



# Voisus Quick Start Guide

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Product Name: Voisus

Voisus Quick Start Guide

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## Revision history

Date	Revision	Version	Comments
10/2/2017	B	0	(5.32) Converted content to XML and edited for grammar and accuracy.
2/26/2018	B	1	Updated browser compatibility in "Web interface setup."
3/8/2018	B	2	(5.33) Fixed minor list style error in "Network Configuration."
9/28/2018	C	0	(7.01) Updated screenshots and added new content to "Licenses."
11/15/2018	C	1	(7.1.0) Updated licensing screenshots and content with new IA maintenance expiration messages, <b>Revision</b> column, and compatible software version message.
6/25/2019	D	0	(7.4.0) Added "User Management" and "Network license servers." Made minor edits for consistency.
7/19/2019	E	0	Added "Update USB License Keys on a license server."
9/11/2019	F	0	Added "Enable ACENet devices."
11/21/2019	G	0	(7.6.0) Reorganized and simplified sections in the <i>Voisus Quick Start Guide</i> . Documented <b>Web Server Interface</b> setting in "Network Configuration."
2/21/2020	H	0	(7.7.0) Added "View the audit log."
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6/14/2022	I	3	Fixed minor version error in documentation.
3/8/2023	I	4	(8.0.0) Updated a <b>Network Configuration</b> screenshot in "Add a cloud." Added the Red Hat Enterprise Linux subscription and export statement to the front matter.
11/13/2024	I	5	(8.5.0) Modified description of licensing states in "View licensing information."

Date	Revision	Version	Comments
1/21/2025	I	6	(8.6.0) Fixed minor in-line image display error in "Claim or release licenses from a license server." Reassigned Voisus 8.6 and later, Voisus 8.5 and earlier to commands in "Voisus server setup" Removed Telestra references in "Connect or disconnect a license server in Voisus."
3/14/2025	J	0	(8.7.0) Updated <b>NTP Servers</b> screenshot and description in "Network Configuration."

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# 1.0 Introduction

Welcome to Voisus, ASTi's networked audio and communications solution for simulation and training environments. Voisus features high-fidelity simulated radios and intercoms, speech recognition and text-to-speech, environmental sound generation, network traffic record-and-replay, and live-to-virtual radio bridging over local and Distributed Interactive Simulation (DIS) networks.

Voisus is a family of networked, modular products designed for flexibility and scalability. Voisus capabilities include:



## **VoIP Comms Clients**

Voice comms for a variety of user interfaces, including computer, tablet, and hardware-based operators. Provides networked access to: simulated radios, live Radio-over-IP, intercom chat lines, VoIP calling and text chat.



## **Serious Game Comms**

Serious game users become part of a truly immersive training experience using ASTi's in-game radio, intercom and speech environment. Our integrated GUI keeps your head in the game.



## **Tactical Radio Simulation**

Designed for hands-on radio experience at a fraction of the cost. Options include hardware panels for maximum physical realism and software skins for maximum affordability.



## **Constructive Simulation**

Link automated radio, voice and sound with synthetic entities and game avatars to populate the training environment and provide an immersive training experience.



## **Record and Replay**

Simscribe is a network communications capture-and-replay tool for after-action review of LVC and game-based training.



## **Live Radio-over-IP Bridge**

Link live radios to virtual training environments and remotely control live radios over IP networks.



## **3D Sound**

Physics-based effects add directionally accurate sound cues to dome-based simulations, serious games, and other highly immersive training exercises.



## **Cloud Architecture**

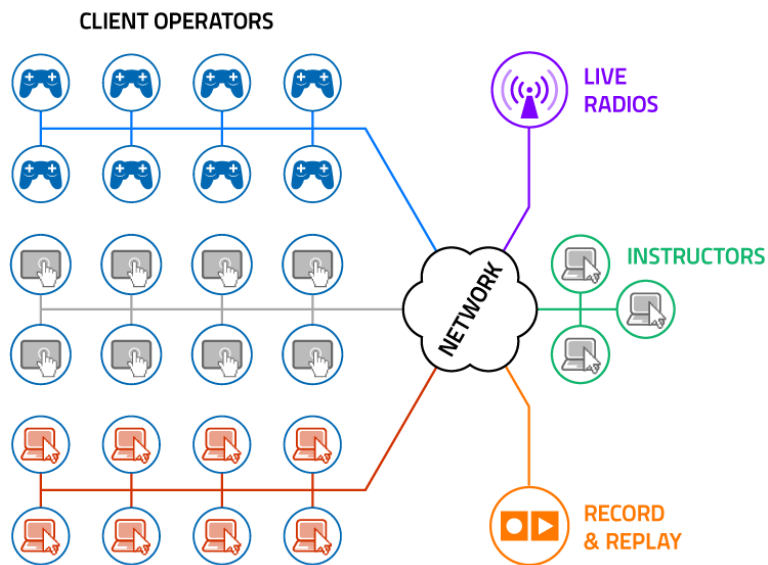
On-demand, subscription-based service reduces hardware infrastructure and facilitates redundancy for minimized system and exercise downtime. Visit [HearVoisus.com](https://HearVoisus.com) to try our cloud-based service on your own computer.



## **Security**

ASTi's Information Assurance (IA) program ensures compliance with government standards (ATO/ATC) and helps safeguard mission-critical information.

The Voisus platform's robust features combine seamlessly and scale to meet the needs of large and small exercises alike. Client operators connect wherever there is access to the network. Automated environmental sounds and radio traffic increase exercise realism and relieve busy instructors. Live radios are bridged to the network, linking live and virtual domains. Network traffic is recorded and then replayed for after-action review.



This quick start guide gets you up and running with your new Voisus system, including the following:

- An introduction to Voisus network configurations
- Voisus server installation
- Voisus web interface access

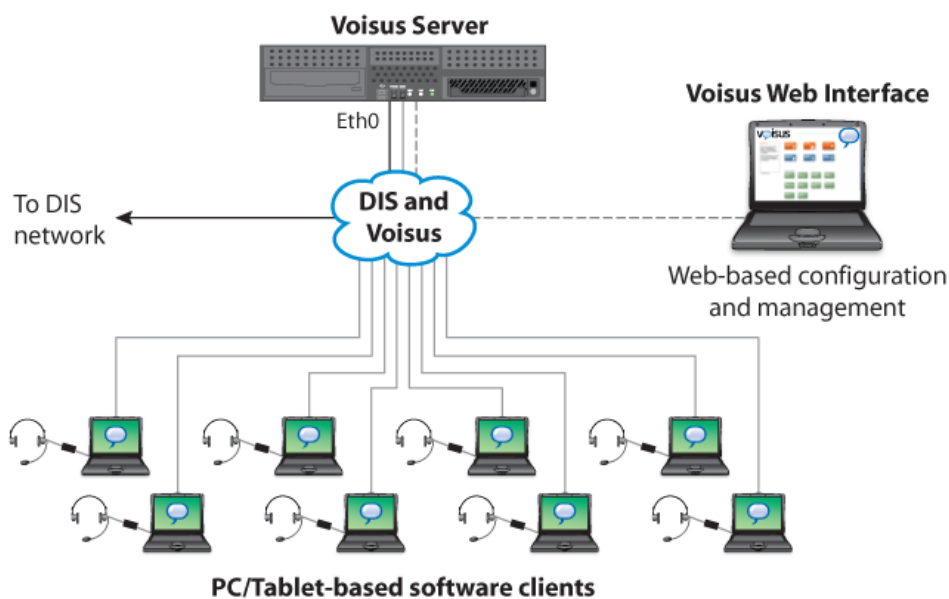
Once the server is installed and you have access to the Voisus web interface, you can begin configuring communications and audio resources for your particular application.

## 2.0 Network architecture

Voisus is a networked communications and audio system. At the heart of this system is the Voisus server, a powerful audio-processing platform hosted on an off-the-shelf chassis. Depending on the number of network interfaces available on your particular chassis, combine or separate network traffic in a variety of configurations.

