



Comms Logger User Guide

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Product Name: Comms Logger

Comms Logger User Guide

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Revision history

Date	Revision	Version	Comments
6/5/2017	A	0	Initial version of the <i>Comms Logger User Guide</i> .
12/2/2020	B	0	Updated screenshots of the Comms Logger web interface.
12/4/2020	B	1	Documented Center on Cursor and fixed minor display errors.
1/12/2022	C	0	Added "(Optional) Capture client audio in the Audio interface."
3/8/2023	C	1	Added Red Hat Enterprise Linux subscription and export statement to the front matter.
8/12/2024	D	0	Updated screenshots of the Comms Logger logo and top navigation menu in the web interface. Documented the Transcription and Bookmark features. Grouped "(Optional) Capture client audio in the Audio interface," "Install the Comms Logger server," and "Configure the Comms Logger server" under "Server installation and setup." Added "Licenses" and corresponding subsections.
10/15/2024	E	0	Made various clarifications and edits throughout the document.
04/30/2025	F	0	Updated the Features screenshot in "(Optional) Capture client audio in the Audio interface." Added "Download transcription text" and updated Search Filter screenshots in "Filter and review transcription messages." Documented the Include Transcript checkbox in "Select and export audio."

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1.0 Introduction

ASTi's Communications Logger (i.e., Comms Logger) records, retrieves, and reviews communications conducted through ASTi's Voisus server. These communication types include Radio over Internet Protocol, network intercoms, and phone calls that occur between operators and over public telephone networks. Three possible configuration options exist:

- Comms Logger server,
- Comms Logger server with two redundant array of independent disks drives, which provide additional storage and more reliable uptime for mission critical exercises, and
- Comms Logger in a virtual machine, which provides increased flexibility and a smaller hardware footprint.

The Comms Logger operates in conjunction with the Voisus server. These servers publish uniquely identified communication streams using Variable Transmitter Parameters available with Distributed Interactive Simulation (DIS), version 7. The Comms Logger receives, stores, and then processes this traffic for display, review, and archival. The Comms Logger only shows what the Voisus server publishes.

To access recorded audio, log into the Comms Logger web interface using a web browser on a computer sharing the same network. Use this platform to accomplish the following:

- Set up and manage the recording parameters,
- Filter and review recorded audio, and
- Export audio to an external storage device or DVD in waveform (i.e., .wav) audio file format.

The *Comms Logger User Guide* describes how to set up the Comms Logger, monitor its status, operate **Audio**, and troubleshoot common problems. It does not explain how to set up Voisus servers. To make these configurations, go to the [Voisus Client User Guide](#).

This guide is intended for technicians or exercise staff who want to set up, record, review, or export captured audio from the Voisus server. To set up the Comms Logger, you should be familiar with Voisus client operation. Additionally, you should understand basic networking concepts allowing the Comms Logger and its associated servers to communicate.

1.1 Required equipment

To set up the Comms Logger, you will need the following items:

- Hardware

- Comms Logger 2U server with removable hard drive



Important: *If your application doesn't use a physical Comms Logger server, you'll need to configure Comms Logger in a virtual machine instead, as described in "Comms Logger in a virtual machine" in the [Comms Logger Cold Start Guide](#).*

- Voisus 2U server with removable hard drive
- CAT5e Ethernet cable or better
- Network switch
- Computer with a local area network connection to the Comms Logger and Voisus server
- Monitor
- Keyboard
- Software
 - *(Optional)* An enterprise class virtualization stack (i.e., Type-1 or bare-metal hypervisor), such as VMware ESXi
 - *(Optional)* Software application that plays files in waveform (.wav) audio file format (e.g., iTunes)
- Network data
 - Comms Logger's IPv4 address
 - Comms Logger's subnet mask
 - User Datagram Protocol (UDP) ports where the Comms Logger will receive Distributed Interactive Simulation (DIS) traffic
 - DIS exercises containing audio that the Comms Logger will record
 - Comms Logger's broadcast or multicast group address

2.0 Licenses

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 Comms Logger 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)” at support.asti-usa.com/appnotes/123.html.

This section discusses how to:

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

2.1 Install a USB License Key

When you first receive an ASTi USB License Key with a shipment, you must install your license on the applicable Comms Logger server. If you're updating an existing license, follow the instructions in Section 2.3, "Update a USB License Key" on page 5.

To install a USB License Key and verify it is active, follow these steps:

1. Insert the USB License Key into the Comms Logger server.
2. Open a web browser on a computer or tablet sharing a network with the Comms Logger server.
3. In the address bar, enter the Comms Logger server's IP address.
4. Log into the Comms Logger web interface using the following default credentials:

Username	Password
admin	astirules

5. From the top right, go to **Manage** () > **Licensing**.

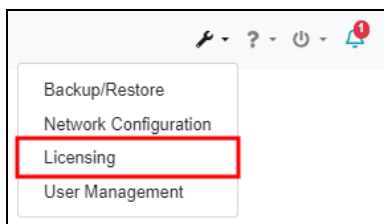
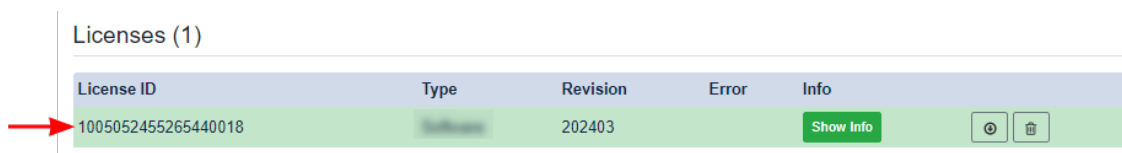


Figure 1: Licensing navigation

6. Under **Licenses (N)**, find the **License ID** to confirm that your license is active. This ID is printed on the tag attached to your USB License Key.



Licenses (1)

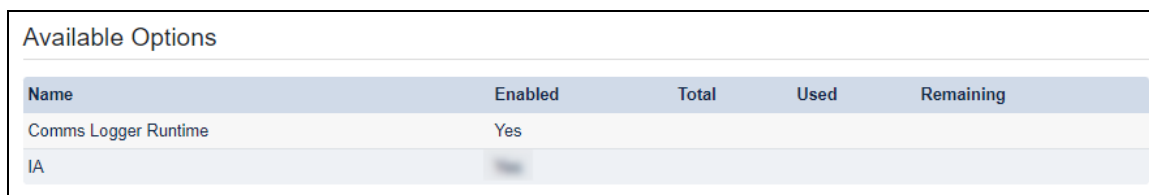
License ID	Type	Revision	Error	Info
1005052455265440018	Software	202403		Show Info

Figure 2: Active License ID

2.2 View licensing information

On **Licensing**, under **Available Options**, you can view a variety of information about licenses on your system:

- **Enabled:** enabled options
- **Total:** the total number of endpoints assigned to each option
- **Used:** the number of endpoints each option is using
- **Remaining:** the number of endpoints remaining to each option



Name	Enabled	Total	Used	Remaining
Comms Logger Runtime	Yes			
IA				

Figure 3: Available Options

A list of installed USB License Keys displays under **Licenses (N)**, where *N* represents the number of licenses. This table specifies the following:

- License ID
- License type (i.e., hardware or software)
- License revision number
- Error messages

Figure 4, "Installed licenses" below shows an example of installed licenses:



Licenses (3)				
License ID	Type	Revision	Error	Info
1155718797	Hardware	104		Show Info
344002975424982500	Software	1	This license is only valid for software released by August 2018. Current software is July 2019.	Show Info
1010157914135923480	Software	202103		Show Info  

Figure 4: Installed licenses

Green licenses are active with no errors, while yellow licenses indicate that certain features have expired. Red licenses have already expired, as shown in the error message. If a system is unlicensed, a warning displays at the top of the page in **Notifications**. 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.

To view specific information about the license, select **Show Info**:

- **Name**: options enabled on this license.
- **Total**: shows the total number of endpoints per option.
- **Expired?**: indicates whether the option's capabilities have expired.
- **Expiration Date**: shows the option's expiration date (if applicable).
- **Error**: displays option-specific error messages (e.g., expiration).

2.3 Update a USB License Key

You may need to update one or more ASTi USB License Keys 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 Comms Logger 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 Keys, follow these steps:

1. Insert the USB License Keys into a Comms Logger server.
2. Open a web browser on a computer or tablet sharing a network with the Comms Logger server.
3. In the address bar, enter the Comms Logger server's IP address.
4. Log into the Comms Logger web interface using the following default credentials:

Username	Password
admin	astirules

5. From the top right, go to **Manage** () > **Licensing**.

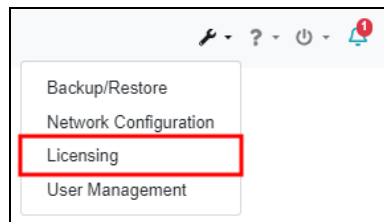


Figure 5: Licensing navigation

6. On **Licensing**, under **Update/Install a License**, select **Browse**, and find the .lku file on your local system. Alternatively, drag and drop the file to the browser.

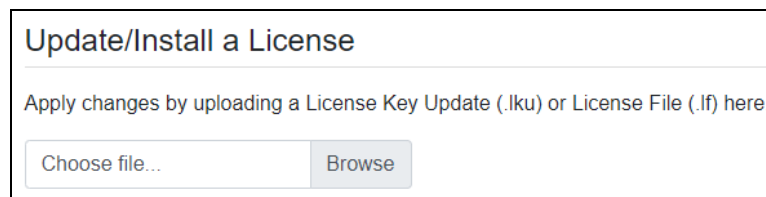



Figure 6: Update/Install a License

The updated .lku file displays under **Licenses (N)**, where N is the number of licenses.



