

Telestra Cold Start Guide

Product Name: Telestra

Telestra Cold Start Guide

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Revision history

Date	Revision	Version	Comments
8/8/2016	A	1	Completed internal reorganization and made minor edits for grammar, consistency, and style; moved "(Optional) Media check" after "BIOS setup."
9/26/2017	A	2	Changed internal inline styles to character styles; added bookmarks to section titles; made edits to the wording in the Telestra cold-start procedure.
10/3/2017	A	3	Made minor edits to wording and fixed conditions display error.
10/16/2018	B	0	(7.1.0) Added instructions for the Red Hat 7.X cold-start procedure. Updated licensing references. Moved Red Hat 5.X and 6.X to Appendix D, "Legacy cold-start procedures" on page 45.
10/16/2018	C	0	Made minor wording change to Studio and Telestra terminology in "Introduction," removed network configuration instructions from "Studio cold-start procedure for Telestra 7.X and 8.X," and added new network configuration instructions for Studio.
1/9/2019	D	0	Added "BIOS Q17MX or Q17AX" configuration instructions.
1/22/2019	D	1	Added Q17MX/Q17AX to "BIOS setup;" added licensing reminder to "Restore" and removed "USB License Keys" for consistency with other cold start guides.
1/30/2019	D	2	Removed incorrect Step 8 from "Introduction."
3/13/2019	D	3	Removed Second Super IO Configuration interface element from "BIOS Q17MX or Q17AX."
4/26/2019	D	4	Made minor edits to BIOS for clarity and added cross reference to "iSCSI cold-start procedure for Telestra 6.X."
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11/22/2019	E	0	(7.4.1) Clarified media check verification process. Added "Cold start procedure for SLES 11."
1/16/2020	E	1	(7.5.0) Added caution note about custom speech models to "Backup."
2/16/2021	E	2	Updated 2U chassis diagram, title page, and header styles.

Date	Revision	Version	Comments
3/10/2021	E	3	Removed deprecated BIOS identification instructions.
3/30/2021	F	0	(7.10.0) Added support for USB media to the "Telestra server cold-start procedure for Telestra 7.X and 8.X."
4/1/2021	F	1	Made minor tweak to wording in "Telestra server cold-start procedure for Telestra 7.X and 8.X."
8/10/2021	F	2	Updated the 2U chassis diagram in "Required equipment." Added link to Fedora Media Writer download instructions.
6/14/2022	F	3	Fixed minor typo in "Cold start procedure for SLES 11."
6/23/2022	F	4	Updated the 2U chassis diagram to include the Power and Hard Drive LEDs.
10/7/2022	F	5	Added the Red Hat Enterprise Linux (RHEL) export statement to front matter. Updated 2U chassis diagram to move Eth card to third slot.
3/27/2023	G	0	Added "Telestra on customer or government equipment" and "Telestra in a virtual machine." Updated the Red Hat Enterprise Linux subscription and export statement in the front matter. Made "Required equipment," "Telestra server cold-start procedure for Telestra 7.X and 8.X," and "Studio cold-start procedure for Telestra 7.X and 8.X" generic to other types of installation media.
3/29/2023	G	1	Added UEFI to "Virtual machine host setup," "Set up and install Telestra on customer or government equipment," "(Optional) Media check," and "Memory Test (Telestra 7.X and 8.X)." Updated the BIOS table in "BIOS setup." Added "minimum" to Memory and Disk Space in "ESXi virtual machine specifications." Added "Memory Test (Telestra 7.X and 8.X)."

Date	Revision	Version	Comments
10/16/2023	H	0	<p>Updated content for Telestra 8.X. In "BIOS Q17MX or Q17AX," added a note instructing users not to select the UEFI option for DVD or USB. In "Intel iSCSI cold-start procedure for Telestra 7.X and 8.X," and added a note instructing users to verify the DVD is set to the first boot device if they can't boot from the DVD.</p> <p>Deleted unnecessary Telestra server column in "BIOS setup." Replaced "Target" references with "Telestra server" and "ACE" references with "Telestra."</p> <p>Added "Broadcom iSCSI setup and cold-start procedure" documentation.</p> <p>Updated Disk Space to 80 GB in "Minimum host server specifications" and "ESXi virtual machine specifications."</p>
1/3/2024	H	1	<p>Updated the recommended image flash utility in "Telestra server cold-start procedure for Telestra 7.X and 8.X." Fixed an error causing duplicate "Backup" sections to display. Removed Step 10 in "Restore" and added "(Optional) Licensing."</p>
3/11/2024	I	0	<p>Added "BIOS HW-1XXXXX-1XX or HW-2XXXXX-1XX." Fixed configuration number typo in "Broadcom iSCSI setup and cold-start procedure" and added required equipment to "Intel iSCSI setup and cold-start procedure" for consistency.</p>
3/12/2024	I	1	<p>Added BIOS HW-1XXXXX-1XX or HW-2XXXXX-1XX to the table in "BIOS setup." Fixed blurry image of the ASTI-SRV chassis diagram in "Required equipment."</p>
3/13/2024	I	2	<p>Updated the compatible software release for BIOS HW-1XXXXX-1XX and HW-2XXXXX-1XX in "BIOS setup."</p>

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1.0 Introduction

The cold-start procedure(s) described in this document allow you to build Telestra 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 Telestra server, go to Section 3.0, "Backup" on page 4.
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 18.
4. Complete the Telestra server cold-start procedure, erase the hard drive, and install the Red Hat and Telestra software. For cold-start procedure instructions, go to Section 6.0, "Telestra server cold-start procedure for Telestra 7.X and 8.X" on page 19.
5. Set up the network. First, assign a temporary IP address to the Telestra server, which allows a web browser to remotely access Telestra software. Then use the Telestra web interface on a web browser to complete the network setup. To set up the network, go to Section 9.0, "Telestra server network setup" on page 28.
6. *(Optional)* To install Studio on hardware or a virtual machine, complete the Studio cold-start procedure in Section 10.0, "Studio cold-start procedure for Telestra 7.X and 8.X" on page 30.
7. To restore the Telestra server, go to Section 11.0, "Restore" on page 33.

2.0 Required equipment

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

- A Telestra 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
- Telestra installation media (i.e., DVD, USB drive, ISO)

Figure 1, "Telestra (P/N: TL-AT) 2U chassis" below shows the Telestra (P/N: TL-AT) 2U chassis:

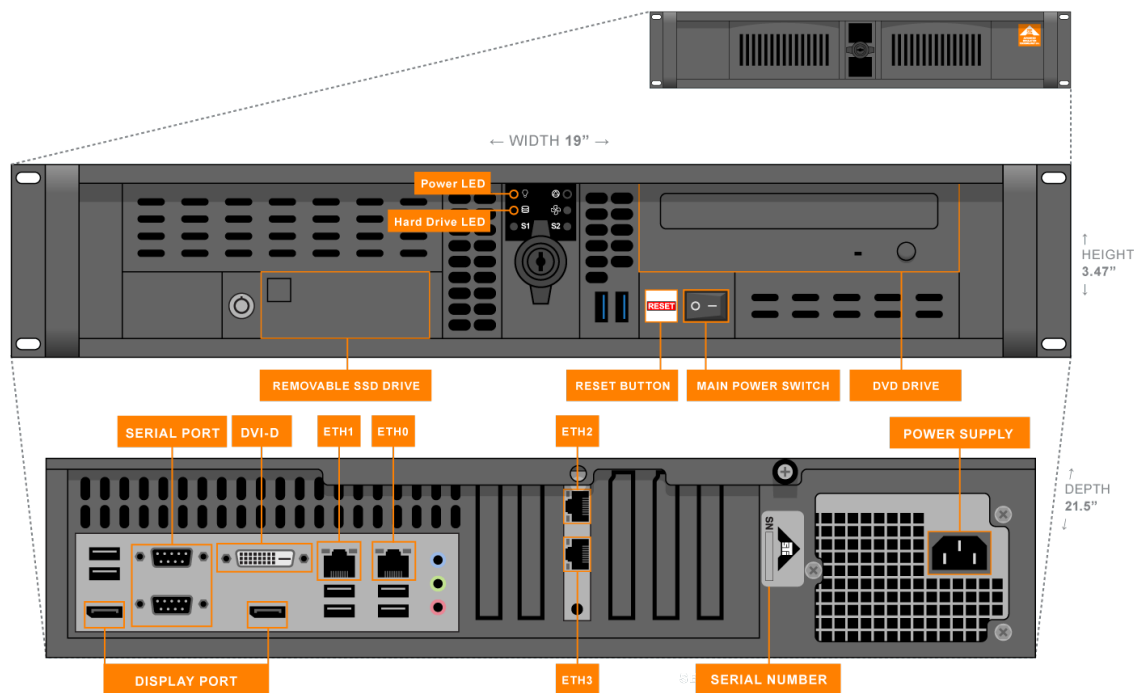


Figure 1: Telestra (P/N: TL-AT) 2U chassis

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

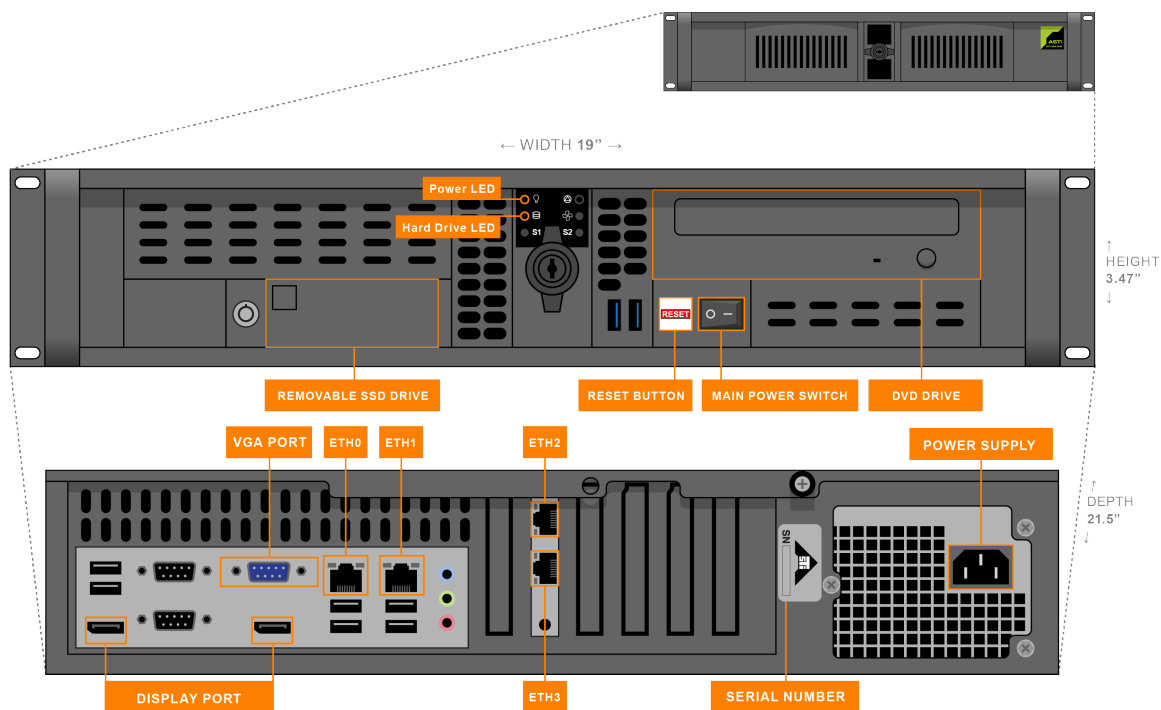



Figure 2: Telestra (P/N: ASTI-SRV) 2U chassis



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.