### 2.1 Basic network configuration

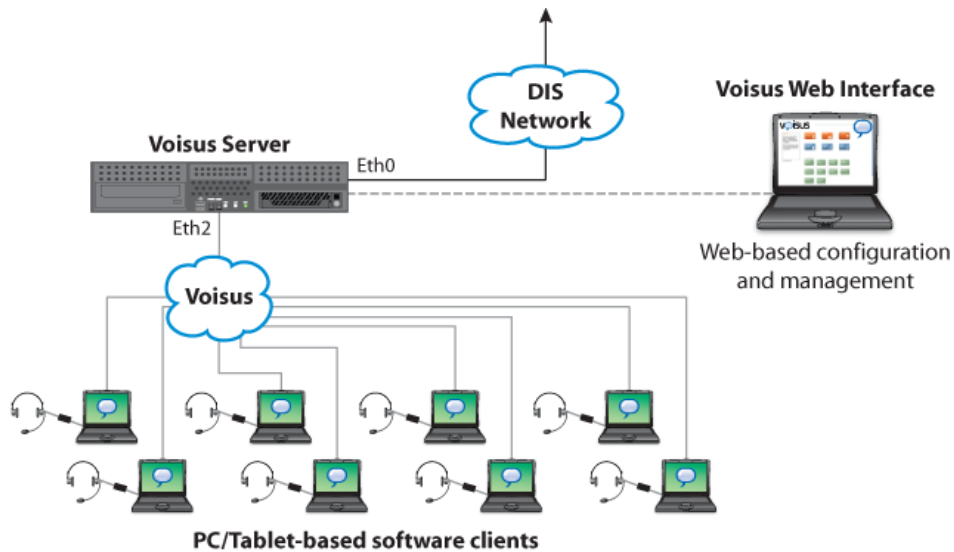
In the most basic network configuration, all network traffic shares a common network interface (Eth0), as shown below:



*Figure 1: Basic Voisus network configuration*

## 2.2 Separate network configuration

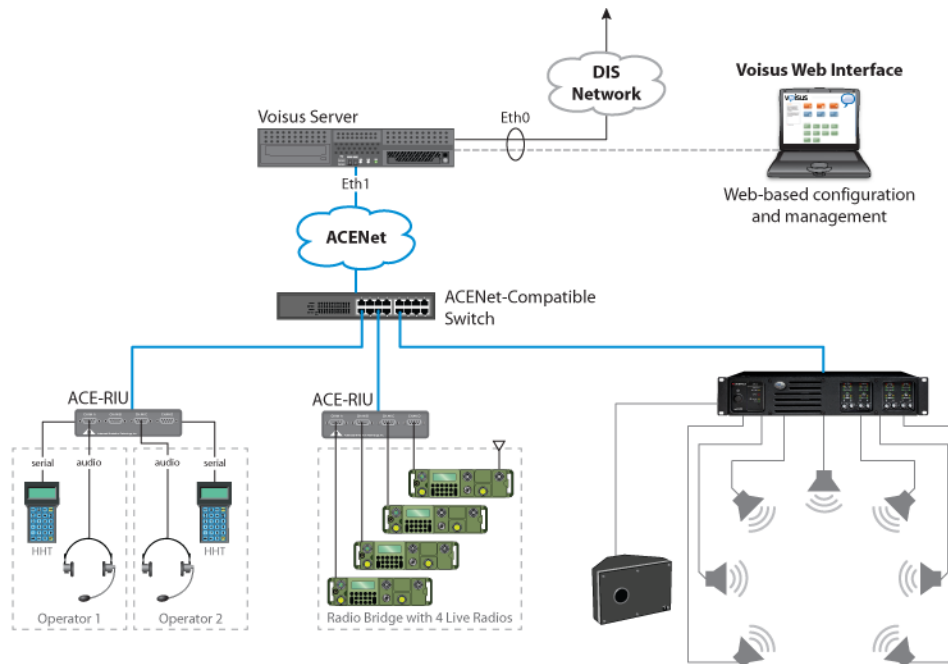
When multiple network interfaces are available, you can segregate network traffic to ease congestion on each network. Our example shows the Voisus web interface and Distributed Interactive Simulation (DIS) traffic on one network interface (i.e., Eth0) and software client traffic on another (i.e., Eth2). Eth1 is traditionally reserved for ACENet traffic.



*Figure 2: Separate Voisus network configuration*

## 2.3 ACENet

The Audio Communications Environment Network (ACENet) is a low-latency network for remote audio and I/O distribution. ASTi's ACE-RIU and ACU2 audio distribution devices connect a variety of user interfaces to the network, such as military headsets, press-to-talk (PTT) devices, handheld terminal (HHT) devices, and live radios.



*Figure 3: ACENet network configuration*

## 2.3.1 ACENet network requirements

ACENet requires a closed network on Eth1, consisting of only ACE-RIU, ACU2s, amplifiers, and ACENet-compatible Ethernet switches. No other traffic should be present on Eth1. There are two possible ACENet configurations. ACENet devices (i.e., ACE-RIUs and ACU2s) can connect directly to the Voisus server on Eth1 using a crossover CAT5e cable. Alternatively, add ACENet-compatible Ethernet switches for greater flexibility. ASTi accommodates a maximum of six hops (i.e., five switches) and 20 ACENet devices.

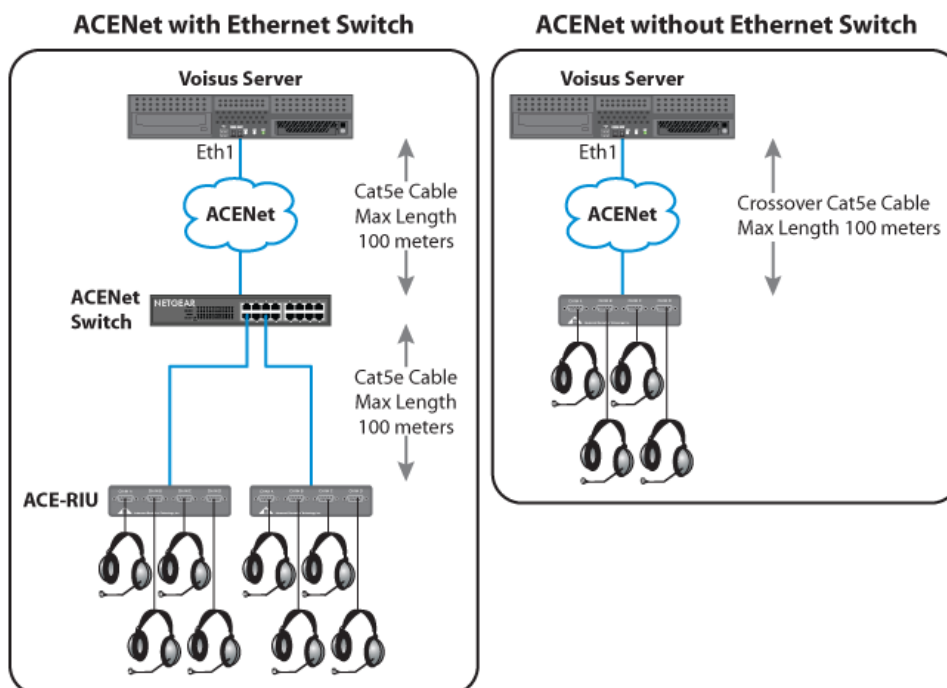


Figure 4: ACENet network requirements

## 2.3.2 ACENet cabling requirements

Homemade cables are the primary reason for product performance issues. ASTi highly recommends using only manufactured, commercial, premium-grade cable.

- CAT5e cable or better
- 100 meters (i.e., 328 feet) maximum distance per cable
- 1000 BASE-T specifications wiring requirements

### 2.3.3 ACENet switch requirements

All ACENet-capable Ethernet switches must adhere to the following core requirements:

- *Specifications:*
  - Gigabit-capable (1000 Mbps)
  - Open Systems Interconnection (OSI) Layer 2
  - LAN switch, not a router or hub
- *Settings:*
  - Auto-negotiate speed and duplex type
  - Disable all advanced Layer 2 protocols. These protocols include but are not limited to 802.1p/q, spanning tree, and Quality of Service (QoS).

### 2.3.4 ACENet with VLANs

ACENet with virtual local area networks (VLANs) must meet the following specifications:

- Only port-based VLANs are compatible.
- Each VLAN cannot see traffic from other ports.
- Each Voisus server and its associated devices must be on separate VLANs.
- VLAN tagging is not supported.

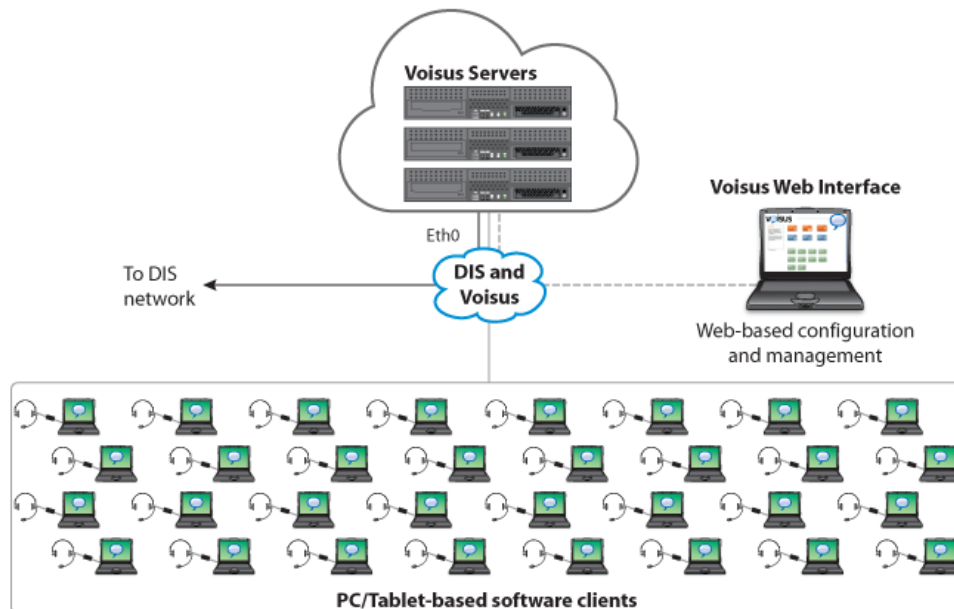
The following limitations constrain ACENet with VLANs:

- ACENet audio devices do not support daisy chaining to additional units or internal switching across networks.
- Each ACENet supports one Voisus server. The cloud/multiserver configuration described below is incompatible with ACENet at this time.
- Advanced protocols such as 802.1p, port priority, and spanning tree are not supported.

