU Speed	2.4 GHz i7 or better; nonmobile
CPU Cores	4x or greater
Memory	8 GB RAM
Disk Space	80 GB solid-state drive (SSD) or nonvolatile memory express (NVMe) drive
NIC Count	1 or greater
NIC Speed	Gigabit
Boot Method	Unified Extensible Firmware Interface (UEFI) or Legacy Basic Input/Output System (BIOS) ***Note:*** *Voisus 8.X and later supports UEFI boot.*

Additionally, ensure the Red Hat Enterprise Linux (RHEL) operating system (OS) compatible with your Voisus software version also supports the host server hardware. To check Voisus software and OS compatibility, go to **Voisus Release Notes** at support.asti-usa.-com/voisus/notes.

C-2 Set up and install Voisus on customer or government equipment

To install Voisus on customer-furnished equipment (CFE) or government-furnished equipment (GFE), follow these steps:

1. At a minimum, configure the following Basic Input/Output System (BIOS) or Unified Extensible Firmware Interface (UEFI) settings on the CFE or GFE:
    a. Disable hyperthreading (i.e., logical processors).
    b. Limit the CPU core count to four cores.
    c. If multiple physical CPUs exist, limit the server to one physical CPU in the BIOS or UEFI.
    d. Disable C-States.

e. Disable C1E.

f. Disable E-Cores.

***Note**: Voisus 8.X and later supports booting from UEFI.*

2. Run the cold-start procedure for the Voisus software version applicable to your configuration.

Appendix D: Legacy cold-start procedures

This appendix discusses the following legacy cold-start procedures:

- ASTi USB cold-start procedure
- Cold-start procedure for Voisus 6.X
- iSCSI cold-start procedure for Voisus 6.X
- iSCSI cold-start procedure for Red Hat 5.X

D-1 ASTi USB cold-start procedure

***Important**: The ASTi USB cold-start procedure is compatible with Voisus 7.X and earlier.*

To cold start a MicroServer, follow these steps:

1. Turn off the MicroServer.
2. Insert the ASTi USB.
3. Turn on the MicroServer.
4. To access the Boot Disk menu, press the F10 key.
5. Choose an option to boot from the ASTi USB, and then press Enter.
6. At the prompt, enter **usb**, and press Enter.
7. When prompted, remove the ASTi USB.
8. Press Enter to complete the installation. The MicroServer turns off.
9. Turn on the MicroServer again.
10. Log into the system using the following default credentials:

Username	Password
root	abcd1234

11. *(Optional)* To set the IP address and subnet mask, run **ace-net-config -a** *xxx.xxx.xxx.xxx* **-n** *yyy.yyy.yyy.yyy*, where *xxx.xxx.xxx.xxx* is the IP address and *yyy.yyy.yyy.yyy* is the netmask. This configuration sets the IP address and netmask for Eth0, which you can use to access the Voisus web interface via a browser to complete the network setup.

12. *(Optional)* For more network settings, enter **ace-net-config -h**, and press Enter.
13. Reboot the server.

D-1 Cold-start procedure for Voisus 6.X

To complete the Voisus cold-start procedure for Voisus 6.X, follow these steps:

1. Turn on the server.
2. Insert the Voisus Software Installation DVD, and reboot the server.
3. At the boot prompt, press Enter.
4. Remove the Voisus Software Installation DVD when it ejects from the drive.
5. Insert the Red Hat 6 Installation DVD, and select **OK**. Wait 10–15 minutes for the installation to complete.
6. When the Red Hat 6 Installation DVD ejects from the drive, insert the Voisus Software Installation DVD. Press Enter.
7. Wait several minutes for the installation to complete, and press Enter.
8. Remove the Voisus Software Installation DVD when it ejects from the drive.
9. Reboot the server.
10. Log into the system using the following default credentials:

Username	Password
root	abcd1234

11. *(Optional)* To set the IP address and subnet mask, run **ace-net-config -a** *xxx.xxx.xxx.xxx* **-n** *yyy.yyy.yyy.yyy*, where *xxx.xxx.xxx.xxx* is the IP address and *yyy.yyy.yyy.yyy* is the netmask. This configuration sets the IP address and netmask for Eth0, which you can use to access the Voisus web interface via a browser to complete the network setup.
12. *(Optional)* For more network settings, enter **ace-net-config -h**, and press Enter.
13. To activate the changes, enter **reboot**, and press Enter.