3.0 Backup

To back up a system configuration, follow these steps:

- 1. Open a web browser on a computer sharing a network with the Telestra server.
- 2. In the address bar, enter the Telestra server's IP address.
- 3. On the left, under  **Setup**, go to **Backup/Restore**.

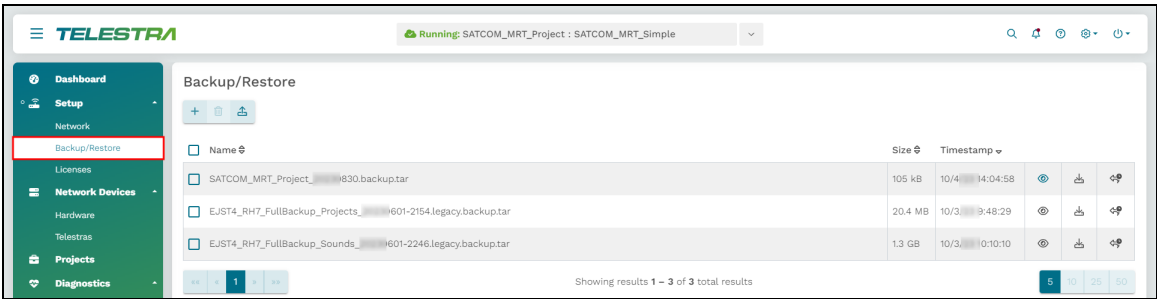


Figure 3: Backup/Restore navigation

- 4. On the right, hover over the orange tab (), and select **Log in to edit**.

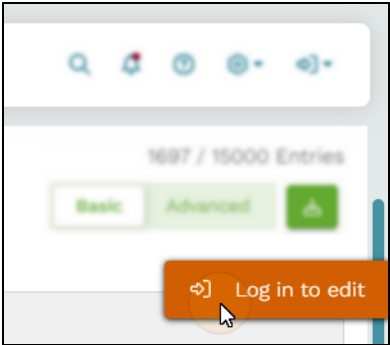





Figure 4: Log in to edit

- 5. Log in with the following default credentials:

Username	Password
admin	astirules

- 6. Select **Add a backup** (.
- 7. (Optional) In **Select Resources to Back up**, select the arrow () to view the contents of each section. To view all available resources, select .

8. Choose which resources to back up:

- **Licenses**: saves the license file and/or license server configuration on the Telestra server.
- **Networking**: saves the Telestra server's network configuration, such as the hostname and network settings.
- **Project Archives**: saves all of the Telestra server's projects.
- **RecordReplay**: saves any Telestra Sound Recording (.tsr) files from the **RecordReplay** or **LevelDCapture** components or .wav files from the **StereoWavRecord** component.
- **Sound Library**: saves all wavesets on the Telestra server.
- **System Configuration**: saves **Audit Logs**, internal features, HTTP API server configuration and data, Level D configurations, system **Contact** information, and **User Management** information (i.e., usernames, passwords).
- **Telestra Configurations**: saves the configuration file enabling you to use custom or customer-specific components.
- **Custom SR Models**: saves any speech recognition (SR) models built or installed on the system.



***Important:** Some options may not display depending on your Telestra server's configuration.*

9. (Optional) In **Prefix**, enter a unique name for the backup. If this field is blank, Telestra uses the server's hostname followed by a string of unique characters.
10. (Optional) Select **Text Only?** to remove project history (i.e., Mercurial) from the backup. This setting is ideal for secure facilities that are unable to transmit binary data.

11. Select Back up.

Select Resources to Back up

☒ Select All

Expand All

☒ Licenses

☒ Networking

☒ Project Archives

☒ RecordReplay

☒ Sound Library

☒ System Configuration

☒ Telestra Configurations

Prefix (optional)

☐ Text Only?

Cancel

Back up

Figure 5: Select Resources to Back up

When the backup is complete, a “Backup was successful” message appears.

12. (Optional)Find the new backup in the table, and select **Download** (📄).

Backup/Restore

<input type="checkbox"/> Name	Size	Timestamp			
<input type="checkbox"/> SATCOM_MRT_Project_004_153338EDT_000c295e7baa.backup.tar	103 kB	15:33:38			
<input type="checkbox"/> SATCOM_MRT_Project_1830.backup.tar	105 kB	14:04:58			
<input type="checkbox"/> EJUST4_RH7_FullBackup_Projects_601-2154.legacy.backup.tar	20.4 MB	9:48:29			
<input type="checkbox"/> EJUST4_RH7_FullBackup_Sounds_601-2246.legacy.backup.tar	1.3 GB	10:10:10			

Showing results 1 – 4 of 4 total results

5

10

25

50

Figure 6: Download a backup

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 Telestra server uses, refer to the table below:

BIOS Version	Telestra Software Version
BIOS HW-1XXXXX-1XX or HW-2XXXXX-1XX	8.2.X and later
BIOS Q17MX or Q17AX	6.8.0–6.12.0, 7.1.0–7.15.0, 8.X.Y
BIOS Q67AX 2.14.1219 and later	4.37-37635–4.50-38673, 6.X.Y, 7.X.Y, 8.X.Y
BIOS Q67AX 2.02.1205 and earlier	
BIOS Q35AX American Megatrends	4.15–4.50-38673, 6.X.Y, 7.X.Y
BIOS Advantech AIMB-562 American Megatrends	4.X.Y, 6.X.Y
BIOS Advantech AIMB-562 Award	
BIOS BLH6710H	4.37-37635–4.50-38673
BIOS JGIBX10J	4.37-37635–4.50-38673

Table 1: Telestra 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 **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* or *USB* option



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 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**
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**.

4.6 BIOS Advantech AIMB-562 American Megatrends

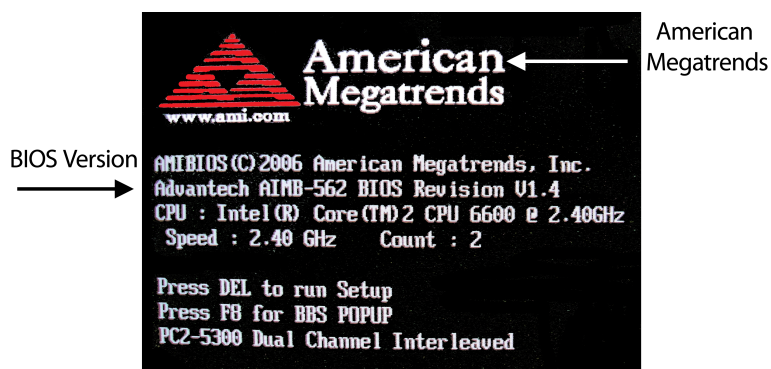


Figure 7: AIMB-562 American Megatrends BIOS version

To set up BIOS version AIMB-562 American Megatrends, follow these steps:

1. Insert the Telestra Server Software Installation DVD.
2. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
3. Go to **Exit**, and select **Load Set Up Defaults**.
4. Go to **Main**, and set the system date and time to Greenwich Mean Time.
5. Go to **Chipset > APM Configuration**. Set **Restore on AC Power Loss** to **Power On**.
6. Go to **Advanced > CPU Configuration**, and set the following:
 - a. **Execute Disable Function** to **Enabled**
 - b. **Intel® Speed Step™** to **Disabled**

7. Go to **Advanced > Onboard Device Configuration**, and set the **Lan Option ROM** to **Enabled**.
8. Go to **Exit**, and select **Exit & Save**.
9. As the server reboots, press Del to enter the **BIOS Setup Utility**.
10. Go to **Boot > Boot Device Priority**. Set the following:
 - a. **1st Boot Device** to the *CD/DVD drive* option
 - b. **2nd Boot Device** to the *hard drive* option (e.g., **WDC WR800JD**)
 - c. **3rd Boot Device** to the *Ethernet* option (e.g., **IBA GE Slot 0200 v1228**)



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

- d. **4th Boot Device** to **Disabled**
11. Go to **Exit**, and select **Exit & Save**.

4.7 BIOS Advantech AIMB-562 Award

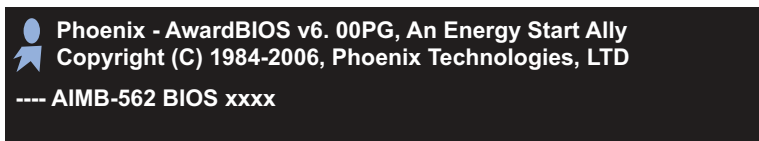


Figure 8: AIMB-562 American Megatrends BIOS version

To set up BIOS version AIMB-562 Award, follow these steps:

1. Reboot the server, and immediately press Del as the system boots to enter the **BIOS Setup Utility**.
2. Select **Load Optimized Defaults**.
3. Select **Standard CMOS Features**, and set the following:
 - a. **System Date** and **System Time** using Greenwich Mean Time
 - b. **Halt On** to **No Errors**
4. Go to **Advanced BIOS Features**, and set the following:
 - a. **First Boot Device** to the *CD-ROM* option
 - b. **Second Boot Device** to the *hard drive* option
 - c. **Third Boot Device** to the *LAN* option

5. Go to **Integrated Peripherals**.
6. Select **Onboard Device**, and set the following:
 - a. **USB Keyboard Support** to **Enabled**
 - b. **Onboard Lan Boot ROM** to **Enabled**
7. Select **OnChip IDE Device**, and set the following:
 - a. **On-Chip Serial ATA** to **Enhanced Mode**
 - b. **SATA PORT Speed Settings** to **Force GEN I**
8. Select **Super IO Device**, and set **PWERON After PWR-Fail** to **On**.
9. Go to **Main**, and select **Save and Exit Setup**.

4.8 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**.

4.9 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 Telestra 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 Telestra server. As it boots, insert the Telestra Server Software Installation DVD into the disc drive within 10 seconds of turning it on.



Important: *If the Telestra 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 Telestra w/ mediacheck**, and press Enter.



Note: *Telestra 7.10.0 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 Telestra server cold-start procedure for Telestra 7.X and 8.X



Note: Telestra 7.10.0 and later supports cold-starting with USB media in addition to a DVD. To install Telestra 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.

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

1. Connect a monitor, keyboard, and mouse to the Telestra server.
2. Turn on the server.
3. Insert or mount the installation media (i.e., the Telestra Server Software Installation DVD, USB, or ISO file), and wait for it to boot.
4. When the Telestra welcome screen appears, press Enter to begin installing the software. Wait 15–20 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 Telestra Server 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, run one of the following:

- *Telestra 8.X and later:* **astikli netcfg -a xxx.xxx.xxx.xxx -n yyy.yyy.yyy.yyy**,
- *Telestra 7.X and earlier:* **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 Web Interface via a browser to complete the network setup.

9. (Optional) For more network settings, run one of the following:

- *For Telestra 8.X:* **astikli netcfg -h**
- *For Telestra 7.X:* **ace-net-config -h**

10. To activate the changes, enter **reboot**, and press Enter.

11. Log into the system using the following credentials:

Username	Password
admin	admin

The cold-start procedure for Telestra 7.X and 8.X is now complete.

7.0 Telestra iSCSI cold-start procedure

The iSCSI cold-start procedure involves installing Telestra 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 Telestra 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 Telestra 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 T4H-XXXAX, T4H-XXXBX system and a Telestra Server 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 22. 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 Telestra 7.X and 8.X

7.1.1 Intel iSCSI boot firmware installation



Important: To identify the Ethernet port for iSCSI, enter `ethtool -p ethN`, 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 22. 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 Telestra 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 Telestra 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 Telestra server settings.