Licenses (1)				
License ID	Type	Revision	Error	Info
1010157914135923480	Software	202103		Show Info

Figure 7: Updated license

3.0 Server installation and setup

Before you can use the Comms Logger to capture and manage client communications, you'll need to set up the Comms Logger server's network and configure it to interface with Voisus. This section provides step-by-step instructions explaining how to make these configurations, enabling you to take full advantage of the Comms Logger's features.

This chapter discusses how to:

- (Optional) Capture client audio in the Audio interface
- Install the Comms Logger server
- Configure the Comms Logger server

3.1 Install the Comms Logger server

First, you must install the hardware, and if necessary, set up initial network options. To install the Comms Logger server, follow these steps:

1. Insert the USB License Key into the Comms Logger server, as described in Section 2.1, "Install a USB License Key" on page 3.
2. Plug the Comms Logger server into a power outlet. Allow two inches of space to the rear of the server for connections. The Comms Logger server automatically boots per your BIOS configuration.
3. Connect the Comms Logger server to a monitor and keyboard, which are only necessary for initial software configuration.
4. Connect the Comms Logger server's Ethernet interface to your local area network with a CAT5e cable or better.
5. Log into the system using the following default credentials:

Username	Password
root	abcd1234

6. To obtain the server's default IP address from Dynamic Host Configuration Protocol (DHCP), enter `/sbin/ifconfig ethX`, where *X* represents the Ethernet interface port number (e.g., Eth0). Press Enter. Use the displayed IP address to access the Comms Logger web interface, or set up a custom IP address in the next step.

7. *(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 Comms Logger web interface via a browser to complete the network setup.

3.2 Configure the Comms Logger server

Modify the Comms Logger server's settings to meet your program's requirements using **Comms Logger Configuration**. Settings on this page include the following:

- Recording File Period
- Ethernet Interface
- Capture Filters for protocol data unit (PDU) packets
- Multicast Groups
- Transcription

This section primarily focuses on configuring the Comms Logger's network. For transcription configuration instructions, go to Section 5.1, "Choose and configure a transcription model" on page 22.

To set up the Comms Logger, follow these steps:

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

Username	Password
admin	astirules

4. From the top navigation bar, go to  **Configuration**.

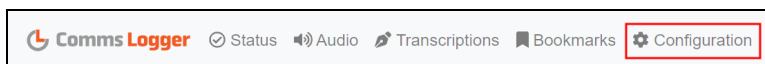


Figure 8: Comms Logger Configuration navigation

- The Comms Logger continuously records audio, dividing network traffic and its associated metadata into subfiles. **Recording File Period** defines how many hours of audio a subfile contains. When a subfile reaches the specified number of hours, the Comms Logger automatically creates a new recording file. If the hard drive runs out of space, new files overwrite the oldest files in the archive.

Ensure **Recording File Period** displays its default value of **1**.



Important: For best results, leave the **Recording File Period** as the default. Before changing this setting, contact ASTi for more information.

- If needed, select **Ethernet Interface**, and choose the Ethernet port the Comms Logger will use to record.

Logger Configuration Edit	
Recording File Period	1 Hour
Ethernet Interface	eth0
Ports	View ▼
Exercises	All
Multicast Groups	None

Figure 9: Comms Logger Configuration

Available ports depend on the active, available network interfaces. The default value is Eth0.

- Capture Filters** determines which packets the Comms Logger should record based on the packet's port and Distributed Interactive Simulation (DIS) exercise. Comms Logger only displays DIS 7 data from a Voisus server.

Define the following filter parameters:

- To filter based on port, in **Ports**, enter the port number the Comms Logger will record (e.g., 3000), and select the plus sign (+). The specified port appears to the right, under **Current Parameters**.
- (Optional) To delete a parameter, select the red trash can (🗑).
- To filter based on DIS exercise, in **Exercises**, enter a DIS exercise, and select +.

Capture Filters		
Define which PDU packets the Comms Logger should record based on the packet's port and exercise.		
Note: If no parameters are defined, all values for that filter are accepted.		
Add Parameter	Current Parameters	
Ports <input type="text" value="Port"/> +	3115 🗑	
Exercises <input type="text" value="Exercise"/> +	All	

Figure 10: Capture Filters

For example, if you define ports 12001 and 12002 but no exercise ID, then the Comms Logger captures every DIS PDU entering those ports. The same concept applies for DIS exercises. If you define exercise IDs 1 and 2 but no ports, then the Comms Logger captures every DIS PDU matching IDs 1 and 2, regardless of its associated port. However, if you define port 12001, port 12002, and exercise ID 1, the Comms Logger captures DIS PDUs with ID 1 arriving via ports 12001 and 12002.

For best results, always define one or more ports and/or exercises. If you leave these settings blank, the Comms Logger captures all DIS traffic coming through all ports, causing your hard drive to fill faster than expected.

The Comms Logger's port and DIS exercise values must match those in the Voisus web interface. These settings reside on **DIS > Networking** and **Exercises**.

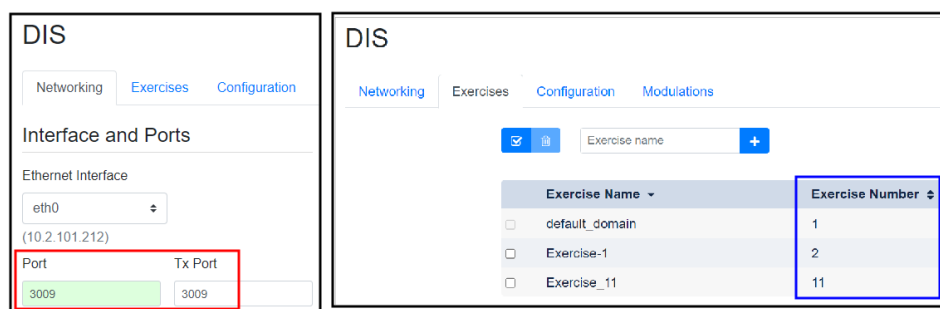



Figure 11: Voisus DIS exercise and port settings

For more information about DIS settings in the Voisus web interface, go to "DIS" in the [Voisus Client User Guide](#).

8. (Optional) If the Comms Logger is not receiving multicast traffic, define specific multicast groups to join. As a result, the Comms Logger sends Internet Group Management Protocol (IGMP) join messages to network routers.

Under **Multicast Groups**, in **Add Groups**, enter a multicast address (e.g., 224.11.22.33), and select .

To delete an address, under **Current Groups**, select the red trash can .

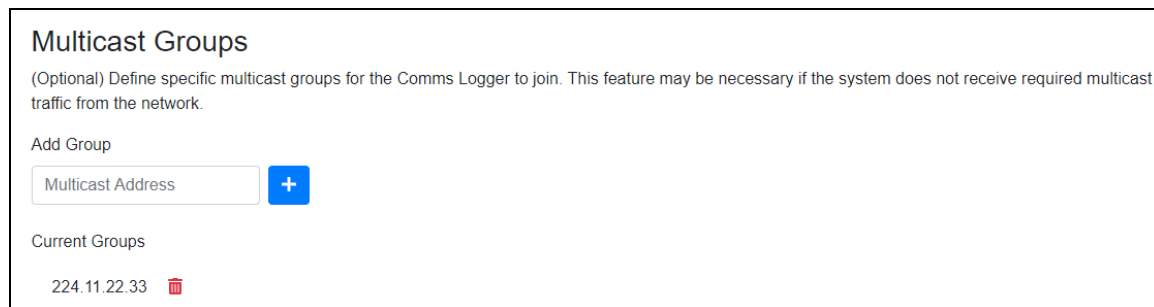


Figure 12: Multicast Groups

The Comms Logger multicast address must match the Voisus multicast address. In the Voisus web interface, this setting resides on **DIS > Networking**, under **Options**:

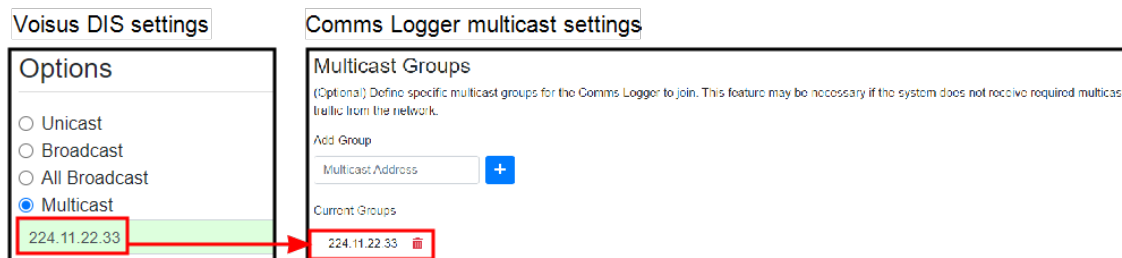


Figure 13: Matching multicast settings

9. When finished, select  **Save Changes**.

3.3 (Optional) Capture client audio in the Audio interface

By default, the Comms Logger records net audio and displays it as radio audio streams in the **Audio** interface. However, the Comms Logger can also record and display the audio of individual clients. This capability might make it easier to find students' audio clips in a classroom environment.

To set up this functionality, you must first enable clients connected to the Voisus server to publish audio in a manner the Comms Logger can record. You only need to make this configuration once per Voisus server as long as you back up and restore your settings during the cold-start procedure. To learn more about backup and restore, go to the [Voisus Cold Start Guide](#).