D-2 iSCSI cold-start procedure for Voisus 6.X

Before proceeding, install and set up the iSCSI boot firmware, as described in Section 7.0, "Voisus iSCSI cold-start procedure" on page 19. To complete the iSCSI cold-start procedure for Voisus 6.X, follow these steps:

1. Turn on the Voisus server.
2. Insert the Voisus iSCSI Software Installation DVD, and reboot the Voisus server.

3. At the boot prompt, press Enter, and wait for initialization to complete.
4. From the menu options, select the interface that is connected to the network hosting your iSCSI drive.

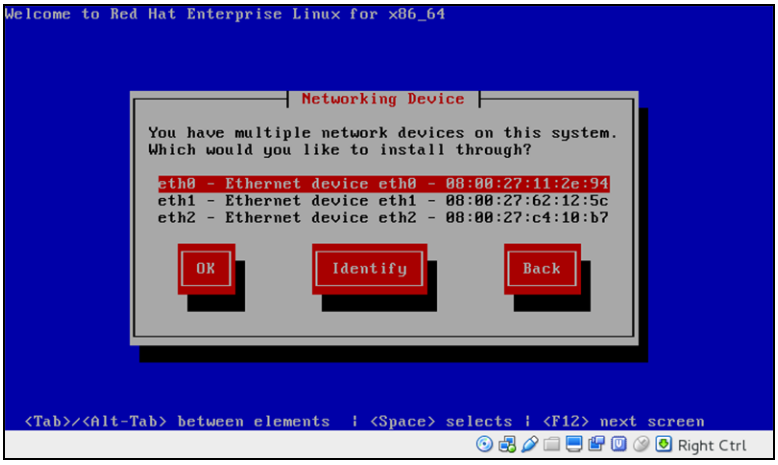

Figure 13: Networking Device

5. Enter the appropriate network information, or select **Use Dynamic IP Configuration** (if applicable). Select **OK**.

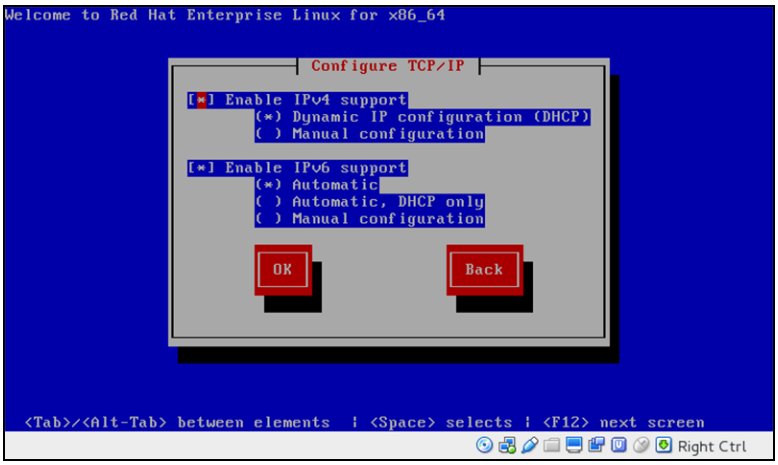

Figure 14: Configure TCP/IP

6. Remove the Voisus iSCSI Software Installation DVD when it ejects from the drive.

7. A “Disc Not Found” message appears. Select **OK** to continue.

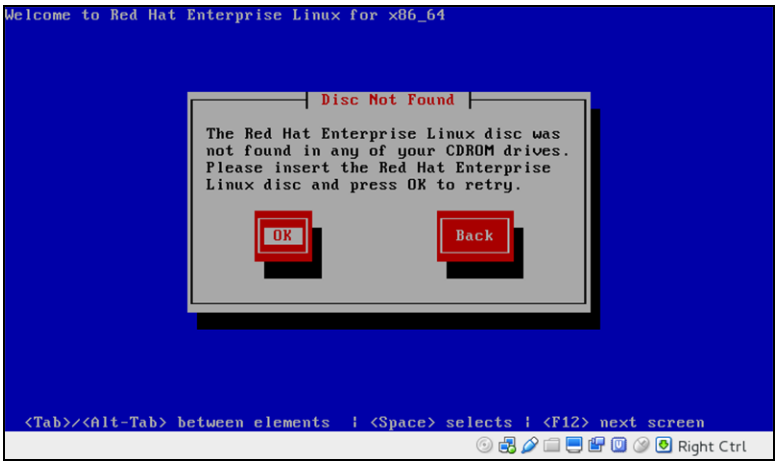

Figure 15: “Disc Not Found”

