

Remote Management System User Guide

Product Name: Telestra

Remote Management System User Guide

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Revision history

Date	Revision	Version	Comments
5/23/2019	N	0	Updated licensing, sound files, and HLA content for Red Hat 7.X. Converted content to XML and made minor edits to grammar style. Updated left menu screenshots.
2/21/2020	O	0	Added "Set the HLA standard."
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1.0 Introduction

The Remote Management System (RMS) is a specialized web server that provides complete sight and control of all ASTi devices on the simulation network, ranging from stand-alone to multiple-site, exercise-wide network configurations. You can set up the Target and other services using a standard web browser from anywhere on the network. Further, the RMS offers a web page interface to control ASTi resources, check a device's status, and manage files and networks.

Access the RMS via any standard web browser on the network through the RMS web interface. While most RMS tasks are fairly intuitive, this document offers further guidance and information about system capabilities.

This chapter discusses the following topics:

- Browser compatibility settings
- Cookies and JavaScript
- Certificate security warnings

1.1 Browser compatibility settings

Different operating systems (OSs) and web browsers offer varying levels of support for standard Internet technologies, such as JavaScript, Cascading Style Sheets (CSS), and Extensible Hypertext Markup Language (XHTML), all of which the RMS uses. While ASTi designed the RMS with cross-platform compatibility in mind, certain OS and web browser combinations may not render the web interface properly.

To take full advantage of the RMS, you may need to change some of your browser settings. Verify or set up your browser to do the following:

- Automatically load images
- Enable JavaScript for web pages
- Enable style sheets
- Accept cookies (i.e., all cookies or those returned to originating servers)
- Disable full caching
- Enable pop-up windows

Go to your browser's documentation or help system to learn more about these settings.

1.2 Cookies and JavaScript

The RMS uses modern Internet client/server technology (e.g., cookies and JavaScript) to extend its functionality and enhance the quality of features offered to ASTi's customers. Thanks to hackers and media exposure, the Internet's general public is wary of this technology. This section attempts to allay any concerns you may have about the RMS's use of cookies and JavaScript.

Cookies are small bits of text that a web server sends to your web browser. Two types of cookies exist: *session* and *persistent*. Session cookies only exist while your web browser is running. When you close your browser or shut down your computer, the session cookie's information disappears. Persistent cookies are stored in a cookie list on your local computer's hard drive. The information in persistent cookies stays available to the web browser and web server until it expires or someone deletes it.

The RMS only uses session cookies. It does not write to your computer's hard drive or transmit information to ASTi or other third parties. When you log into the RMS, its server passes a session cookie to your browser, letting you open any RMS page without logging in again. As a best practice, close your browser to clear the session cookie when finished. Future users must provide login credentials during the next session.

JavaScript is a programming language that extends a web browser's capabilities beyond XHTML. The RMS uses JavaScript to do the following:

- *Launch remote windows*: at times, the RMS opens remote windows to keep information separate from the main window.
- *Create simple navigation links*: JavaScript sometimes provides hypertext links to other pages within the RMS. For example, if an error occurs when processing a user input form, the RMS commonly uses JavaScript to display a "go back" link that works like your browser's Back button.
- *Manipulate input forms*: JavaScript modifies input forms in RMS pages (e.g., allowing you to check multiple boxes at once).

JavaScript code in the RMS does not attempt to access, change, or manipulate any information on your local computer. It does not transmit any information to ASTi or another third party.

1.3 Certificate security warnings

The RMS can serve its web pages over a secure connection with your web browser. This secure connection uses industry-standard, 128-bit encryption, similar to online bank and shopping sites.



***Note:** ASTi enables secure operation by default for systems shipped within the US and Canada; however, it may be optional for other countries. Its availability is subject to export controls by the Bureau of Industry and Security of the US Department of Commerce. Contact ASTi for more information.*

On a secure connection, the RMS still handles requests to its web server over the standard HTTP Port 80 but automatically forwards these requests to the secure HTTPS Port 443. Part of this secure operation relies on the Telestra server's certificate, which identifies it to the web browser.

This certificate raises a security warning in most contemporary web browsers. In publicly available applications (e.g., e-commerce sites), the certificate verifies the server is “trusted” by comparing it to a database from third-party certificate authorities. ASTi creates and issues its own certificates for secure systems. In other words, ASTi acts as the certificate authority in place of a professional registrar. As a result, the system’s certificate is not in the database of “trusted” sites.

Your browser may also issue an alert for the certificate's domain name. Because ASTi's domain name (i.e., "telestra") is not fully qualified, the browser may complain that it's invalid. ASTi can't access each customer's network to determine their Domain Name System (DNS) server's fully qualified domain name (FQDN). As a result, we can't tailor these certificates on a per-installation basis. You may also receive a security warning because the IP address (e.g., xxx.xxx.xxx.xxx) or network-specific FQDN (e.g., telestra.yourdomain.com) that you use to access the RMS doesn't match the certificate's host name.

Examine the certificate's information to verify the system you are trying to access is an ASTi Target. After that, you can accept the certificate and continue connecting to and working with the RMS. Many web browsers allow you to change the "trust settings" for specific certificates. If you change the trust settings for the Target's certificate, you will no longer receive a security warning on that browser and computer.

2.0 RMS User Management

Before you can take full advantage of the RMS, you'll need to log in as an administrator and set up any user accounts. These accounts are only applicable to the RMS, not Linux system user accounts. To view **RMS User Management**, go to **Manage Users** in the top right:

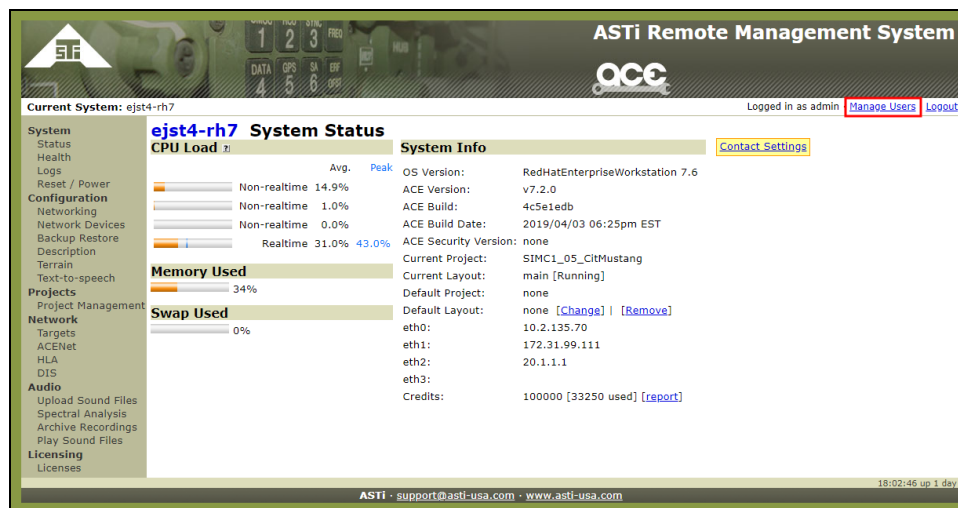


Figure 1: Manage Users navigation

This chapter discusses how to:

- Log in as an administrator
- Add a user account
- Delete a user account
- Change a user's password

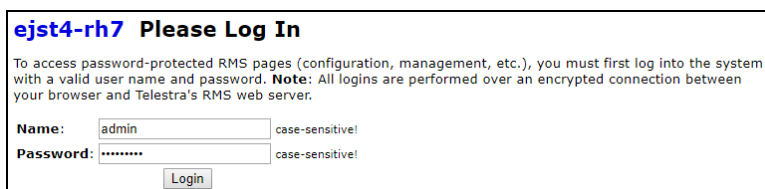
2.1 Log in as an administrator

To log into the RMS as an administrator, follow these steps:

1. Open a web browser on a computer sharing a network with the Telestra server.
2. To access the RMS, in the address bar, enter the Telestra server's IP address.
3. In the top-right corner, select **Login**.
4. Log into the system using the following default credentials:

Username	Password
admin	astirules

5. Select **Login**.



ejst4-rh7 Please Log In

To access password-protected RMS pages (configuration, management, etc.), you must first log into the system with a valid user name and password. **Note:** All logins are performed over an encrypted connection between your browser and Telestra's RMS web server.

Name: case-sensitive!

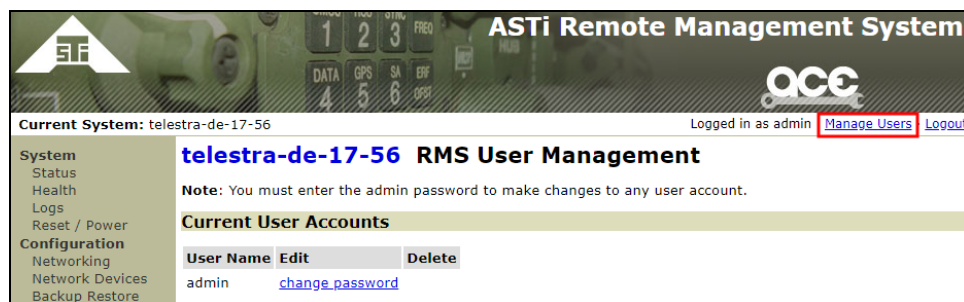
Password: case-sensitive!