## 2.4 Cloud/multiserver configuration

Voisus software versions 5.10 and later include a cloud/multiserver configuration. In this configuration, a specialized, virtual environment houses Voisus servers in a single location and provides access to these resources over the Internet. The cloud configuration increases the number of software clients the Voisus system can support. The client load is automatically distributed among the servers in the cloud platform. This load will rebalance as needed when more clients join the exercise.

The cloud configuration provides centralized exercise management through the Voisus web interface. When servers are joined in a cloud platform, their scenarios are merged. Changes made to a scenario on one server will be reflected on all servers in the cloud platform.



*Figure 5: Cloud configuration*

## 3.0 Voisus server setup

The Voisus server and software are hosted on an off-the-shelf chassis. Each new Voisus system is shipped with the software already installed. In addition to the server chassis, you need the following equipment:

- Monitor
- Keyboard
- Power cord
- CAT5 or CAT5e cable
- Network connection

To set up the Voisus server, follow these steps:

1. Connect the server to a monitor and keyboard, which are only necessary for initial software configuration.
2. Connect the server's Eth0 interface to your local area network (LAN) with the CAT5 or CAT5e cable.
3. Turn on the server, and allow it to boot.
4. Log into the server using the following credentials:

Username	Password
astidadmin	admin

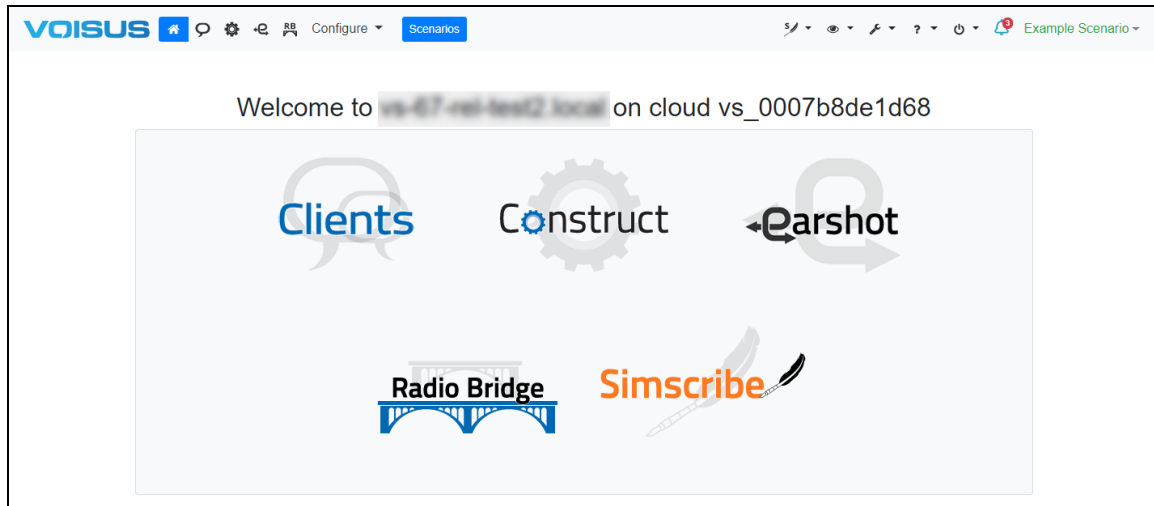
5. *(Optional)* To set the IP address and subnet mask, run one of the following:
  - *Voisus 8.6 and later:* **astikli netcfg -a xxx.xxx.xxx.xxx -n yyy.yyy.yyy.yyy,**
  - *Voisus 8.5 and earlier:* **ace-net-config -a xxx.xxx.xxx.xxx -n yyy.yyy.yyy.yyy,**

where xxx.xxx.xxx.xxx is the IP address and yyy.yyy.yyy.yyy is the netmask. This configuration sets the IP address and netmask for Eth0, which you can use to access the Web Interface via a browser to complete the network setup.

6. *(Optional)* For more network settings, run one of the following:
  - *For Voisus 8.6 and later:* **astikli netcfg -h**
  - *For Voisus 8.5 and earlier:* **ace-net-config -h**
7. To activate the changes, enter **reboot**, and press Enter.

## 4.0 Voisus web interface setup

Centrally set up and manage the Voisus server and clients with the Voisus web interface. The web interface is remotely accessed through a web browser on any computer sharing a network as the Voisus server.



*Figure 6: Voisus welcome page*

Use the Voisus web interface's setup and management tools to:

- Monitor central processing unit (CPU), memory, and network performance
- Monitor clients and radios
- Discover other Voisus servers on the network
- Set up the network
- Manage users
- Back up and restore the Voisus server

The Voisus platform contains five applications:



**Voisus Clients** Ready-to-Go Comms  
Configure simulated radios and intercoms and assign them to software and hardware communications clients.



**Construct** Constructive Radio Environment  
Link automated radio, voice, and sound with synthetic entities and game avatars to animate the training environment and provide an immersive training experience.



**Simscribe** Capture, Replay, AAR  
Capture and replay network voice and comms for after-action review.



**Radio Bridge** Live-to-Virtual  
Route live radio traffic among multiple sites and remotely control live radios over local and wide area data networks.



**Earshot** Realistic 3D Sound  
Earshot models sound propagation in 3D space, providing excellent directionality and ranging cues.

For more information about Voisus products, go to the following guides:

- [Voisus Client User Guide](#)
- [Construct User Guide](#)
- [Simscribe User Guide](#)
- [Radio Bridge User Guide](#)
- [Earshot User Guide](#)

## 4.1 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 Voisus 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](https://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
- Manage network license servers

### 4.1.1 Install a USB License Key

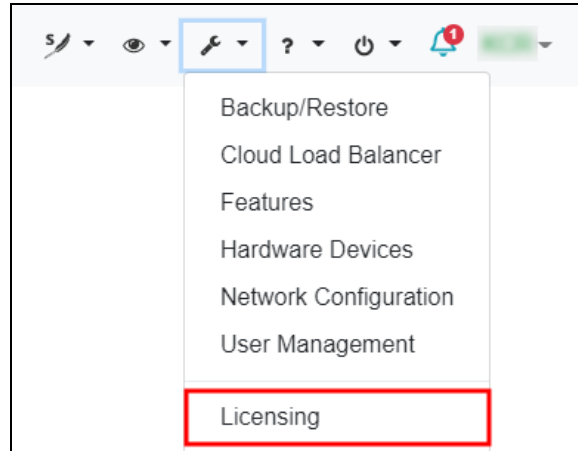
When you first receive an ASTi USB License Key with a shipment, you must install your license on the applicable Voisus server. To connect multiple licenses to a network license server, go to Section 4.1.4, "Network license servers" on page 18. If you're updating an existing license, follow the instructions in Section 4.1.3, "Update a USB License Key" on page 16.

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

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



Username	Password
admin	astirules

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



*Figure 7: 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 (3)				
License ID	Type	Revision	Error	Info
1155718797	Hardware	104		<a href="#">Show Info</a>
344002975424982500	Software (Network)	1	This license is only valid for software released by August 2020. Current software is July 2021.	<a href="#">Show Info</a>
1010157914135923480	Software	202103		<a href="#">Show Info</a>  

*Figure 8: Active License ID*

## 4.1.2 View licensing information

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

- **Enabled:** enabled options (e.g., Voisus, Clients, Radio Bridges, Comms Logger, Construct, Earshot)
- **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

Licensing				
<div>Voisus</div> <div>Speech</div>				
Available Options				
Name	Enabled	Total	Used	Remaining
Voisus Runtime	Yes			
Advanced Radio Skins	Yes	5	0	5
Clients and Radio Bridges	Yes	50	0	50
CIAT RMT	Yes	50	0	50
MCAP RCU	Yes	10	0	10
Phone Line	Yes	20	0	20
Radio Bridge Remote Control	Yes	5	0	5
RTP	Yes	5	0	5
Construct	Yes			
Earshot	Yes			

*Figure 9: 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 10, "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 2019. Current software is July 2020.	Show Info
1010157914135923480	Software	202103		Show Info  



Figure 10: 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).

