



Solo User Guide

Revision C
Version 0
February 2023
Document DOC-SL-NA-UG-C-0

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Product Name: Solo

Solo User Guide

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Revision history

Date	Revision	Version	Comments
11/18/2021	A	0	Initial baseline version.
4/1/2022	B	0	Documented steps to connect the Voibus Client to Solo in "Connect the Voibus Client to Solo."
2/2/2023	C	0	Disassociated Solo from the Voibus product by removing Voibus references and updating screenshots of the Solo logo.

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1.0 Introduction

ASTi expanded its powerful comms and sound product suite with Solo, a standalone application that installs on your Windows desktop or laptop. Compact and portable, Solo can adapt to any training scenario. No extra hardware required.

Perfect for small programs, single operators, or last-minute stand-up for training exercises, Solo provides instant comms for training at the point of need. Its intuitive interface enables administrators to configure the core communication requirements of any exercise. Back up, restore, import, and export settings to different systems, or define multiple roles with different radios. Quickly set up simulated radios, intercoms, and more, creating a comms environment that meets your Modeling, Simulation, and Training (MS&T) needs.

In a typical configuration, Solo runs alongside a Voisus client on your computer. It communicates with other assets (e.g., a flight simulator, PC operators, LVC, RoIP) via the Distributed Interactive Simulation (DIS) network:

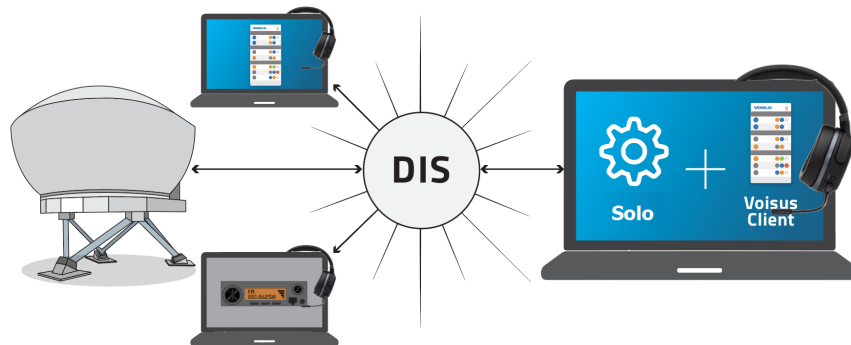


Figure 1: Example Solo configuration

This low-cost, low-maintenance option interoperates with all ASTi products and DIS-based training applications. It doesn't just offer ready-to-go interfaces: ASTi's software development kit (SDK) lets you develop custom user interfaces for almost any application. Integration is simple, making it easy to add high-fidelity radio simulations and comms to virtual reality (VR) devices and Next Gen training environments.

Features and capabilities include the following:

- Voisus client compatibility
- Customer-furnished equipment (CFE), government-furnished equipment (GFE), and thin client compatibility
- Windows compatibility
- A Comm Plan with customizable radio frequencies, modulations, and audio codecs
- Library of advanced radio skins
- Customizable DIS radio features (e.g., entity attach)
- Dark mode

Intended for maintenance technicians or users, the *Solo User Guide* discusses the following topics:

- Solo configuration
- Client connection

By this point, you should have already configured one or more scenario(s), licensing, and network settings as described in the *Solo Quick Start Guide*. This guide explains how to set up client resources in Solo (e.g., scenarios, a Comm Plan, radios, DIS settings) and connect them to a Voisus client.

2.0 Solo configuration

Solo scenario templates come with a preconfigured Comm Plan, a role, and multiple radios that allow you to communicate right away. However, Solo also gives you the flexibility to customize your assets to best suit your program's needs.

Common configuration tasks include the following:

- Adding nets to the Comm Plan
- Adding or editing clients
- Adding or editing radios

This chapter discusses the following topics:

- Sidebar
- Comm Plan
- Roles
- DIS
- Clients
- Backup / Restore
- About
- Settings

2.1 Sidebar

On the left, an expandable and collapsible sidebar contains the majority of Solo's settings and resources. To collapse the sidebar and maximize screen space, from the top navigation bar, select the collapse icon (☰):

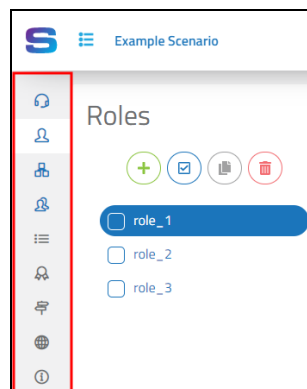


Figure 2: Collapsed sidebar

To expand the sidebar and view each page's name, select the expand icon (☰):

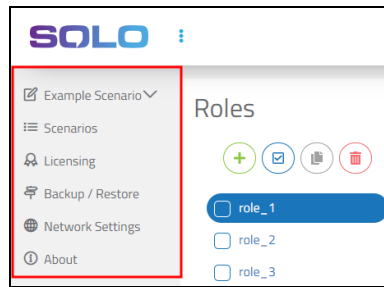


Figure 3: Sidebar settings resources

2.2 Comm Plan

The **Comm Plan** is a collection of virtual communication nets with customizable parameters, such as frequency, waveform modulation type, crypto, and frequency hopping. Use nets to fill simulated radios on the **Radios** tab.

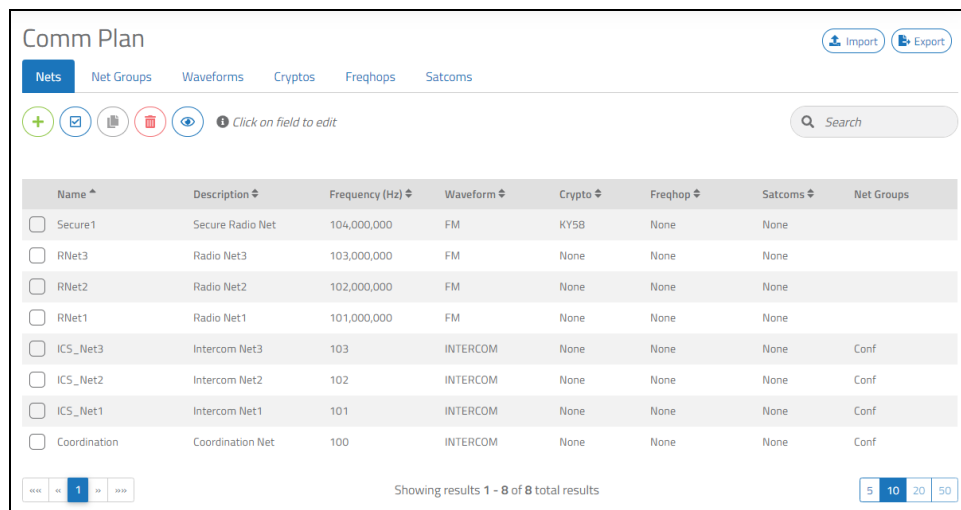


Figure 4: Comm Plan

Radio nets connected to Voisus clients must share key net settings to intercommunicate:

- Frequency
- Waveform modulation type
- Bandwidth
- Crypto settings

Clients can communicate by tuning to the same net or using different nets with the same settings:

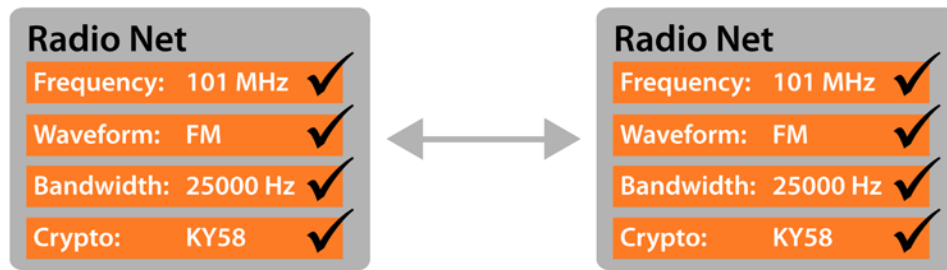


Figure 5: Radio net match

This section discusses how to:

- Add a net
- Add nets to a net group
- Delete a net group
- Import or export a Comm Plan

2.2.1 Add a net

To add a net in the Comm Plan, follow these steps:

1. On the left, open the scenario, and go to **Comm Plan**.

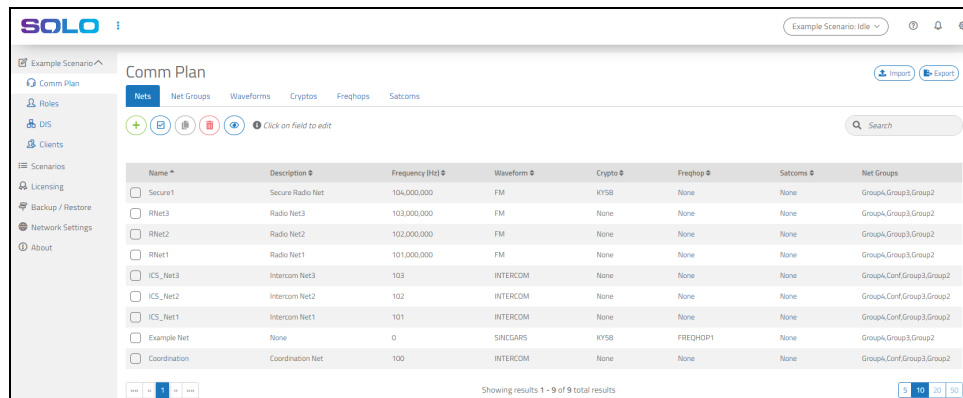


Figure 6: Comm Plan navigation

2. (Optional) To access a net's advanced frequency settings, on **Nets**, select **Show Advanced View** (🔍).

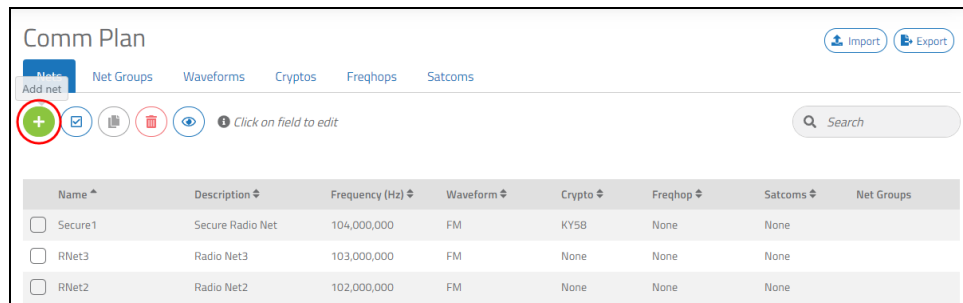
3. Select **Add Net** (+).