To enable software client audio streams for Comms Logger, follow these steps:

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

Username	Password
admin	astirules

4. From the top right, go to **Manage** () > **Features**.

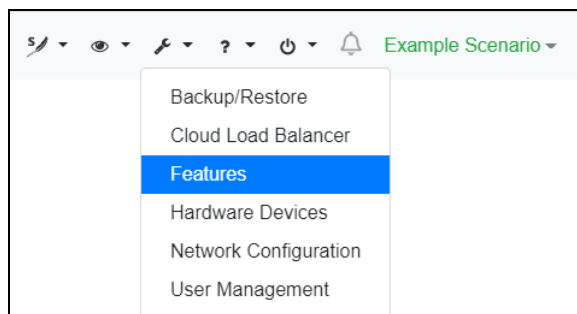


Figure 14: Features navigation

5. On **System Features**, turn **Software Client - Comms Logger** .



















System Features	
<div>  Changes to features require a Reboot </div>	
Feature	Description
 ACENet	Supports ACENet devices (e.g., ACU2, RIU)
 AI-Delta Routing	Supports connecting to AI-Delta devices over wide-area networks (WAN)
 Chat	Text chat for software clients
 Crew Intercom	Custom intercom behaviors in the Voisus Client for Desktops & Tablets
 Hand-Held Terminal	Supports the Hand-Held Terminal (HHT)
 HLA	Supports High-Level Architecture (HLA) protocol
 Hot Spare Failover	Forces all processing onto a single server in the cloud, and provides failover to hot spares
 PRC-117F Panel	Supports the PRC-117F hardware panel
 Radio Bridge Security Levels	Enables radio bridge security functionality
 Radio Monitor Remote Access	Allows clients to view radios on the network
 Remote Live Radios	Enables remote live radio functionality
 RTSP Server	Enables RTSP server listening for connections
 Simscribe DIS Replay	Sends Distributed Interactive Simulation (DIS) packets during playback
 Simscribe VBS	Allows Virtual Battlespace (VBS) administrators to control Simscribe
 SINGARS Panel	Supports the SINGARS hardware panel
 Software Client - Comms Logger	Enables clients to publish audio (received and transmitted) for Comms Logger
 Software Client - Load Balancing	Allows software clients connecting to this server to be load balanced to other servers in the same cloud

Figure 15: Turn on Software Client - Comms Logger

6. To activate changes, select Reboot.

4.0 Audio interface

From the top navigation bar, go to **Audio**.

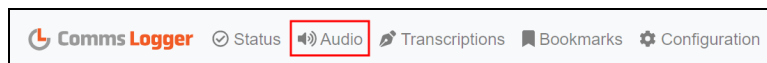


Figure 16: Audio navigation

Audio displays recorded transmissions on a timeline with color-coded periods representing transmissions. Figure 17, "Audio diagram" below identifies each interface element:

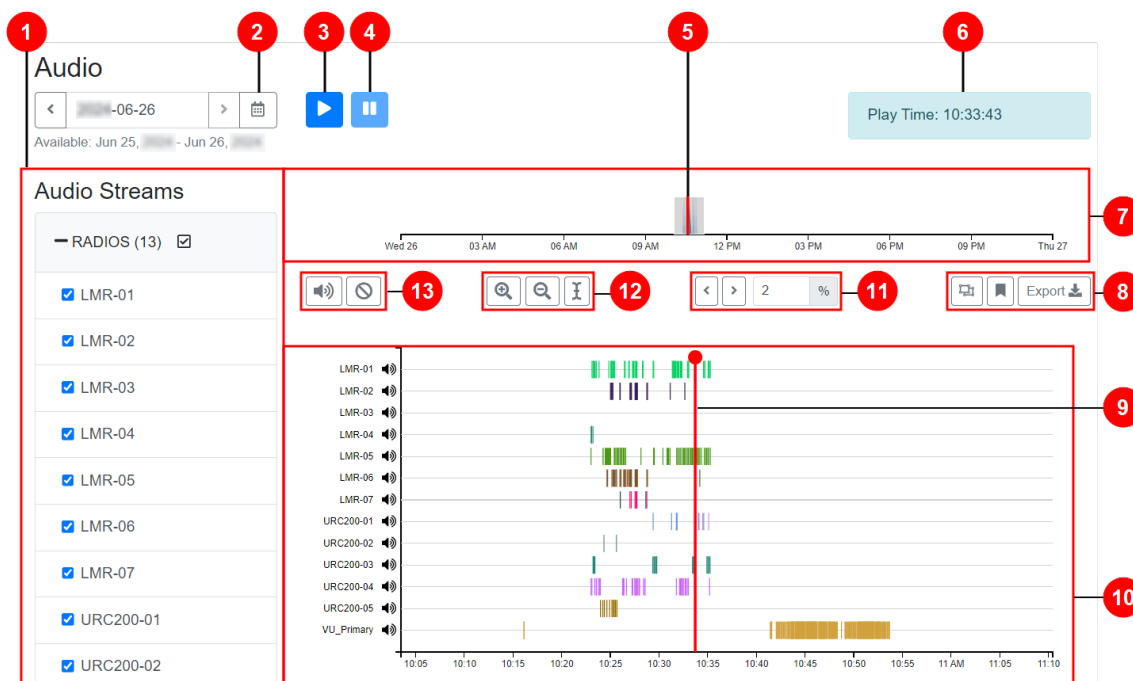








Figure 17: Audio diagram

Table 1, "Audio elements" on the facing page lists and describes interface elements on **Audio**:

Number	Icon	Name	Description
1	N/A	Audio Streams	Recorded channels grouped by communication type (i.e., radio, call, or client). Channel identifiers are established in Voisus: <ul style="list-style-type: none"> <i>Radio</i>: identified by their net names in the Comm Plan. <i>Calls</i>: identified by the line names of a gateway. <i>Clients</i>: set on Client Mapping in the Voisus web interface. For more information about radio, call, and client net channel identifiers, go to "Comm Plan" in the Voisus Client User Guide .
2		Calendar	Lets you select recordings by date.
3		Play	Plays the recording.
4		Pause	Pauses the recording.
5	N/A	Audio Selection	Displays audio selected in the Overview . Selections are shaded gray and display in the Detailed View .
6	N/A	Time Display	Displays the <i>hour:minute:second</i> of the marker's position in the recording.
7	N/A	Overview	Shows all audio streams recorded that day, zoomed all the way out. This timeline show when transmissions have occurred and audio data is available.
8		Select Audio	Selects a precise audio duration in the Detailed View to bookmark or export.
		Bookmark	Tags a specific time for easy retrieval and organization.
		Export	Exports audio selections in waveform (i.e., .wav) audio file format.
9	N/A	Marker	Marks the current playback position in the Overview or Detailed View .
10	N/A	Detailed View	Displays a closer view of audio selections in the Overview .
11	N/A	Shift	Shifts the audio selection to the right or left based on a percentage of the selection's size.






Number	Icon	Name	Description
12		Zoom In	Doubles the Detailed View's current zoom level.
		Zoom Out	Cuts the Detailed View's current zoom level in half.
		Center on Cursor	Centers the Audio Selection on the cursor.
13		Unmute All	Unmutes all audio streams in the Detailed View .
		Mute All	Mutes all audio streams in the Detailed View .

Table 1: Audio elements

Underneath **Overview** and **Detailed View**, **Transcriptions** displays the recording text displayed above. This table includes three columns:

- **Date:** displays a time stamp indicating the hour, minute, and second (i.e., *HH:MM:SS*) that the message occurred.
- **Net:** displays the name of the net affiliated with the message.
- **Transcription:** displays the contents of the message.

Figure 18, "Audio transcription table" below displays the **Audio** transcription table:

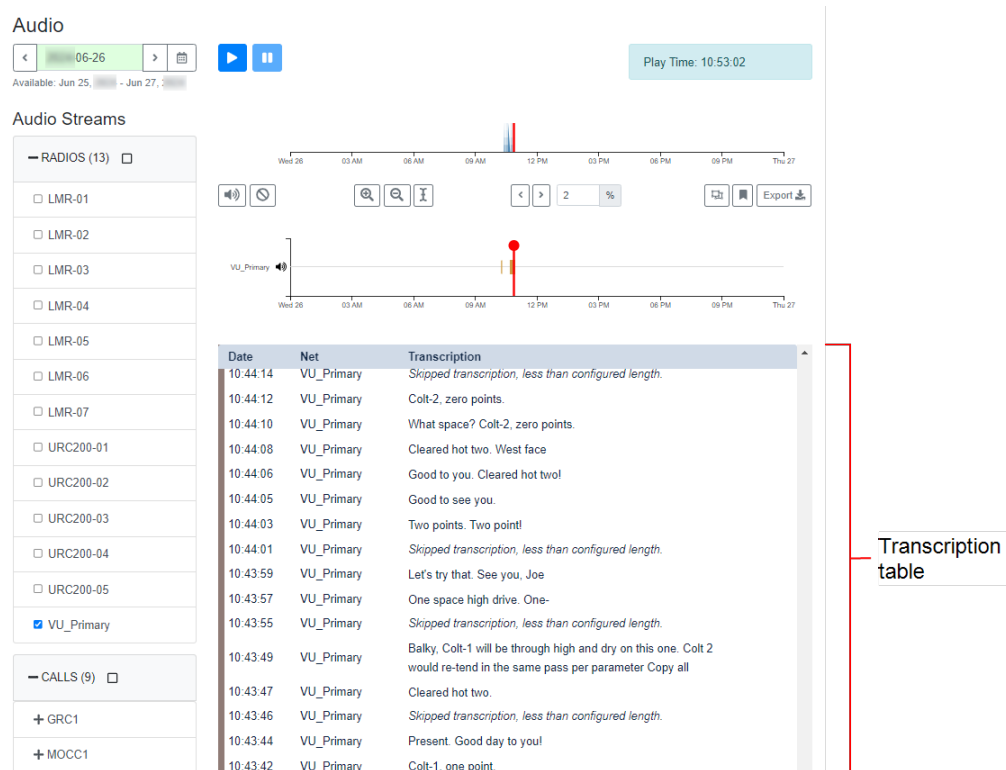


Figure 18: Audio transcription table

Transcriptions are located on both **Audio** and **Transcriptions**. To learn more about transcriptions, go to Section 5.0, "Transcriptions" on page 22.