Licenses (2)

License ID	Type	Revision	Error	Info
1024423439696723861	Software	202103		<div>Hide Info</div> <div></div>
<b>Notes:</b> DEV/SUPPORT SYSTEM. This system is licensed to operate in a lab/development/support environment only. Using this system as an operational platform in a training application or program loaded engineering support environment is a violation of the software license. Please refer to license statement provided with equipment or contact ASTi for information.				
Name	Total	Expired?	Expiration Date	Error
Advanced Radio Skins	5	No	30-Sep-2021	
Clients and Radio Bridges	50	No	30-Sep-2021	
CIAT RMT	50	No	30-Sep-2021	
Construct	1	No	30-Sep-2021	
Earshot	1	No	30-Sep-2021	
HLA	1	No	30-Sep-2021	
IA	1	No	30-Sep-2021	
MCAP RCU	10	No	30-Sep-2021	
Phone Line	20	No	30-Sep-2021	
Radio Bridge Remote Control	5	No	30-Sep-2021	
RTP	5	No	30-Sep-2021	
Simscribe	1	No	30-Sep-2021	
Voisus Runtime	1	No	30-Sep-2021	
This license is compatible with Voisus 7.x software released September 2021 or earlier.				

*Figure 11: Additional license information*

### 4.1.3 Update a USB License Key

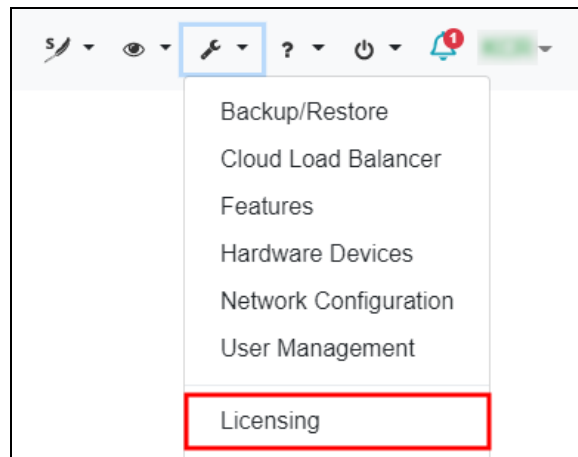
You may need to update one or more ASTi USB License Keys to expand or alter system functionality (e.g., receive a software trial, add more clients). ASTi provides a License Key Update (.lku) file that you can upload to the Voisus server. Updating a USB License Key or changing its license terms does not 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 Voisus server.
2. Open a web browser on a computer or tablet sharing a network with the Voisus server.
3. In the address bar, enter the Voisus server's IP address.
4. Log into the Web Interface using the following default credentials:

Username	Password
admin	astirules

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



*Figure 12: 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.

### Update/Install a License

Apply changes by uploading a License Key Update (.lku) or License File (.lf) here.

*Figure 13: 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		<input type="button" value="Show Info"/> <input type="button" value="Refresh"/> <input type="button" value="Delete"/>

*Figure 14: Updated license*

## 4.1.4 Network license servers

A network license server is a service running on a customer-furnished computer that hosts ASTi licenses for Voisus servers on the network. This configuration can consolidate USB License Keys for multiple servers into a single location and support virtual machine deployments without physical USB ports. ASTi must enable Voisus licenses for network use. By default, Voisus licenses are not network-enabled.

This section discusses how to:

- Install license server software
- Connect or disconnect a license server in Voisus
- Claim or release licenses from a license server
- Update USB License Keys on a license server

### 4.1.4.1 Install license server software

To set up a license server, you must install third-party, Sentinel software on your license server. These instructions are only valid for Windows operating systems. To install license server software on other operating systems (e.g., Linux), contact ASTi at [support@asti-usa.com](mailto:support@asti-usa.com).

To install license server software, follow these steps:

1. Download the ASTi-provided executable file (i.e., **haspdinst.exe**) on the license server, which must share a network with the Voisus server.
2. Open a terminal, and log into the system as an administrator.
3. At the prompt, enter **haspdinst.exe -i**, and press Enter. Wait approximately two minutes for installation to complete.
4. Insert the USB License Keys into the license server, as described in Section 4.1.1, "Install a USB License Key" on page 12. Note down the key IDs for future reference.
5. Open a web browser, and go to **localhost:1947**. The **Sentinel Admin Control Center** opens.
6. From **Options**, go to **Sentinel Keys**.

- Under **Key ID**, confirm the key IDs that you noted in Step 4 appear among the listed options:

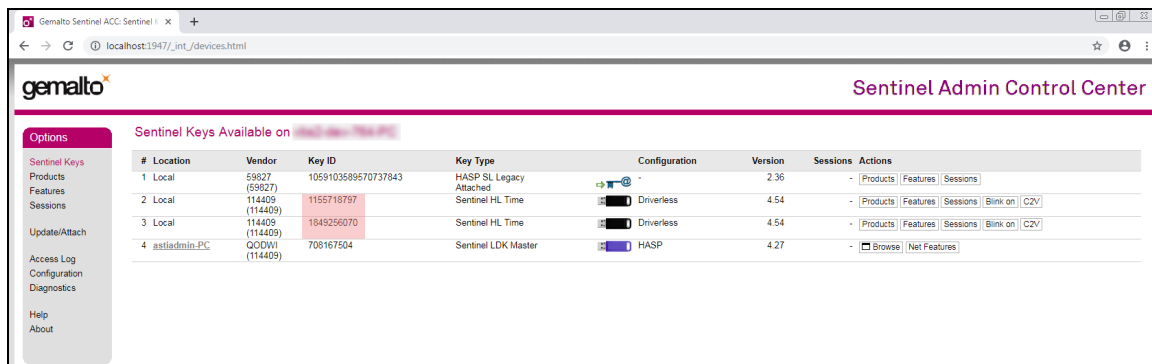


Figure 15: Confirm license key IDs

#### 4.1.4.2 Connect or disconnect a license server in Voisus

To connect or disconnect a license server in the Web Interface, follow these steps:

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

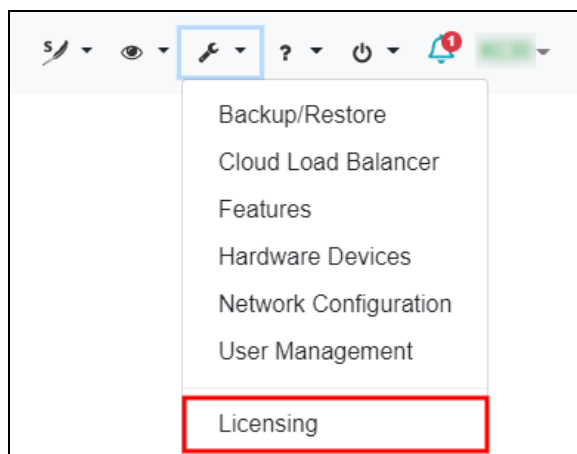


Figure 16: Licensing navigation

- In **License Servers**, enter xxx.xxx.xxx.xxx, where xxx.xxx.xxx.xxx is the license server's IP address.
- To connect to the license server, select the plus sign (+), or press Enter.

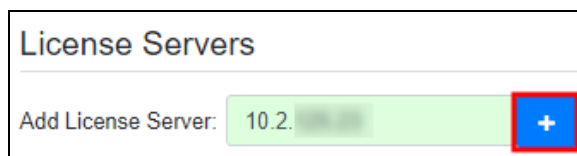


Figure 17: Add a license server

**License Servers** shows the following information:

- **Hostname**: the license server's host name
- **IP Address**: the license server's IP address
- **License Count**: the total number of licenses available to claim on the license server
- **Status**: the number of licenses the Voisus server has claimed

4. To view all licenses available on the license server, select **Show Info**.

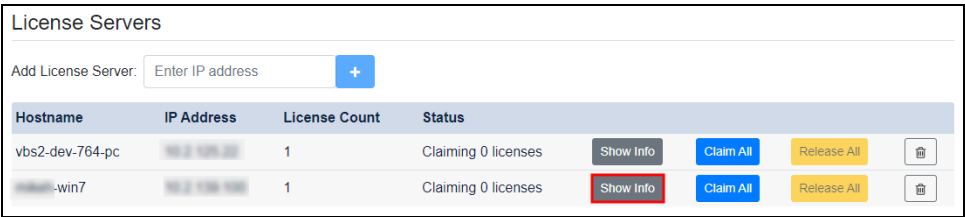


Figure 18: View licenses available to claim

5. To disconnect a license server from the Web Interface, select **Remove License Server** (Remove icon).

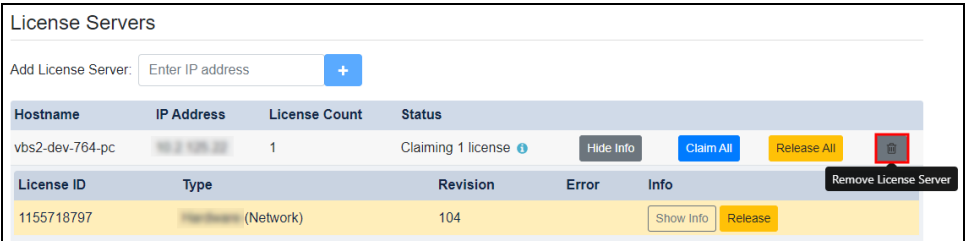


Figure 19: Disconnect a license server

#### 4.1.4.3 Claim or release licenses from a license server

To claim a specific license, choose a license, and select **Claim**.