Figure 7: Add a net

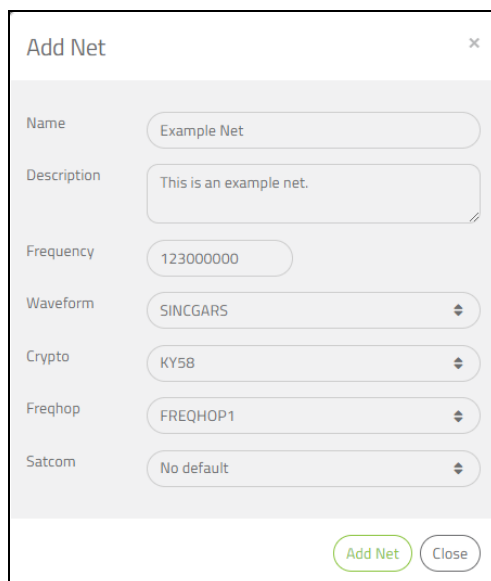
4. In **Name**, enter a unique name for the net.
5. (Optional) In **Description**, enter a brief description of the net.
6. **Frequency** determines the net's simulated frequency (i.e., channel) on which to receive radio communications. To enable communications, enter a nonzero value in Hertz (Hz).
7. Select **Waveform**, and choose a waveform modulation type.



Important: Nets require waveforms to operate. To add or edit waveforms, go to **Waveforms**.

8. (Optional) Select **Crypto**, and choose a radio encryption parameter. You can add or edit cryptography parameters on **Cryptos**.
9. (Optional) Select **Frequhop**, and choose a frequency-hopping parameter. You can add or edit frequency-hopping parameters on **Frequhops**.

10. (Optional) Select **Satcom**, and choose a satellite communications (SATCOM) signal. You can add or edit SATCOM signals on **Satcoms**.



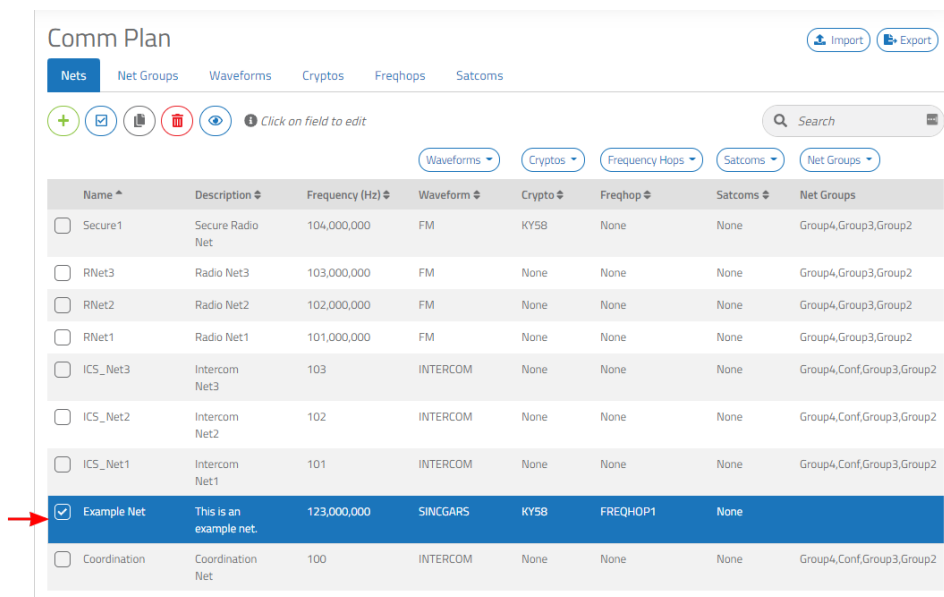
The 'Add Net' dialog box contains the following fields:

- Name: Example Net
- Description: This is an example net.
- Frequency: 123000000
- Waveform: SINGARS
- Crypto: KY58
- Freqhop: FREQHOP1
- Satcom: No default

Buttons at the bottom: Add Net (highlighted in green), Close.

Figure 8: Net settings

11. Select **Add Net**, and the new net appears in the list:



The 'Comm Plan' interface shows a table of nets. The 'Example Net' is highlighted in blue and has a red arrow pointing to its checkbox.

Name	Description	Frequency (Hz)	Waveform	Crypto	Freqhop	Satcoms	Net Groups
<input type="checkbox"/> Secure1	Secure Radio Net	104,000,000	FM	KY58	None	None	Group4, Group3, Group2
<input type="checkbox"/> RNet3	Radio Net3	103,000,000	FM	None	None	None	Group4, Group3, Group2
<input type="checkbox"/> RNet2	Radio Net2	102,000,000	FM	None	None	None	Group4, Group3, Group2
<input type="checkbox"/> RNet1	Radio Net1	101,000,000	FM	None	None	None	Group4, Group3, Group2
<input type="checkbox"/> ICS_Net3	Intercom Net3	103	INTERCOM	None	None	None	Group4, Conf, Group3, Group2
<input type="checkbox"/> ICS_Net2	Intercom Net2	102	INTERCOM	None	None	None	Group4, Conf, Group3, Group2
<input type="checkbox"/> ICS_Net1	Intercom Net1	101	INTERCOM	None	None	None	Group4, Conf, Group3, Group2
<input checked="" type="checkbox"/> Example Net	This is an example net.	123,000,000	SINGARS	KY58	FREQHOP1	None	
<input type="checkbox"/> Coordination	Coordination Net	100	INTERCOM	None	None	None	Group4, Conf, Group3, Group2

Figure 9: New net

2.2.2 Add nets to a net group

The Comm Plan allows you to group nets together in a net group. You can add a net group on both **Nets** and **Net Groups**. To assign these groups to roles on **Roles**, go to Section 2.3.2, "Add a radio" on page 14.

To add a net groups on **Nets**, follow these steps:

1. On **Comm Plan**, choose the nets you want to group together.
2. Select **Net Groups** (**Net Groups**), and then select **Add Net Group** (**+ Add Net Group**).

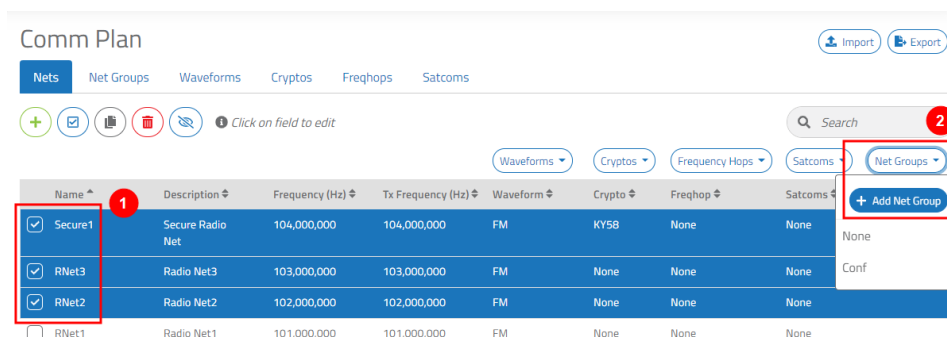


Figure 10: Add Net Group on Nets

3. In **Name**, enter a unique name for the net group.

Figure 11: Net Group name

4. Select **Add Net**. Under **Net Groups**, selected nets show the new net group:

Name	Description	Frequency (Hz)	Tx Frequency (Hz)	Waveform	Crypto	Freqhop	Satcoms	Net Groups
<input type="checkbox"/> Secure1	Secure Radio Net	104,000,000	104,000,000	FM	KY58	None	None	Group1
<input type="checkbox"/> RNet3	Radio Net3	103,000,000	103,000,000	FM	None	None	None	Group1
<input type="checkbox"/> RNet2	Radio Net2	102,000,000	102,000,000	FM	None	None	None	Group1

Figure 12: Net group assignment

To add a net group on **Net Groups**, follow these steps:

1. Go to **Net Groups**.
2. Select **Add Net Group** (+).

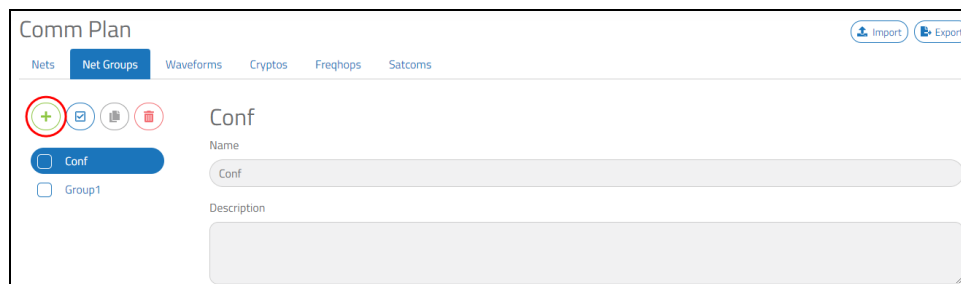


Figure 13: Add a net group on Net Groups

3. In **Name**, enter a unique name for the net group. The default net group name is **NetGroupN**, where *N* is the net group number.
4. (Optional) In **Description**, enter a brief description of the net group.

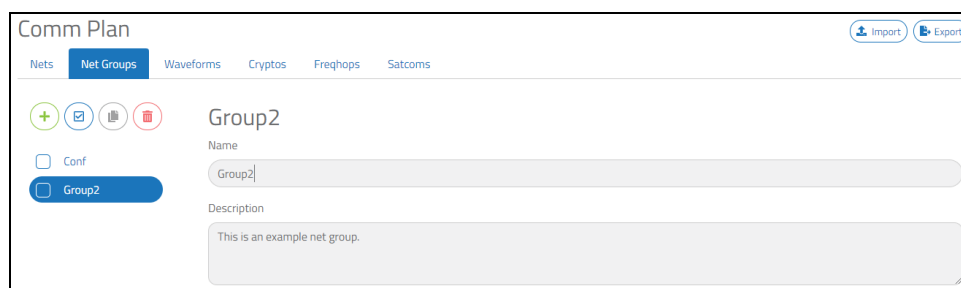


Figure 14: Net Group Name and Description

5. Under **Available**, choose nets to assign to the net group. Find specific nets in the search box.

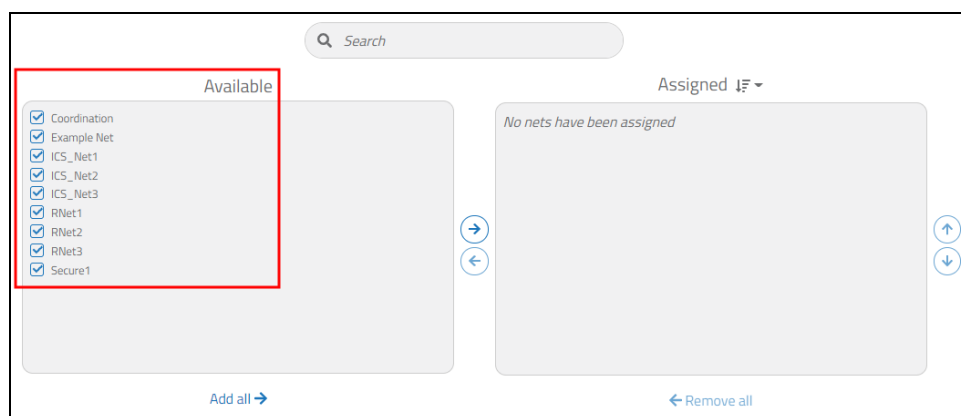


Figure 15: Available nets

6. Select . The selected nets move to **Assigned**.

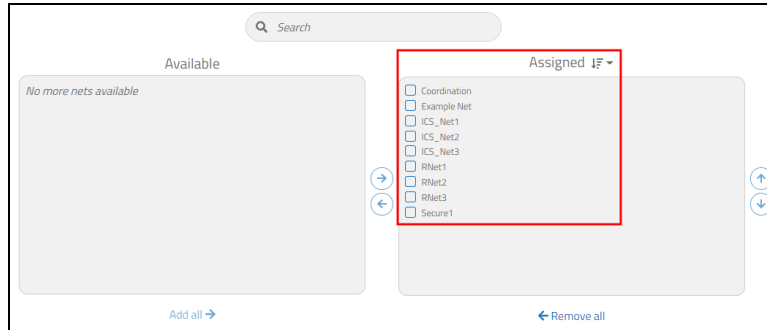



Figure 16: Nets assigned to net group

Alternatively, to assign all available nets, select **Add all**.