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

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

The Intel iSCSI cold-start procedure for Telestra 7.X and 8.X is identical to the standard cold-start procedure for Studio and the Telestra server. To cold start a Telestra server for iSCSI, go to Section 6.0, "Telestra server cold-start procedure for Telestra 7.X and 8.X" on page 19. To cold start a Studio for iSCSI, go to Section 10.0, "Studio cold-start procedure for Telestra 7.X and 8.X" on page 30.



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 Telestra 7.X, ensure the DVD is set to the first boot device, as described in Section 4.2, "BIOS Q17MX or Q17AX" on page 8. Some Telestra 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 Telestra software on an iSCSI server using a Broadcom Ethernet adapter. Required equipment includes a T4H-XXX8X, T4H-XXX9X system and a Telestra Server 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
- Telestra ROM configurations for iSCSI with a Broadcom Ethernet Adapter
- Broadcom iSCSI cold-start procedure

7.2.1 BIOS additions for iSCSI with Broadcom

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

To modify Telestra'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 8.
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 Telestra ROM configurations for iSCSI with a Broadcom Ethernet Adapter

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

1. Reboot the Telestra 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 Telestra server.
2. Insert the Telestra Server 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, "Telestra 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 Telestra server to boot from the Telestra Server Software Installation DVD, and remove the DVD when it ejects from the drive. If the Telestra server does not boot from the DVD, reboot the Telestra server, and repeat Steps 2–3.
5. Complete the Telestra cold-start procedure in Section 6.0, "Telestra server cold-start procedure for Telestra 7.X and 8.X" on page 19.

8.0 Terrain server software installation

If you purchased Telestra terrain server database software (ACE-TRN), you will have a USB License Key that enables the terrain server software to run on the Telestra server. To install the terrain server software from the Telestra Server Software Installation DVD, follow these steps:

1. Insert the Telestra Server Software Installation DVD into the terrain server.



***Note:** The Terrain data is very large and may take several minutes to complete.*

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

Username	Password
root	abcd1234

3. To mount the DVD, run **mount /dev/cdrom /media**.
4. Run **terrain-server-install**.
5. Wait for the installation to complete. Follow the on-screen instructions, and remove the disc from the drive when instructed.
6. Make any necessary changes to the /usr/local/ast/sysconfig/terrain_d.ini terrain server configuration file. The file contains built-in configuration instructions.
7. Reboot the terrain server for the changes to take effect.



***Important:** This installation is for ASTi terrain server software only, which includes DTED Level 0 data for the entire Earth. To upload third-party terrain server data, go to the **Terrain** web page in the Telestra web interface.*

9.0 Telestra server network setup

To complete Telestra server network setup, you will need the following hardware:

- Monitor
- Keyboard
- Category 5e cable or better
- Telestra server

To set up the Telestra server and assign an IP address, follow these steps:

1. Connect the monitor and keyboard to the Telestra server.
2. Using a Category 5e cable, connect the Telestra server to the local network using Eth0.
3. Turn on the Telestra server.
4. Log into the system using the following default credentials:

Username	Password
root	abcd1234

5. *(Optional)* To set the IP address and subnet mask, run one of the following:
 - *Telestra 8.X and later:* **astikli netcfg -a xxx.xxx.xxx.xxx -n yyy.yyy.yyy.yyy,**
 - *Telestra 7.X and earlier:* **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 Telestra web interface via a browser to complete the network setup.

6. *(Optional)* For more network settings, run one of the following:
 - *For Telestra 8.X:* **astikli netcfg -h**
 - *For Telestra 7.X:* **ace-net-config -h**
7. Open a web browser on a computer sharing a network with the Telestra server.
8. In the address bar, enter the Telestra server's IP address.
9. Log in with the following default credentials:

Username	Password
admin	astirules

10. On the left, under **Setup**, go to **Network > Configuration**.

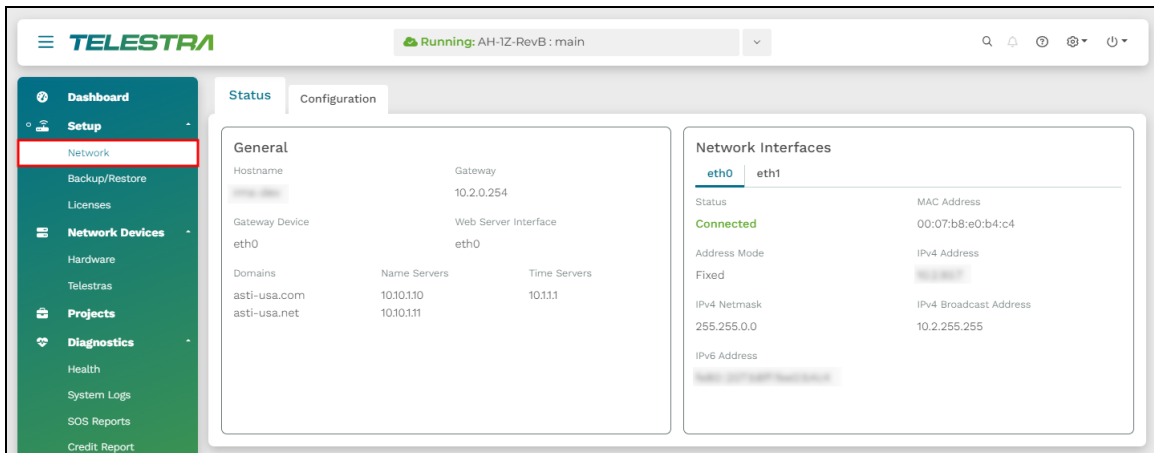


Figure 9: Network > Configuration navigation

11. In **General**, verify the following settings are configured:

- **Gateway**
- (Optional) **Domains**
- **Routing Method**
- **Hostname**
- (Optional) **Name Servers**

12. To reboot the server, go to **System (⏻) > ↺ Reboot**.

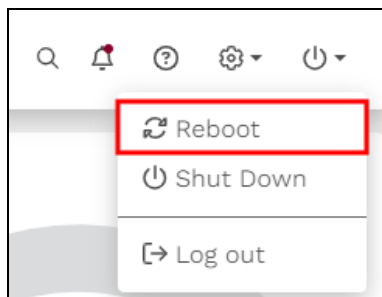


Figure 10: Reboot the Telestra server

In the confirmation message, select **Confirm** to continue.



Note: In most cases, the browser refreshes automatically. However, you may need to manually refresh if you see a message indicating that the Telestra server is down.

10.0 Studio cold-start procedure for Telestra 7.X and 8.X



***Note:** Telestra 7.10.0 and later supports cold-starting with USB media in addition to a DVD. To install Telestra 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.*

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

1. Connect a monitor, keyboard, and mouse to the Telestra server.
2. Turn on the server.
3. Insert or mount the installation media (i.e., the Telestra Studio Software Installation DVD, USB, or ISO file), and wait for it to boot.
4. When the Studio welcome screen appears, press Enter to begin installing the software. Wait 15–20 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 Telestra Studio 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. Select the **aceuser** account.
8. Log into Studio using the following default credentials:

Username	Password
aceuser	aceuser

The Studio cold-start procedure for Telestra 7.X and 8.X is now complete.

10.1 Set up a Studio development workstation

The Studio development workstation or virtual machine (VM) will not have an IP address without a DHCP server present on the network. To manually set the IP address and other network settings, follow these steps:

1. From the toolbar, select **Applications > System Tools > Settings**.

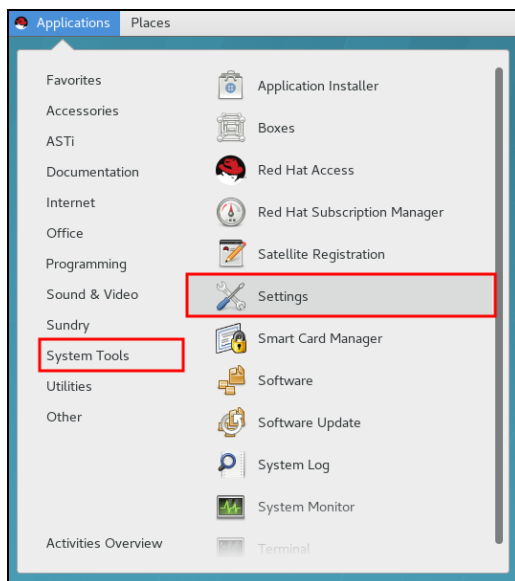


Figure 11: Studio Settings navigation

2. Under **Hardware**, select **Network**.
3. In **Network**, choose an Ethernet port (e.g. Eth0), and select the gear (⚙️).

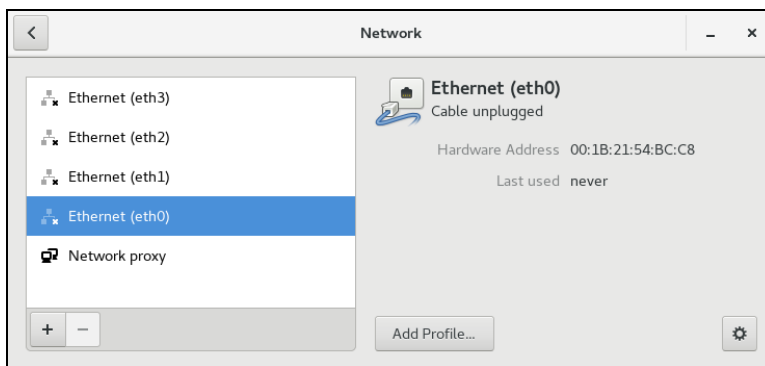


Figure 12: Ethernet selection

4. On the left, select **IPv4**.
5. Select **Addresses**, and then select **Manual**.
6. In **Address**, enter Studio's IP address.

7. In **Netmask**, enter Studio's subnet mask.
8. In **Gateway**, enter the default gateway. If unsure of the gateway, enter the IP address from Step 6.

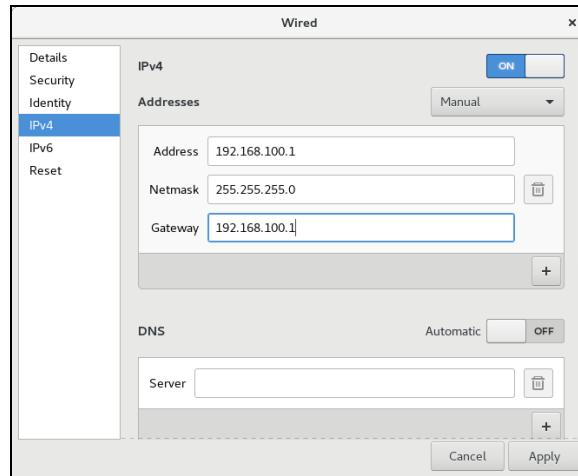



Figure 13: Studio network configuration

9. Select **Apply**.
10. To apply your changes, restart the development workstation or VM.

11.0 Restore

To restore a backup on the Telestra server, follow these steps:

- 1. Open a web browser on a computer sharing a network with the Telestra server.
- 2. In the address bar, enter the Telestra server's IP address.
- 3. On the left, under  **Setup**, go to **Backup/Restore**.