4.1 Open and preview recorded audio

To open and preview an audio stream, follow these steps:

1. On the **Audio** page, select **Calendar** (📅), and choose a date. Alternatively, select the left arrow (⏮) or right arrow (⏭). Dates with no recorded audio are shaded gray. By default, the calendar displays the current date.

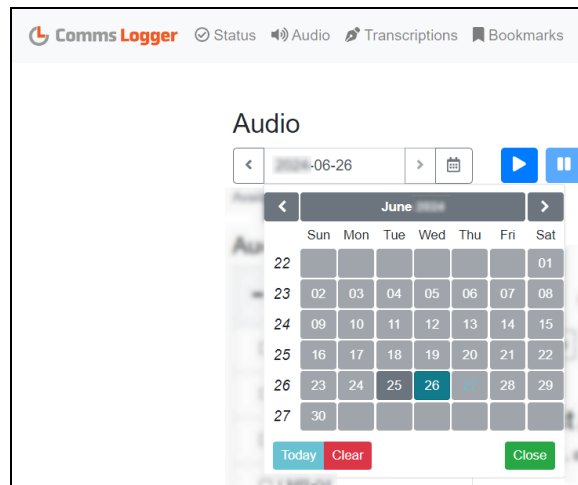


Figure 19: Recording calendar

2. Under **Audio Streams**, select the plus sign to expand the recording's channel type (i.e., radio, call, or client), and then select the channel identifier (i.e., radio net, call name, or client name). If a (0) displays next to the channel type, the Comms Logger didn't record any traffic that day.

The **Detailed View** shows individual audio streams in the audio selection. If nothing is selected, the **Detailed View** is empty. The ruler shows the time of the recording measured in hours, minutes, or seconds, depending on your zoom level.



Figure 20: Audio streams

3. To bring the selector into focus, select a desired point in the **Overview** timeline.

4. To play the recording, select play (▶).



Note: The browser's audio capability and network conditions may impact playback quality.

5. To pause the recording, select pause (⏸). This button only stops your preview of recorded audio; it does not stop the Comms Logger from recording in real time.
6. To mute or unmute a specific audio stream, next to the channel identifier (e.g., UMH-04), select mute (🔇) or unmute (🔊).

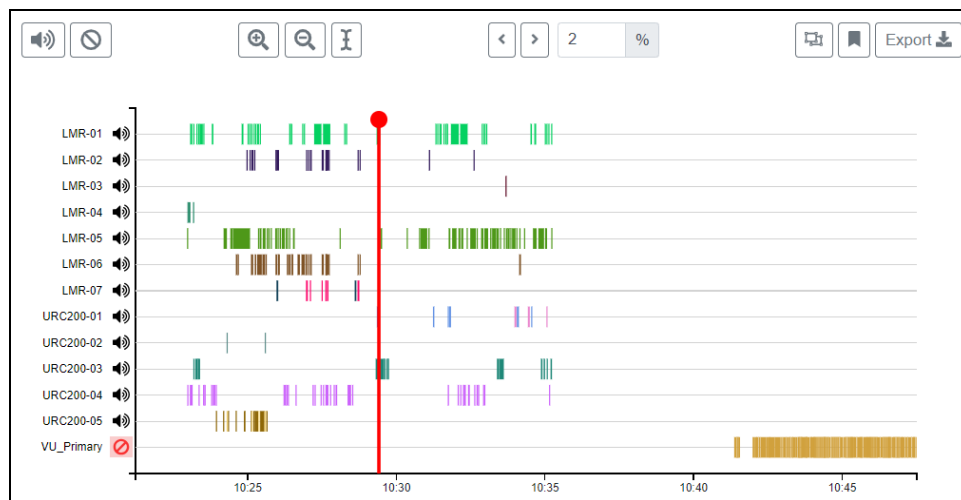


Figure 21: Mute specific audio streams

7. To mute or unmute all audio streams, next to **All**, select **Mute All** (🔇) or **Unmute All** (🔊).

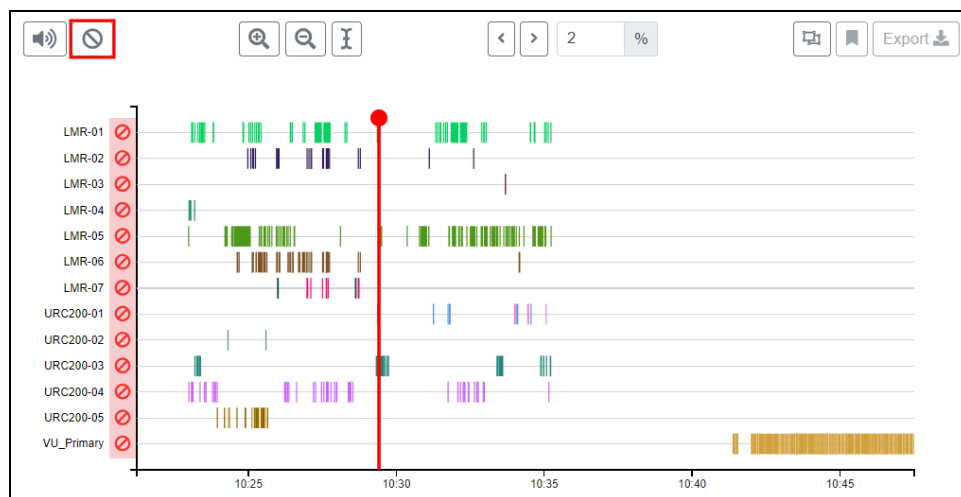


Figure 22: Mute all audio streams

4.2 Select and export audio

With the selection tool, you can position the cursor or select a range of audio. Playback always begins at the cursor's position. To make a selection, follow these steps:

1. Position your mouse on the **Overview** track. The selector turns into a plus sign (+).
2. Select and move the selector to highlight a portion of the audio. To stop selecting, release the mouse.

A red line marks the beginning of the clip, and the selected portion is shaded gray. In the **Detailed View** track, selected audio streams display.

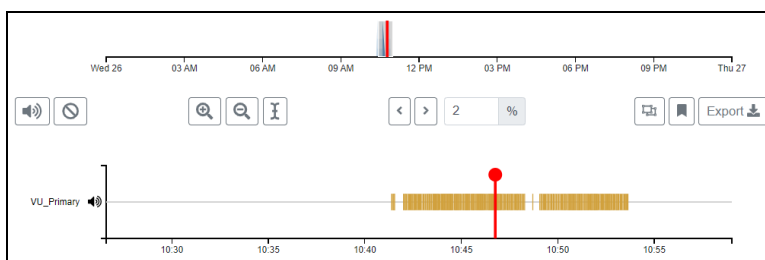


Figure 23: Select audio

3. To adjust the playback starting point, move the red cursor in the **Overview** or **Detailed View** tracks.
4. To adjust the audio selection, hover your mouse over the selection's edge. When the selector turns into a bidirectional arrow (\longleftrightarrow), move to the desired location.

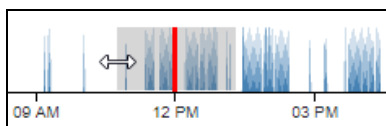


Figure 24: Adjust selection

5. To double the selection's zoom level, select **Zoom In** ([Q]).
6. To half the selection's zoom level, select **Zoom Out** ([Q]).
7. To shift the selection to the left or right, in **Shift**, enter a percentage value, and select the left arrow ([L]) or right arrow ([R]). For example, if **Shift** is 50 percent, the selection moves a distance equivalent to half of the selection's size.
8. (Optional) In the **Detailed View**, click **Select Audio** ([A]), and move the blue handles to highlight the desired audio clip.

9. On the right, select  or .

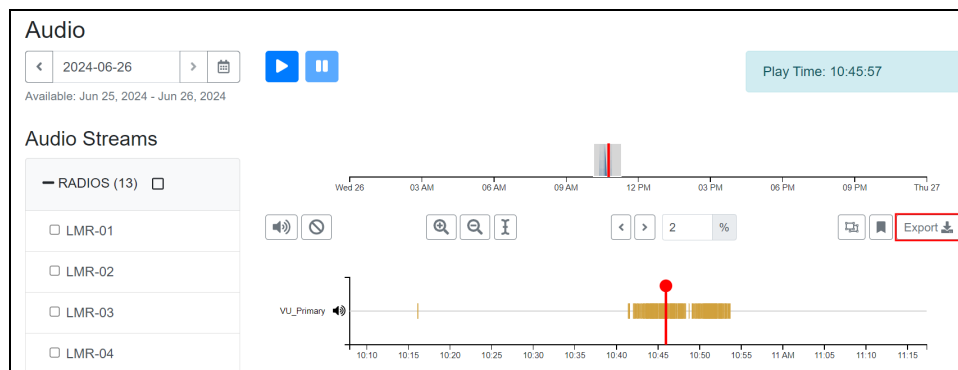


Figure 25: Export button



*Note: If you selected audio in the **Detailed View**, the **Export** button turns blue.*

10. In **Export audio to wav file**, review the recording's starting and ending times and listed audio streams. By default, the export file includes all recordings visible in the **Detailed View** unless you select audio. If you select audio from multiple radios, calls, or clients, then the file includes combined audio from all sources.
11. To download the transcription text alongside the audio as a comma-separated value (.csv) or plaintext file, select **Include Transcript**. Select the blue drop-down arrow, and choose **CSV** or **Plaintext**.