7. To sort assigned nets by name or frequency, select , and choose **Name** or **Frequency**.

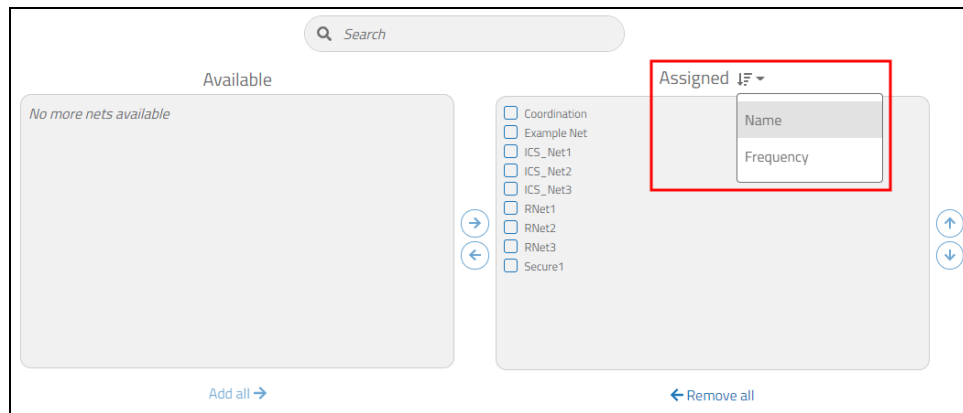


Figure 17: Sort assigned nets



Note: *Frequency* does not display the net's frequency. To view a net's frequency, go to *Nets*.

2.2.3 Delete a net group

To delete a net group, follow these steps:

1. From the **Comm Plan**, go to **Net Groups**.
2. Choose a net group to delete.

3. Select **Delete Selected** ()

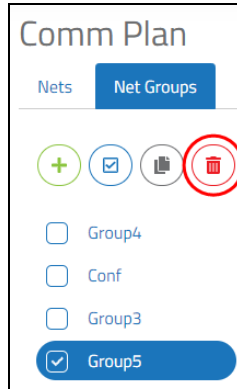


Figure 18: Delete a net group



Important: Deleting a net group does not impact associated nets.


4. At the confirmation message, select .

2.2.4 Import or export a Comm Plan


The **Comm Plan Import** and **Export** buttons download the Comm Plan from Solo to your computer's hard drive. These buttons only capture Comm Plan-specific items (e.g., nets, net groups, waveforms, cryptos, freqhops, satcoms).

To export an entire scenario, go to "Import or export scenarios" in the *Solo Quick Start Guide*.

To export a **Comm Plan**, follow these steps:

1. Select .
2. The file automatically downloads to your local system. Save the file to your desktop, or edit it in comma-separated values (.csv) format.
3. Using email or another file-transfer method of your choice, send the .csv file to another Solo.

To import a Comm Plan, follow these steps:

1. Select .
2. In **Import Comm Plan**, under **From File**, find the exported .csv file on your computer.

To import a Comm Plan from an existing scenario, under **From existing Scenario**, click **Select Scenario**, and choose a scenario.

2.3 Roles

Roles are collections of radios, and radios are filled with virtual nets from the Comm Plan. Each Voisus client operator uses a role to gain access to its associated radios.

This section discusses how to:

- Add a role
- Add a radio
- Set up a scan plan

2.3.1 Add a role

To add a role, follow these steps:

1. On the left, open the scenario, and go to **Roles**.

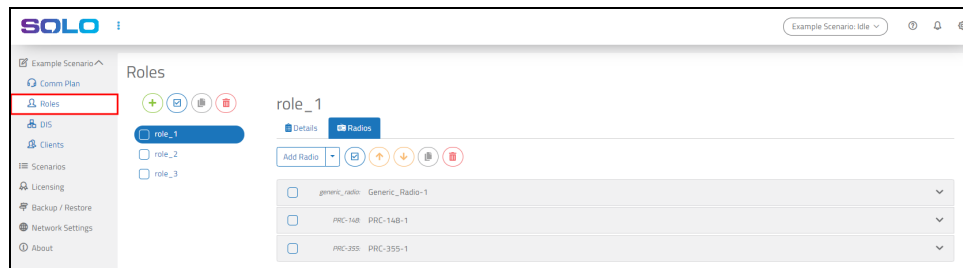

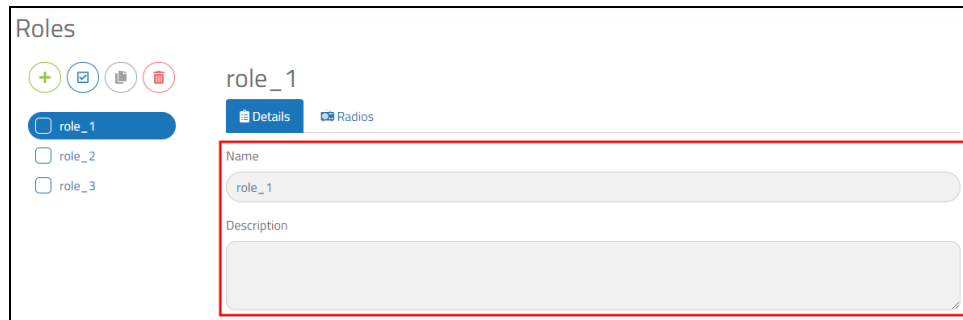


Figure 19: Roles navigation

2. On **Roles**, select **Create Role** (.
3. Open the new role.
4. (Optional) In **Name**, enter a unique name for the role.

5. *(Optional)* In **Description**, enter a description of the role.



The screenshot displays a web interface for managing roles. On the left, a sidebar titled 'Roles' contains a list of roles: 'role_1' (selected with a blue pill), 'role_2', and 'role_3'. Above the list are four circular icons: a green plus sign, a blue checkmark, a grey document, and a red trash can. The main area shows the details for 'role_1'. At the top, the title 'role_1' is followed by 'Details' and 'Radios' tabs. Below the tabs, the 'Name' field is pre-filled with 'role_1'. The 'Description' field is a large, empty text area, which is highlighted by a red rectangular border. A small checkmark icon is visible in the bottom right corner of the description field.

Figure 20: Add a role

2.3.2 Add a radio

To add a new radio to Solo, follow these steps:

1. Under **Radios**, select Add Radio, and choose a radio.

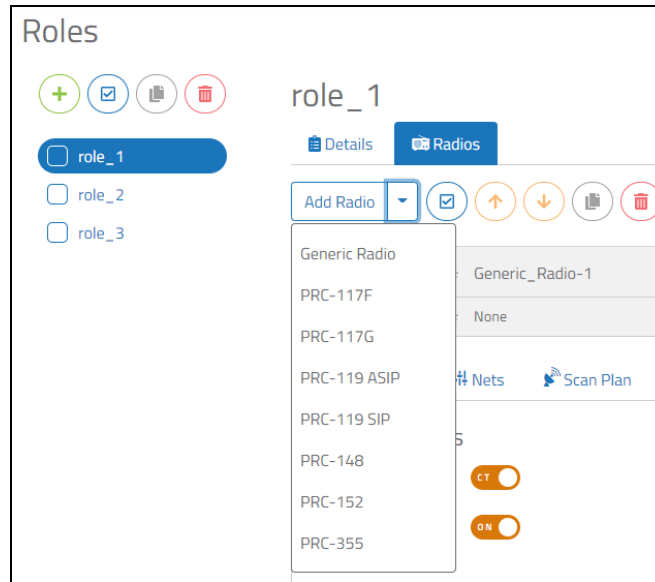


Figure 21: Add a radio

The default radio is compatible with the Original Desktop Client and Voisus Client.



Important: Certain radios may be unavailable due to export restrictions. Contact support@asti-usa.com for more information.

2. Select the radio to open it.
3. (Optional) In **Name**, enter a unique name for the radio.
4. (Optional) In **Description**, enter a description of the radio.

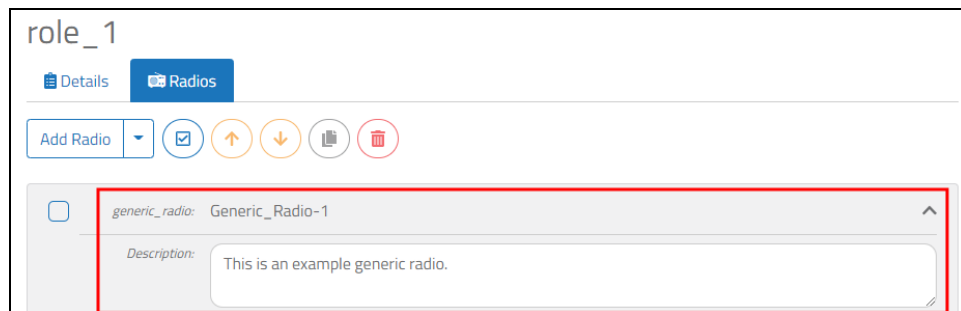


Figure 22: Radio Name and Description

- Next to **Cipher Mode**, enable Plain Text (**PT**) or Cipher Text (**CT**). The Voisus Client for Tablets & Desktops and the simulated radio panels provide controls that allow client operators to switch between PT and CT as needed. In the Flex Client, when a radio in PT mode receives encrypted transmissions, the operator only hears static.

The Voisus Client, Original Desktop Client, and Virtual Battlespace (VBS) add-in do not have CT controls. The client operator cannot change this setting. When this radio receives on a CT net, a default PT mode set here could result in a "cannot receive" condition.

- To include the burst of noise after a received transmission, next to **Radio Squelch Tail**, select **On**.

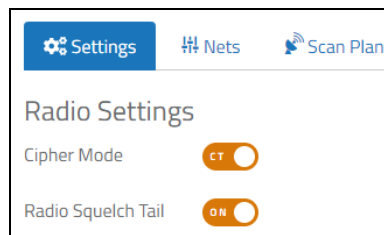


Figure 23: Role settings

- On **Nets**, in the **Available** column, choose the net(s) you want to assign, and select the right arrow (→). A radio with only one net is fixed (i.e., not tunable), whereas client operators can tune radios with multiple nets.