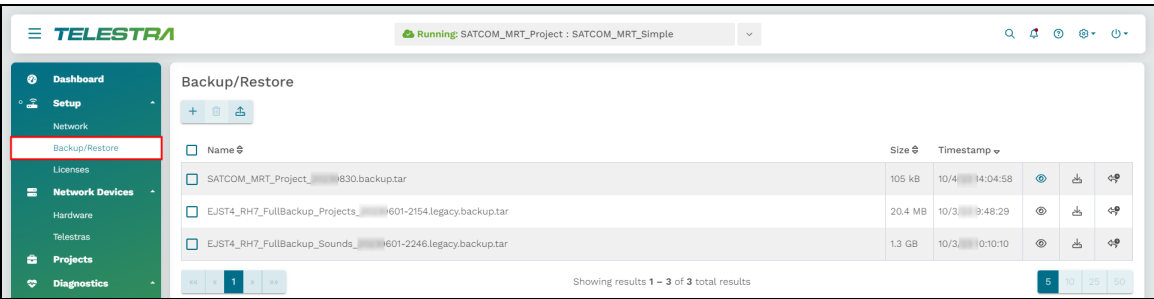


Figure 14: Backup/Restore navigation

- 4. On the right, hover over the orange tab (), and select **Log in to edit**.

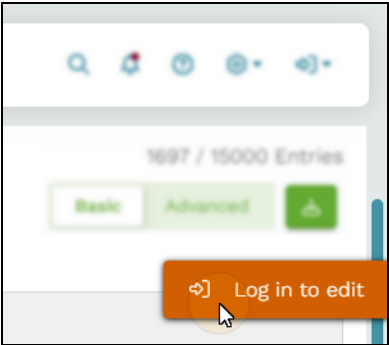


Figure 15: Log in to edit

- 5. Log in with the following default credentials:

Username	Password
admin	astirules

- 6. To upload a backup to the Telestra server, select **Upload** ().

7. In **Upload Backups**, select **Browse Files**, and find the backup file on your local system. Accepted file types include tape archive, GNU zip, and backup tape archive formats (.tgz, .backup.tar).

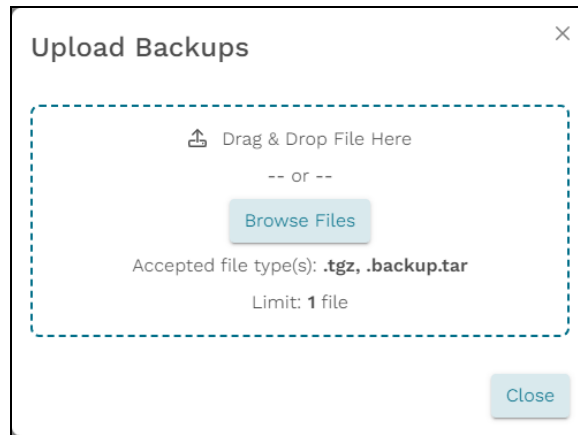


Figure 16: Find a backup file

8. Select **Upload 1 file**. Close the window when the upload is complete.

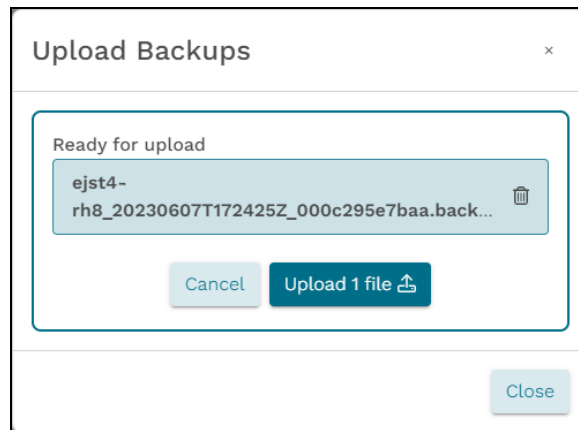


Figure 17: Upload a backup file

9. (Optional) To view the contents of a backup, select **View Restore Files** (👁️). Once the system loads, select the eyeball icon again.

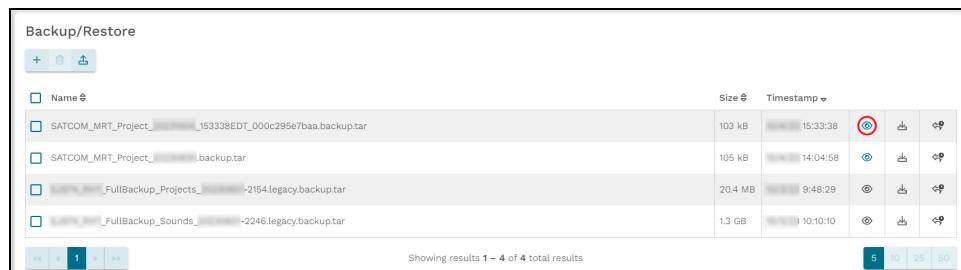


Figure 18: View Restore Files icon

A pop-up window opens, displaying paths to files and sound files in the backup. Scroll down to view the full list of items.

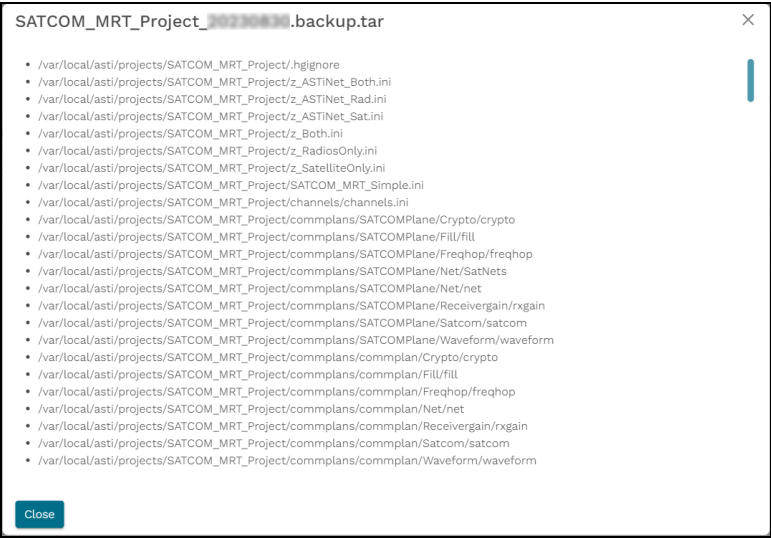


Figure 19: View the contents of a backup

10. To restore the uploaded backup, select **Restore** (↺).

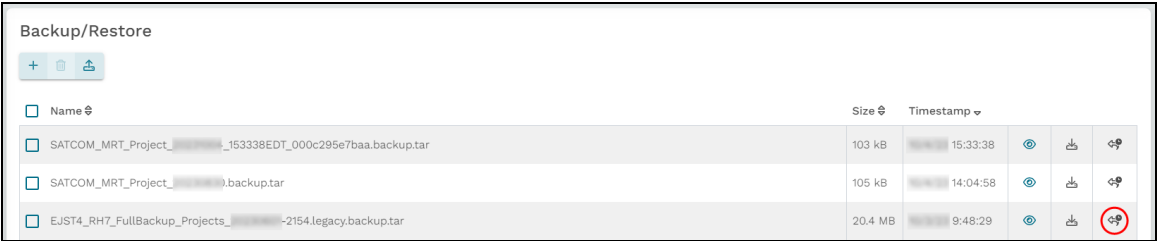


Figure 20: Restore a backup

11. (Optional) In **Select Resources to Restore**, select the down arrow (▼) to view the contents of each section. To view all available resources, select **Expand All**.

12. Choose which resources to restore:

- **Licenses**: saves the license file and/or license server configuration on the Telestra server.
- **Networking**: saves the Telestra server's network configuration, such as the hostname and network settings.
- **Project Archives**: saves all of the Telestra server's projects.
- **RecordReplay**: saves any Telestra Sound Recording (.tsr) files from the **RecordReplay** or **LevelDCapture** components or .wav files from the **StereoWavRecord** component.
- **Sound Library**: saves all wavesets on the Telestra server.
- **System Configuration**: saves **Audit Logs**, internal features, HTTP API server configuration and data, Level D configurations, system **Contact** information, and **User Management** information (i.e., usernames, passwords).
- **Telestra Configurations**: saves the configuration file enabling you to use custom or customer-specific components.
- **Custom SR Models**: saves any speech recognition (SR) models built or installed on the system.

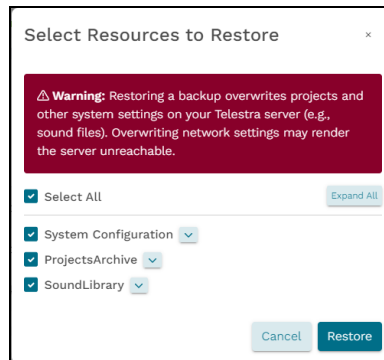


Figure 21: Select Resources to Restore



Important: Some options may not display depending on your Telestra server's configuration.

13. Select **Restore**. After Telestra restores the configuration, a “Restore was successful” message appears.

12.0 (Optional) Licensing

After cold-starting the Telestra server and restoring your system configuration, you may wish to verify your license is still active. The Telestra server requires an active license to function properly. While you don't have to reinstall your license after a cold start, it's a good idea to check its status in the Telestra web interface. This section explains how to ensure your license is active and operational. To learn more about USB License Keys, go to "Licenses" in the [Telestra Web Interface User Guide](#).

To verify the Telestra server's license, follow these steps:

1. On the left, go to **Licenses**.

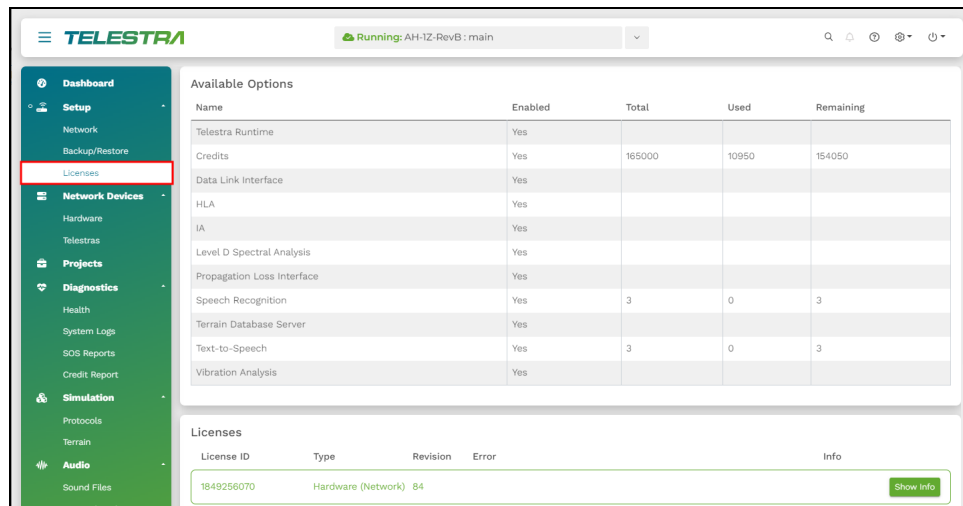


Figure 22: Licenses navigation

2. Verify an active license appears under **Licenses**:

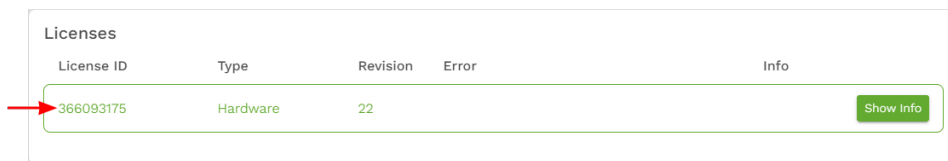


Figure 23: Active license

Appendix A: Memory Test procedures

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

A-1 Memory Test (Telestra 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 Telestra server.
2. Insert the Telestra Server Software Installation DVD, and reboot the Telestra 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:** Telestra 7.10.0 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 Telestra server to service, remove the DVD, restart the server, and wait for it to reboot.