Figure 2: Login page

2.2 Add a user account

To add a user account, follow these steps:

1. In the top right, go to **Manage Users**.



ASTi Remote Management System

Current System: telestra-de-17-56 Logged in as admin [Manage Users](#) [Logout](#)

telestra-de-17-56 RMS User Management

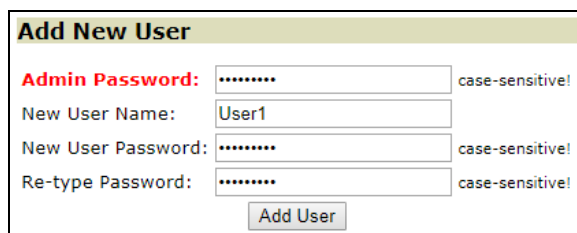
Note: You must enter the admin password to make changes to any user account.

Current User Accounts

User Name	Edit	Delete
admin	change password	

Figure 3: RMS User Management navigation

2. In **Admin Password**, enter the administrator password (i.e., **astirules** by default).
3. In **New User Name**, enter a unique username.
4. In **New User Password**, enter a password for the new account.
5. In **Re-type Password**, confirm the new password.



Add New User

Admin Password: case-sensitive!

New User Name:

New User Password: case-sensitive!

Re-type Password: case-sensitive!

Figure 4: Add New User

6. Select **Add User**.

The new account appears under **Current User Accounts**:

Current User Accounts		
User Name	Edit	Delete
admin	change password	
User1	change password	delete user

Figure 5: Current User Accounts

2.3 Change a user's password

To change a user's password, follow these steps:

1. In the top right, go to **Manage Users**.

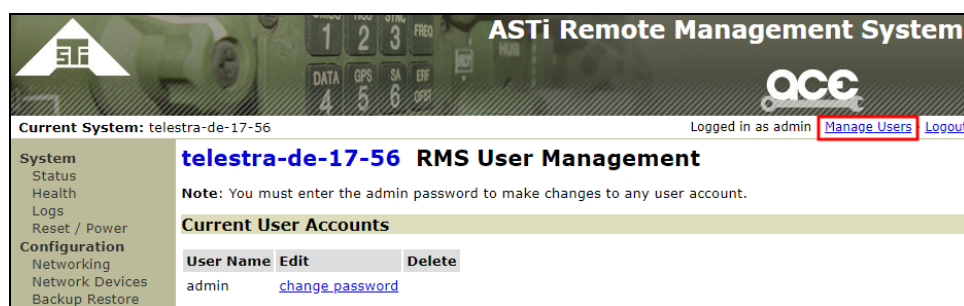


Figure 6: RMS User Management navigation

2. Under **Current User Accounts**, choose a user, and select **change password**.

Current User Accounts		
User Name	Edit	Delete
admin	change password	
User1	change password	delete user

Figure 7: change password

3. In **Admin Password**, enter the administrator password (i.e., **astirules** by default).
4. In **New User Password**, enter a new password for the account.
5. In **Re-type Password**, confirm the new password.

6. Select **Change Password for** *user*, where *user* is the username.

hla-e-t1 Change Password for User1

Admin Password: case-sensitive!

User Name: User1

New User Password: case-sensitive!

Re-type Password: case-sensitive!

[Change Password for User1](#)

Figure 8: Change Password for User

The password change is now complete.

2.4 Delete a user account

To delete a user account, follow these steps:

1. In the top right, go to **Manage Users**.

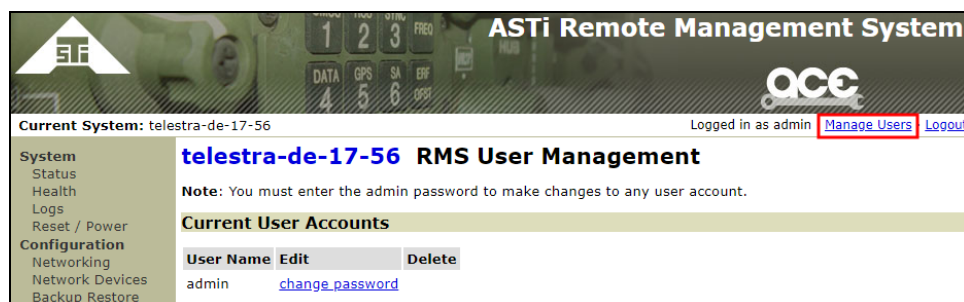


Figure 9: RMS User Management navigation

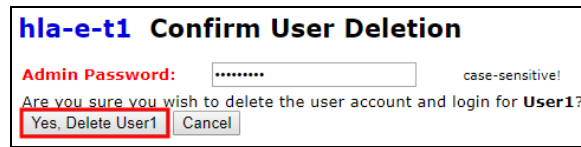
2. Under **Current User Accounts**, choose a user to delete.
3. Under **Delete**, select **delete user**.

Current User Accounts		
User Name	Edit	Delete
admin	change password	
User1	change password	delete user

Figure 10: delete user

4. In **Admin Password**, enter the administrator password (i.e., **astirules** by default).

5. Select **Yes, Delete** *user*, where *user* is the account username (e.g., User1).



hla-e-t1 Confirm User Deletion

Admin Password: case-sensitive!

Are you sure you wish to delete the user account and login for **User1**?

Yes, Delete User1

Figure 11: Confirm User Deletion

The account no longer appears under **Current User Accounts**.

3.0 System

System settings provide general information about your Telestra server's operation that you can use for troubleshooting. These settings also allow you to reboot or shut down your server from the RMS.

Figure 12, "System" below shows **System** pages on the left:

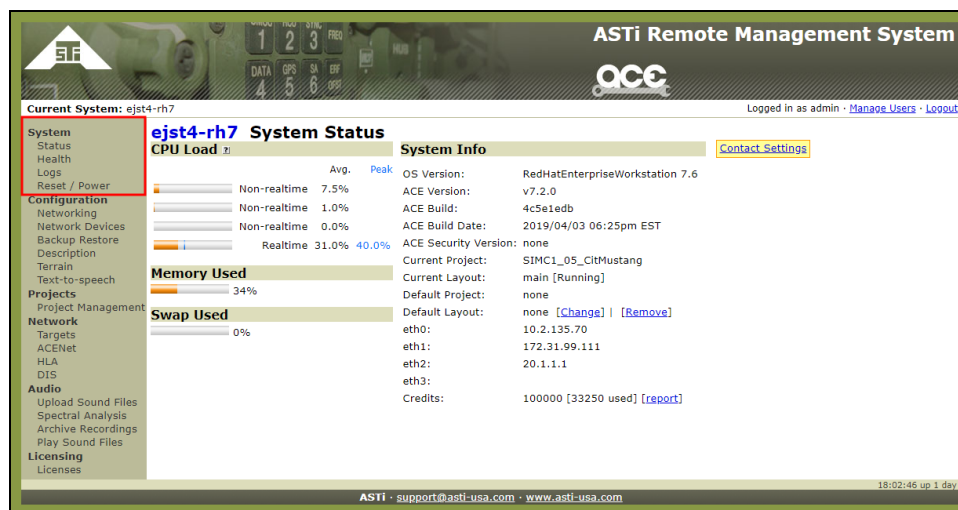


Figure 12: System

This chapter discusses the following topics:

- System Status
- Health
- System Log
- System Actions

3.1 System Status

The RMS first directs you to **System Status**. To enter the system's installation and contact information, select **Contact Settings**. **CPU Load** displays the overall amount of space that the model uses. **Memory Used** displays the amount of space that programs use, including projects, model storage, and data. **SWAP Used** is the virtual memory used when the memory utilization percentage is too high. Ideally, this setting should remain at 0 percent.

You can also view the Target's software version. The **Project**, **Branch** and **Topology** names display for the **Project** running on the system.



*Note: **Topology** is synonymous to the layout in ACE Studio.*

Figure 13, "System Status" below shows the **CPU Load**, **Memory Used**, **Swap Used**, and **System Info** on **System Status**:

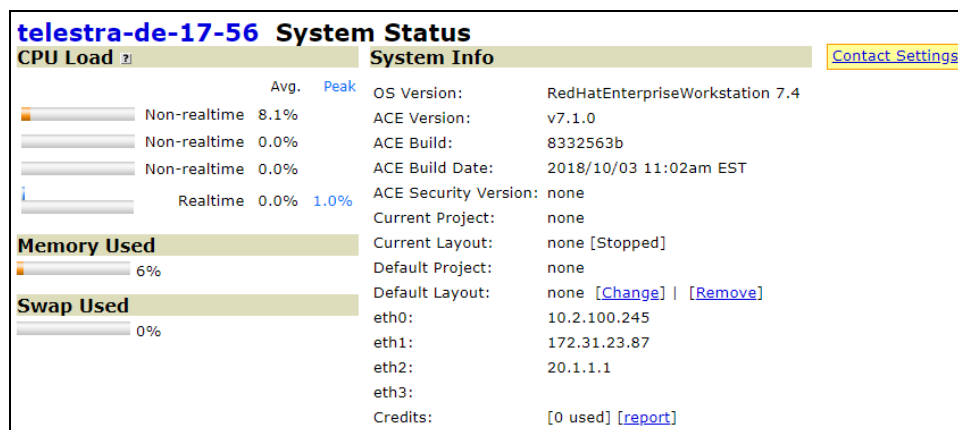


Figure 13: System Status

3.1.1 Set a default project and layout

The RMS allows you to set a default project and layout. On **Status**, select **Change** next to **Default Layout**. On the next page, choose a project and layout, and select **Make Changes**. This project and layout automatically installs the next time you turn on or reboot the Target.