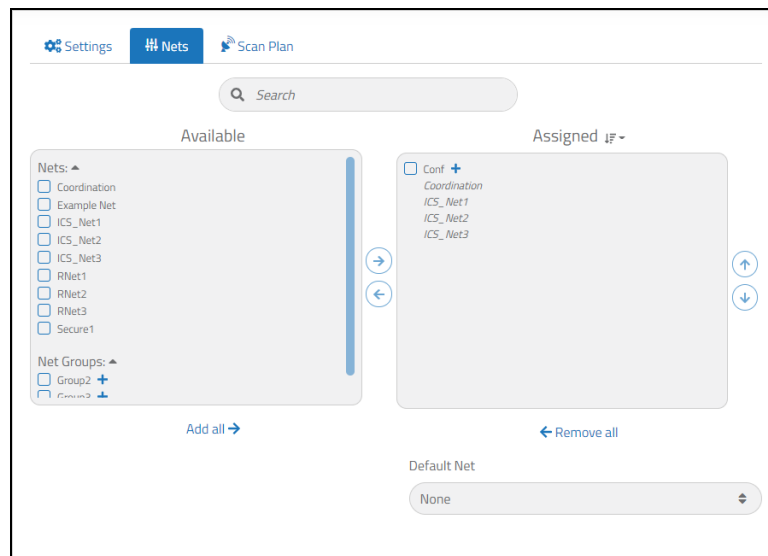


Figure 24: Assign nets to radio

8. (Optional) Sort assigned nets by their names or frequencies defined in the Comm Plan. Next to **Assigned**, select **Sort** (↓↑), and choose **Name** or **Frequency**.

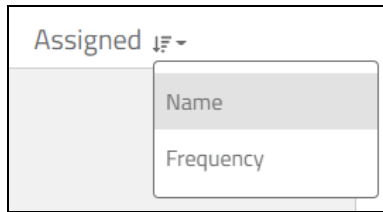


Figure 25: Sort assigned nets

9. (Optional) Select **Default Net**, and choose a default net.
10. To enable the radio to receive by default, on **Settings > Audio**, next to **Default Rx**, select **Rx**. To prevent client operators from disabling the radio's Rx mode, select **Lock**. If **Rx** is cleared, **Lock** is disabled by default.
11. To enable the radio to transmit by default, next to **Default Tx**, select **Tx**. To prevent client operators from changing the radio's Tx mode, select **Lock**.



Important: Radios cannot transmit when **Rx** is disabled.

12. To balance the audio output, next to **Audio Output**, select **Left**, **Center**, or **Right**. To prevent client operators from changing this setting, select **Lock**.
13. To assign this radio to a hardware press-to-talk (PTT) button, select **PTT Group**, and choose an option.

Most clients only use the primary PTT button. The Voisus Client for Tablets & Desktops can support four USB PTT devices, while the Flex Client can support two software PTT buttons.

2.3.3 Set up a scan plan

In Solo, you can set up a scan plan for individual radios in a role. Scan plan functionality is available for PRC-117G, PRC-152, PRC-148, and generic radios.

A scan plan cycles through a list of nets, searching for activity. When the radio detects activity, it pauses on that net. Set a **Priority Tx Net** for transmission when there's no activity, or choose a **Priority Rx Net** to scan a net more frequently. In **Scan Settings**, you can also decide how long the scanner monitors each net or hangs on a net after it senses activity. Finally, you can decide the maximum amount of time the radio holds on a constantly receiving net.

This section discusses how to:

- Add scan plan nets
- Remove scan plan nets
- Set scan plan priority nets
- Edit dwell, hang, and hold times

2.3.3.1 Add scan plan nets

To add scan plan net(s), follow these steps:

1. In a radio's settings, go to **Scan Plan**.

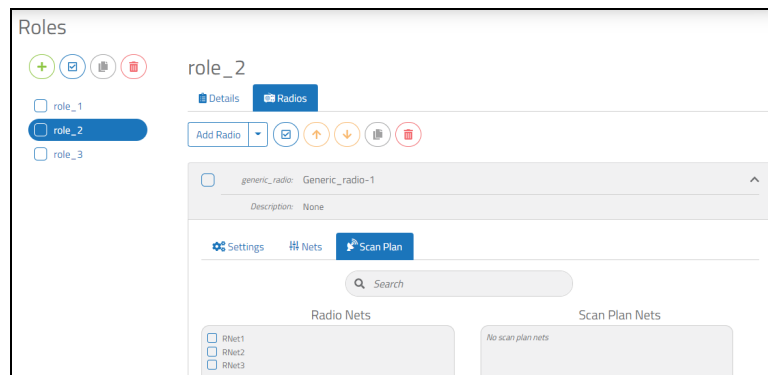


Figure 26: Scan Plan navigation

2. **Radio Nets** displays nets assigned to your radio. To add one or more net(s), under **Radio Nets**, choose the net(s) you want to add to the scan plan, and select the right arrow (→).

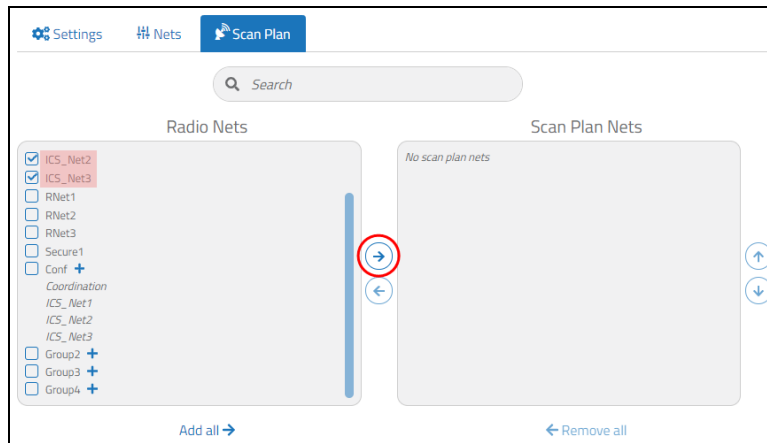


Figure 27: Add nets to scan plan

The selected nets move to **Scan Plan Nets**:

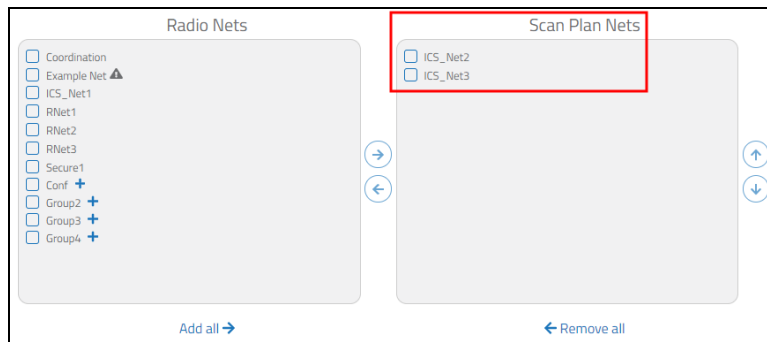


Figure 28: Scan Plan Nets

The scan plan cannot monitor nets with frequency-hopping waveforms:

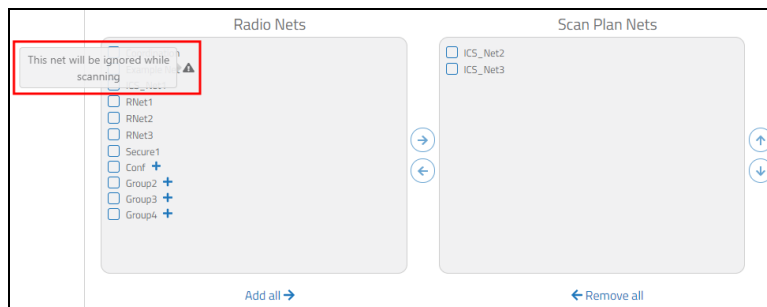


Figure 29: Ignored nets

3. (Optional) To add all nets to the scan plan, under **Radio Nets**, select **Add all**.

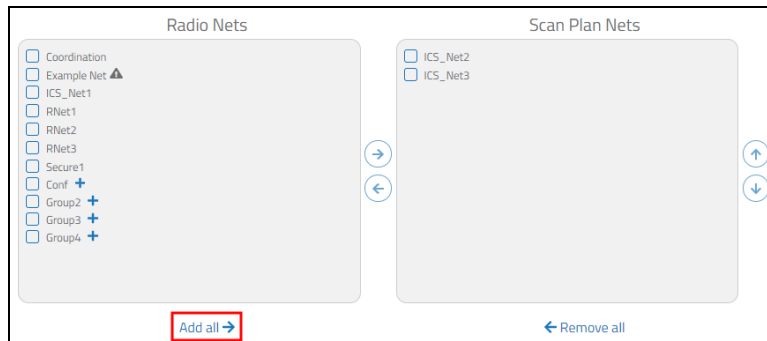


Figure 30: Add all nets to scan plan

4. (Optional) To add a net group to the scan plan, choose a net group, and select the right arrow (→).

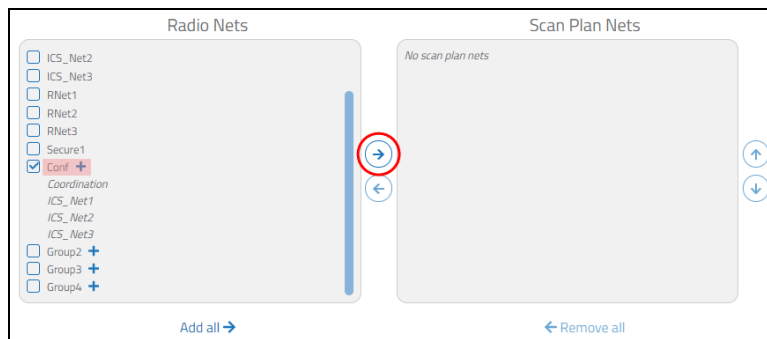


Figure 31: Add net group to scan plan

To add individual nets from a net group, do the following:

- a. Expand the net group.
- b. Choose the nets you want to add.

Under **Radio Nets**, assigned nets in a net group are grayed out.

2.3.3.2 Remove scan plan nets

To remove a specific net, under **Scan Plan Nets**, choose a net, and select the left arrow (←).

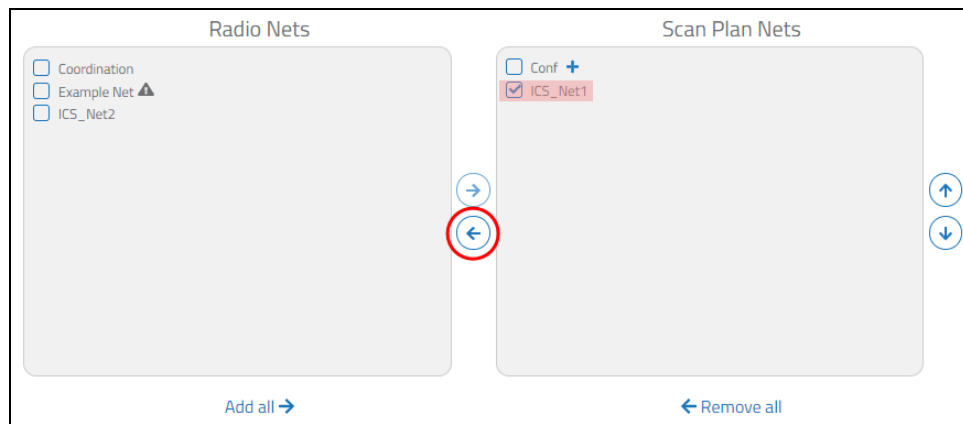


Figure 32: Remove a scan plan net

To remove all nets, select **Remove all**.