A-2 Memory Test (Telestra 6.X)

This Memory Test procedure applies to the Red Hat 6.X operating system. To complete the Memory Test, follow these steps:

1. Turn on the Telestra server.
2. Insert the Studio Software Installation DVD or Telestra Server Software Installation DVD, and reboot by pressing the Reset button on the front of the chassis.

3. At the boot prompt, enter **memtest86**, and press Enter. 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.

A-3 Memory Test (Telestra 4.31 and later)

This Memory Test procedure applies to the Red Hat 5.X operating system. To complete the Memory Test, follow these steps:

1. Turn on the Telestra server.
2. Insert the Telestra ASTi Software Installation DVD, and reboot the development workstation.
3. At the prompt, select **Memtest**.

A-4 Memory Test (Telestra 4.10–4.30)

The following Memory Test procedure applies to the Red Hat 5.X operating system. To execute the Memory Test, follow these steps:

1. Turn on the development workstation.
2. Insert the Telestra ASTi Software Installation DVD, and reboot.
3. At the prompt, enter **memtest**, and press Enter. Let the Memory Test run for an extended period of time or over night, if possible.
4. The Memory Test will continue running indefinitely until manually stopped. To stop the test, press the Esc key.

Appendix B: Telestra in a virtual machine

User requirements and/or deployment needs may require you to install the Telestra software in a virtual machine (VM) using customer or government-furnished equipment.

Intended for customers using Telestra in a VM, this appendix supplements the *Telestra Cold Start Guide* with virtualization requirements and setup. ASTi currently supports Telestra virtualization using ESXi from VMware. Consult [VMware vSphere Documentation](#) as needed for setup.

A variety of factors can impact a deployed Telestra software:

- 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 Required equipment for Telestra virtualization

To install Telestra in a virtual machine (VM), you will need the following items:

- *Host system:*
 - VMware ESXi, versions 6.7, update 3 or later
 - Two or more network interfaces:
 - A general network interface assigned to Telestra's Eth0 port
 - An interface assigned to Telestra's Eth1 port (i.e., ACENet), dedicated for Telestra pass-through
- *Telestra in a VM:*
 - Telestra 7.10 and later
 - Telestra installation media (i.e., DVD, USB drive, or ISO)

B-2 Virtual machine host setup

To configure a virtual machine (VM) host for Telestra, follow these steps:

1. Configure the following Basic Input/Output System (BIOS) or Unified Extensible Firmware Interface (UEFI) settings:
 - a. Set the system profile (i.e., the CPU) to use a high-performance power management policy.
 - b. Disable C-States.
 - c. Disable C1E.
2. In ESXi, designate and configure a physical Ethernet interface for pass-through.



Note: ASTi recommends using Intel Ethernet cards.

3. Set ESXi to use a high-performance power management policy.

B-3 ESXi virtual machine specifications

Telestra in an ESXi virtual machine (VM) requires the following specifications:

CPUs	
vCPUs:	Two dedicated
CPU Cores:	Two cores per socket
Resource Allocation Reserve:	Total amount of processing across both CPUs (e.g., if the host has a CPU of 2.2 GHz, reserve 4,400 MHz or 4.4 GHz) <i>Note: This number must represent the maximum reservation. Reservation configuration settings may vary across different ESXi versions.</i>
CPU Resources:	Unlimited
CPU Share Value:	High
vCPU Performance Counters:	Enabled
Scheduling Affinity:	Disabled
Memory	
Memory:	8 GB minimum
Guest Memory:	Reserve all available
Storage	
Disk Space:	80 GB minimum
Advanced	
Latency Sensitivity:	High

Table 2: ESXi VM specifications for Telestra

B-4 Virtual machine network configurations

To set up the virtual machine's (VM's) network, follow these steps:

1. Create a network adapter (if your configuration does not already include one), and connect it to a virtual network. Set the network adapter type to E1000E.
2. Add a new Peripheral Component Interconnect (PCI) device, specifying the Ethernet card you configured in B-2, "Virtual machine host setup" on the previous page.
3. *(Optional)* If your configuration requires multiple Ethernet ports, add more network adapter(s). Additional network adapters require VMXNET3 adapter types.
4. After configuring the VM's network, run the Telestra cold-start procedure in Section 6.0, "Telestra server cold-start procedure for Telestra 7.X and 8.X" on page 19.

Appendix C: Telestra on customer or government equipment

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

The CFE/GFE hardware selection must support Telestra's requirements. A variety of factors can impact a deployed Telestra:

- 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 for Telestra 7.10 and later:

CPU Speed	Intel 3 GHz i7 or better; nonmobile
CPU Cores	4x or greater
Memory	8 GB RAM
Disk Space	80 GB
Ethernet	2 or more gigabit Ethernet ports, preferably Intel Ethernet Important: Port Eth1 is dedicated to ACENet.

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

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

To install Telestra 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: Telestra 7.10 and later supports booting from UEFI.

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

Appendix D: Legacy cold-start procedures

The following sections provide installation instructions for older Red Hat and Telestra software versions.

D-1 Telestra 6.X cold-start procedure



Important: Before installing the software, ensure the Boot Priority settings are in accordance with the proper BIOS configuration instructions. Otherwise, the Telestra server does not boot from the DVD but automatically enters the installation routine.

To complete the cold-start procedure for Telestra server versions 6.0 and later, follow these steps:

1. Turn on the Telestra server.
2. Insert the Telestra Target Software Installation DVD into the drive, and ensure the system boots from the DVD.
3. To start the installation, press Enter, and wait for the installation to complete.
4. A warning message displays, “Disc Not Found.” Insert the Red Hat 6 Installation DVD, and select **Ok**. Wait ten to fifteen minutes for the installation to complete.
5. When the software is finished installing, eject the Red Hat 6 Installation DVD from the drive, and remove the DVD.
6. Insert the Telestra Target Software Installation DVD, and press Enter. Wait several minutes for the installation to complete, and press Enter again.
7. When the post-installation scripts finish running, press Enter to turn off the server.
8. Remove the Telestra Target Software Installation DVD when it ejects from the drive.
9. Turn on the Telestra server.
10. Log into the system using the following credentials:

Username	Password
admin	admin

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 Remote Management System via a browser to complete the network setup.

D-2 Studio cold-start procedure for Telestra 6.X

The following sections provide cold-start procedure instructions for Studio version 6.0 and later.



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.

Install Studio 6.X and later

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

1. Turn on the server.
2. Insert the Studio Software Installation DVD, and reboot the server.
3. At the boot prompt, press Enter.
4. Remove the Studio 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 Studio Software Installation DVD. Press Enter.
7. Wait several minutes for the installation to complete, and press Enter.
8. Remove the Studio Software Installation DVD when it ejects from the drive.
9. Reboot the server.
10. When the Studio login screen appears, select **aceuser**, and enter the following password: **aceuser**. The Studio interface appears.

Set up a Studio 6.X development workstation

To set up your Studio 6.X development workstation, you will need the following hardware:

- Monitor
- Keyboard
- Mouse
- Studio development workstation
- Category 5e cable or better
- Network connection from Studio to the Telestra server

Studio does not have an IP address without a Dynamic Host Configuration Protocol (DHCP) network connection. To set up Studio, and assign an IP address to the system, follow these steps:

1. Connect the monitor, keyboard, and mouse to the Studio.
2. Connect Studio to the same network as the Telestra server.
3. Turn on Studio.
4. Log into Studio using the following default credentials:

Username	Password
aceuser	aceuser

5. From the taskbar, go to **System > Preferences > Network Connections**.

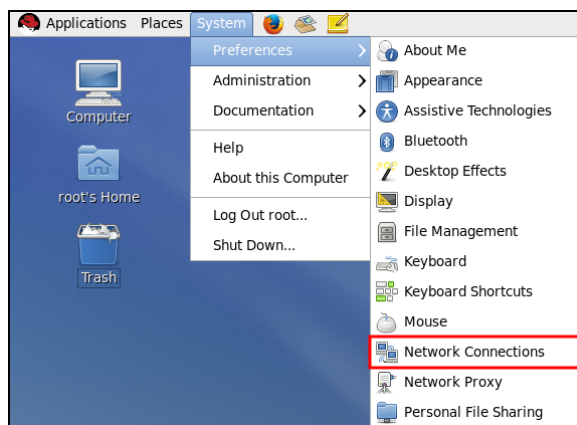


Figure 1: Network Connections

6. **Network Connections** opens. Choose an Ethernet port (e.g., Eth0), and select **Edit**.

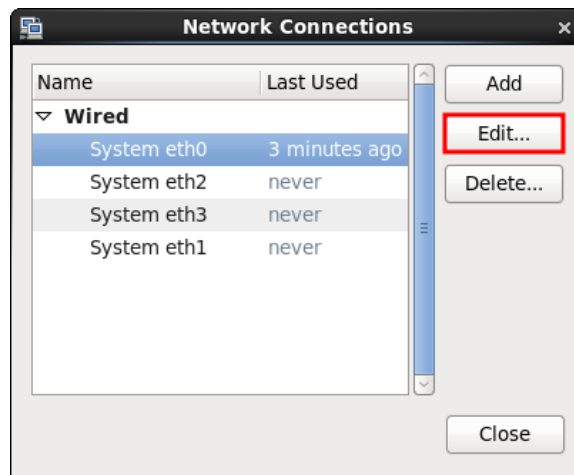


Figure 2: Network Connections

7. **Editing System ethN** opens, where *N* represents the Ethernet port number. Go to the **IPv4 Settings** tab.
8. Point to **Method**, and select **Manual**.

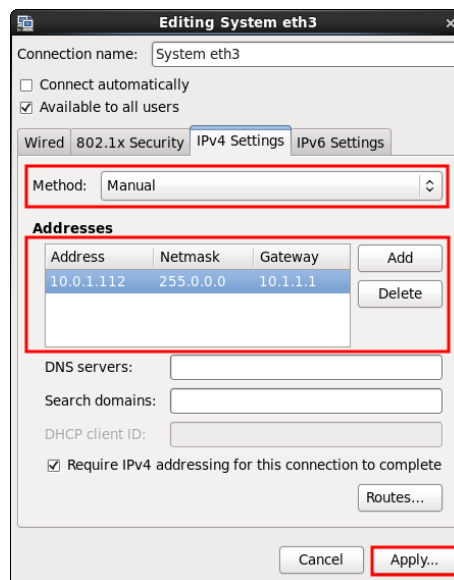


Figure 3: Editing System ethN

9. To manually enter the IP settings, select **Add**, and enter the IP address in **IP Address**. Valid IP addresses turn the box green.
10. In **Netmask**, enter a subnet mask.
11. If applicable, in **Gateway**, enter a default gateway address.
12. When finished, select **Apply**.

13. **Authenticate** opens, asking you to log into the system as a root superuser. In **Password for root**, enter **abcd1234**.
14. To save your changes, select **Authenticate**.