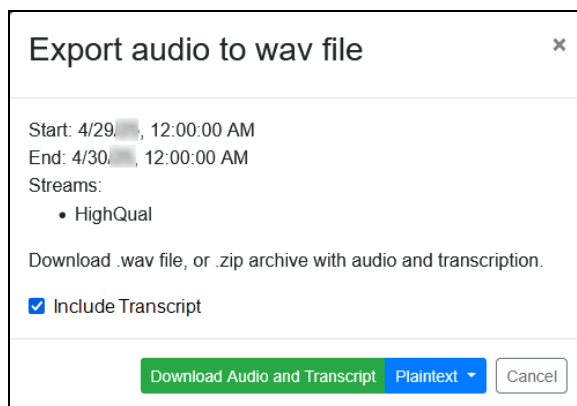




Figure 26: Export audio to wav file

12. Select  or .
13. When the download completes, save the audio file in the desired location.

4.3 Edit a transcription message

To edit a transcription message (e.g., to make a correction) on the **Audio Interface**, follow these steps:

1. From the top navigation bar, go to **Audio**.

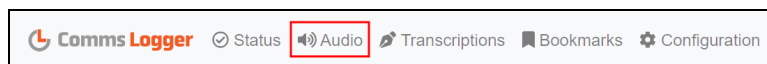


Figure 27: Audio navigation

2. Under **Transcriptions**, find the transcription message you want to edit.
3. Hover over the message, and select the pencil icon (✎).

Date	Net	Transcription
10:43:49	VU_Primary	Balky, Colt-1 will be through high and dry on this one. Colt 2 would re-tend in the same pass per parameter Copy all
10:43:47	VU_Primary	Cleared hot two. ✎
10:43:46	VU_Primary	Skipped transcription, less than configured length.

Figure 28: Edit a transcription

4. Enter the desired correction in the text box, and press Enter. An “edited,” label displays next to the revised entry:

Date	Net	Transcription
10:43:49	VU_Primary	Balky, Colt-1 will be through high and dry on this one. Colt 2 would re-tend in the same pass per parameter Copy all
10:43:47	VU_Primary	Cleared hot three edited ✕
10:43:46	VU_Primary	Skipped transcription, less than configured length.

Figure 29: Edited transcription entry

5. To clear the edit, select the ✕ next to “edited,” and the transcription reverts back to its original state:

Date	Net	Transcription
10:43:49	VU_Primary	Balky, Colt-1 will be through high and dry on this one. Colt 2 would re-tend in the same pass per parameter Copy all
10:43:47	VU_Primary	Cleared hot two .
10:43:46	VU_Primary	Skipped transcription, less than configured length.

Figure 30: Reverted transcription edit

5.0 Transcriptions

Transcriptions enable you to access and manage recorded messages from communications with the Voisus Client. Commonly used in military exercises for after-action review, these messages provide valuable insights to assess and improve students' performance. Use this page to filter and review transcription messages, ensuring quick access to crucial information. The **Audio** interface also displays transcription messages, offering tools for editing and replaying messages.

This chapter discusses how to:

- Choose and configure a transcription model
- Filter and review transcription messages

5.1 Choose and configure a transcription model

If you're planning to use the Comms Logger transcription feature, you'll need to complete a few additional setup tasks on **Configuration**. This section discusses how to select or upload a transcription model, filter out unwanted audio, and define a style guide to fine-tune your results.



Important: For best results, configure a waveform with an **Encoding Rate** of 16000 Hz and PCM encoding on **Comm Plan** > **Waveforms** in the Voisus web interface. Using these settings will improve transcription quality. To learn more about waveforms in the **Comm Plan**, go to "Comm Plan" in the [Voisus Client User Guide](#).

To configure the Comms Logger's transcription feature, follow these steps:

1. On **Configuration**, under **Transcription**, select **Transcription Model**, and choose one of the following:
 - **atc (custom)**: a custom model specific to air traffic control (ATC) chatter; uses SERA's speech recognition model.
 - **General**: a model for general use that transcribes speech more slowly but with slightly greater accuracy.
 - **General (Faster)**: a model for general use that transcribes speech more quickly but with slightly less accuracy. Use this option for best results.

The screenshot shows a web interface for configuring transcription. At the top, the word 'Transcription' is displayed. Below it, the label 'Transcription Model' is present. A dropdown menu is shown with the option 'General - Faster' selected. A small upward and downward arrow icon is visible to the right of the dropdown text.

Figure 31: Transcription Model

2. (Optional) To upload a custom language model that ASTi developed for your program, under **Install Transcription Model**, select **Browse**. Find the .zip file that ASTi provided on your local system, and upload it to the Comms Logger web interface.

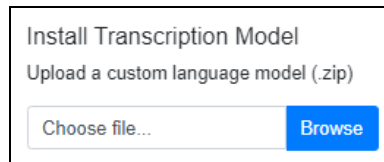


Figure 32: Install Transcription Model

3. Under **Minimum Length**, move the slider to adjust the minimum transmission length in milliseconds (ms). Comms Logger won't transcribe transmissions shorter than this cutoff value.



Figure 33: Minimum Length

This setting helps to filter out incidental or accidental transmissions unlikely to contain speech audio. Acceptable values range from 0–3000. For best results, ASTi recommends leaving the default value of **500**.

4. A *style guide* is a piece of text that defines the use of language and formatting elements in transcriptions. In the text box below, enter example phrases that are representative of the speech you expect to transcribe. Defining a style guide can greatly improve transcription accuracy. A style guide might include the following items:
 - Words with unconventional spellings,
 - Abbreviation formatting,
 - Proper nouns (e.g., names, place names, products),
 - Call sign formatting,
 - Jargon,
 - Common phrases that a user might say quickly, and
 - Number formatting, such as digits.

Here's an example of a style guide containing words and phrases from a generic military training exercise:

Viper 1. Viper 1, go ahead. Viper 2. Cleared hot one.
Cleared hot two. Copy all. Viper 1, two points.

Range control, Viper 1, copy. Range control, this is Viper 2, approaching the west side of the building. Going around for another pass.

TCAST, MOCC, UAV



Important: Style guides do not work with the *atc (custom)* transcription model, which already includes its own, built-in style guide.

Figure 34, "Transcription Style Guide" below shows the **Style Guide** text box at the bottom of the page:

Style Guide

A *style guide* is a piece of text that defines the use of language and formatting elements in transcriptions. Enter example phrases that are representative of the speech you expect to transcribe. Defining a style guide can greatly improve transcription accuracy.

A style guide might include the following items:

- Words with unconventional spellings
- Abbreviation formatting
- Proper nouns (e.g., names, place names, products)
- Callsign formatting
- Jargon (e.g. *Copy all*.)
- Common phrases that a user might say quickly (e.g. *Copy all*.)
- Number formatting, such as digits

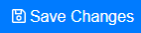

For example:

Viper 1. Viper 1, go ahead. Viper 2. Cleared hot one. Cleared hot two. Copy all. Viper 1, two points.
Range control, Viper 1, copy. Range control, this is Viper 2, approaching the west side of the building. Going around for another pass.
TCAST, MOCC, UAV

Enter your style guide below.

Colt-01. Colt-1, go ahead. Colt-2. Cleared hot one. Cleared hot two. Copy all. Colt-2, two points. Bally, Colt-1, copy that. Bally, I'm approaching the

Figure 34: Transcription Style Guide

- To save your changes, select  at the bottom of the page or  at the top of the page.

5.2 Filter and review transcription messages

To filter and review transcription messages on **Transcriptions**, follow these steps:

1. From the top navigation bar, go to **Transcriptions**.

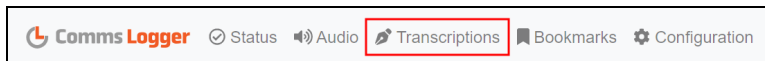


Figure 35: Transcriptions navigation

2. On **Transcriptions**, select the **Date Range and Times** field.
3. In the calendar picker, choose the dates you wish to view. On the left, filter days by the **Last 7 Days**, the **Last 30 Days**, or a **Custom range**, the default selection. The calendar strikes through and disables days without any transcriptions.
4. Below the calendar, specify the time range you wish to filter. The Comms Logger uses military time (i.e., 0:00 to 23:59 hours).

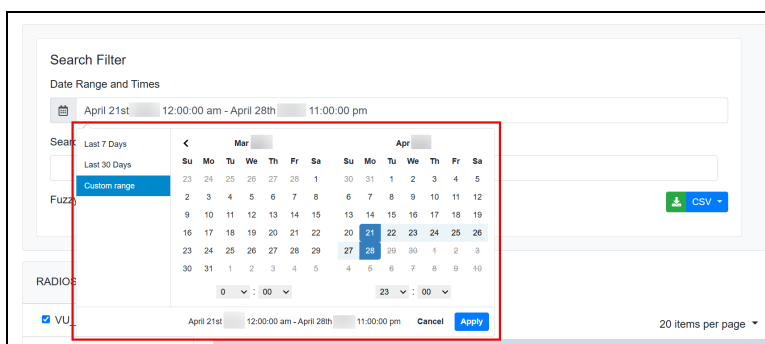


Figure 36: Transcription calendar picker

5. Confirm the date and time ranges are correct, and select **Apply**.
6. (Optional) In **Search Text**, enter any specific words or phrases you wish to find.
7. (Optional) Select **Fuzzy** to return a list of results based on likely relevance, even if the search terms are not an exact match.