8. Insert the Red Hat 6 Installation DVD, and select **OK**.
9. The **Voisus iSCSI Coldstart** welcome message appears. Select **<Ok>** to continue.

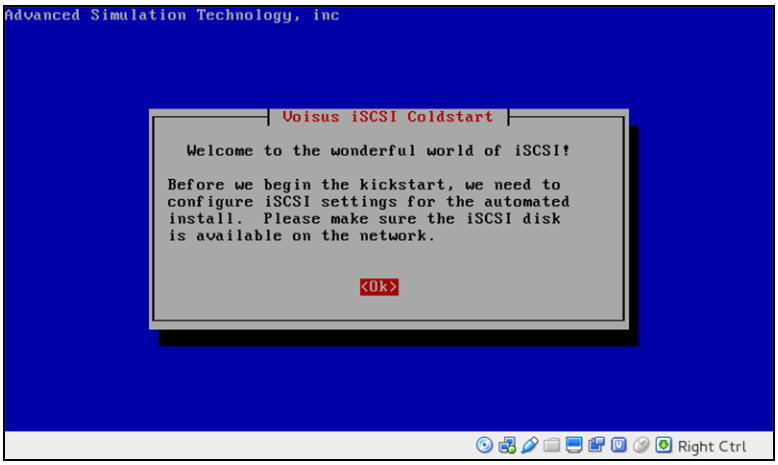

Figure 16: Voisus iSCSI Coldstart welcome message

10. Enter the client initiator name, and select **<Ok>**.

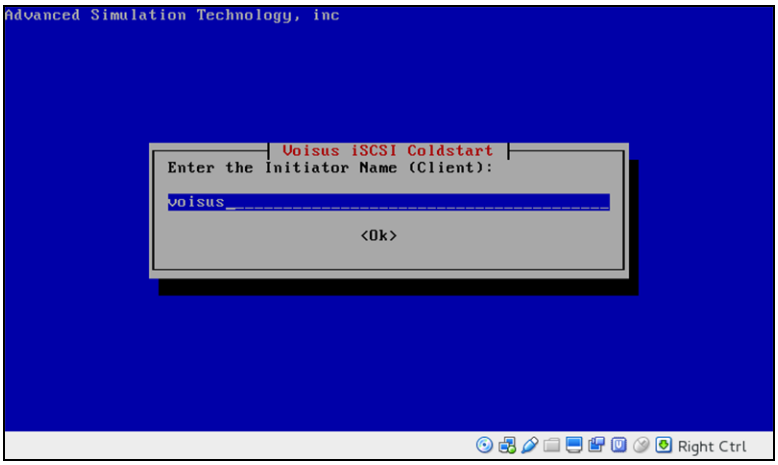

Figure 17: Enter the Initiator Name (Client)

11. Enter the iSCSI Target IP address, and select **<Ok>**.

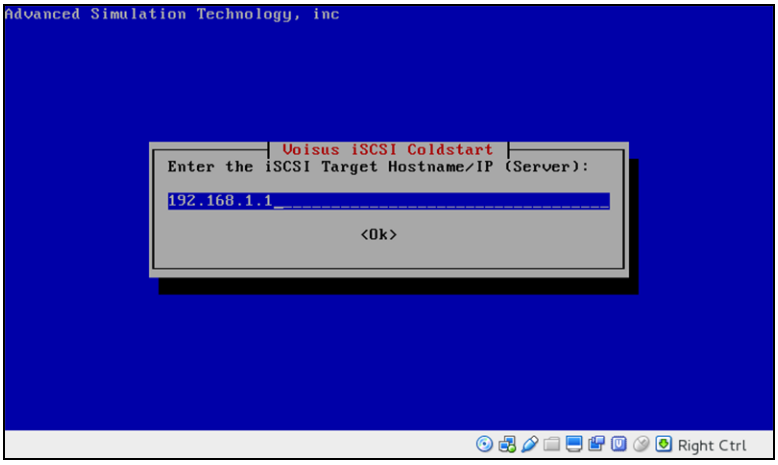

Figure 18: Enter the iSCSI Target Hostname/IP (Server)