To set a default project and layout, follow these steps:

1. On **System Status**, next to **Default Layout**, select **Change**.

System Info	
OS Version:	RedHatEnterpriseWorkstation 7.4
ACE Version:	v7.1.0
ACE Build:	8332563b
ACE Build Date:	2018/10/03 11:02am EST
ACE Security Version:	none
Current Project:	none
Current Layout:	none [Stopped]
Default Project:	none
Default Layout:	none [Change] [Remove]
eth0:	10.2.100.245
eth1:	172.31.23.87
eth2:	20.1.1.1
eth3:	
Credits:	[0 used] [report]

Figure 14: Change Default Layout

2. On **Default Project**, in **Select Project**, choose a default project.
3. In **Select Layout**, choose a layout.
4. Select **Make Changes**.

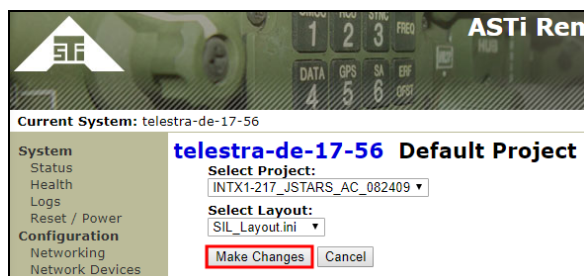


Figure 15: Set the default project and layout

3.2 Health

ACE System Health verifies the software is running properly and displays low-level, raw information for troubleshooting. Figure 16, "ACE System Health" below shows **ACE System Health**:

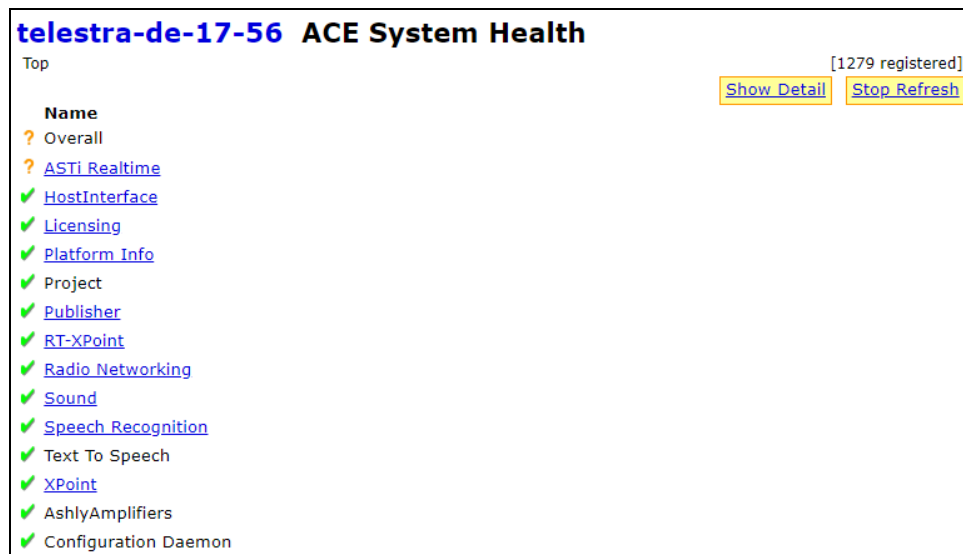


Figure 16: ACE System Health

The health system consists of a tree-like structure of subsections. A ? next to **ASTi Realtime** indicates an issue with one or more ASTi Realtime items. To expand and view the subsections, select **ASTi Realtime**. If an ✗ displays next to **Model**, the model is not operational. To view the model's status, in the top right, select **Show Detail**.

3.3 System Log

System Log displays 100 of the most recent log entries. Download the log files to the local system, and view the uploaded logs. Filter capabilities provide quick search capabilities for specific functions, including **Debug**, **Info**, **Warning**, **Error**, and **Critical**.

Figure 17, "System Log" below shows red errors on **System Log**:

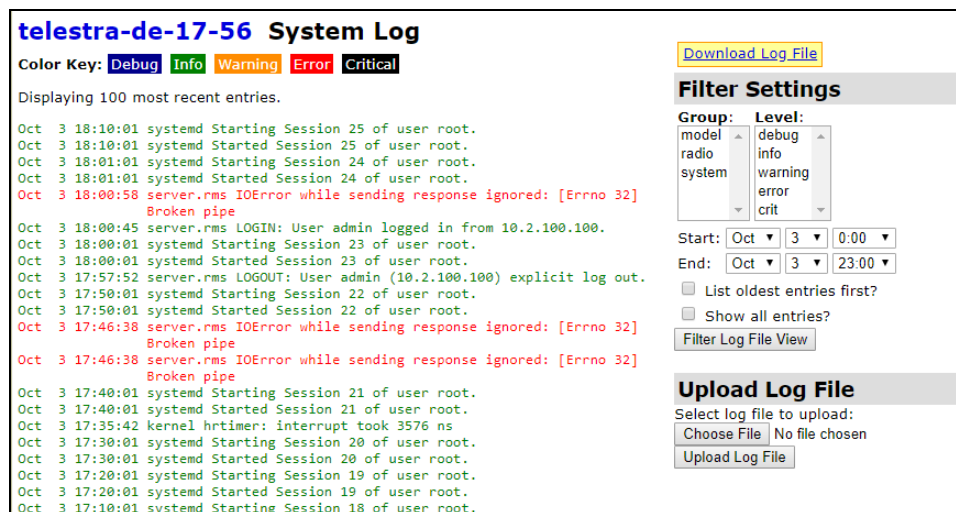


Figure 17: System Log

3.4 System Actions

Select **System > Reset/Power** to perform **System Actions**. System actions include restarting the Target's software (e.g., multicast routing and other networking daemons, the RMS web server software), rebooting, or shutting down the system. Once you choose an action, a confirmation screen warns you not to interrupt the software services. Restarting, rebooting, or shutting down the server interrupts software running on the Target (e.g., model operation). After turning off the system, you may need to manually reboot the server by pressing the Power button on the front of the chassis.

Figure 18, "System Actions" below shows options to **Restart Software**, complete a **System Reboot**, or **Shut Down** the system on **System Actions**:



Figure 18: System Actions

4.0 Configuration

Configuration settings allow you to set up a Telestra server's network, back up and restore your system, and record basic configuration details about your project, including location, contact information, and trainer type. You can also install Level 0 Digital Terrain Elevation Data (DTED) and text-to-speech voice licenses.

Figure 19, "Configuration" below shows **Configuration** pages on the left:

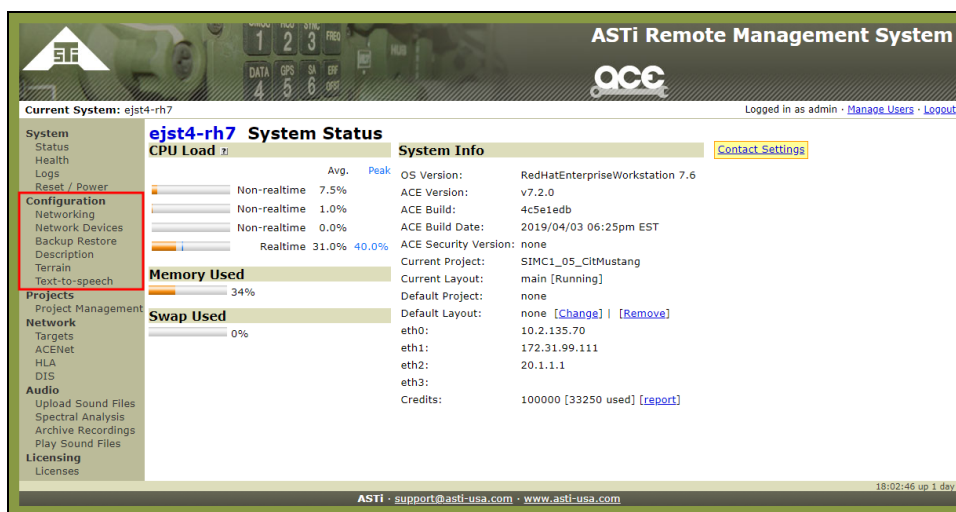


Figure 19: Configuration

This chapter discusses the following topics:

- Networking
- Network Devices
- Backup Restore
- Description
- Terrain
- Text-to-speech

4.1 Networking

Access Target network settings from **Networking**:

- **General Networking**: encompasses network-wide, interface-independent settings, such as the Domain Name System (DNS) server and router gateway IP addresses.
- **Edit Network Config**: enter the IP address and subnet mask for each of Target's three Ethernet interface cards.
- **Time Server**: specify and test connections to a Network Time Protocol (NTP) server to synchronize the Target's internal clock. Other settings allow you to tweak the Target's NTP client variables.
- **Ping Utility**: enter another computer's IP address to send five pings (i.e., echo requests) to it. A positive response indicates the computer is available on the network, using any of Target's three network interfaces.