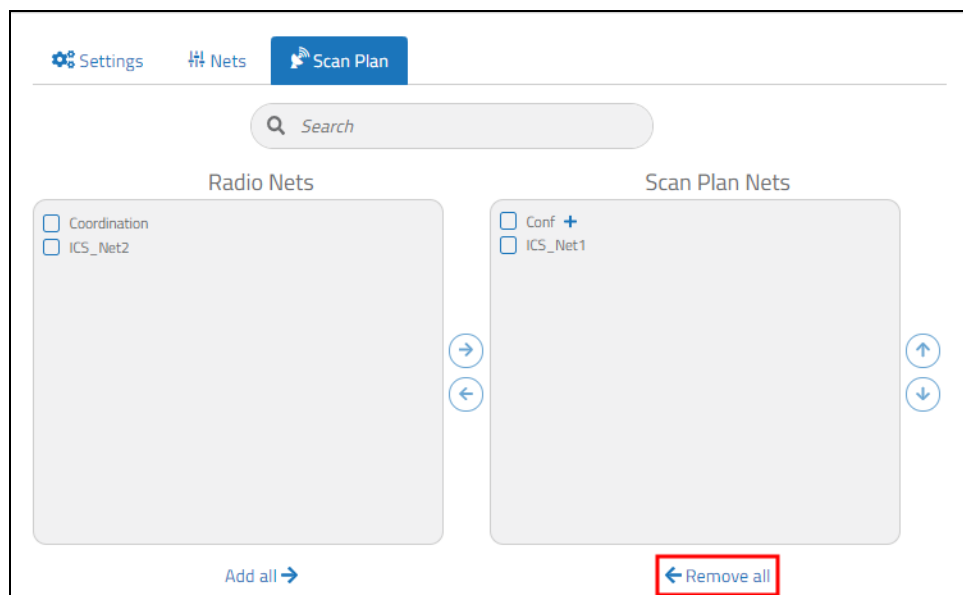


Figure 33: Remove all scan plan nets

2.3.3.3 Set scan plan priority nets

To set scan plan priority nets, follow these steps:

1. On a radio's **Scan Plan**, **Priority Tx Net** sets a default net for transmission if/when the radio does not detect any activity. Select **Priority Tx Net**, and choose a net.
2. **Priority Rx Net** allows you to scan a net more frequently, regardless of its activity. This setting prioritizes scanning a certain net, alternating it in between each net in the scan plan. Select **Priority Rx Net**, and choose a net.

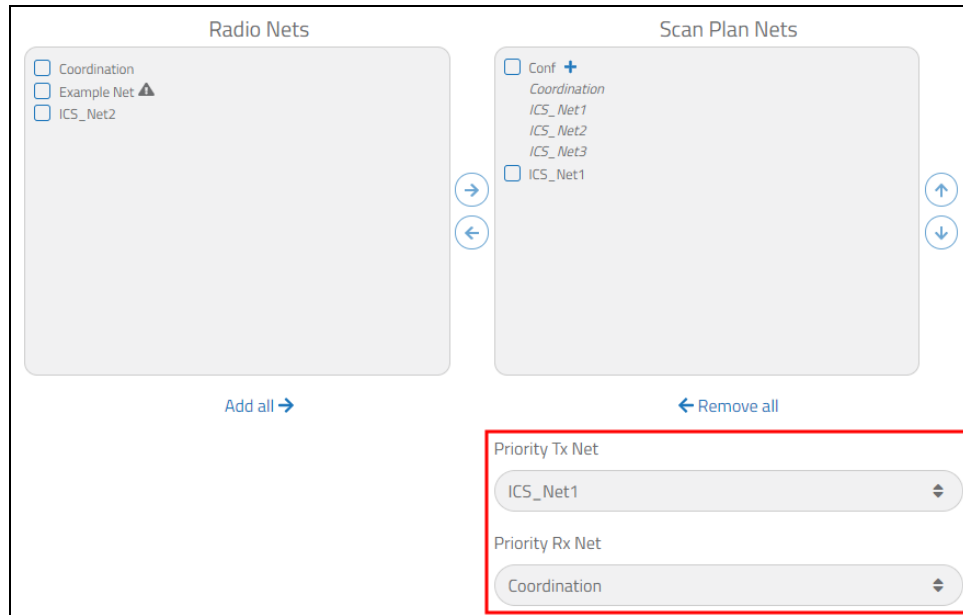


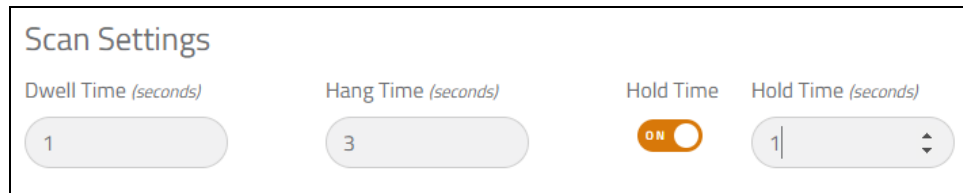
Figure 34: Priority scan plan nets

2.3.3.4 Edit dwell, hang, and hold times

To edit a scan plan's dwell, hang, and hold times, follow these steps:

1. To set how long the scanner spends on each net, under **Scan Settings**, in **Dwell Time**, enter a value in seconds.
2. To set how long the scanner hangs on a net after a transmission or reception ends, in **Hang Time**, enter a value in seconds, where the minimum value is 1 second. If the operator responds within the defined **Hang Time**, then he or she transmits on the active net.

3. (Optional) **Hold Time** limits the time a scanner spends on a net, regardless of activity. To set the maximum amount of time on a net, select **Enabled**, and enter a value in seconds. The minimum value is 1 second.



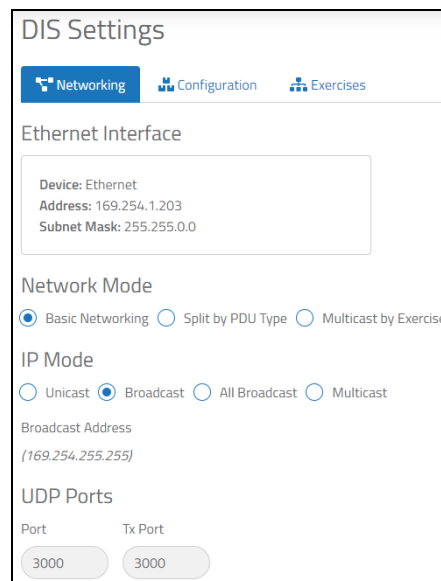
The image shows a 'Scan Settings' window with four input fields: 'Dwell Time (seconds)' set to 1, 'Hang Time (seconds)' set to 3, 'Hold Time' with a toggle switch set to 'ON', and 'Hold Time (seconds)' set to 1. The 'Hold Time' toggle is orange and labeled 'ON'.

Figure 35: Scan Settings

4. To apply your changes, restart the scenario and any applicable software clients.

2.4 DIS

Distributed Interactive Simulation (DIS) is a standard for exchanging entity state information over the network, enabling entities controlled by different hosts to interact in a common virtual training exercise. The entity state information is contained in a Protocol Data Unit (PDU), which is sent to other hosts in User Datagram Protocol (UDP) packets over the network. ASTi DIS radio entities consist of Transmitter PDUs, Signal PDUs, and Receiver PDUs.



The image shows a 'DIS Settings' window with three tabs: 'Networking' (selected), 'Configuration', and 'Exercises'. Under 'Networking', there are sections for 'Ethernet Interface' (Device: Ethernet, Address: 169.254.1.203, Subnet Mask: 255.255.0.0), 'Network Mode' (Basic Networking selected, Split by PDU Type, Multicast by Exercise), 'IP Mode' (Unicast, Broadcast selected, All Broadcast, Multicast), 'Broadcast Address' (169.254.255.255), and 'UDP Ports' (Port: 3000, Tx Port: 3000).

Figure 36: DIS settings

This section discusses the following topics:

- DIS Networking
- DIS Exercises
- DIS Configuration

2.4.1 DIS Networking

To set up DIS networking, follow these steps:

1. On the left, open the scenario, and go to **DIS**.

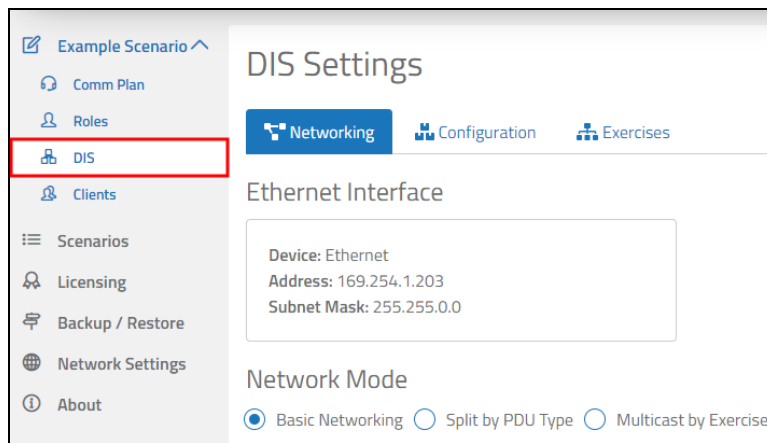


Figure 37: DIS navigation

2. Choose an Ethernet Interface; eth0 is the default.
3. Add a UDP port number. The default port number is 3000.

Software versions 5.23 and later include both Rx and Tx Ports. When you adjust the Rx port number, the Tx Port number adjusts to match. However, the ports can function separately if you adjust the Tx number to a number different from the Rx port.

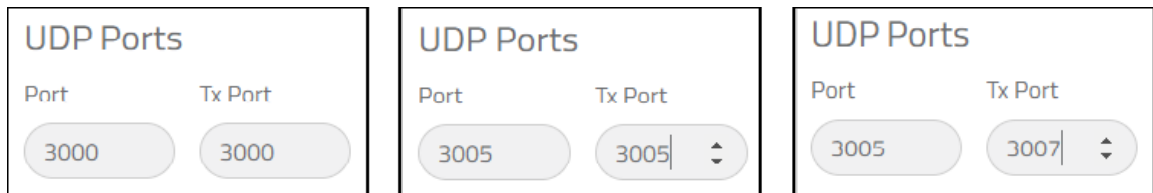


Figure 38: UDP ports

4. Choose and set up a **Network Mode**.

2.4.2 DIS Exercises

Use **Exercises** to link your scenario to a DIS exercise. To determine the proper DIS parameters, contact your exercise administrator.