Figure 4: Authenticate

15. Reboot the server.

D-3 iSCSI cold-start procedure for Telestra 6.X

Before proceeding, install and set up the iSCSI boot firmware, as described in Section 7.0, "Telestra iSCSI cold-start procedure" on page 21. To complete the iSCSI cold-start procedure for Telestra 6.X, follow these steps:

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

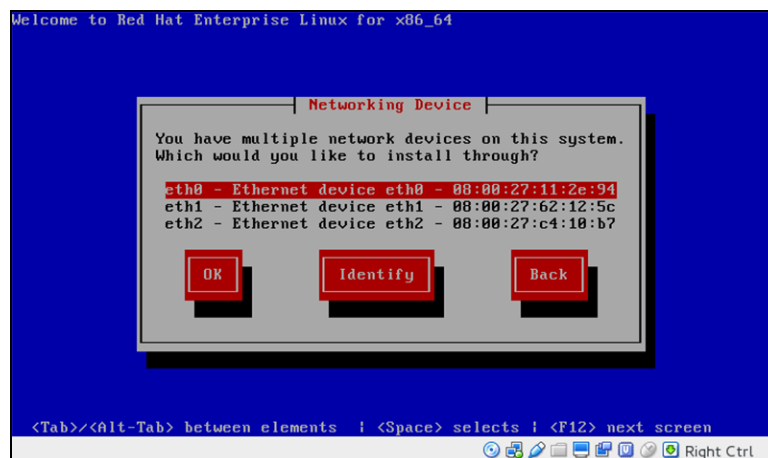


Figure 5: Networking Device

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

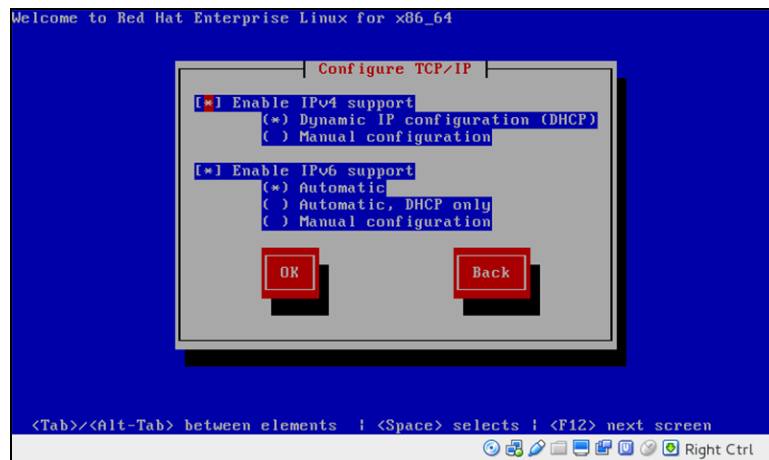


Figure 6: Configure TCP/IP

6. Remove the Telestra iSCSI Software Installation DVD when it ejects from the drive.
7. A “Disc Not Found” message appears. Select **OK** to continue.

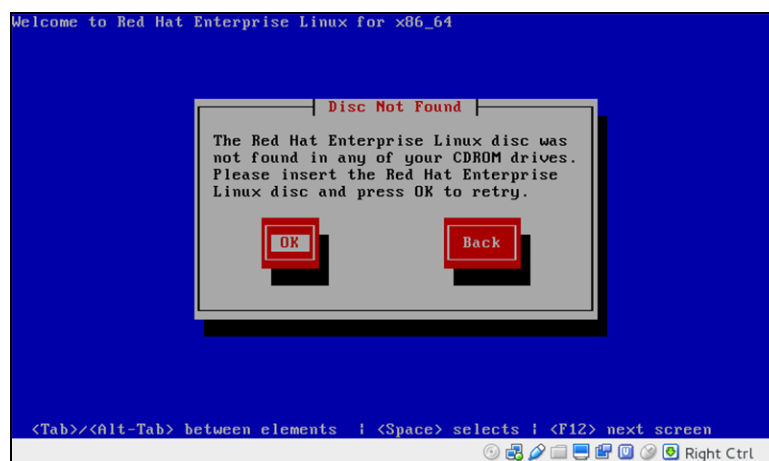


Figure 7: “Disc Not Found”

8. Insert the Red Hat 6 Installation DVD, and select **OK**.

9. The **Telestra iSCSI Coldstart** welcome message appears. Select **<Ok>** to continue.

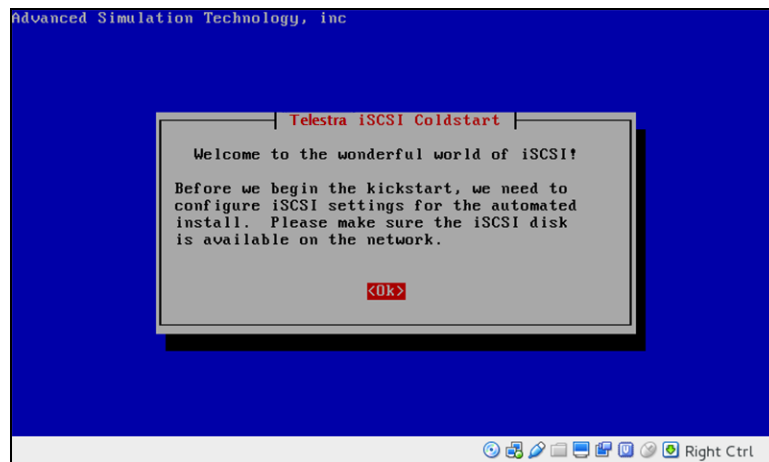


Figure 8: Telestra iSCSI Coldstart welcome message

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

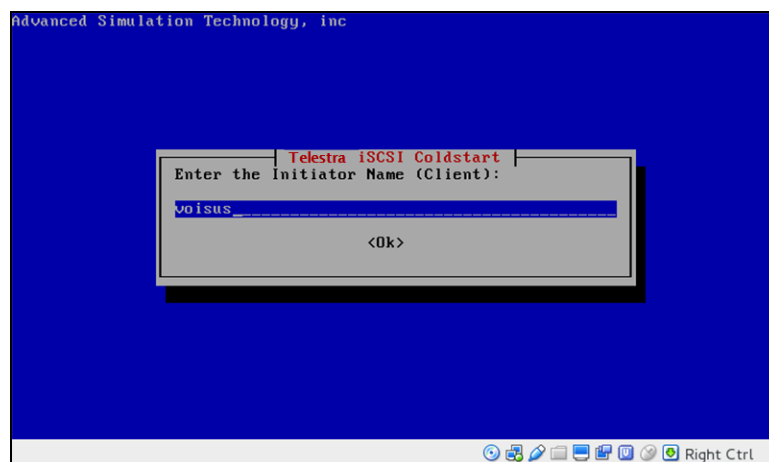


Figure 9: Enter the Initiator Name (Client)

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

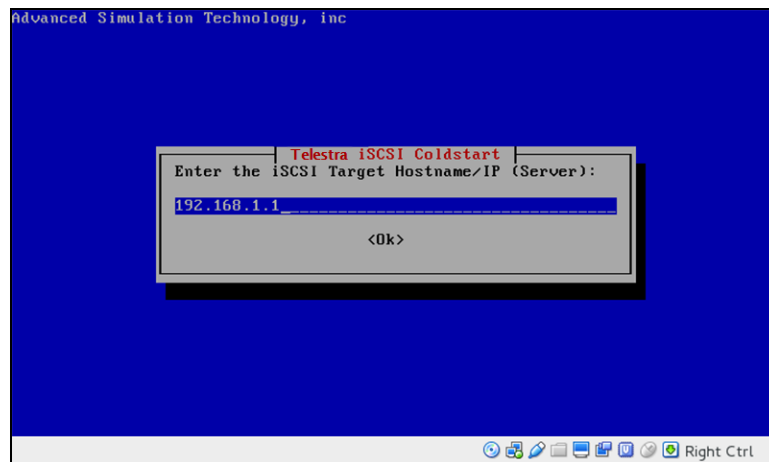


Figure 10: Enter the iSCSI Target Hostname/IP (Server)

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

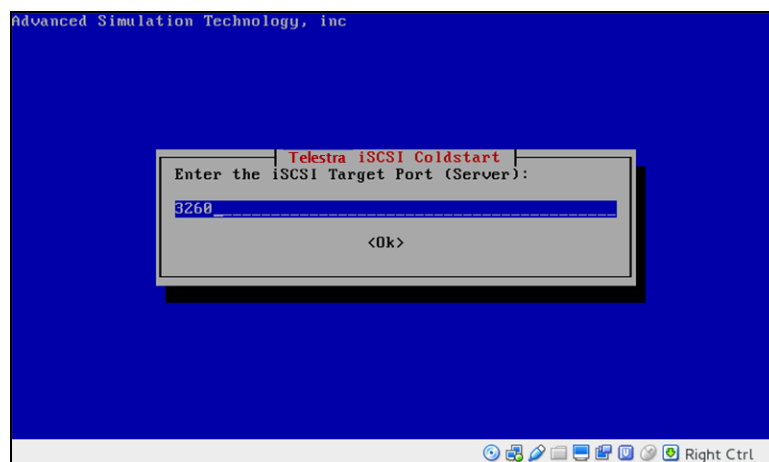


Figure 11: Enter the iSCSI Target Port (Server)

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

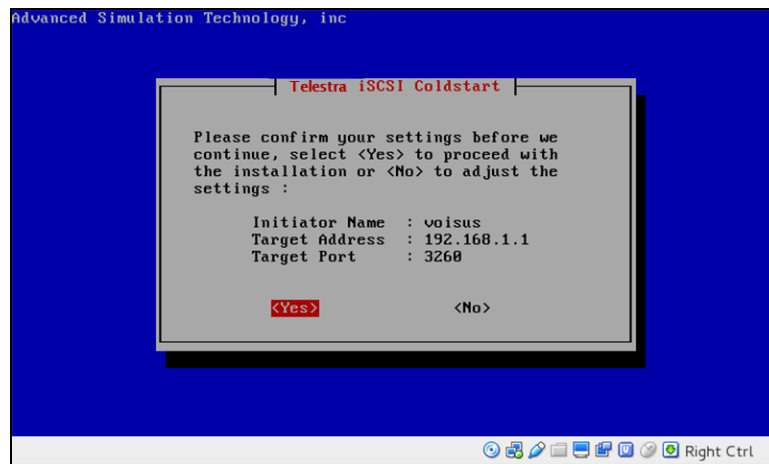


Figure 12: Settings confirmation

14. Wait approximately 10–15 minutes for the installation to complete. When prompted, insert the Telestra iSCSI Software Installation DVD. Press Enter.
15. Wait for confirmation that the software installation is complete, and press Enter.
16. Remove the Telestra iSCSI Software Installation DVD. The server automatically turns off.
17. Turn on the server.
18. Log into the system using the following credentials:

Username	Password
admin	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 Telestra 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-4 Telestra cold-start procedure for Telestra 5.X

The following sections provide cold-start procedure instructions for Telestra versions 4.13 and later.



***Important:** Before installing the software, ensure the Boot Priority settings are in accordance with the proper BIOS configuration instructions. Otherwise, the Telestra server does not boot from the DVD but automatically enters the installation routine.*

Install Red Hat 5.1–5.9

To install Red Hat 5.1–5.9, follow these steps:

1. Turn on the server.
2. Select the **DVD Windows** icon to boot from the DVD.
3. At the prompt, enter one of the following:
 - a. *For Studio:* enter **studio**, and press Enter.
 - b. *For the Telestra server:* enter **target**, and press Enter.
4. Wait for the installation to complete. When the installation is finished, the DVD automatically ejects. Remove the DVD, and select **Reboot**.
5. After the system reboots, the login prompt opens. Continue with the next section for software installation.

Install Red Hat 5.10 and later

To install Red Hat 5.10 and later, follow these steps:

1. Turn on the Telestra server.
2. Insert the Telestra ASTi Software Installation DVD, and wait for the system to boot.

- At the prompt, select **RHEL Telestra[Default]**.



Important: For Telestra 4.30 and earlier, the prompt screen is different. At the prompt, enter *target*, and press Enter.



Figure 13: ACE Coldstart Menu

- When the system ejects the Telestra ASTi Software Installation DVD, remove the DVD.



Note: Alternate Red Hat versions are available. Select the installation that corresponds with your system.