12. Enter the iSCSI port number, and select **<Ok>**.

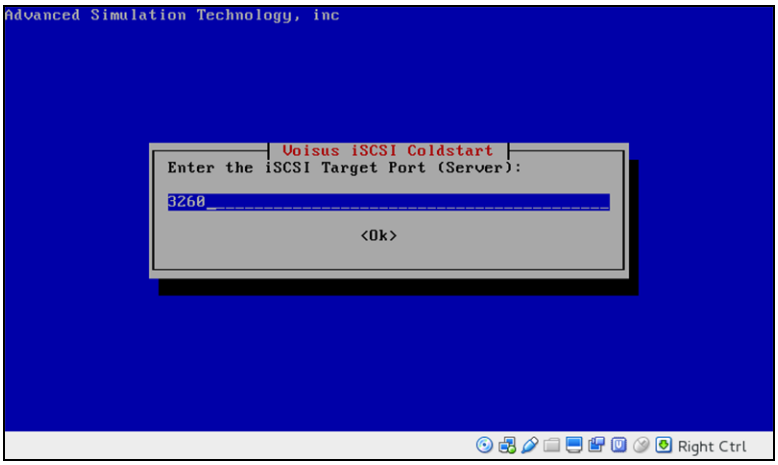

Figure 19: Enter the iSCSI Target Port (Server)

13. Confirm your settings, and select **<Yes>**.

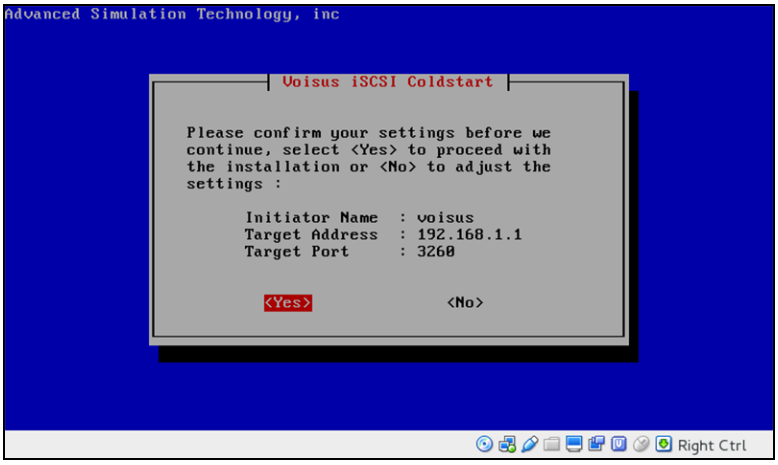

Figure 20: Settings confirmation

14. Wait approximately 10–15 minutes for the installation to complete. When prompted, insert the Voisus iSCSI Software Installation DVD. Press Enter.

15. Wait for confirmation that the software installation is complete, and press Enter.

16. Remove the Voisus iSCSI Software Installation DVD. The server automatically turns off.

17. Turn on the server.

18. Log into the server using the following credentials:

Username	Password
astiadmin	admin

19. *(Optional)* To set the IP address and subnet mask, run **ace-net-config -a** *xxx.xxx.xxx.xxx* **-n** *yyy.yyy.yyy.yyy*, where *xxx.xxx.xxx.xxx* is the IP address and *yyy.yyy.yyy.yyy* is the netmask. This configuration sets the IP address and netmask for Eth0, which you can use to access the Voisus web interface via a browser to complete the network setup.
20. *(Optional)* For more network settings, enter **ace-net-config -h**, and press Enter.
21. To activate the changes, enter **reboot**, and press Enter.

D-3 iSCSI cold-start procedure for Red Hat 5.X

***Caution**: Performing a cold-start procedure will completely erase the system hard drive.*

To perform the iSCSI cold-start procedure for Red Hat 5.X, follow these steps:

1. Turn on the Voisus server.
2. Insert the Voisus Software Installation DVD, and reboot the Voisus server.
3. At the Boot prompt, press Enter.
4. Remove the Voisus Software Installation DVD when it ejects from the drive.
5. Insert the Red Hat 5 Installation DVD, and select **OK**.
6. Select +**Advanced Storage Configuration**.