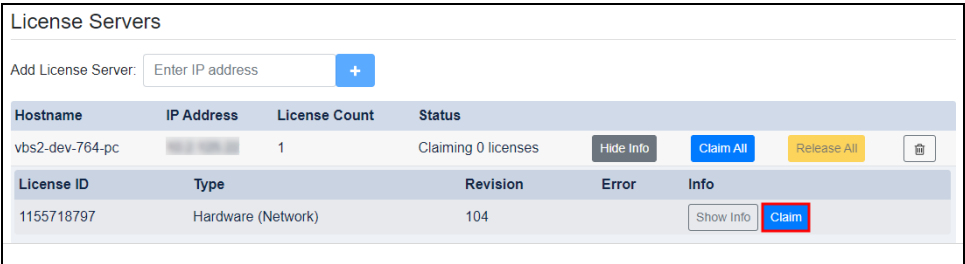


Figure 20: Claim a license

The license server's **Status** reads “Claiming 1 license:”

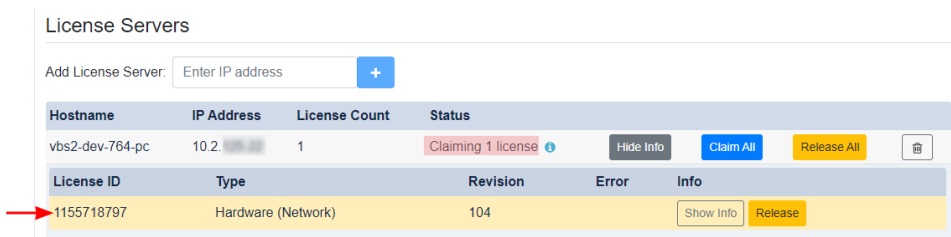


Figure 21: “Claiming all licenses” message

To automatically claim all current and future licenses on the license server, select [Claim All](#).

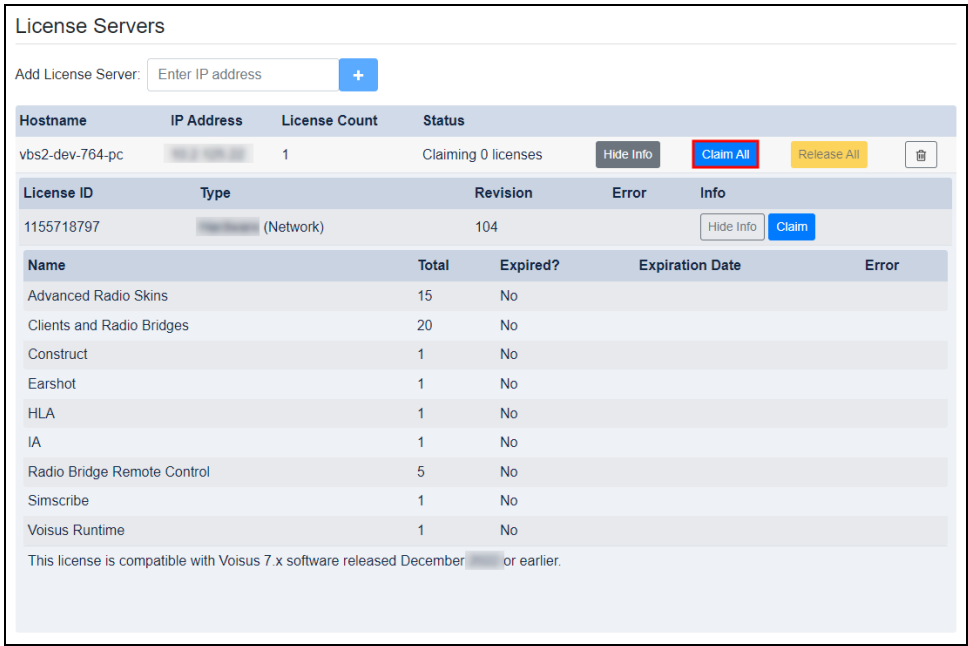
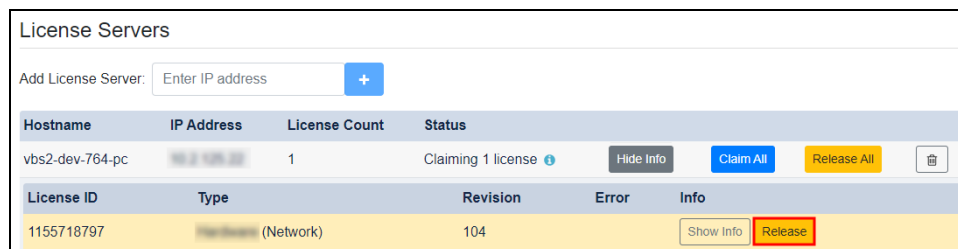


Figure 22: Claim all licenses



**Note:** To view additional information about individual licenses, select **Show Info**. For more information about these interface elements, go to Section 4.1.2, "View licensing information" on page 14.

To release a specific license from the license server, select **Release**.

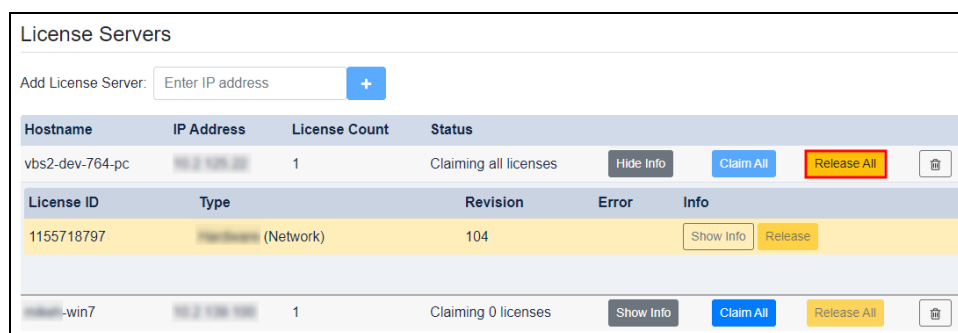


*Figure 23: Release a license*



**Note:** If the license server is in the “Claim All” state, you cannot release an individual license.

To release all licenses from the license server, select **Release All**.



*Figure 24: Release all licenses*

#### 4.1.4.4 Update USB License Keys on a license server

You must update USB License Keys on the network license server itself (i.e., the Windows computer running Sentinel license server software). The Web Interface cannot update USB License Keys installed on a license server; it can only update license keys on a Voisus server.

To update USB License Keys on a license server, follow these steps:

1. Contact [support@asti-usa.com](mailto:support@asti-usa.com) for license update (.v2c) files. You will receive one file per USB License Key installed on your license server. Save these files to your local system.
2. Verify that all USB License Keys you want to update are plugged into the license server.
3. On the computer running license server software, open a web browser, and go to **localhost:1947**. The **Sentinel Admin Control Center** opens.

4. From **Options**, go to **Update/Attach**.

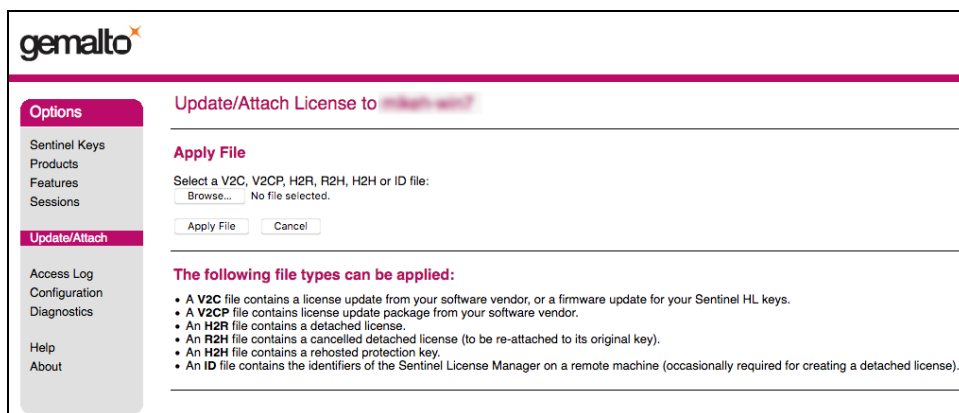


Figure 25: Update/Attach navigation

5. Under **Apply File**, select **Browse**. Find the .v2c files that you received in Step 1.

6. Select **Apply File**. The page reads, “Your update was applied successfully.”

## 4.2 User Management

Before you can take full advantage of the Voisus web interface, you'll need to set up any user accounts. These accounts are only applicable to the Voisus web interface, not Linux system user accounts.