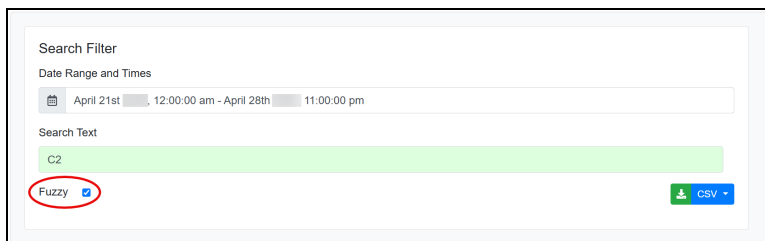


Figure 37: Search parameter settings

8. On the left, select the **RADIOS**, **CALLS**, and **CLIENTS** you want to view. The category title shows the number of assets available, with all assets selected by default. To hide all category messages (e.g., **RADIOS**), clear the check box by the title. Expand a category to view its assets, and clear the check box by an asset to hide its affiliated messages.

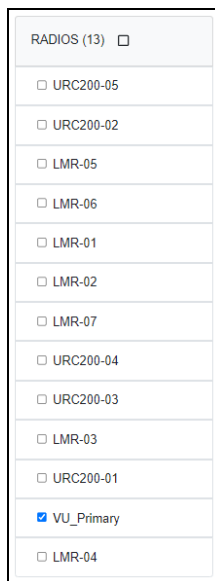


Figure 38: Audio assets


9. Under **Transcriptions**, a table shows the filter results with columns for **Date**, **Net**, and **Transcription** messages. On the left, each message is color-coded by net. By default, the table displays 20 messages per page. Use the drop-down arrow or pagination number to view additional messages.

Transcriptions (4 radios, 12 transmissions)
Hover over transcriptions for options

« < 1 > » 20 items per page ▾

Date	Net	Transcription
Apr 21, 15:07:22	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 21, 22:07:22	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 22, 00:07:29	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 22, 08:07:25	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 22, 20:07:23	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 23, 17:07:24	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 24, 07:07:25	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 24, 17:07:26	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 25, 16:07:25	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 26, 06:07:28	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 27, 00:07:28	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 27, 04:08:05	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work

Figure 39: Transcription table

10. (Optional) To listen to a message's audio, hover over the transcription, and select **Listen to audio** () which opens the **Audio** page.

Date	Net	Transcription
Apr 21, 15:07:22	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 21, 22:07:22	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 22, 00:07:29	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work
Apr 22, 08:07:25	VU_Primary	Copy, switching to A-1 and C2. You guys are cleared for contact Terraceburg, I see a flight back Thanks for the work

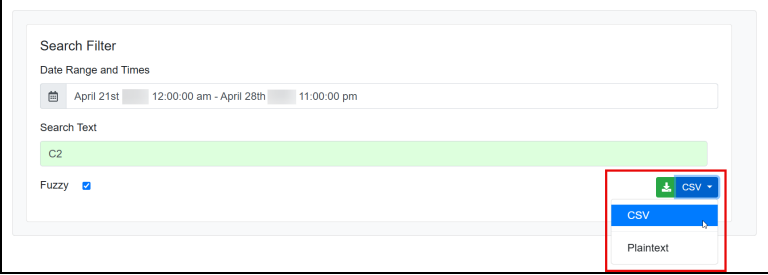
Figure 40: Listen to a message on the Audio page

5.3 Download transcription text

The Comms Logger includes an export feature that allows instructors to quickly download the transcript text as a comma-separated value (.csv) or plaintext file. This streamlined process preserves mission-critical communications for after-action review and training evaluations.


To download one or more transcription texts as a .csv or plaintext file, follow these steps:

1. On **Transcriptions**, choose the transcriptions you want to download.
2. In **Search Filter**, select the drop-down arrow next to the download button to choose **CSV** or **Plaintext**. CSV is the default selection.



The screenshot shows the 'Search Filter' section of the application. It includes a 'Date Range and Times' field set to 'April 21st 12:00:00 am - April 28th 11:00:00 pm', a 'Search Text' field containing 'C2', and a 'Fuzzy' checkbox that is checked. On the right side, there is a download button with a green download icon. A red box highlights the dropdown menu that appears when the button is clicked, showing three options: 'CSV' (selected), 'CSV', and 'Plaintext'.

Figure 41: Transcription text file format

3. Select the download button (.
4. Save the .csv or plaintext file to your local system or external media.

6.0 Bookmarks

Bookmarks in the Comms Logger web interface enable you to tag specific times or time ranges, making it easy to locate important communications quickly. This functionality is particularly useful for organizing and prioritizing messages that require further review or action. Bookmarks can also identify critical information, track follow-up tasks, or highlight messages for team collaboration.

This chapter discusses how to:

- Bookmark a time or time range
- Edit a bookmark
- Delete a bookmark

6.1 Bookmark a time or time range

To bookmark a time or time range on the **Audio** interface, follow these steps:

1. From the top navigation bar, go to **Audio**.

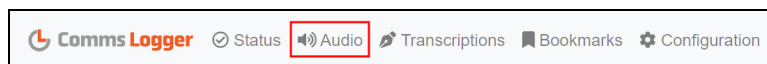


Figure 42: Audio navigation

2. Under **Audio Streams**, choose the **NETS**, **CALLS**, or **CLIENTS** you want to review.
3. (Optional) Between the **Overview** and **Detailed View**, click **Select Audio** (🔊).
4. (Optional) In the **Detailed View**, move the blue markers to highlight an audio clip.

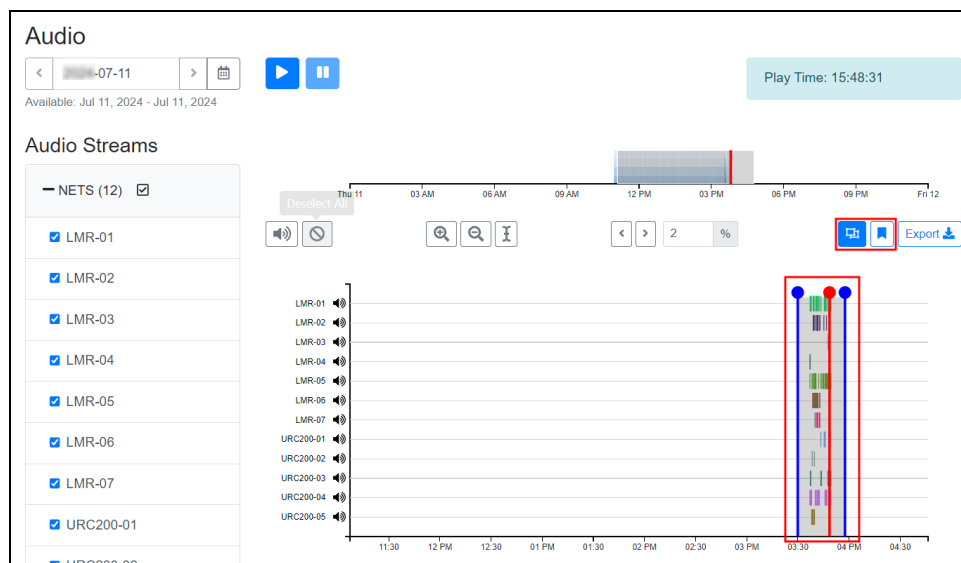
5. Select **Bookmark** (🔖).

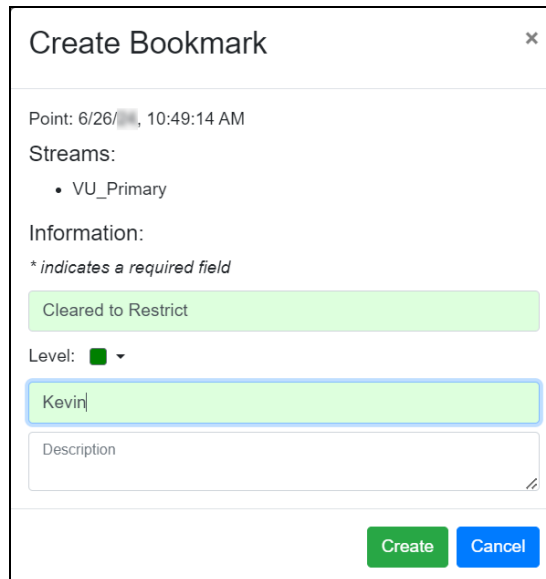
Figure 43: Bookmark a time or time range



***Note:** If you selected audio in the **Detailed View**, the **Select Audio** and **Bookmark** buttons turn blue.*

6. **Create Bookmark** opens. In **Title**, enter a unique name for the bookmark.
7. Select **Level**, and choose a color to designate a priority level. Red (■) indicates high priority, yellow (■) is medium priority, and green (■) is low priority.
8. In **Reporter**, enter your name.

9. (Optional) In **Description**, enter any relevant information about the time stamp or time range.