DIS Settings

Networking Configuration **Exercises**

DIS Exercises

New Exercise

Exercise Name +

☒ ☐

Exercise Name	Exercise ID
default_domain	1
<input type="checkbox"/> Example_Exercise	2

Figure 39: DIS Exercises

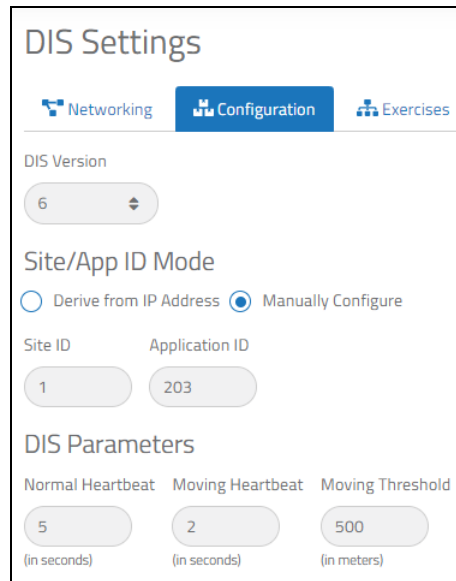
2.4.3 DIS Configuration

To set up DIS, follow these steps:

1. On **Configuration**, select **DIS Version**, and choose a DIS version.
2. Under **Site/App ID Mode**, decide how to determine the DIS site and application ID:
 - **Derive from IP address**: derives the DIS site and application IDs from your IP address
 - **Manually configure**: enter the desired values in **Site ID** and **Application ID** below.
3. To add a new exercise, under **DIS Exercises**, in **New Exercise**, enter an exercise name, and select the plus sign (+).

New exercises appear under **Exercise Name**. You can create up to 254 new DIS exercises but cannot delete or edit **default_domain**.

- Under **DIS Parameters**, enter values for **Normal Heartbeat**, **Moving Heartbeat**, and **Moving Threshold**.



The screenshot shows the 'DIS Settings' interface with the 'Configuration' tab selected. It includes sections for 'DIS Version' (set to 6), 'Site/App ID Mode' (set to 'Manually Configure'), 'Site ID' (1) and 'Application ID' (203), and 'DIS Parameters' with 'Normal Heartbeat' (5 seconds), 'Moving Heartbeat' (2 seconds), and 'Moving Threshold' (500 meters).

DIS Settings		
Networking	Configuration	Exercises
DIS Version: 6		
Site/App ID Mode: <input type="radio"/> Derive from IP Address <input checked="" type="radio"/> Manually Configure		
Site ID: 1	Application ID: 203	
DIS Parameters		
Normal Heartbeat: 5 (in seconds)	Moving Heartbeat: 2 (in seconds)	Moving Threshold: 500 (in meters)

Figure 40: DIS Configuration



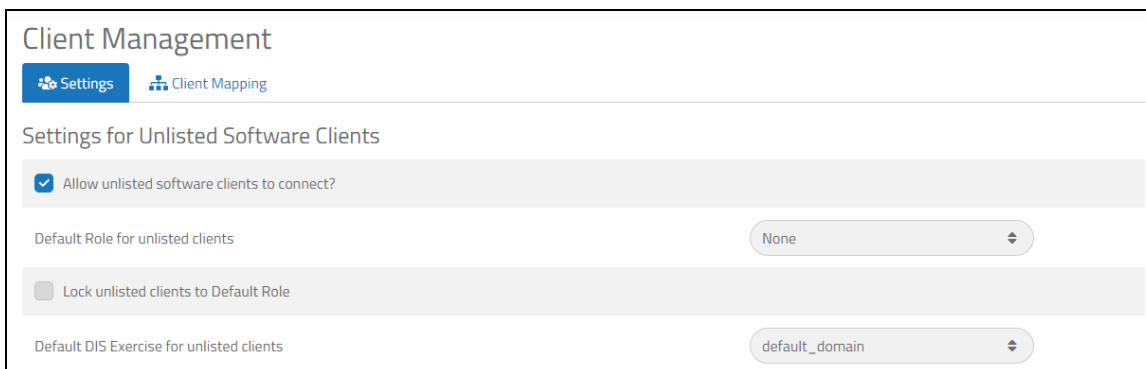
Important: You can only edit **Normal Heartbeat**, **Moving Heartbeat**, and **Moving Threshold** if **Manually Configure** is selected.

2.5 Clients

Client Management manages the relationship among hardware and software client interfaces and the Solo. Set up clients in one of two ways:

- Allow unlisted clients to connect to the Solo, and set a default role, DIS exercise, and vehicle for all clients in the scenario. For more information about unlisted client settings, go to Section 2.5.1, "Set default options for unlisted clients" on the next page.
- Map each client to the Solo, and assign it scenario resources. Individual clients can have differing roles, exercises, and vehicles. To add a new client, go to Section 2.5.2, "Add a software client" on page 27.

Figure 41, "Client Management" below shows **Client Management**:



The screenshot shows the 'Client Management' interface. At the top, there are two tabs: 'Settings' (active) and 'Client Mapping'. Below the tabs, the section is titled 'Settings for Unlisted Software Clients'. It contains three settings: 1. 'Allow unlisted software clients to connect?' with a checked checkbox. 2. 'Default Role for unlisted clients' with a dropdown menu set to 'None'. 3. 'Lock unlisted clients to Default Role' with an unchecked checkbox. At the bottom, there is a 'Default DIS Exercise for unlisted clients' dropdown menu set to 'default_domain'.

Figure 41: Client Management

This chapter discusses how to:

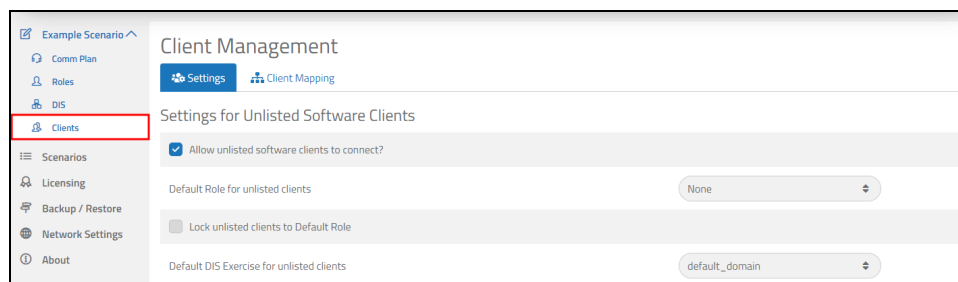
- Set default options for unlisted clients
- Add a software client

2.5.1 Set default options for unlisted clients

On **Client Management**, you can assign a default role, DIS exercise, or vehicle to unlisted software clients. As a result, all unlisted software clients in a scenario share the same role, DIS exercise, and vehicle.

To set default options for unlisted clients, follow these steps:

1. On the left, open the scenario, and go to **Clients**.



This screenshot shows the 'Client Management' page within a larger application window. On the left is a navigation sidebar with options: 'Example Scenario' (selected), 'Comm Plan', 'Roles', 'DIS', 'Clients' (highlighted with a red box), 'Scenarios', 'Licensing', 'Backup / Restore', 'Network Settings', and 'About'. The main content area is the same 'Settings for Unlisted Software Clients' as in Figure 41, with the 'Settings' tab active.

Figure 42: Client Management navigation

- To allow any client to connect to Solo, under **Settings for Unlisted Software Clients**, select **Allow unlisted software clients to connect?** If cleared, only clients on **Client Mapping** may connect.

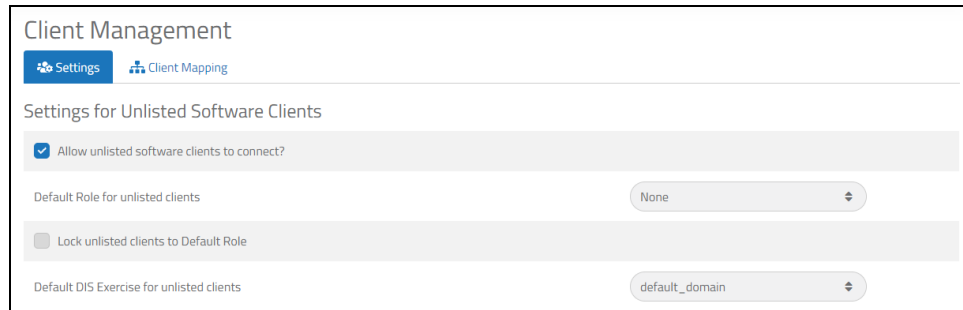


Figure 43: Settings for Unlisted Software Clients

- Select **Default Role for unlisted clients**, and choose a role. Roles are set on **Roles**. For more information about role configuration, go to Section 2.3, "Roles" on page 12.
- Select **Default DIS exercise for unlisted clients**, and choose an exercise. DIS exercises are set on the **DIS** page. For more information about DIS exercises, go to Section 2.4.3, "DIS Configuration" on page 24.

2.5.2 Add a software client

Client Mapping links client interfaces to scenario resources. This mapping process is required for all clients except unlisted software clients connected via **Settings for Unlisted Software Clients**. This capability also allows you to create preset software client definitions and map clients to static roles and DIS exercises.

To add a new client, follow these steps:

- On the left, open the scenario, and go to **Clients**.

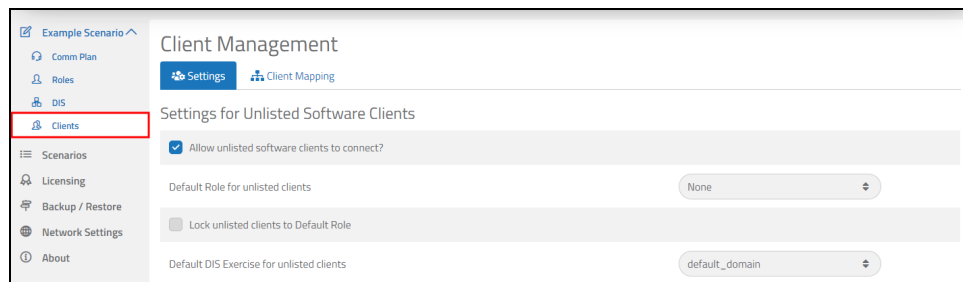


Figure 44: Client Management navigation

- On **Client Mapping**, in **Add Client**, enter a unique client name (e.g., Op9b).

3. Choose a role for the client, and select **Add Client**. Roles contain the intercom and radio assets that each client uses to communicate. For more information about roles, go to Section 2.3, "Roles" on page 12.
4. Under **Client Name**, find the new client in the list.
5. To prevent client operators from changing the settings assigned on this page, select **Lock Role**.
6. Select **DIS Exercise**, and assign a DIS exercise to the client. Each client must use the same DIS exercise to communicate with one another. You can assign clients in a scenario to separate DIS exercises. To set DIS options, go to Section 2.4.3, "DIS Configuration" on page 24.
7. Launch the software client on the operator desktop or tablet. In the client's settings, enter the client name exactly as it appears in **Client Mapping**. The client automatically assumes the default resources when it connects to Solo.

Client Management

Settings Client Mapping

Add Client

Role_Ex1 Name Add Client

Client Name Default Role Lock Role DIS Exercise

<input type="checkbox"/>	Op7a	Role_Ex1	<input type="checkbox"/>	default_domain
--------------------------	------	----------	--------------------------	----------------

Showing results 1 - 1 of 1 total results

5 10 20 50

Figure 45: Client Mapping

2.6 Backup / Restore

When working with Solo, you may wish to back up your settings on your local system and restore them at a later time. Alternatively, you may use this procedure to transport and restore your configurations to a Solo instance on another computer.