From the top right, go to **Manage** (🔧) > **User Management**.

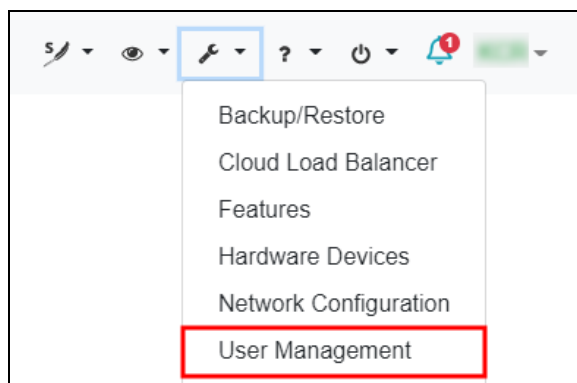


Figure 26: User Management navigation

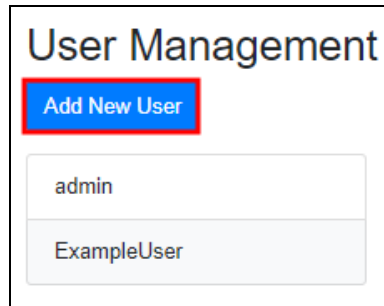
This chapter discusses how to:

- Add a user
- Change a user's password
- Delete a user

## 4.2.1 Add a user

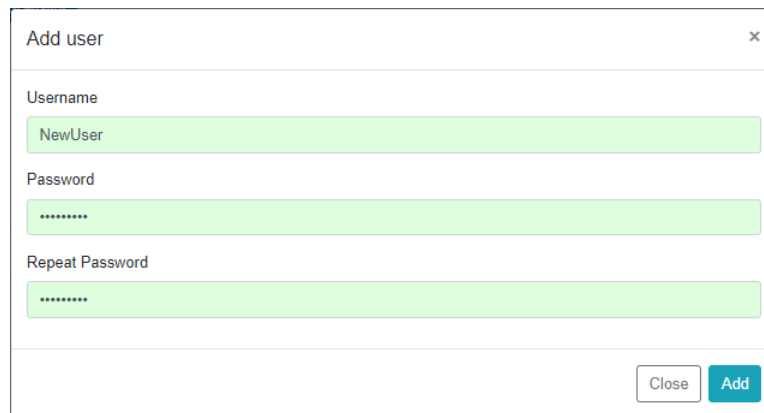
To add a user, follow these steps:

1. On **User Management**, select **Add New User**.



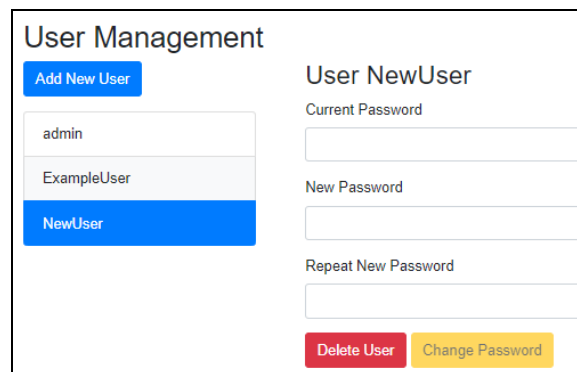
*Figure 27: Add New User*

2. In **Username**, enter a unique username for the user.

The image shows a modal dialog box titled 'Add user' with a close button (x) in the top right corner. It contains three input fields: 'Username' with the text 'NewUser', 'Password' with masked characters '\*\*\*\*\*', and 'Repeat Password' also with masked characters '\*\*\*\*\*'. At the bottom right, there are two buttons: 'Close' and 'Add'.

*Figure 28: User credentials*

3. Select **Add**. The new user shows among the listed options:

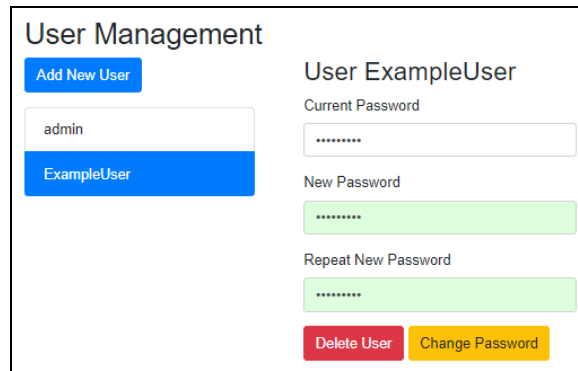


*Figure 29: List of users*

## 4.2.2 Change a user's password

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

1. On **User Management**, choose a user.
2. In **Current Password**, enter the user's current password.
3. In **New Password**, enter a new password for the user.
4. In **Repeat New Password**, enter the new password again. If the new passwords match, both boxes turn green.



The screenshot shows a web interface titled "User Management". On the left, there is a list of users: "admin" and "ExampleUser". "ExampleUser" is highlighted with a blue background. Above the list is a blue button labeled "Add New User". To the right of the user list, the details for "User ExampleUser" are shown. It includes three password input fields: "Current Password" (with masked characters), "New Password" (with masked characters and a green background), and "Repeat New Password" (with masked characters and a green background). At the bottom right of the details section, there are two buttons: a red "Delete User" button and a yellow "Change Password" button.

*Figure 30: Change a user's password*

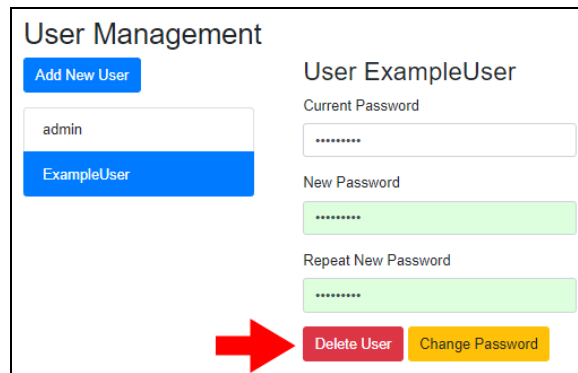
5. Select **Change Password**. "Edited *username*" temporarily displays under **Repeat New Password**, where *username* identifies the user.

### 4.2.3 Delete a user

The Voisus web interface allows you to delete inactive or unneeded users, with the exception of the **admin** account. While you can't delete the administrator account, you can change its password. To change an account's password, go to Section 4.2.2, "Change a user's password" on the previous page.

To delete a user, follow these steps:

1. On **User Management**, choose a user.
2. Select **Delete User**.



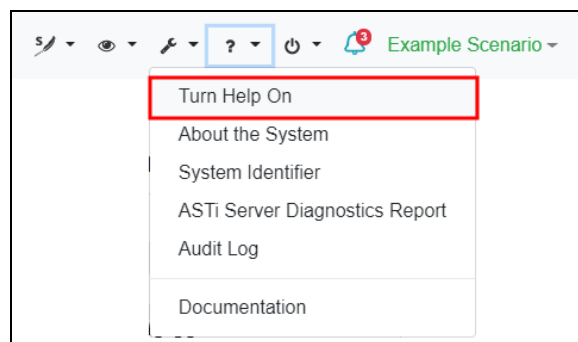
*Figure 31: Delete a user*

3. At the confirmation message, select **Delete**. The user disappears from the list of active users.

## 4.3 Help

The Voisus web interface includes an integrated help feature as well as built-in documentation. To enable the built-in help, follow these steps:

1. From the toolbar on the right, go to **Help** (?) > **Turn Help On**.



*Figure 32: Help navigation*

- To view help text and links to additional documentation, hover over elements outlined in blue.