The 'Create Bookmark' dialog box contains the following fields and controls:

- Point:** 6/26/ , 10:49:14 AM
- Streams:**
 - VU_Primary
- Information:**
 - * indicates a required field
 - Cleared to Restrict** (highlighted in green)
 - Level:** [Green square] ▾
 - Kevin** (highlighted in green)
 - Description** (empty text area)
- Buttons:** Create (green), Cancel (blue)

Figure 44: Create Bookmark window

10. Select **Create**.
11. From the top navigation bar, go to **Bookmarks**.

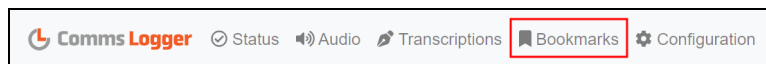


Figure 45: Bookmarks navigation

12. Find the new bookmark on **Bookmarks**:



The 'Bookmarks' page displays a table of saved bookmarks. The 'Cleared to Restrict' bookmark is highlighted with a red box.

Select	Title	Start Time	End Time	Reporter	Level
<input type="checkbox"/>	Command Initiation	6/25/24 4:10 PM	6/25/24 4:13 PM	John	Yellow
<input type="checkbox"/>	Mission Debrief	6/25/24 4:10 PM	6/25/24 4:11 PM	Amy	Red
<input type="checkbox"/>	Cleared to Restrict	6/26/24 10:49 AM	--	Kevin	Green

Figure 46: Bookmarks page

- On **Bookmarks**, select the bookmark's chevron arrow (▼) on the right:

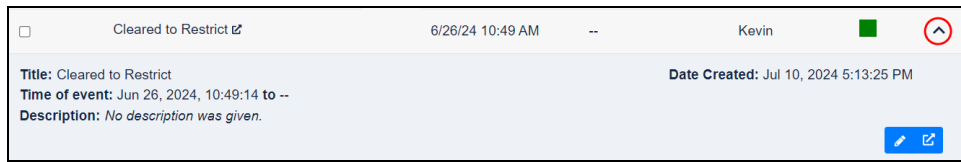


Figure 47: View bookmark details

The expanded bookmark displays the bookmark's **Title**, **Time of Event**, **Date Created**, and **Description**.

6.2 Edit a bookmark

To edit a bookmark, follow these steps:

- On **Bookmarks**, select the bookmark's chevron arrow (▼) on the right:

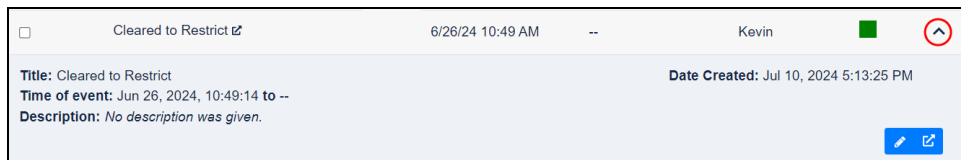


Figure 48: View bookmark details

- To edit the bookmark, select the pencil button (✎).
- In **Edit Bookmark**, modify the **Title**, **Level**, **Reporter**, or **Description** as needed.

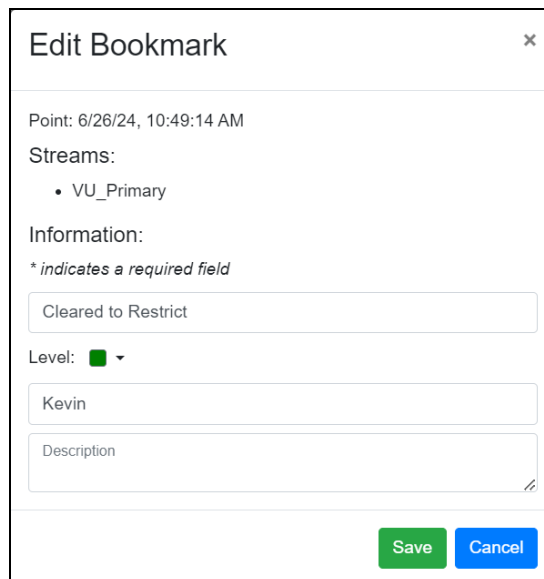



Figure 49: Edit Bookmark window

- Select **Save**.

6.3 Delete a bookmark

To delete a bookmark, follow these steps:

1. On **Bookmarks**, choose a bookmark to delete.
2. Above the table, select the trash can button ().

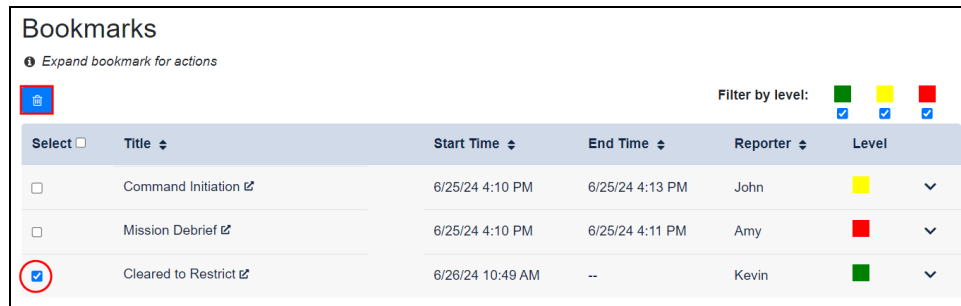


Figure 50: Delete a bookmark

3. In the confirmation window, select , and the bookmark disappears from the page.

7.0 System status and troubleshooting

This section explains common status indicators on **Comms Logger Status** and provides troubleshooting procedures if the Comms Logger is not recording audio.

7.1 Comms Logger Status page

The **Comms Logger Status** page shows the status of the Comms Logger server and the redundant array of independent disks (RAID) drives. This page also provides system feedback of settings on **Comms Logger Configuration**.

From the top navigation bar, go to  **Status**.



Figure 51: Status navigation

Logger Status shows the following indicators:

- **Current Time:** displays the current date and time based on the server's geographic location.
- **Newest Recording:** shows the amount of time since the last recording in seconds, minutes, hours, or days.
- **Oldest Recording:** shows how many days of audio you can review and archive.
- **NTP Status:** shows the Network Time Protocol (NTP) synchronization status.
- **Disk Space Used:** shows the percentage of hard drive space used. When the hard drive is 80 percent full, the Comms Logger overwrites the oldest recording.

Logger Status	
Current Time	Mon Nov 30 13:44:05 
Newest Recording	3 hours ago
Oldest Recording	13 months ago
NTP Status	Synchronized to 10.10.1.10
Disk Space Used*	14%
<small>* Oldest recording will be overwritten when disk is 80% full.</small>	

Figure 52: Logger Status area

The **RAID Status** area shows the status of the Comms Logger's two RAID drives (i.e., Drive A and Drive B).

RAID Status	
Drive A	Up
Drive B	Up

Figure 53: RAID Status area



Important: If one or both of the RAID drives displays "Down," go to Section 7.4, "RAID servers are disconnected" on page 38.

The **Logger Configuration** area shows the following settings:

- **Recording File Period:** displays the recording subfile's size.
- **Ethernet Interface:** shows the Ethernet port associated with the Comms Logger.
- **Ports:** displays the port filter parameters set on the **Comms Logger Configuration** page.
- **Exercises:** displays the Distributed Interactive Simulation (DIS) exercise filter parameters set on the **Comms Logger Configuration** page.
- **Multicast Groups:** displays multicast addresses set on the **Comms Logger Configuration** page.


Logger Configuration 	
Recording File Period	1 Hour
Ethernet Interface	eth0
Ports	View ▼
Exercises	All
Multicast Groups	None

Figure 54: Logger Configuration settings

To edit the Comms Logger's settings, select **Edit**.

7.2 Server fails to turn on

If the Comms Logger server fails to turn on, troubleshoot the following:

Cause	Remedy
The Comms Logger is disconnected from a power source.	Make sure the Comms Logger is securely plugged into a power outlet.
The power outlet is faulty.	To test the power outlet, plug in another electronic device. If it doesn't work, plug the Comms Logger into a different outlet.
The power cable is faulty.	Switch the Comms Logger's power cable with the Voisus server's cable. If the cable is faulty, contact ASTi to order a replacement.
The AC power adapter is faulty.	Switch the Comms Logger's adapter with the Voisus server's adapter. If the adapter is faulty, contact ASTi to order a replacement.
The Comms Logger server has suffered a hardware failure.	Contact ASTi to diagnose and/or replace the server.

Table 2: Troubleshooting power connections

7.3 Comms Logger stops recording network traffic

If the Comms Logger is not recording network traffic from the Voisus server, no activity displays in the **Overview** timeline. A network issue may exist between the Comms Logger and servers generating the traffic.

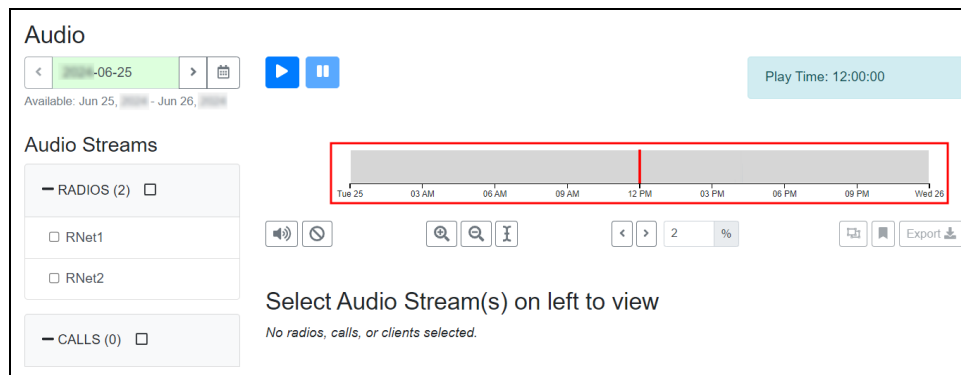


Figure 55: Missing network traffic

7.3.1 Confirm the Voisus scenario is running

First, confirm that the scenario in the Voisus web interface is running correctly. To check the scenario, follow these steps:

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

Username	Password
admin	astirules

4. In the top-right corner, confirm that the scenario is running. If the scenario is not running, restart the scenario.

In the top right, go to **Scenario > Restart**.