***Note:** Editing network settings may prevent you from accessing the RMS at its original IP address. Enter the new IP address in the browser.*

Figure 20, "System Networking" below shows **System Networking**:

telestra-de-17-56 System Networking

General Networking

Domain:

Gateway IP:

Default Route:

Hostname: telestra-de-17-56

Primary Nameserver:

Secondary Nameserver:

Tertiary Nameserver:

Studio / Radio Monitor Interface: eth0

[Edit Network Config.](#)

Time Server

[Edit NTP Config.](#)

Network Tools

Ping Utility

Enter IP address:

10.2.100.245

Figure 20: System Networking

4.1.1 Edit Ethernet configuration settings

To edit eth0, eth1, and eth2 configuration settings, select **Edit Network Config**. To commit the changes to the system, select **Make Changes**.

Figure 21, "Network Configuration" below shows **Network Configuration**:

The screenshot shows a web-based configuration interface titled "telestra-de-17-56 Network Configuration". At the top, a red-bordered box contains a warning: "Changing these settings may affect your ability to access this machine! It is recommended you save all changed data before performing this action." Below this, the interface is organized into sections with labels and input fields:

- Domain**: A text input field.
- Gateway IP**: A text input field.
- Default Route**: A dropdown menu currently set to "off". A note to the right states: "Only applies if Gateway IP not specified".
- Hostname**: A text input field containing the value "telestra-de-17-56".
- Primary Nameserver**: A text input field.
- Secondary Nameserver**: A text input field.
- Tertiary Nameserver**: A text input field.
- Studio / Radio Monitor Interface**: A dropdown menu currently set to "eth0". A note to the right states: "Optional parameter. Contact ASTi for details."

At the bottom of the form are two buttons: "Make Changes" and "Cancel".

Figure 21: Network Configuration

4.2 Network Devices

To change the network configuration in the RMS, go to **Configuration > Network Devices**. To edit the network Ethernet ports, select **Edit eth N Config**, where N is the Ethernet port number.

Figure 22, "Network Devices" below shows **Network Devices**:

telestra-de-17-56 Network Devices

System Warnings
This system is not licensed for this software release. Please upload the proper file for this system on the [Licensing](#) page.

Interface eth0
Mac Address: 00:07:b8:de:17:56
IP 4 Address: 10.2.100.245
IP 6 Address: fe80::207:b8ff:fede:1756
Subnet Mask: 255.255.0.0
Mode: dhcp
DHCP Client ID:
Ignore DNS: off
[Edit eth0 Config.](#)

Interface eth1
Mac Address: 00:07:b8:de:17:57
IP 4 Address: 172.31.23.87
IP 6 Address: fe80::207:b8ff:fede:1757
Subnet Mask: 255.255.0.0
Mode: fixed
[Edit eth1 Config.](#)

Interface eth2
Mac Address: 00:1b:21:61:8a:f0
IP 4 Address: 20.1.1.1
IP 6 Address:
Subnet Mask: 255.0.0.0
Mode: fixed
[Edit eth2 Config.](#)

Interface eth3
Mac Address: 00:1b:21:61:8a:f1
Status: Off
[Edit eth3 Config.](#)

Figure 22: Network Devices

4.3 Backup Restore

Manage system configuration files through the back up and restore options below:

- *Backup*: use **Backup System Configuration** to back up individual sections of the overall system configuration or back up the entire system configuration. **Backup System Configuration as Text Only** does not back up any binary information and is only useful when exporting a project from a classified area.
- *Restore*: use **Restore System Configuration** to install or restore system configuration files from an existing backup file. You can upload this file to the system if it is not already on the Target.
- *Manage*: use **Manage Backup Archives** to inspect, download, or delete **System Configuration** backup archives.

Figure 23, "System Backup/Restore" below shows **System Backup/Restore**:

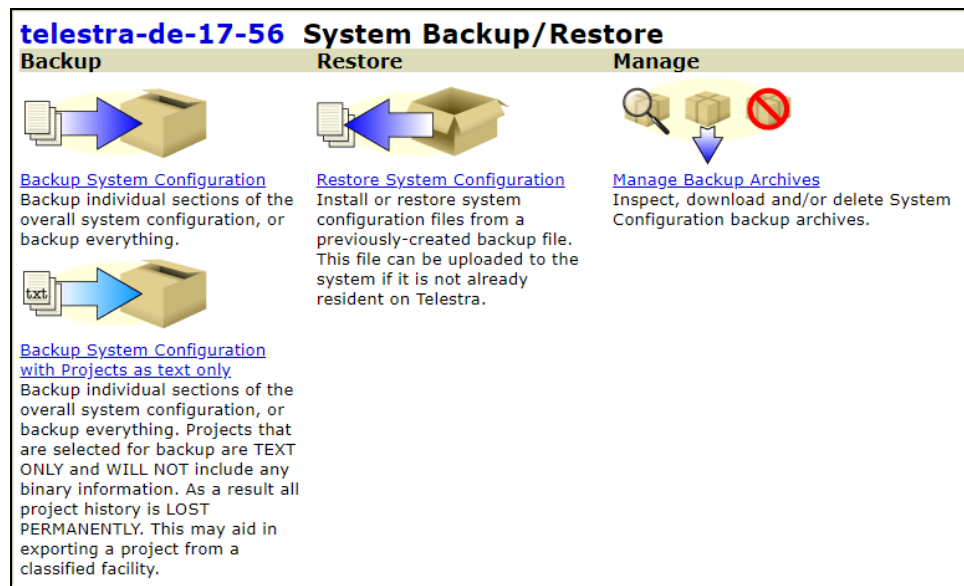


Figure 23: System Backup/Restore

The following sections discuss how to:

- Back up a system configuration
- Restore a system backup
- Manage system backups
- Archive system backups

4.3.1 Back up a system configuration

Backing up system configurations archives these files on the workstation. Choose the configuration sections, and select **Start Backup**. Backup categories include the following:

- **Projects Archive:** includes all projects archived on the system. To back up some or all of the Target's projects, select the **Projects Archive** link.
- **RMS Users and Config:** includes all RMS users and their passwords, as well as any user lockout settings for the RMS.
- **Sound Library:** the library of sound files on the system, including an index and all of the waveform (.wav) audio file format files in the project. Select the sound library link to back up some or all of the sounds files.
- **Telestra Config:** includes all configurations settings such as network settings and system preferences.

Figure 24, "Backup System Configuration" below shows the **Backup System Configuration** page:

deathstar Backup System Configuration
Configuration Sections

Please select the desired type(s) of system configuration info to back up.

- ☒ CrownAmpMapping
- ☐ CustomSRModels
- ☒ DefaultLoadAndLayout
- ☐ HLAConfig
- ☐ [ProjectsArchive](#)
- ☒ RMSUsersAndConfig
- ☒ RecordReplay
- ☐ SoftwareLicenses
- ☐ [SoundLibrary](#)
- ☒ SpeakerEQConfig
- ☒ TelestraConfig
- ☐ TextToSpeechLicenseAndConfig

Backup filename prefix:
telestraConfig

Figure 24: Backup System Configuration

4.3.2 Restore a system backup

To restore a model archive on the Target, select **restore now**. You can also upload a backup file from a local workstation. Figure 25, "Restore System Backup" below shows **Restore System Backup**:

telestra-de-17-56 Restore System Backup

Select which backup to restore, or upload a backup archive using the form below.

Existing Backup Files

Filename	Restore
SERA_AudioBridge_RevA20181003-2051.tgz	restore now
SpkrEq20181003-2049.tgz	restore now
hail_test20181003-2050.tgz	restore now
s97_Test20181003-2050.tgz	restore now
telestraConfig20181003-2033.tgz	restore now

Upload Previous Backup File

No file chosen

Figure 25: Restore System Backup

4.3.3 Manage system backups

System Backup Management backs up or deletes system configuration files on the Target. Figure 26, "System Backup Management" below shows **System Backup Management**:

telestra-de-17-56 System Backup Management		
Del	File / Download	Info
<input type="checkbox"/>	SERA_AudioBridge_RevA20181003-2051.tgz	info
<input type="checkbox"/>	SpkrEq20181003-2049.tgz	info
<input type="checkbox"/>	hail_test20181003-2050.tgz	info
<input type="checkbox"/>	s97_Test20181003-2050.tgz	info
<input type="checkbox"/>	telestraConfig20181003-2033.tgz	info
<input type="button" value="Delete Selected Files"/>		

Figure 26: System Backup Management

4.3.4 Archive system backups

For a detailed list of archived files, choose an archive, and select **info**. Figure 27, "Back up archive contents" below shows **info** on **System Backup Management**:

telestra-de-17-56 System Backup Management		
Del	File / Download	Info
<input type="checkbox"/>	SERA_AudioBridge_RevA20181003-2051.tgz	info
<input type="checkbox"/>	SpkrEq20181003-2049.tgz	info
<input type="checkbox"/>	hail_test20181003-2050.tgz	info
<input type="checkbox"/>	s97_Test20181003-2050.tgz	info
<input type="checkbox"/>	telestraConfig20181003-2033.tgz	info
<input type="button" value="Delete Selected Files"/>		

Figure 27: Back up archive contents

4.4 Description

From the left, go to **Description**. On **Basic Configuration**, enter system details for future reference:

telestra-de-17-56 Basic Configuration

Description
 (e.g. Network HLA/RMS Server)

Contact Email
 (e.g. johnq@example.com)

Installation Facility
 (e.g. 56th TTW)

Installation Location
 (e.g. Luke AFB, AZ)

Contact Name
 (e.g. John Q. Public)

Contact Phone
 (e.g. (703)555-1234 x35)

Installation Trainer
 (e.g. F-15E)

Figure 28: Basic Configuration

4.5 Terrain

To add third-party terrain data, upload the compressed file (.zip) on **Terrain Management**. Figure 29, "Terrain Management" below shows **Level 0 Data** and **Supplying Additional Terrain** on **Terrain Management**:

telestra-de-17-56 Terrain Management

Level 0 Data

ASTi DTED level 0 data is not installed.