7. A dialog box appears, prompting "How would you like to modify your drive configuration?" Select **Add iSCSI target**, and then select **+Add drive**.

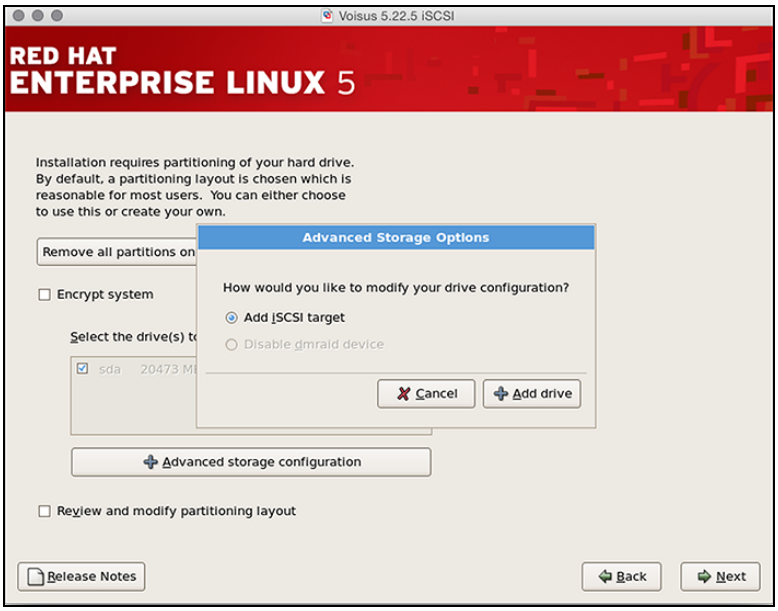

Figure 21: Advanced Storage Options

8. **Enable network interface** opens. From the **Interface** list, choose the interface that is connected to the network hosting your iSCSI drive.

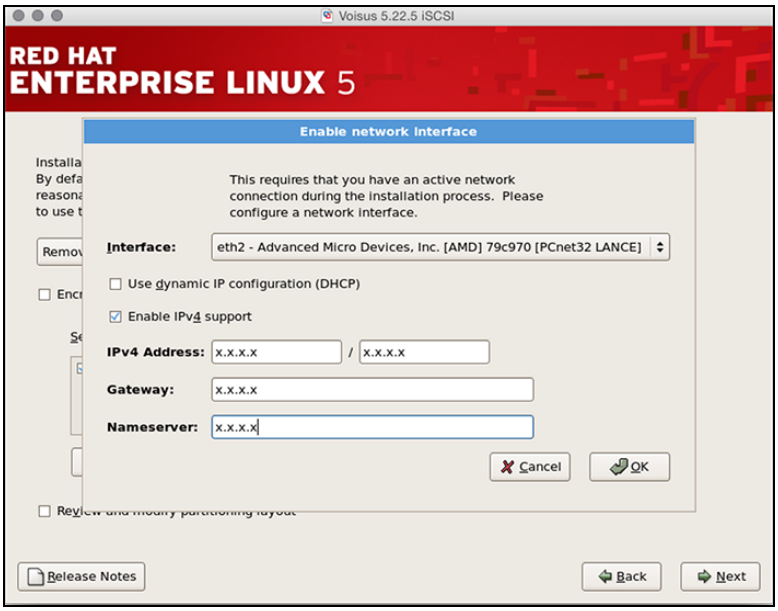

Figure 22: Enable Network Interface

9. Enter the appropriate network information, or select **Use Dynamic IP Configuration** if applicable. Select **OK**.

10. **Configure iSCSI Parameters** appears. In **Target IP Address**, enter the target IP address of the iSCSI server on your network.

11. In **iSCSI Initiator Name**, enter the iSCSI initiator name, which is determined by the party responsible for the server hosting the iSCSI Virtual Hard Drive (VHD). Select **+Add Target**.

Figure 23: Configure iSCSI Parameters screen

12. From the list, select **Remove all Partitions**, and then select **Next**. When the warning message appears, select **Yes**.