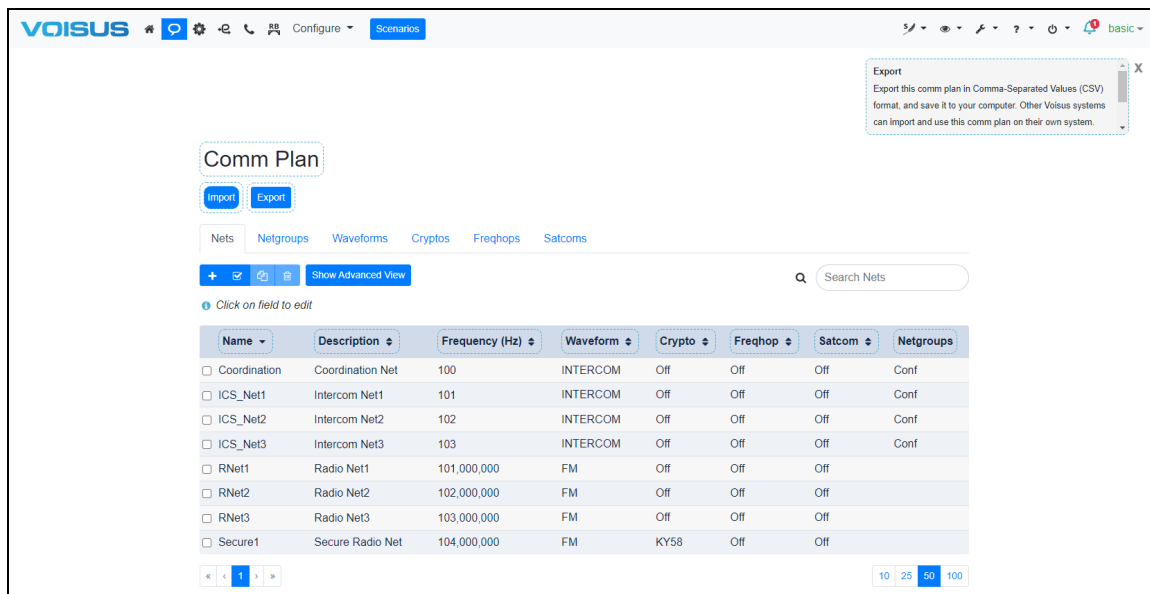


Figure 33: Help text

- From the top right, go to **Help** (? ▾) > **Documentation**.

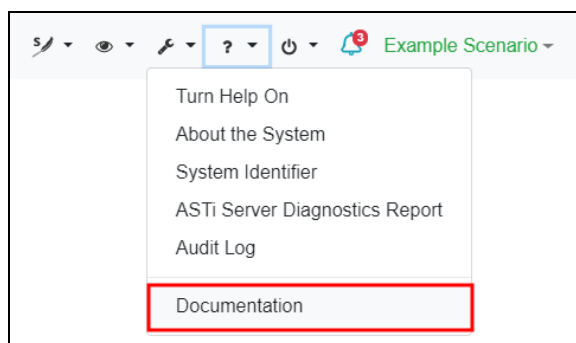
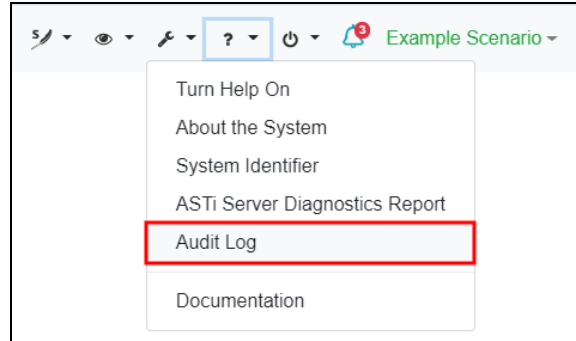


Figure 34: Documentation navigation

### 4.3.1 View the audit log

Voisus keeps a record of system security changes to user accounts, backups, network settings, and license files. To view these records, go to **Help > Audit Log**.



*Figure 35: Audit Log navigation*

**Audit Logs** shows each event, the date and time that it occurred, and the user who made the change.

Audit Log	
Aug 15 00:00:00 vs-67-rel-test2 amsaudit: USER admin's session 7c124cc006d0975da83250eec6dc5e16acfd3113 expired.	
Aug 14 23:50:33 vs-67-rel-test2 amsaudit: USER admin's session 7e222d4e1419d3dee9b7c87206f23cddf3d2a44c expired.	
Aug 14 15:59:59 vs-67-rel-test2 amsaudit: USER admin successfully logged in for session: 7c124cc006d0975da83250eec6dc5e16acfd3113	
Aug 14 15:50:32 vs-67-rel-test2 amsaudit: USER admin successfully logged in for session: 7e222d4e1419d3dee9b7c87206f23cddf3d2a44c	
Aug 12 18:27:51 vs-67-rel-test2 amsaudit: License server added by user: admin	
Aug 12 18:27:37 vs-67-rel-test2 amsaudit: License server added by user: admin	
Aug 12 18:18:50 vs-67-rel-test2 amsaudit: USER admin created new user ExampleUser	
Aug 12 01:22:22 vs-67-rel-test2 amsaudit: USER admin's session a5420f541732f0a9910e5938ac8de1346397072b expired.	
Aug 12 01:02:48 vs-67-rel-test2 amsaudit: USER admin's session 51a4fb58765b69e16da1ea36fa829e4cf211ddf5 expired.	
Aug 11 17:22:21 vs-67-rel-test2 amsaudit: USER admin successfully logged in for session: a5420f541732f0a9910e5938ac8de1346397072b	

*Figure 36: Audit Log*

## 4.4 Network Configuration

To set up the Voisus server's network in the Web Interface, follow these steps:

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

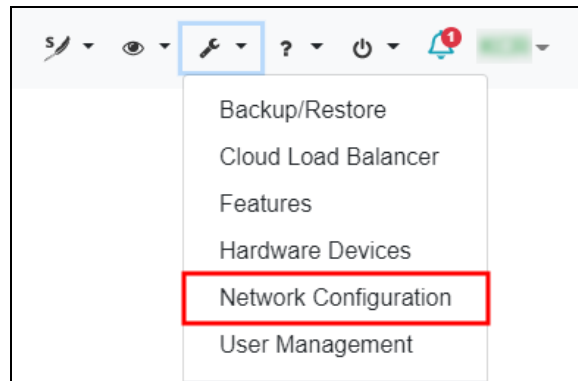


Figure 37: Network Configuration navigation

2. **Status** displays your server's current settings. To view individual settings and status, select each Ethernet interface (i.e., eth0, eth1, eth2, eth3).

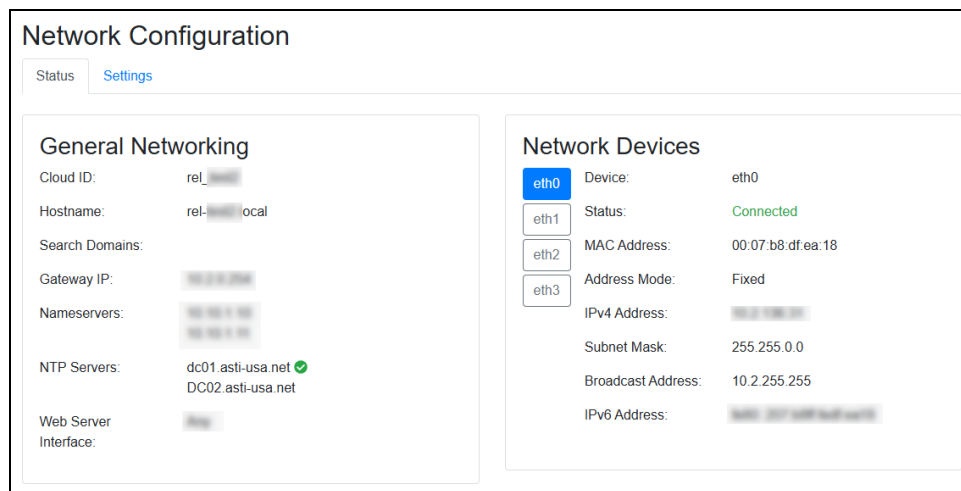
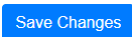


Figure 38: Status

3. To change network settings, go to **Settings**. To view and change individual settings, select each Ethernet interface.
4. By default, the cloud ID matches the hostname. To create a cloud with other servers, under **General Networking**, in **Cloud ID**, enter the same cloud ID for each server. For more information about clouds, go to Section 2.4, "Cloud/multiserver configuration" on page 7.
5. (Optional) In **Hostname**, enter a hostname. This name identifies your server on the network. When the hostname changes, the cloud ID changes to match.

6. In **Search Domains**, enter up to two unique names for the domain servers. Voisus uses these domain names to perform name look-ups for other servers on the network.
7. Under **Routing**, assign one of the following routing methods to the Voisus server:
  - **Gateway**: route traffic to and from other networks via a gateway IP address and network interface. Choose a gateway interface (e.g., eth0), and enter the gateway's IP address.
  - **Default Interface**: route traffic to and from other networks by selecting a default Ethernet interface (e.g., eth0).
  - **None**: do not assign a routing method to the Voisus server.
8. In **Nameservers**, enter the IP addresses of up to three servers. Voisus queries these servers when attempting to match host names to IP addresses.
9. In **NTP Servers**, enter the IP addresses of up to three Network Time Protocol (NTP) servers. Voisus references these servers to synchronize the system clock. The green check indicates the server with which Voisus is synchronized.
10. To restrict web server access to a single interface (i.e., eth0, eth1, eth2), select **Web Server Interface**, and choose an interface. To allow web server access on all interfaces, select **Any**.
11. Under **Network Devices**, select **Address Mode**, and choose the Ethernet device's mode of operation:
  - a. **None**: disables the Ethernet interface.
  - b. **DHCP**: requests IPv4 and subnet mask information from another server on your network.
  - c. **Fixed**: requires you to enter an IP address and subnet mask.
12. In **IPv4 Address**, enter the IPv4 address for this network interface. For help with this setting, contact your network administrator.
13. In **Subnet Mask**, enter the network interface's subnet mask. For help with this setting, contact your network administrator.
14. When finished, select .