Supplying Additional Terrain

You can install your own terrain data by mounting the media containing your data, and following these steps:

- At a command prompt, change to the root directory of the new DTED data.
- Run the Command `"/usr/local/bin/dtedConversion.py ./ /usr/local/customer/terrain"`, which converts the new DTED files to ASTi format files located in `/usr/local/customer/terrain/`.
- The newly added terrain data will be made active immediately.

Removing Supplied Terrain

Terrain data installed using the process above can be removed by following these steps:

- At a command prompt, execute `'dtedCleanUp.py -r'`.
- The data in `/usr/local/customer/terrain/` will be deactivated and removed.

Figure 29: Terrain Management

4.6 Text-to-speech

Text-to-Speech software packages require an additional license file from ASTi. These license files activate upon upload. This page also provides **Voice Management** for ASTi voices. Simply upload and install voices for text-to-speech (TTS).

Figure 30, "Text-to-Speech" below shows **Text-to-Speech Voice Licensing** and **Text-to-Speech Voices**:

speechrec7 Text-to-Speech

Text-to-Speech Voice Licensing

To enable text-to-speech voices, enter a valid license key below and click Update.

Status: ✔ **Licensed**

License Key: LE/1B/9B660F5438728AF4A206A870656270627282F4A270F4629BE4F4A2

New License Key:

Text-to-Speech Voices

Name	Gender	Language	Accent
Karen	Female	English	American
Laura	Female	English	American
Micah	Male	English	American
Rod	Male	English	American
Ryan	Male	English	American
Saul	Male	English	American
Sharon	Female	English	American
Tracy	Female	English	American
Will	Male	English	American

Figure 30: Text-to-Speech

5.0 Projects

The RMS contains **Project** settings that allow you to view and manage Target projects. You can also duplicate a project or clone it, creating a master/slave relationship between two Targets.

Figure 31, "Project" below shows **Project** settings on the left:

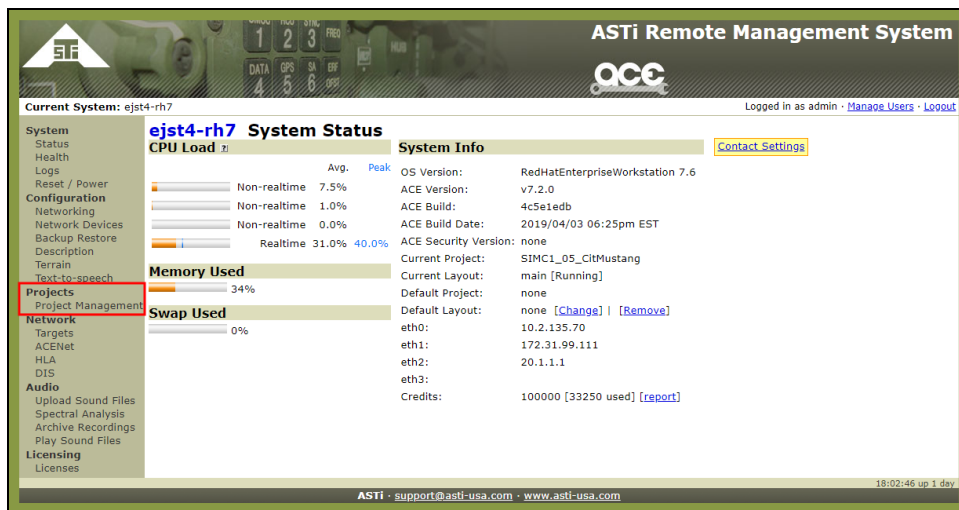


Figure 31: Project

This chapter discusses how to:

- View local and global projects
- Clone and copy projects

5.1 View local and global projects

In **Project Management**, select **Show Projects** to view all projects local to the system and over the network. You can also delete any local projects on the system. Figure 32, "Local and global projects" below shows local and global projects on **Project Management**:

telestra-de-17-56 Project Management	
Local Projects	
[Main Menu] No projects listed	
Global Projects	
Target Hostname : Project Name	Changeset ID
avcatt-bmc.local:avcatt_01_20_10dev	ab3f4474f0e8
avcatt-bmc.local:avcatt_01_29_10dev	36c772c6271f
avcatt-bmc.local:avcatt_rctd_project	3a19777d8521
avcatt-bmc.local:PMATS_GCS_block30_03_07_18rel	a582b31ef015
avcattmm3.local:avcatt	000000000000
avcattmm3.local:avcatt_06_29_10rel	48447f7fb5c1
avcattmm3.local:avcatt_rctd_project	3a19777d8521
avcattmm3.local:PMATS_GCS_block30_03_07_18rel	a582b31ef015
awz-dev.local:test	0d6ce95eba1e
EJST4.local:BOEG1-1021_P-8A-VMT-RevA	a7f7b7e9cbae
EJST4.local:BOEG1_959_AH-6	820a5a9a311d
EJST4.local:GMH3_879_PMATS_GCS_block30_03_07_18rel	70eafa2764cc

Figure 32: Local and global projects

5.2 Clone and copy projects

On **Project Management**, select **Clone New Project**. This setting applies to situations where multiple Targets are using one project. Choose a project and clone it to create a link between a master and slave Target. For more information, go to Application Note 90, "Managing a Single Project across Multiple Target Platforms" at support.asti-usa.com/appnotes/90.html.

Copying a project creates an independent copy:

telestra-de-17-56 Project Management
Clone new project [\[Main Menu\]](#)
Select Project:
avcatt-bmc.local:avcatt_01_20_10dev
Submit Cancel

telestra-de-17-56 Project Management
Copy new project [\[Main Menu\]](#)
Select Project:
avcatt-bmc.local:avcatt_01_20_10dev
Submit Cancel

Figure 33: Clone or copy new project

6.0 Network

Network allows you to manage Targets and ACENet devices connected to the RMS as well as high-level architecture (HLA) and Distributed Interactive Simulation (DIS) settings.

Figure 34, "Network" below shows **Network** pages on the left:

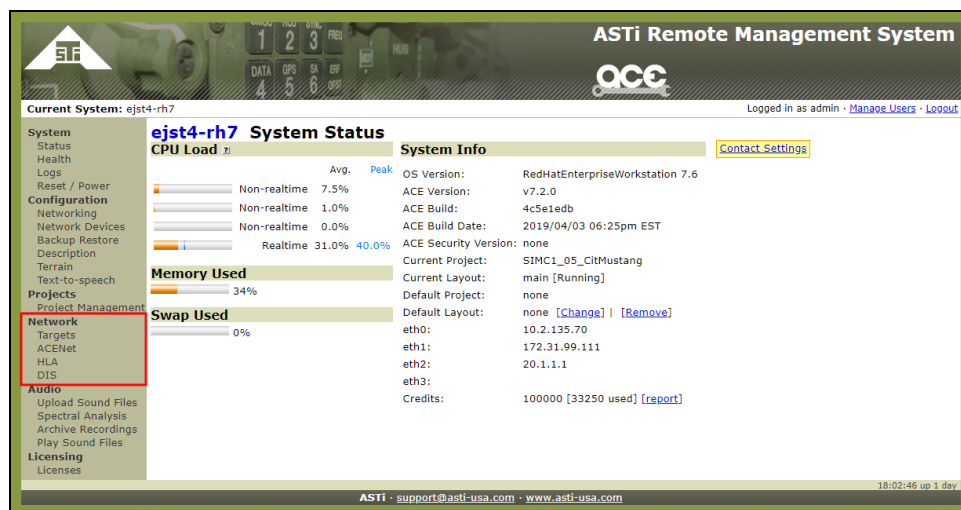


Figure 34: Network

This chapter discusses the following topics:

- Targets
- ACENet
- HLA

6.1 Targets

Network > Targets displays all the Targets on the network. To open a new RMS browser for a specific Target, choose a link under **Target Hostname**. Figure 35, "Network RMS targets" below shows a list of **RMS targets** on **Network**:

telestra-de-17-56 Network				
RMS targets				
Target Hostname	Software Version	Current Project	Current Layout	Current Project Changeset
avcatt-bmc.local	7.0.2-3f40b5a0e894	avcatt_rctd_project	bmcsafrp_layout	3a19777d8521
avcattmm3.local	6.6.0-d7768c7416b0	avcatt_rctd_project	bmcsafrp_layout	3a19777d8521
awz-dev.local	7.Dev-348283f5a805	test	main	0d6ce95eba1e

Figure 35: Network RMS targets

6.2 ACENet

The following section applies to ACE software versions 4.17 or later. ACENet devices must have firmware version 2.X to run properly with ACE software versions 4.17 or later. If an ACENet device needs a firmware update to operate with the ACE software version, the page displays a “Need firmware version ≥ 2.0 ” message.