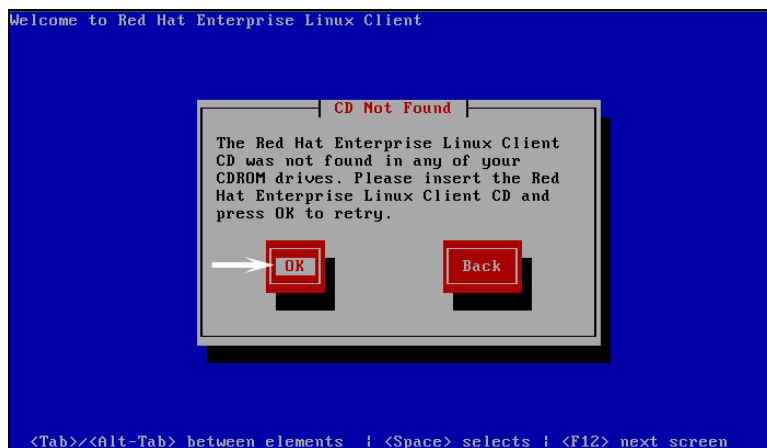


Figure 14: “CD Not Found”

- Insert the Red Hat 5 Installation DVD, and select **OK**. Wait for the installation to complete.

- As described in the display, remove the DVD, and press the Tab key to select **Reboot**.



Figure 15: Installation complete

After the system reboots, the login prompt opens.

```
Red Hat Enterprise Linux Client release 5 (Tikanga)
Kernel 2.6.18-8.el5 on an i686

localhost login: _
```

Figure 16: Login prompt

Install Telestra 4.13 and later



Note: The following steps are for software versions 4.13 and later. To install older software versions, go to Appendix D, "Legacy cold-start procedures" on page 45.

To install Telestra software versions 4.13 and later, follow these steps:

- Insert the Telestra ASTi Software Installation DVD.
- Enter **mount /dev/dvd /media**, and press Enter.

```
Red Hat Enterprise Linux Client release 5 (Tikanga)
Kernel 2.6.18-8.el5 on an i686

localhost login: root
Password:
Last login: Tue Sep  4 11:28:43 on tty1
root@localhost ~]# mount /dev/cdrom /media
mount: block device /dev/cdrom is write-protected, mounting read-only
```

Figure 17: Target CDROM mount

3. Next, enter **sh /media/install**, and press Enter.
4. The prompt reads, “Select a product to install.” Press the Tab key, and then select **Target**.
5. The prompt reads, “Do you wish to install Target?” Select **Yes**.
6. Wait for the installation to complete. To eject the DVD from the drive, enter **eject /media**, and press Enter.
7. Remove the DVD from the drive.
8. *(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 Telestra web interface via a browser to complete the network setup.



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

9. To activate the changes, enter **reboot**, and press Enter.



Note: For instructions on installing ASTi Information Assurance (IA) software, go to the [IA Software Installation Guide](#).

D-5 Studio cold-start procedure for Telestra 5.X

These sections provide instructions for the following:

- Installing Red Hat 5.X software
- Installing Studio versions 4.4 and later
- Setting up a development workstation for Studio versions 4.4 and later

Install Red Hat 5.10 and later

To install Red Hat 5.10 and later, follow these steps:

1. Turn on the Telestra server.
2. Insert the Telestra ASTi Software Installation DVD, and wait for the system to boot.

3. At the prompt, select **RHEL Telestra[Default]**.



Important: For Telestra 4.30 and earlier, the prompt screen is different. At the prompt, enter **studio**, and press Enter.

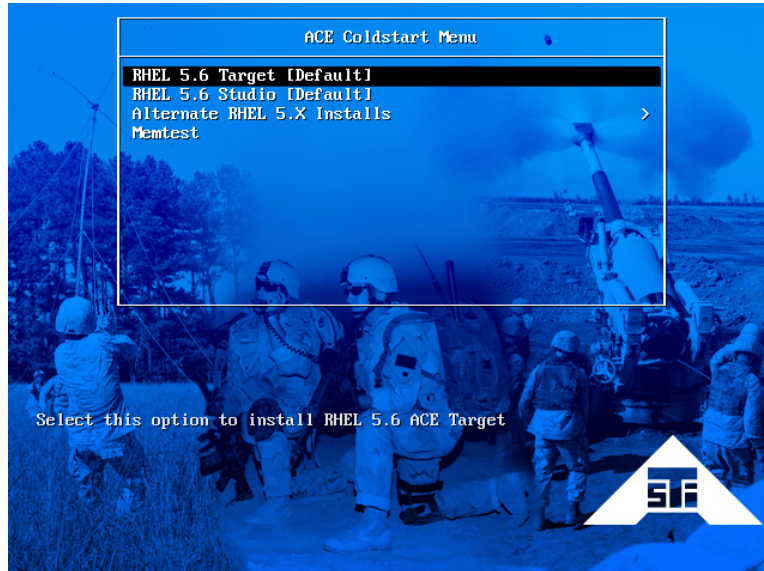


Figure 18: ACE Coldstart Menu

4. When the system ejects the Telestra ASTi Software Installation DVD, remove the DVD.



Note: Alternate Red Hat versions are available. Select the installation that corresponds with your system.

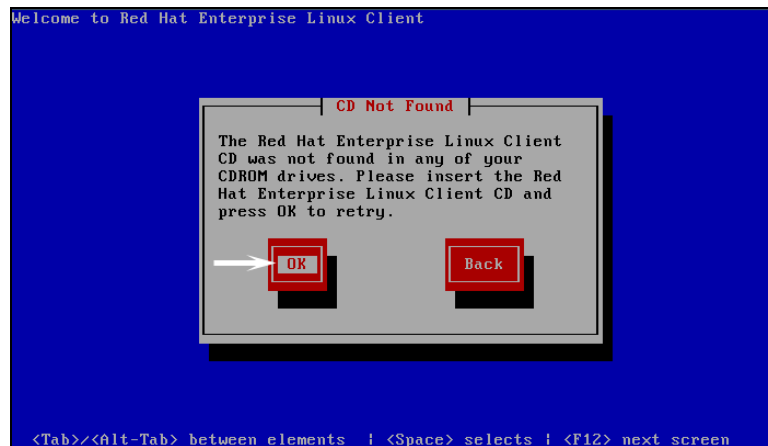


Figure 19: "CD Not Found"

5. Insert the Red Hat 5 Installation DVD, and select **OK**. Wait for the installation to complete.

- As described in the display, remove the DVD, and press the Tab key to select **Reboot**.



Figure 20: Installation complete

- Log into the system using the following credentials:

Username	Password
admin	admin

Install Studio 4.5 and later

Before continuing with this installation, complete "Install Red Hat 5.10 and later." To install Studio versions 4.5 and later, follow these steps:

- Log into the system using the following default credentials:

Username	Password
root	abcd1234

- Insert the Telestra ASTi Software Installation DVD.
- From the desktop, right-click and select **Open Terminal**, or go to **Applications > System Tools > Terminal**.
- To instruct the computer to access the DVD, enter **mount /dev/dvd /media**, and press Enter.
- At the prompt, enter **sh /media/install**, and press Enter.

- The prompt reads, “Select a product to install.” To select **Studio**, press the Up arrow and Down arrow keys. To select **Ok**, press the Tab key or Right arrow key.

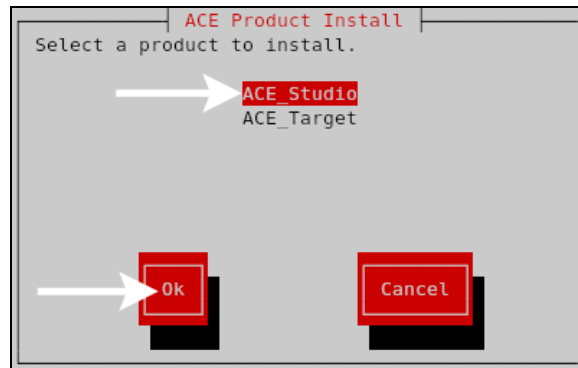


Figure 21: ACE Product Install screen



Note: To install Studio on a virtual machine, go to the [Studio VM Quick Start Guide](#).

- The prompt reads, “Do you wish to install Studio?” Select **Yes**. Wait for the installation to complete.
- Enter **eject /media**, and press Enter.
- Remove the DVD from the drive.
- To activate the changes, enter **reboot**, and press Enter.
- To set up your IP address, continue to "Studio 4.X setup."



Note: For instructions on installing ASTi Information Assurance (IA) software, go to the [IA Software Installation Guide](#).

Studio 4.X setup

To set up your Studio development workstation for Studio 4.X, you will need the following hardware:

- Monitor
- Keyboard
- Mouse
- Studio
- Category 5e cable or better
- Network connection from Studio to the Telestra server

Studio does not have an IP address without a Dynamic Host Configuration Protocol (DHCP) network connection. To set up Studio and assign an IP address to the system, follow the steps below:

1. Connect the monitor, keyboard, and mouse to Studio.
2. Connect Studio to the same network as the Telestra server.
3. Turn on Studio.
4. Log into Studio using the following default credentials:

Username	Password
aceuser	aceuser

5. From the taskbar, go to **System > Administration > Network**.

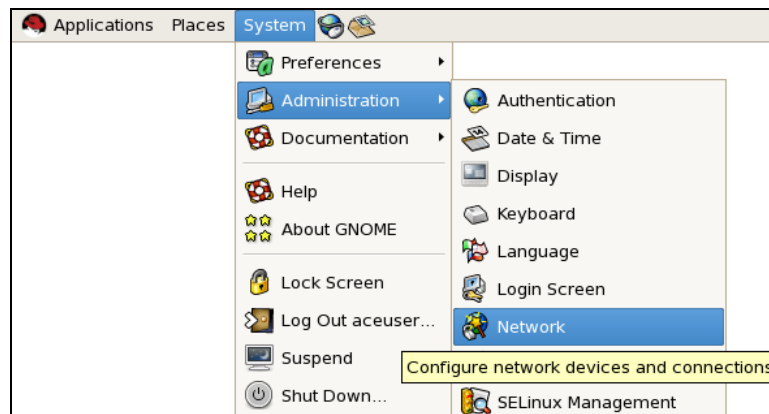


Figure 22: Network navigation

6. Select the **Profile** check box, and then select **Edit**.

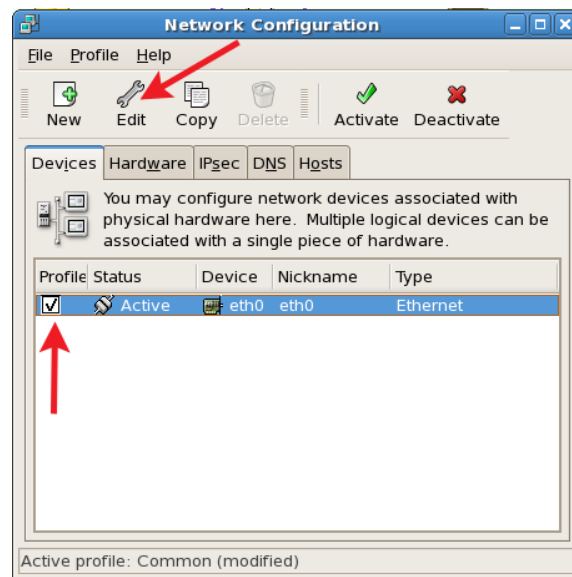


Figure 23: Network Configuration

7. Select **Statically Set IP Addresses**.

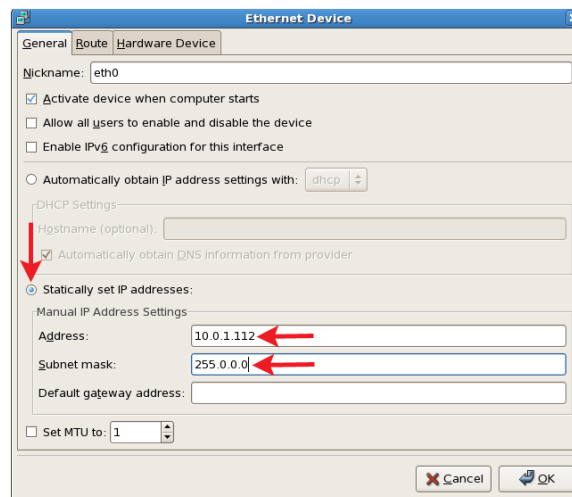


Figure 24: Ethernet Device

8. In **Address**, enter the IP address.
9. In **Subnet mask**, enter the subnet mask. Ask your network administrator for valid IP addresses and subnet masks for the network(s) with which Studio will connect.
10. If applicable, enter the default gateway. If the network does not have a gateway, enter the IP address from Step 8.
11. Reboot the server.