This section discusses how to:

- Back up a Solo instance
- Restore a Solo instance

2.6.1 Back up a Solo instance

To back up a Solo instance, follow these steps:

1. On the left, open the scenario, and go to **Backup / Restore**.

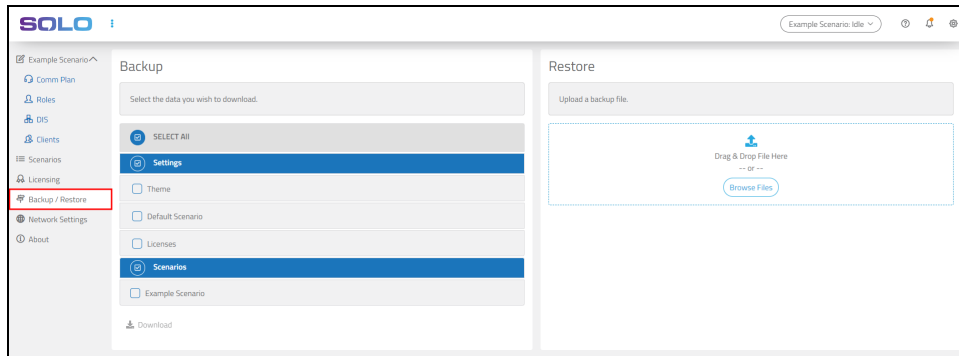


Figure 46: Backup / Restore navigation

2. Under **Backup**, choose the resource(s) you want to back up, or click **SELECT ALL**.

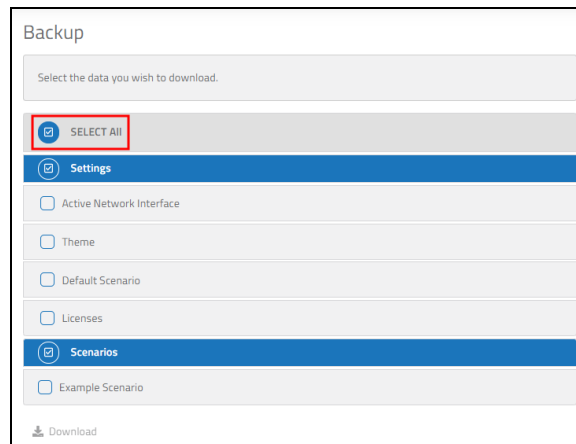



Figure 47: Back up Solo resources

3. Select  **Download**.
4. Save the downloaded .zip file to a secure location on your local system.

2.6.2 Restore a Solo instance

To restore a Solo instance, follow these steps:

1. On **Backup / Restore**, under **Restore**, select [Browse Files](#), or drag and drop the .zip file you created in Section 2.6.1, "Back up a Solo instance" on the previous page.

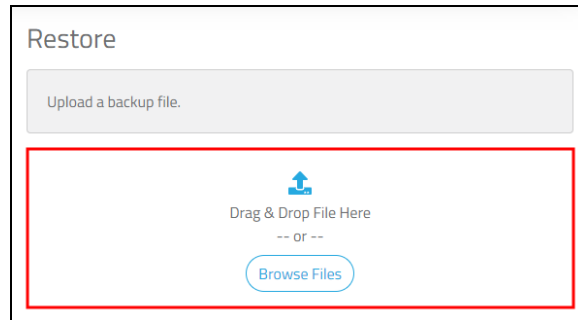


Figure 48: Find backup file


2. Confirm you chose the correct file, and select [Restore](#).



Figure 49: Restore backup file

3. Choose the resource(s) you want to restore, or click **SELECT ALL**.

Figure 50: Choose resources to restore

Red items marked with a  conflict with existing configurations. Restoring these items overwrites existing configuration data. Please review carefully before restoring.

4. Select . A notification in the top right alerts you if the restore was successful:

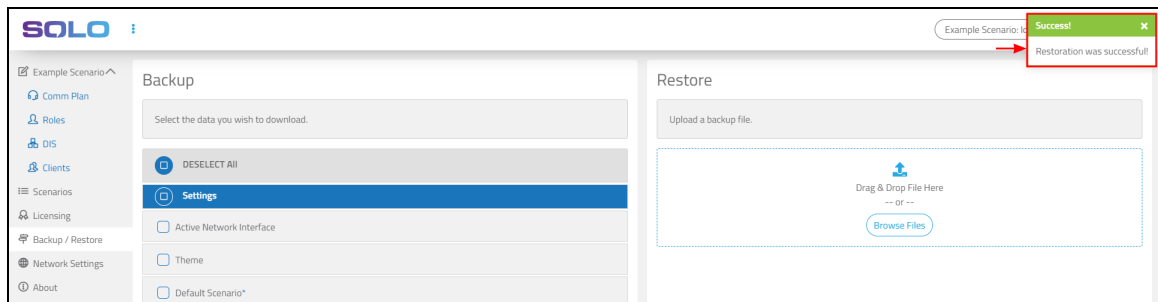


Figure 51: Successful restore

2.7 About

The **About** page includes system information about your Solo instance's version, build date, etc. You can also use this page to download system logs for troubleshooting purposes.

This section discusses how to:

- View system information
- Generate a diagnostics report

2.7.1 View system information

You may wish to view Solo's licensing information (e.g., product version, build date) to troubleshoot an issue.

On the left, open the scenario, and go to **About**.

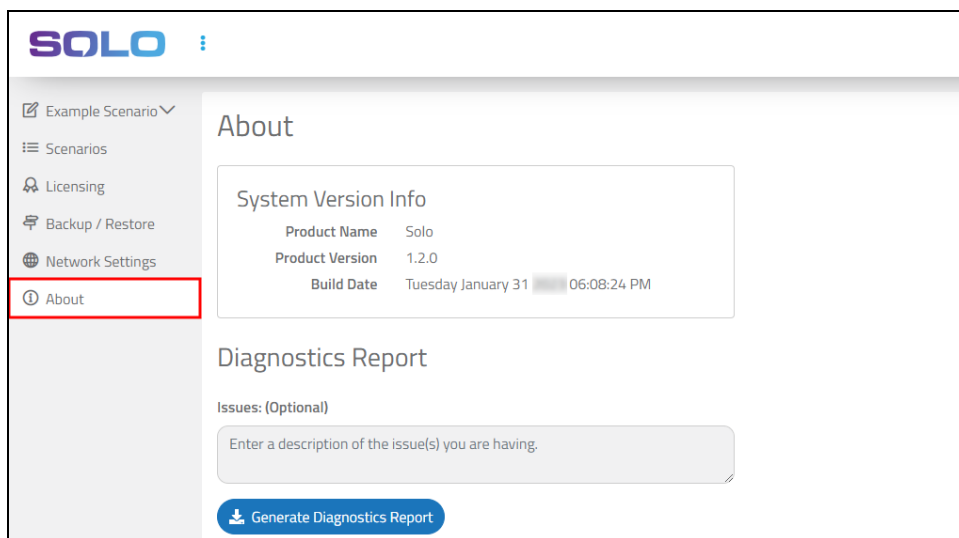


Figure 52: About navigation

About shows the Solo system's product name, version, and build date:

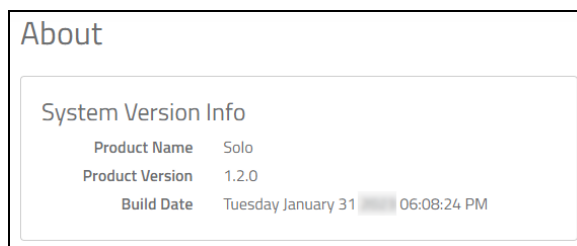



Figure 53: System Version Info

2.7.2 Generate a diagnostics report

To generate a diagnostics report, follow these steps:

1. (Optional) Under **Diagnostics Report**, in **Issues(s): (Optional)**, enter a description of the issue(s) you are experiencing.
2. Select , and wait for the .zip file to finish downloading.

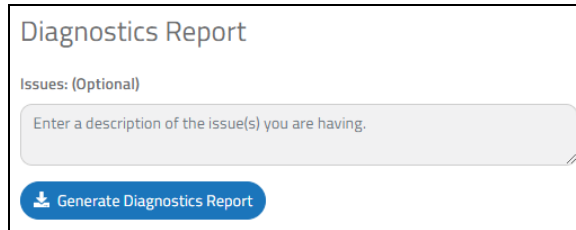


Figure 54: Send a diagnostics report to ASTi

3. Find the .zip file on your local computer, and email it to support@asti-usa.com.

2.8 Settings

Settings (⚙️) allows you to make system-wide changes to your Solo instance and access resources regarding Solo setup and operations.

This section discusses how to:

- Set Solo to dark mode
- Download Solo documentation
- Turn on password authentication
- Change the password

2.8.1 Set Solo to dark mode

To set Solo to dark mode, go to **Settings** (⚙️) > **Set Dark-Mode**.

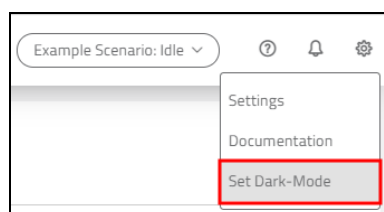


Figure 55: Set Dark-Mode

The interface color scheme changes to dark mode:

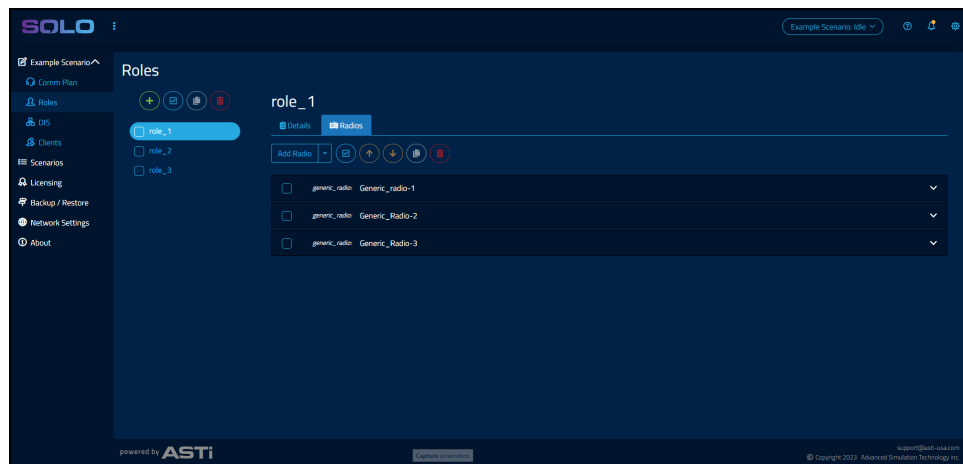


Figure 56: Dark mode

To view dark mode's color scheme before implementing it, follow these steps:

1. From the top navigation bar, go to **Settings** (⚙️) > **Settings**.

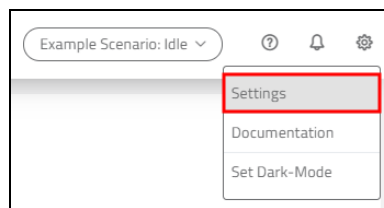


Figure 57: Settings navigation

2. On **Theme**, select **Dark Theme**.

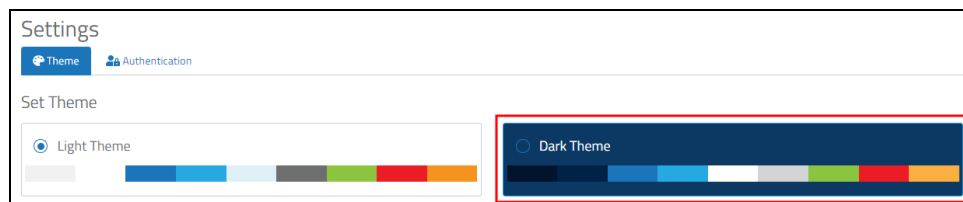


Figure 58: Set Dark Theme

The interface color palette changes to dark mode:

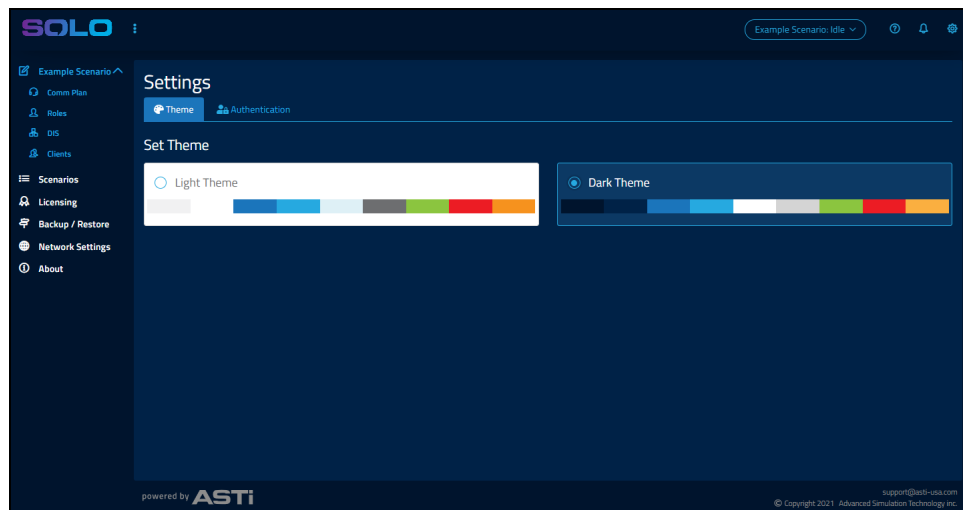


Figure 59: Dark mode color palette

2.8.2 Download Solo documentation

To access and download Solo documentation, follow these steps:

1. From the top navigation bar, go to **Settings** (⚙️) > **Documentation**.

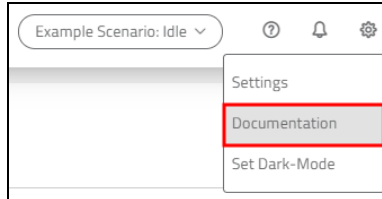


Figure 60: Documentation navigation

2. On **Documentation**, choose a document to download.

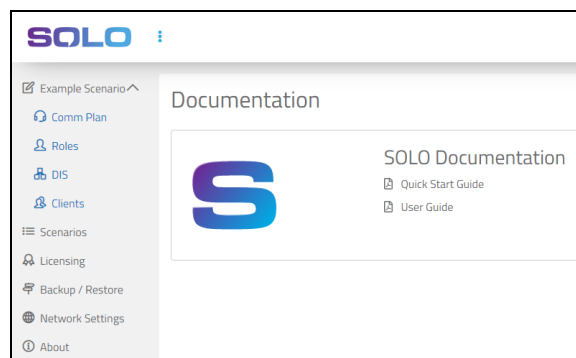


Figure 61: Solo documentation options

2.8.3 Turn on password authentication

To enable password authentication for your Solo instance, follow this step:

1. From the top navigation bar, go to **Settings** (⚙️) > **Settings**.

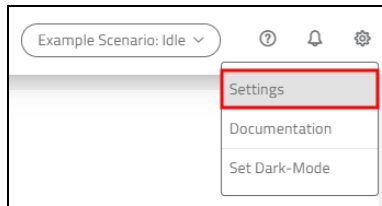


Figure 62: Settings navigation

2. On **Settings**, go to **Authentication**.
3. On **Change Authentication Setting**, turn on **Authentication**. Solo's default password is **admin**.
4. (Optional) In **Authentication Expiration Limit**, enter a time limit for the password in hours and minutes (HH:MM). By default, the time limit is set to one hour.

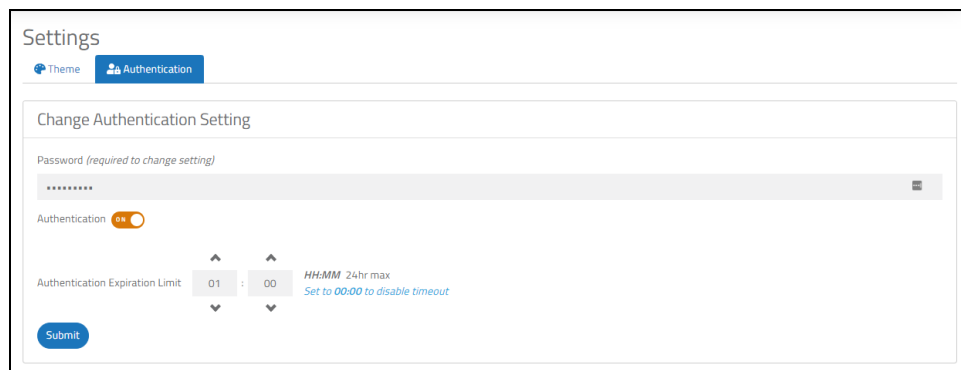


Figure 63: Set a password

To turn off the time limit and operate indefinitely without a password protection, enter **00:00**.

5. Select **Submit**, and a green message states, “Authentication updated successfully!”

2.8.4 Change the password

To change Solo's password, follow these steps:

1. On **Settings**, go to **Change Password**.
2. In **Old Password**, enter Solo's current password. Solo's default password is **admin**.
3. In **New Password**, enter a unique password for Solo.

4. In **Confirm Password**, enter the new password again.

Settings

Theme Authentication **Change Password**

Change Password

Old Password

New Password

Confirm New Password

Submit

Figure 64: Change Password

5. Select **Submit**, and a green notification states, “Password updated successfully!”

2.9 Help

Solo provides built-in help text that provides additional information about settings and their various uses. To turn on help text, from the top navigation bar, select **Turn Help On and Off** (?).



Figure 65: Turn Help On and Off

Interface elements shaded green include help text. Hover over the shaded setting to view an explanation in the green box:

SOLO

Example Scenario

Example Scenario Idle

Turn Help On and Off

Comm Plan

Help your mouse over an object outlined with dashes to see the help information.

Comm Plan

Import Export

Search

Name	Description	Frequency (MHz)	Waveform	Cryptos	Pretop	Satcoms	Net Groups
<input type="checkbox"/> Secure1	Secure Radio Net	104,000,000	FM	KYSB	None	None	
<input type="checkbox"/> RNet3	Radio Net3	103,000,000	FM	None	None	None	
<input type="checkbox"/> RNet2	Radio Net2	102,000,000	FM	None	None	None	
<input type="checkbox"/> RNet1	Radio Net1	101,000,000	FM	None	None	None	
<input type="checkbox"/> ICS_Net3	Intercom Net3	103	INTERCOM	None	None	None	Conf
<input type="checkbox"/> ICS_Net2	Intercom Net2	102	INTERCOM	None	None	None	Conf
<input type="checkbox"/> ICS_Net1	Intercom Net1	101	INTERCOM	None	None	None	Conf
<input type="checkbox"/> Coordination	Coordination Net	100	INTERCOM	None	None	None	Conf

Showing results 1 - 8 of 8 total results

Figure 66: Colored help boxes

To turn off help text, select **Turn Help On or Off** (②) again, or close the green explanation box:

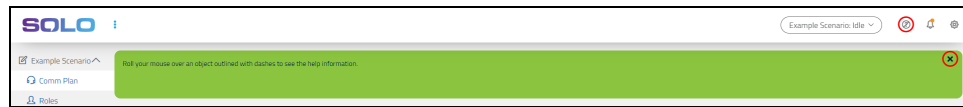


Figure 67: Turn off help text

3.0 Client connection



After you configure a Comm Plan, role, and network settings, you'll need to connect the Voisus Client for Tablets & Desktops or Voisus Client to Solo.

This chapter discusses how to:

- Connect the Voisus Client for Tablets & Desktops to Solo
- Connect the Voisus Client to Solo

3.1 Connect the Voisus Client for Tablets & Desktops to Solo

To connect the Voisus Client for Tablets & Desktops to Solo, follow these steps:

1. From your desktop, open the Voisus Client for Tablets & Desktops (.
2. In the bottom right, go to **SETTINGS**.
3. On **CONNECTION**, in **Client Name**, enter the client name from the client mapping you created in Solo. If your settings allow unlisted clients to connect, enter any client name.
4. Under **Connect to Server**, tap **Solo**.
5. To view the list of available roles on Solo, tap .
6. Tap **Role**, and choose an operator role.

7. Tap **CONNECT** again. The green status bar confirms the client's connection to Solo and a role.



Figure 68: CONNECTION tab

To learn more about setting up and using the Voibus Client for Tablets & Desktops, go to "Voibus Client for Tablets & Desktops" in the [Voibus Client User Guide](#).

3.2 Connect the Voibus Client to Solo

To connect the Voibus Client to Solo, follow these steps:

1. In the top right, go to **Open settings** (⚙️).

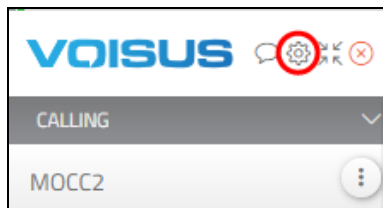


Figure 69: Open settings (⚙️) navigation

2. On **Connection & Setup**, select **Client Mode**, and choose **Solo**.

3. In **Client Name**, enter a client name from the client mappings you created in Solo. If your **Client Management** settings allow unlisted clients to connect, you can enter a new client name here. To learn more about unlisted software clients, go to Section 2.5.1, "Set default options for unlisted clients" on page 26.

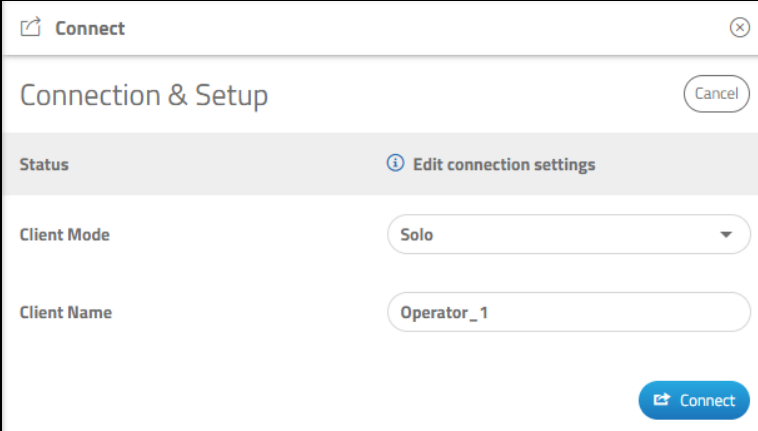




Figure 70: Connect to a Solo instance

4. Select .
5. Select **Operator Role**, and choose a role. To add and set up roles in Solo, go to Section 2.3, "Roles" on page 12.

Once you choose a role, the client automatically connects, and **Status** displays  **Connected**.