Figure 36, "Device List" below shows **ACENet > Device List**:

telestra-63-69-E2 Device List

Update Settings: [Device Names](#) [Device Numbers](#) [Latency Modes](#)

Update Firmware: [ACU2](#)

[Reset ACENet Counters](#)

ACENet Lost Beat
Packets Count: 852006561

Device Name	Layout	Network	Firmware	Device Number	Latency Mode	Status	MAC	Message
1 ACU2(s)								
ACU2			2.17	2374	Normal		00:1a:18:00:09:46	OK
3A24A7			2.17	213	Normal		00:1B:63:84:45:E6	OK
1A34A2A5			2.17	1990	Normal		00:0C:29:9C:B3:33	OK

Figure 36: Device List

Select **ACENet** to view all ACENet devices (e.g., ACE-RIU, ACU2, ACU, Crown Power Amplifier) on the network. Each ACENet device assigns itself a number that determines the ACENet IP address. **ACENet** displays each device number. Each device must have a unique name.

In rare cases, a conflict may arise between two devices using the same device number. The ACENet screen reports this error as “Duplicate device number.” Select **Device Numbers**, and change the device with the number in conflict. Select **Apply**.

This section discusses the following topics:

- ACE-RIU
- ACU
- ACU2
- Crown Power Amplifiers

6.2.1 ACE-RIU

ACENet displays all the ACE-RIUs available on the network. **Layout** shows if the ACE-RIU is active in the ACE Studio **Layout**. **Network**, **Firmware**, **Device Number**, **Latency Mode**, **Status**, and **Message** display additional information to ensure the ACE-RIU is running properly. Each ACE-RIU must have a unique name and number.

View the ACE-RIU channel details:

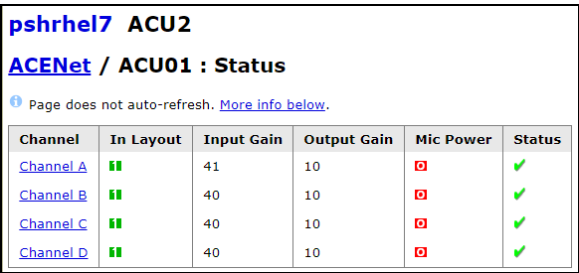


Figure 37: ACU2: Status

For general gain information, select **Device Gain References**:

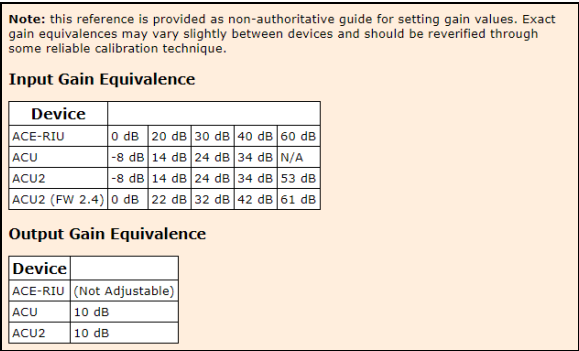


Figure 38: Device Gain Reference

6.2.1.1 Update ACE-RIU firmware

On **ACENet**, next to **Update Firmware**, select **ACE-RIU** for instructions to update the firmware. The following page displays the instructions for updating the firmware.

6.2.2 ACU

ACENet displays all of the ACUs available on the network. **Layout** shows if the ACU is active in the ACE Studio layout. **Network**, **Firmware**, **Device Number**, **Latency Mode**, **Status**, and **Message** display additional information to ensure the ACU is running properly. Each ACU on the ACENet must have a unique device name and number.

Select the ACU's name to view each channel's status and details:

psrhel7 Device List

Update Settings: [Device Names](#) [Device Numbers](#) [Latency Modes](#)

Update Firmware: [ACU2](#)

[Reset ACENet Counters](#)

ACENet Lost Beat Packets Count: 0

Device Name	Layout	Network	Firmware	Device Number	Latency Mode	Status	MAC	Message
8 ACU2(s)								
ACU01	II	II	2.17	4051	Normal	✓	00:1a:18:00:0f:d3	OK
ACU02	I	II	2.17	3846	Normal	✓	00:1a:18:00:0f:06	OK

Figure 39: ACU Device Name

Select each channel to adjust its gains:

psrhel7 ACU2

ACENet / ACU01 : Status

Page does not auto-refresh. [More info below.](#)

Channel	In Layout	Input Gain	Output Gain	Mic Power	Status
Channel A	II	41	10	I	✓
Channel B	II	40	10	I	✓
Channel C	II	40	10	I	✓
Channel D	II	40	10	I	✓

Figure 40: ACU channels

In the top right, select **Device Gain Reference** for general gain information.

Note: this reference is provided as non-authoritative guide for setting gain values. Exact gain equivalences may vary slightly between devices and should be reverified through some reliable calibration technique.

Input Gain Equivalence

Device	0 dB	20 dB	30 dB	40 dB	60 dB
ACE-RIU	0 dB	20 dB	30 dB	40 dB	60 dB
ACU	-8 dB	14 dB	24 dB	34 dB	N/A
ACU2	-8 dB	14 dB	24 dB	34 dB	53 dB
ACU2 (FW 2.4)	0 dB	22 dB	32 dB	42 dB	61 dB

Output Gain Equivalence

Device	
ACE-RIU	(Not Adjustable)
ACU	10 dB
ACU2	10 dB

Figure 41: Device Gain Reference

The following sections discuss how to:

- Set ACU channel gains
- Update ACU firmware

6.2.2.1 Set ACU channel gains

In **ACENet > ACU**, enable the preamp and microphone power, and set the input and output gains. If an input or output gain value is outside the acceptable range, it truncates to an accepted value. The range varies depending on ACU firmware.

6.2.2.2 Update ACU firmware

You may receive the ACU firmware file in one of three ways:

- The Target's software
- An ACU Firmware Update CD
- Email

Update all ACUs on the Target's local ACENet to the same firmware version.



Caution: *Upgrading all ACU firmware at once may destabilize the ACU.*

To update ACU firmware, follow these steps:

1. Turn on the ACU in BOOT mode, which differs from normal operation.
2. On **ACENet**, next to **Update Firmware**, select **ACU**.
3. Follow the instructions on the page to reset the ACU in BOOT mode. Turn off the device for at least 30 seconds.
4. When the ACU is in BOOT mode, refresh the RMS page.
5. Choose an ACU to update.


6. Follow the instructions on **ACU Firmware Update**.

kpst4rh7 ACU Firmware Update

ACU firmware can only be updated on a unit that has been powered on in "Boot Mode". *This is different from the ACU's normal operation.* ACE cannot locate any ACUs that are powered on in Boot Mode. Please follow the instructions below.

Enabling Boot Mode for ACUs:

1. Power off the ACU by removing its power supply plug from the jack in the rear of the unit.
2. Using a small tool, *gently* toggle DIP switch #1 to the down position, as shown.



Setting the ACU for Boot Mode

3. Power on the ACU by reconnecting its power supply.
4. The red and green LEDs adjacent to the DIP switches should be blinking rapidly in an alternating pattern.
5. Refresh this page to see the ACU in the table above.

Figure 42: ACU firmware update

7. After setting the ACU name and firmware version, select **Continue to the next step**.



***Note:** If you received the update via email or CD, upload the file from your local system.*

8. Verify the ACU's name and MAC address, and select **Yes, Update ACU Firmware**.
9. On **ACU Firmware Update Results**, follow the instructions on the page to reset the ACU during normal operation.



***Note:** Turn off the ACU for at least 30 seconds before restarting. Do not refresh ACU Firmware Update Results.*

10. To verify the ACU firmware version, go to **ACE System Health**, and select **Show Detail**. The new firmware version appears.

6.2.3 ACU2

Network ACENet displays all the ACU2s on the network. **Layout** shows if the ACU2 is active in the ACE Studio layout. **Network**, **Firmware**, **Device Number**, **Latency Mode**, **Status**, and **Message** display additional information to ensure the ACU2 is running properly. Each ACU2 on the ACENet must have a unique device name and number.

Select the ACU2's name to view its status and details:

pshrhel7 Device List

Update Settings: [Device Names](#) [Device Numbers](#) [Latency Modes](#)

Update Firmware: [ACU2](#)

[Reset ACENet Counters](#)

ACENet Lost Beat
Packets Count: 0

Device Name	Layout	Network	Firmware	Device Number	Latency Mode	Status	MAC	Message
8 ACU2(s)								
ACU01			2.17	4051	Normal		00:1a:18:00:0f:d3	OK
ACU02			2.17	3846	Normal		00:1a:18:00:0f:06	OK

Figure 43: ACU2 Device Name

To set the gains, select each channel:

pshrhel7 ACU2

ACENet / ACU01 : Status

Page does not auto-refresh. [More info below.](#)

Channel	In Layout	Input Gain	Output Gain	Mic Power	Status
Channel A		41	10		
Channel B		40	10		
Channel C		40	10		
Channel D		40	10		

Figure 44: ACU2 channels

The following sections discuss how to:

- Set ACU2 channel gains
- Update ACU2 firmware

6.2.3.1 Set ACU channel gains

In **ACENet > ACU**, enable the preamp and microphone power, and set the input and output gains. If an input or output gain value is outside the acceptable range, it truncates to an accepted value. The range varies depending on ACU firmware.