13. Turn on the interface used to connect to the iSCSI VHD. Additionally, turn on any additional interfaces that must remain active (i.e., eth0, eth1, eth2, etc.). Enter the host-name, and select **Next**.

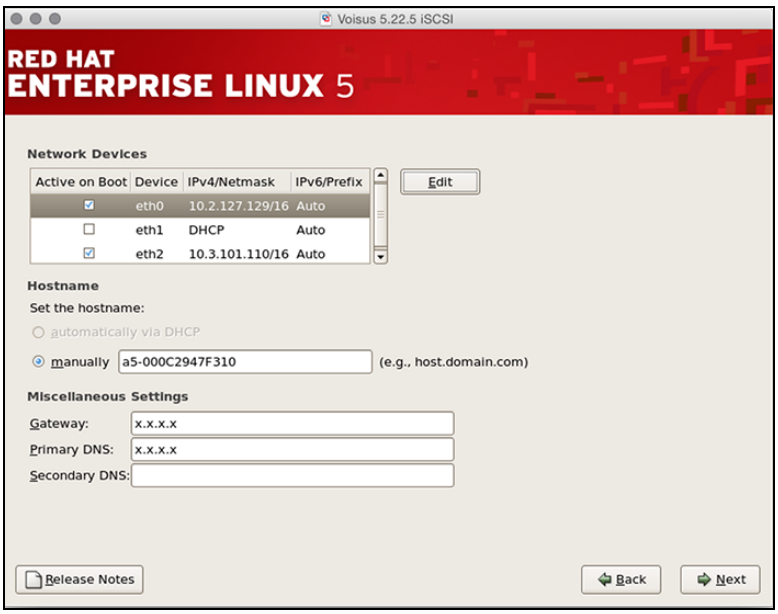

Figure 24: Miscellaneous Settings

14. Select the time zone appropriate to your location, and then select **Next**.

15. Select **Next** on the **Root Account**, **GNOME**, and **Red Hat** installation pages that appear. Wait 10 to 15 minutes for the connection to the iSCSI VHD and formatting to complete.

16. Remove the Red Hat 5 Installation DVD, and insert the Voisus Software Installation DVD when prompted.

17. When installation is complete, remove the Voisus Software Installation DVD.

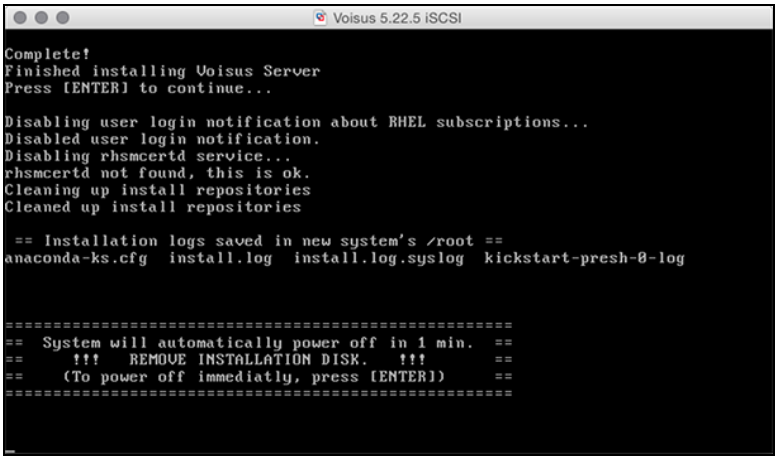

Figure 25: System Power-Down notification

18. When the server automatically turns off, restart the server.
19. Log into the server using the following credentials:

Username	Password
astiadmin	admin

20. *(Optional)* To set the IP address and subnet mask, run **ace-net-config -a** *xxx.xxx.xxx.xxx* **-n** *yyy.yyy.yyy.yyy*, where *xxx.xxx.xxx.xxx* is the IP address and *yyy.yyy.yyy.yyy* is the netmask. This configuration sets the IP address and netmask for Eth0, which you can use to access the Voisus web interface via a browser to complete the network setup.
21. *(Optional)* For more network settings, enter **ace-net-config -h**, and press Enter.
22. To activate the changes, enter **reboot**, and press Enter.