D-6 iSCSI cold start procedure for Red Hat 5.X

The following instructions apply to Telestra 4.29 and later. These steps are required for the Telestra server. Telestra 4.28 and earlier are not supported.

Install Red Hat 5.X on an iSCSI Telestra server

Before starting the installation procedure, remove the local hard drive, if one exists. Only connect the Ethernet cable for the iSCSI network.

To install Red Hat 5 software for iSCSI, follow these steps:

1. Turn on the Telestra server.
2. Insert the Telestra ASTi Software Installation DVD, and reboot the server.

As the system is booting up, a splash screen with the following message displays:

```
Intel (R) iSCSI Remote Boot version XYZ  
Copyright (c) .....  
Press ESC key to skip iSCSI boot initialization
```

When this message appears, press the Esc key.

3. At the prompt, select **Alternate 5.X Installs**.



Figure 25: Alternate RHEL 5.X Installs

4. Select **RHEL 5.X using iSCSI Volume**.

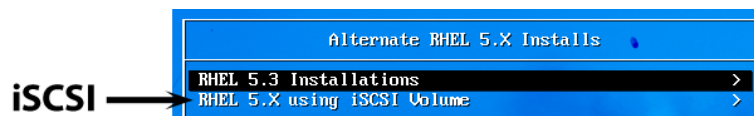


Figure 26: RHEL 5.X using iSCSI Volume

5. Choose your RHEL version.



***Note:** For Telestra 4.31 and earlier, the prompt screen is different. At the prompt, enter **target - iscsi**, and press Enter.*

6. When the system ejects the Telestra ASTi Software Installation DVD, remove the DVD.
7. Insert the Red Hat 5 Installation DVD, and select **OK**.
8. At the Red Hat screen, select **Next**.
9. Select **Advanced Storage Configuration**.
10. To add the Telestra server, select **Add Drive**.
11. Select EthX, where X is the interface recorded in Section 7.1.1, "Intel iSCSI boot firmware installation" on page 22.
12. Set the network settings specific to the system (i.e., the Telestra server network settings).
13. Add the information for the iSCSI initiator and Telestra server (i.e., the Telestra server's network settings).
14. Wait as the Telestra server automatically finds the drive, and select **Next**.
15. A warning message appears. Select **Yes** to continue.
16. At the network devices screen, set EthX, where X is the interface recorded in the previous section.
17. To set the network configuration, select **Active on Boot**, and then select **Edit**. The network configuration must match the information set in Section 7.1.2, "Intel iSCSI boot firmware setup" on page 22.
18. Select **Next**, and wait for the installation to begin.
19. When the installation completes, remove the DVD, and select **Reboot**.

Install Telestra 4.X for iSCSI

To install Telestra 4.X on an iSCSI Telestra server, follow these steps:

1. To switch to the root user account, do the following:
 - a. Enter **su**, and press Enter.
 - b. Enter the root password (i.e., **abcd1234** by default), and press Enter.
2. Insert the Telestra ASTi Software Installation DVD.
3. At the prompt, enter **mount /dev/dvd /media**, and press Enter.
4. Next, enter **sh /media/install**, and press Enter.
5. The prompt reads, “Select a product to install.” Select **Target**.
6. The prompt reads, “Do you wish to install Target?” Select **Yes**.
7. After the installation is complete, enter **eject /media**, and press Enter. Remove the DVD from the drive.
8. At the prompt, input the previously recorded interface into the **ifconfig ethX** command line, where *X* is the interface. Verify the settings.
9. (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 Telestra web interface via a browser to complete the network setup.
10. (Optional) For more network settings, enter **ace-net-config -h**, and press Enter.
11. To activate the changes, enter **reboot**, and press Enter.



Important: If you do not set up Eth0, the system automatically defaults to the DHCP mode and queries a DHCP server if available for the IP address.



Caution: Do not change the Telestra server's EthX network address to an IP address that cannot go to the iSCSI Telestra server. This mistake may require you to reinstall the software.

D-7 Cold start procedure for SLES 11

To complete the Telestra cold-start procedure for SUSE Linux Enterprise Server (SLES) 11, follow these steps:

1. Turn on the Telestra server.
2. To confirm the system's BIOS configuration, go to Section 4.0, "BIOS setup" on page 7.
3. Insert the Telestra Customer-Specific Data DVD into the drive, and reboot the server.
4. On **Boot Options**, select **asti**, and press Enter to begin installing the software.



Figure 27: Boot Options

Wait 5–10 minutes for installation to complete:

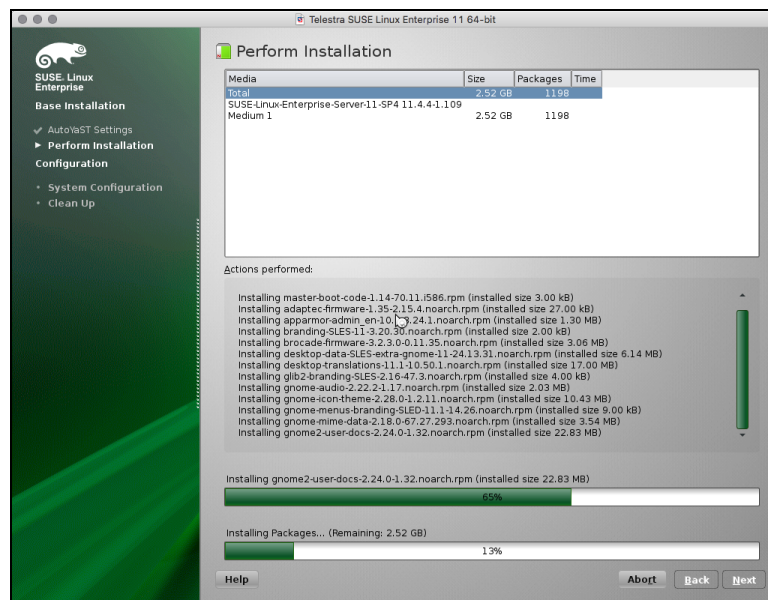


Figure 28: Perform Installation

After installation, the system reboots and returns to the main menu.

5. Eject the Telestra Customer-Specific Data DVD.

6. Select **Boot from Hard Disk**, and press Enter. Wait approximately two minutes for the system to reboot and complete system configuration.

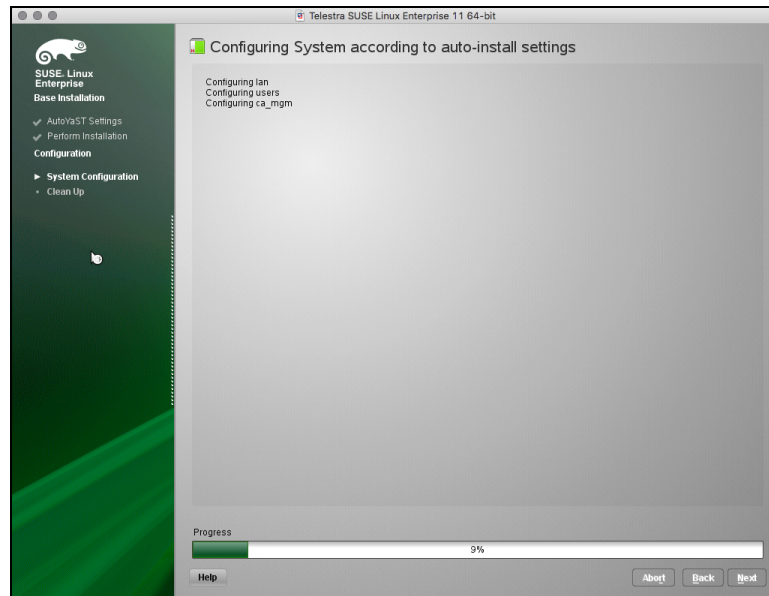


Figure 29: System Configuration

7. At the login prompt, insert the Telestra Server Software Installation DVD into the drive.

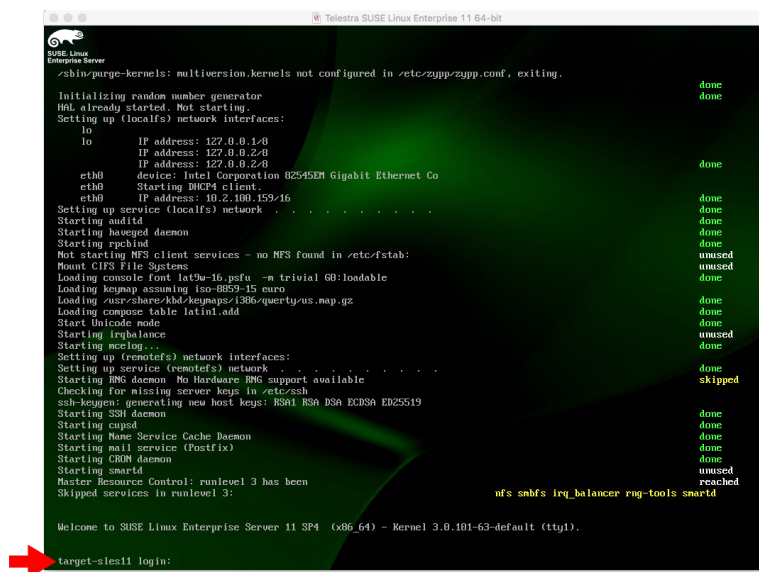


Figure 30: Login prompt

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

Username	Password
root	abcd1234

9. To mount the DVD, at the prompt, enter **mount /dev/cdrom /media**, and press Enter.
10. To install ASTi software, enter **sh /media/install**, and press Enter.
11. To install **ACE_Target telestra-sles**, select **OK**.

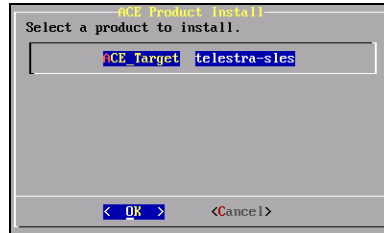


Figure 31: Select a product to install

12. Select **Yes** to continue, and wait approximately two minutes for installation to complete.

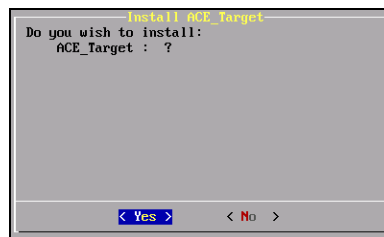


Figure 32: Confirm installation

13. At the prompt, enter **eject /media**, and press Enter. Remove the Telestra Server Software Installation DVD from the drive.
14. Enter **reboot**, and press Enter. After the system reboots, the cold-start procedure is complete.
15. (Optional) Use SUSE Yet Another Setup Tool (YaST) to make any network configurations.