6.2.3.2 Update ACU2 firmware

First, install a project and layout with all of a Target's ACENet devices. To update ACU2 firmware, follow these steps:

1. In ACE Studio, open a project on the Target connected to the ACENet device(s).
2. The layout running in ACE Studio must include all of the ACU2s you are upgrading. A readiness model ensures your layout includes the connected ACU2s. In the menu bar, select **Layout** and **Add Readiness**. Overwrite any previous readiness layouts if prompted.
3. Select the readiness layout, and then select **Install Project**.
4. Follow the ACU2 firmware update instructions in the RMS.
5. On **ACENet**, next to **Update Firmware**, select **ACU2**, and follow the instructions to update the ACU2's firmware.



***Note:** If running a hardened Target, manually install firmware that is not included with the original software installation.*

Figure 45, "ACU2 Firmware Update" below shows instructions on **ACU2 Firmware Update**:

pshrhel7 ACU2 Firmware Update


ACU2 firmware can only be updated on a unit that has been powered on in "Boot Mode". *This is different from the ACU2's normal operation.*

ACE cannot locate any ACU2s that are powered on in Boot Mode. Please follow the instructions below.


Enabling Boot Mode for ACU2s:

1. Power off the ACU2 by removing its power supply plug from the jack in the rear of the unit.
2. Using a small tool, *gently* toggle DIP switch #1 to the down position, as shown.

**Setting the
ACU 2**



**Boot
Mode**



3. Power on the ACU2 by reconnecting its power supply.
4. The red and green LEDs adjacent to the DIP switches should be blinking rapidly in an alternating pattern.
5. Refresh this page to see the ACU2 in the table above.

Figure 45: ACU2 Firmware Update

6.2.4 Crown Power Amplifiers

ACENet displays all the Crown Power Amplifiers available on the network. **Layout** shows if the amplifier is active in the ACE Studio layout. **Network**, **Firmware**, **Device Number**, **Latency Mode**, **Status**, and **Message** display additional information to ensure the Crown Power Amplifier is running properly. Each Crown Power Amplifier on the ACENet must have a unique name and number.

6.3 HLA

This section discusses how to:

- Install an RTI file
- Activate an RTI file
- Set the HLA standard

6.3.1 Install an RTI file

HLA Management provides run-time infrastructure (RTI) management. ASTi's HLA communications environment supports RTIs downloaded from Msko.mil, Mak.com, and Virt-c.com. Download the RTI compatible with the corresponding Target release, as specified in Section 1.0, "Choose a compatible HLA RTI file" on page 1 in the *HLA Installation Guide*. If you are running a hardened Target, manually upload and install the RTI.

To install the RTI file in the RMS, follow these steps:

1. Open a web browser on a computer sharing a network with the Telestra server.
2. To access the RMS, in the address bar, enter the Telestra server's IP address.
3. In the top-right corner, select **Login**.
4. Log into the system using the following default credentials:

Username	Password
admin	astirules

5. On the left, go to **Network > HLA**.

6.3.2 Activate an RTI file

To activate an RTI file, follow these steps:

1. On the left, go to **Network > HLA**.
2. Under **RTI Settings**, choose an RTI file, and select **Activate**. The RTI file's **Status** displays “Active:”

RTI Settings					
Name	Status	License Host	License Port		
mak_4.5c	Active	10.2.137.3	27001	Deactivate	Delete Update
rtis_D35G_x86_64_g++-4.8	Idle			Activate	Delete Update

Figure 46: Active RTI file

3. (Optional) If your RTI vendor requires the RTI to withdraw a license from an external license server, do the following:
 - a. In **License Host**, enter xxx.xxx.xxx.xxx, where xxx.xxx.xxx.xxx is the license server's IP address.
 - b. In **License Port**, enter the license server's port number (e.g., 27001).



***Note:** Alternatively, you may configure the Pitch RTI license in the Local RTI Component (LRC) .settings file. Go to Pitch documentation for more information.*

- c. Select **Update**.

6.3.3 Set the HLA standard

To set the HLA standard, follow these steps:

1. Under **HLA Standard**, choose **IEEE 1516e** for HLAe or **HLA 1.3** for HLA 1.3.
2. Select **Set HLA Standard**.

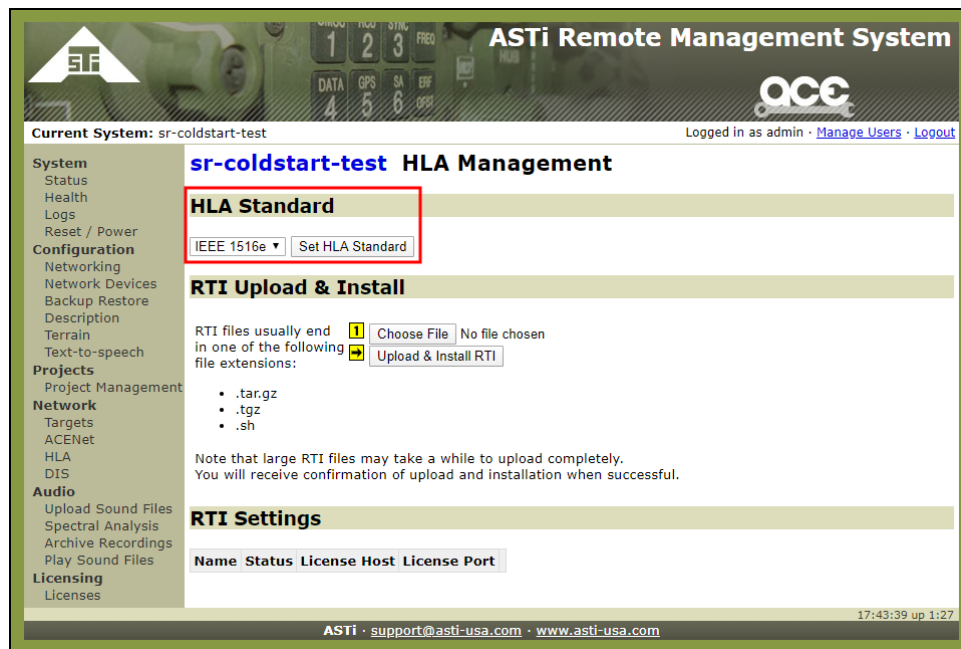


Figure 47: Set HLA standard

7.0 Audio

Audio settings allow you to upload sound files, view spectral analysis comparisons, archive recordings, and play sound files.

Figure 48, "Audio settings" below shows **Audio** on the left:

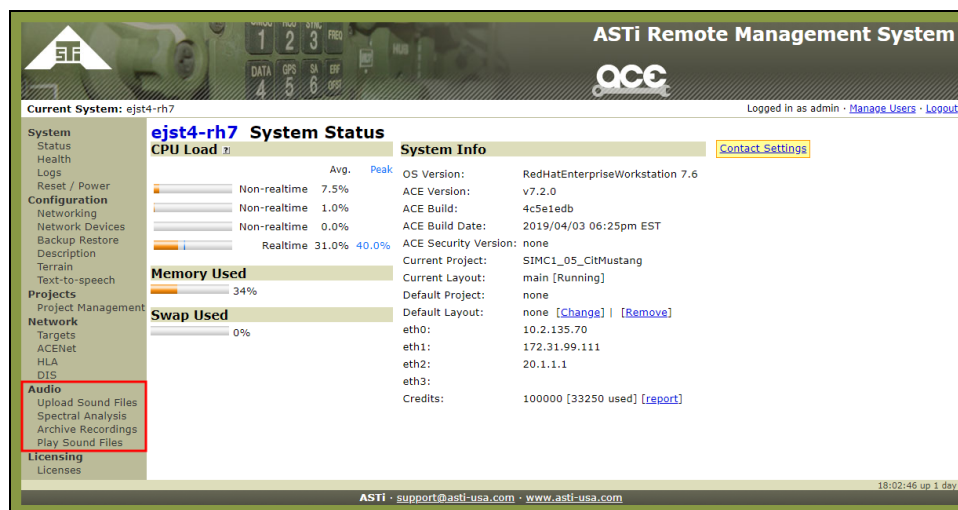


Figure 48: Audio settings

This chapter discusses how to:

- Upload Sound Files
- Spectral Analysis
- Archive Recordings
- Play Sound Files

7.1 Upload Sound Files

Upload Sound Files provides a two-step process to upload sound files on the system. Choose a wave set or create a new one. The wave set is a folder that contains the sound files in the sound repository. Upload the selected sound files to the wave set folder.



Important: The RMS only accepts 16-bit pulse code modulation (PCM) monophonic wave-form audio format files (.wav) with a 48 kilohertz (kHz) sample rate.