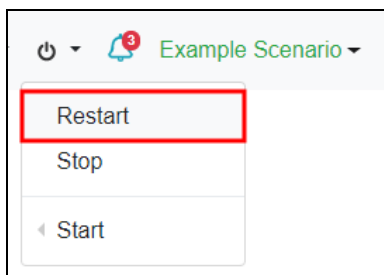


Figure 56: Restart scenario

7.3.2 Check Ethernet Interface settings

To verify the Comms Logger's Ethernet interface settings in the Comms Logger web interface, follow these steps:

1. From the top navigation bar, go to **Configuration**.

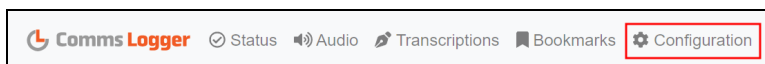
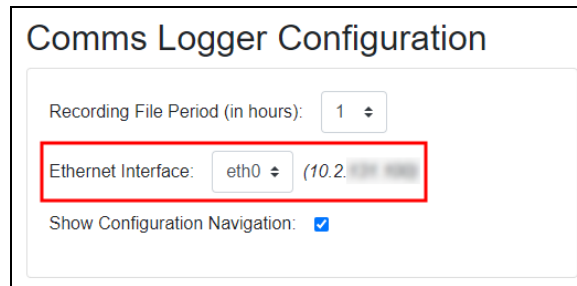


Figure 57: Comms Logger Configuration navigation

2. On **Comms Logger Configuration**, ensure **Ethernet Interface** displays the correct Ethernet port. This setting should match the port number that you set in Section 3.1, "Install the Comms Logger server" on page 7.

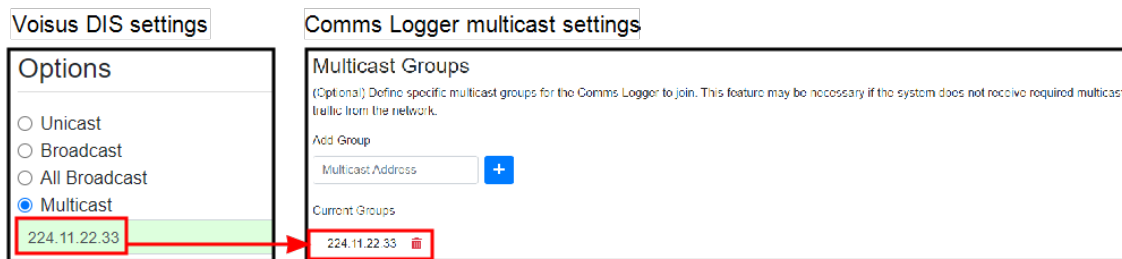


The screenshot shows the 'Comms Logger Configuration' window. It has a title bar and a main content area. In the content area, there is a 'Recording File Period (in hours):' dropdown set to '1'. Below it, the 'Ethernet Interface:' is set to 'eth0' with a dropdown arrow, and the IP address is '(10.2.1.100)'. This entire section is highlighted with a red rectangle. At the bottom, there is a 'Show Configuration Navigation:' checkbox which is checked.

Figure 58: Ethernet Interface setting

7.3.3 Check multicast address

Under **Multicast Groups**, in **Current Groups**, ensure that the multicast address matches the value set in the Voisus web interface. This setting resides on **DIS > Networking**, under **Options**:



The image shows two side-by-side screenshots. The left screenshot is titled 'Voisus DIS settings' and shows the 'Options' section with radio buttons for 'Unicast', 'Broadcast', 'All Broadcast', and 'Multicast'. The 'Multicast' option is selected and highlighted with a green background. Below it, the IP address '224.11.22.33' is displayed and highlighted with a red rectangle. The right screenshot is titled 'Comms Logger multicast settings' and shows the 'Multicast Groups' section. It has a description: '(Optional) Define specific multicast groups for the Comms Logger to join. This feature may be necessary if the system does not receive required multicast traffic from the network.' Below this is an 'Add Group' button with a plus sign. Under 'Current Groups', the IP address '224.11.22.33' is listed with a red trash icon next to it, and this entry is also highlighted with a red rectangle. A red arrow points from the '224.11.22.33' in the left screenshot to the '224.11.22.33' in the right screenshot.

Figure 59: Matching multicast settings

7.3.4 Check port and DIS exercise settings

Under **Capture Filters**, in the **Current Parameters** column, ensure the identified port values and DIS exercises match those set in the Voisus web interface. These settings reside on the **DIS** page, on the **Networking** and **Exercises** tabs:

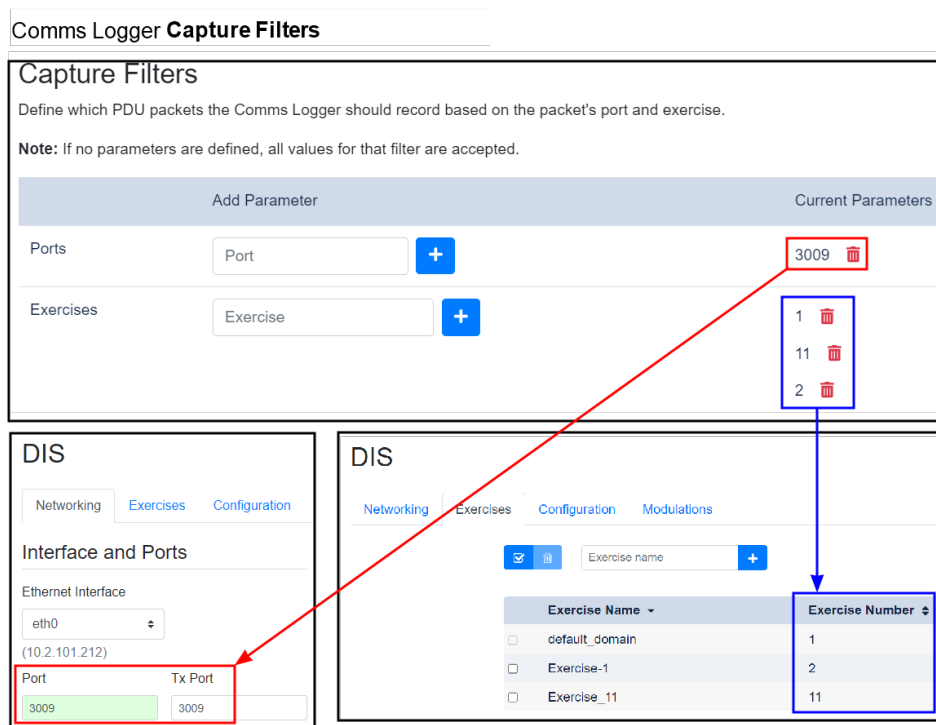


Figure 60: Voisus DIS exercise and port settings

For more information about DIS settings in the Voisus web interface, go to "DIS" in the [Voisus Client User Guide](#).

7.4 RAID servers are disconnected

On **Comms Logger Status**, if one or both redundant array of independent disks (RAID) servers display "Down," the hard drives may have failed, or the drives may be disconnected from the drive carrier.

RAID Status	
Drive A	✖ Down
Drive B	✖ Down

Figure 61: RAID Status "Down"

In the case of drive failure, send ASTi a diagnostic report for the Comms Logger server. To generate a report, follow these steps:

1. From the top-right navigation bar, go to **Help** (?) > **ASTi Server Diagnostics Report**.

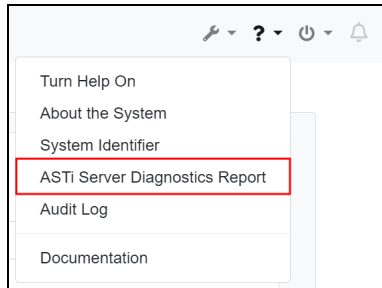


Figure 62: ASTi Server Diagnostics Report navigation

2. On **ASTi Server Diagnostics Report**, select **Create Report** (+). A new archive (.tgz) file generates at the top of the list.
3. Under **Action**, select **Download Report** (📄).

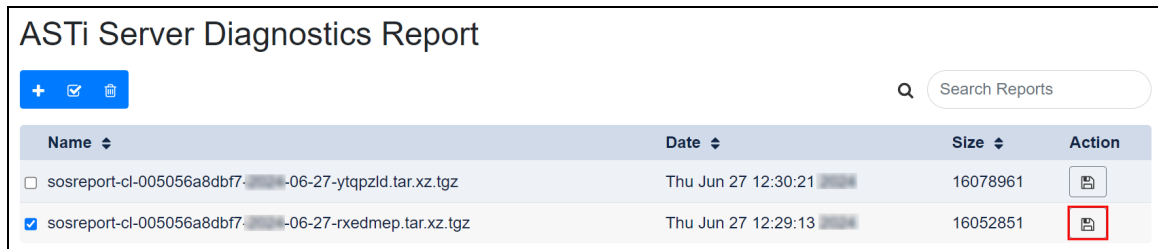


Figure 63: Generate and download diagnostic report

4. Email the report to support@asti-usa.com for evaluation.