Figure 49, "Upload Sound Files" below shows settings on **Upload Sound Files**:

telestra-de-17-56 Upload Sound Files

Use this form to upload individual sound files (in **.wav** format), or to upload one **.tgz** archive containing multiple sound files.

Important! All sound files must have the following attributes:

- .wav format
- 48 kHz sample rate
- 16-bit PCM
- mono audio (1 channel)

At this time, only sound files with the above traits can be used by the system. RMS will inspect the uploaded file(s) after the transfer, and the subsequent page will display valid files, as well as details for any sound file deemed invalid.

1. Where do the files belong?


Select an existing Waveset: **WST_Comms**

Or: Specify the name of a new Waveset:

Creating a new Waveset will ignore the selected Waveset above (if any).
Valid characters are a-z, A-Z, 0-9, underscores(_) and dashes (-); spaces will be automatically converted to underscores.

2. Select file to upload:

propeller_pl..._engine.wav



If you are uploading a new WAV file with the same name as a file inside the selected Waveset, the new file will overwrite the existing one.

Figure 49: Upload Sound Files

7.2 Spectral Analysis

Spectral Analysis creates a .pdf comparison file of the recorded audio files matched up to reference audio. Generate the recorded files using **LevelDCapture** or **RecordReplay**. Figure 50, "Spectral Analysis" below shows an example of a **Spectral Analysis** comparison:

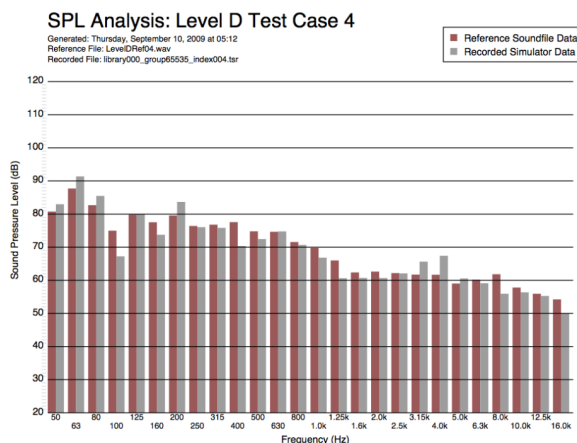


Figure 50: Spectral Analysis

7.3 Archive Recordings

Archive Recordings saves all recording files that are created using **LevelDCapture** or **RecordReplay**:



telestra-de-17-56 Archive Recordings

This utility allows you to save Telestra Sound Recording (TSR) files into a sub-folder of any Waveset on this Telestra system.

These files may be copied in their original TSR format or converted into WAV files.

Where do you want the recorded files to be copied?

Select an existing Waveset:

- [WST_Comms](#)

Or, you can create a new Waveset:

Valid characters are a-z, A-Z, 0-9, underscores(_) and dashes (-); spaces will be automatically converted to underscores.

Figure 51: Archive Recordings

7.4 Play Sound Files

Play Sound Files allows you to preview sound files in the browser without transferring files from the Telestra server. You can play these files in waveform audio format (.wav) from a subfolder of any wave set on your Telestra system. To convert a Telestra sound recording (.tsr) file into waveform (.wav) audio file format, go to Section 7.3, "Archive Recordings" above.

To preview a .wav file, follow these steps:

1. On the left, go to **Audio > Play Sound Files**.
2. Under **Select a Waveset**, choose a wave set to preview.



pshrhel7 Play Sound Files

This utility allows you to play Waveform (wav) files from a sub-folder of any Waveset on this Telestra system. Any TSR files may be converted into WAV files on the Archive Recordings page.

Select a Waveset:

- [Voice](#)

Figure 52: Select a Waveset

3. (Optional) If the sound file exists in a subfolder, under **Select a subfolder**, choose a subfolder (e.g., **Recorded**).

- Under **Select a file to play**, choose a .wav file to preview. Under **Current File**, the sound file automatically plays. The time marker shows elapsed seconds and the file's total time.



Figure 53: Play Sound Files

- To replay the sound file, select play (▶).
- To adjust the volume, next to the speaker (🔊), move the slider.
- To download the file to your local computer, select download (⬇️).

8.0 Licensing

ASTi's licenses are tied to USB License Keys, which are DoD-approved devices covered under ASTi's Authority to Operate (ATO) and Risk Management Framework (RMF) accreditation. Upon delivery, each USB License Key activates a predefined set of software functionality for any system running Telestra software. This includes ASTi-provided hardware, customer-furnished equipment (CFE), government-furnished equipment (GFE), and virtual machines (VMs). USB License Keys also give you the ability to transfer functionality among systems and receive loaner and trial licenses. To learn more about USB License Key benefits and FAQs, go to [USB License Keys and your ASTi System \(#123\)](#).

This chapter discusses how to:

- Install a USB License Key
- View licensing information
- Update a USB License Key

8.1 Install a USB License Key

When you first receive one or more ASTi USB License Key(s) with a shipment, you must insert your licenses into the applicable Telestra server(s).

To install your USB License Key(s), follow these steps:

1. Insert the USB License Key(s) into the applicable servers.
2. Open a web browser on a computer sharing a network with the Telestra server.
3. To access the RMS, in the address bar, enter the Telestra server's IP address.
4. In the top-right corner, select **Login**.
5. Log into the system using the following default credentials:

Username	Password
admin	astirules

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

telestra-dc-a5-a6 License Management

Page does not auto-refresh. [More info below.](#)

Software Maintenance

The software and/or IA maintenance for this system is active until April 1, 2024.

Available Options

Credits	15000
Data Link Interface	II
HLA	II
IA	II
Level D Spectral Analysis	II
Propagation Loss Interface	II
Speech Recognition	II 4 streams
Telestra Runtime	II
Terrain Database Server	II
Text-to-Speech	II 4 streams
Vibration Analysis	II

Licenses

ID	Type	Model	Version	Date	Revision	Error	Details
102768155	Hardware	Time	4.51	14-Dec-2018	13		Show Download

Figure 54: Licenses navigation

7. Under **Licenses**, find your license's ID to confirm that it is active. This ID is printed on the tag attached to your USB License Key.

ID	Type	Model	Version	Date	Error	Details
102768155	Hardware	Time	4.51	15-Oct-2023		Show Download

Figure 55: Active license ID

8.2 View licensing information

On **Licensing Management**, under **Available Options**, view the total credits and options available to your system:

Available Options	
Credits	100000
Data Link Interface	II
HLA	II
IA	II
Level D Spectral Analysis	II
Propagation Loss Interface	II
Speech Recognition	II 2 streams
Telestra Runtime	II
Terrain Database Server	II
Text-to-Speech	II 2 streams
Vibration Analysis	II

Figure 56: License Available Options

Licenses shows a list of installed USB License Keys:

- License ID
- License type (i.e., hardware or software)
- Model
- Version
- The date the license was generated
- Error message, if applicable

Green licenses are active with no errors, while yellow licenses will expire in the next 90 days or sooner. Red licenses have already expired. If a system is unlicensed, a warning displays at the top of the page. Minimum functionality may still be available on unlicensed systems. However, if you would like to use the application's full feature set, contact ASTi to update your USB License Key.

Figure 57, "Installed licenses" below shows an example of installed licenses:

Licenses							
ID	Type	Model	Version	Date	Error	Details	
88275080	Hardware	Max	4.27	09-Oct-2018		Show	Download
102768155	Hardware	Max	4.27	29-Sep-2018		Show	Download
1830087180	Hardware	Max	4.27				Download

Figure 57: Installed licenses

Under **Details**, select **Show** to view the license's individual credits, options, and expiration dates:

Licenses

ID	Type	Model	Version	Date	Error	Details	
88275080	Hardware	Max	4.27	09-Oct-2018		<div>Hide</div>	<div>Download</div>

Name	Qty.	Expired?	Exp. Date
Credits	250000	No	
Data Link Interface	1	No	
HLA	1	No	
IA	1	No	
Level D Spectral Analysis	1	No	
Propagation Loss Interface	1	No	
Speech Recognition	4 streams	No	
Telestra Runtime	1	No	
Terrain Database Server	1	No	
Text-to-Speech	4 streams	No	
Vibration Analysis	1	No	

Figure 58: Individual license details

8.3 Update a USB License Key

You may need to update ASTi USB License Key(s) to expand or alter system functionality (e.g., receive a software trial, add more clients). ASTi provides a License Key Update (.lku) file that you can upload to the Telestra server. Updating a USB License Key or changing its license terms does not require returning it to ASTi. A single file can also update multiple keys.

To update USB License Key(s), follow these steps:

1. Insert the USB License Key(s) into a Telestra server.
2. Open a web browser on a computer sharing a network with the Telestra server.
3. To access the RMS, in the address bar, enter the Telestra server's IP address.
4. In the top-right corner, select **Login**.
5. Log into the system using the following default credentials:

Username	Password
admin	astirules

6. On **Licensing Management**, under **Update/Install a License**, select **Choose File**, and find the License Key Update (.lku) file on your local system.

Figure 59: Update/Install a License

The new license displays under **Licenses**:

Licenses						
ID	Type	Model	Version	Date	Error	Details
102768155	Hardware	Time	4.51	15-Oct-2023		Show Download

Figure 60: Active license