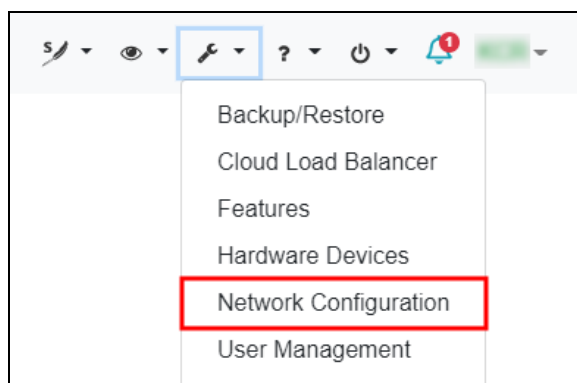
## 4.4.1 Add a cloud

To join multiple servers in a cloud, assign each server the same cloud ID in the Voisus web interface. To create a new cloud, 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:

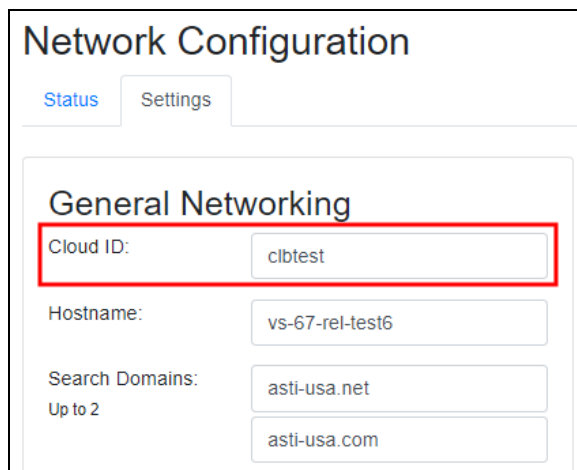
Username	Password
admin	astirules

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



*Figure 39: Network Configuration navigation*

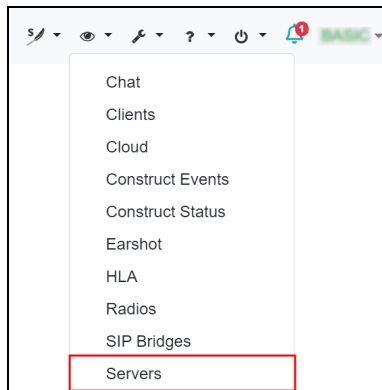
5. On **Network Configuration**, go to **Settings**.
6. Under **General Networking**, in **Cloud ID**, enter a client ID for the Voisus server.



*Figure 40: Cloud ID setting*

7. In the bottom right corner, under **Pending Changes**, select Save Changes.
8. To reboot your server, follow these system prompts.
9. Repeat Steps 5–8 for each server you want to connect to the cloud. Make sure you enter the same cloud ID for each server.
10. To find other servers on your network and view their cloud IDs, go to **Server Discovery**.

From the top right, go to **Monitor** () > **Servers**.



*Figure 41: Server Discovery navigation*

To disconnect a server from a cloud, change the cloud ID in the Voisus web interface, save your changes, and reboot the server. A disconnected server keeps all of the scenario data it gained while in the cloud. If changes are made to these scenarios while disconnected from the cloud, a conflict of data could occur when the servers reconnect again. Typically, the most recent change to a scenario prevails.

#### 4.4.2 Connect software clients to the cloud

Each software client provides the option of connecting to the server via its IPv4 address or cloud ID. Enter the cloud ID if you wish to connect the client to a cloud. If the client cannot detect the cloud ID, you may need to adjust your Windows firewall settings as described below. For more information about Voisus software clients, go to "Software clients" in the [Voisus Client User Guide](#).

#### 4.4.2.1 Set up the Windows firewall

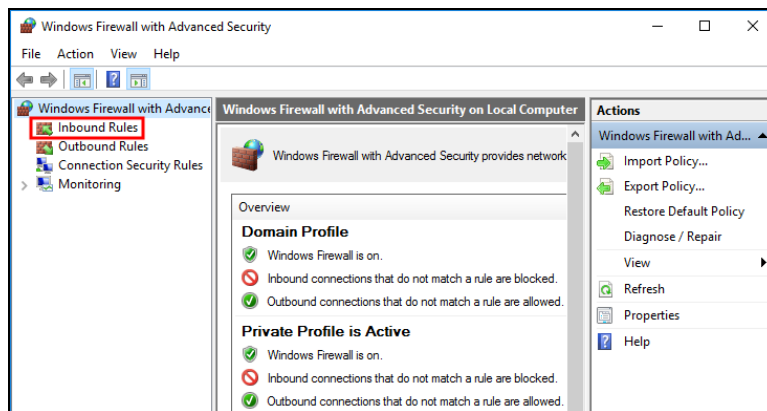


*Note: These instructions apply to Voisus software versions 5.16.0 and later.*

Active firewall settings on a Windows computer blocks communication between the Voisus client and Voisus server. For the Voisus client to operate, you must either disable the firewall settings or open certain ports, protocols, and services so that the client and server can communicate with each other.

To set up a Windows firewall, follow these steps:

1. Open Control Panel.
2. Go to **System and Security > Windows Firewall**.
3. From the vertical left menu, select **Advanced Settings**.
4. Under **Windows Firewall with Advanced Security on Local Computer**, select **Inbound Rules**.



*Figure 42: Inbound Rules*

5. In the **Actions** panel on the right, select **New Rule**.

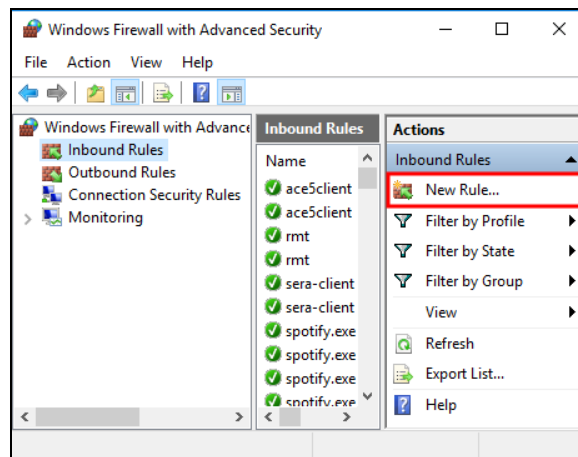


Figure 43: New Rule

6. The New Inbound Rule Wizard opens. On the **Rule Type** page, select **Port**.

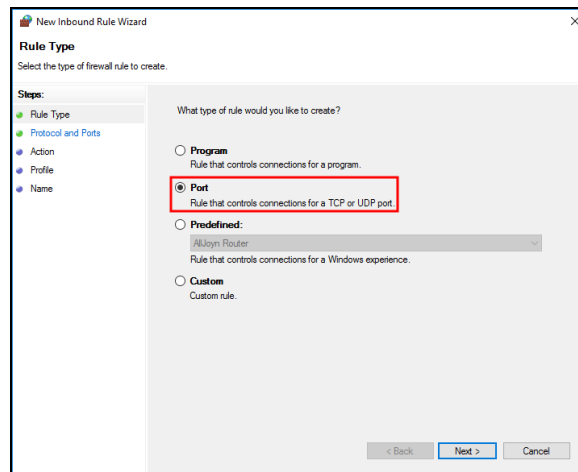
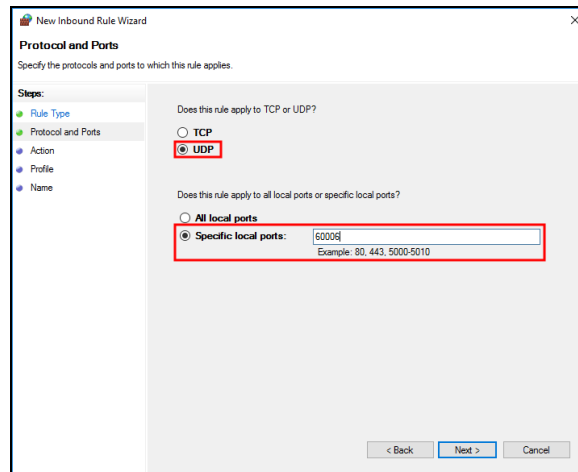


Figure 44: Port Rule Type

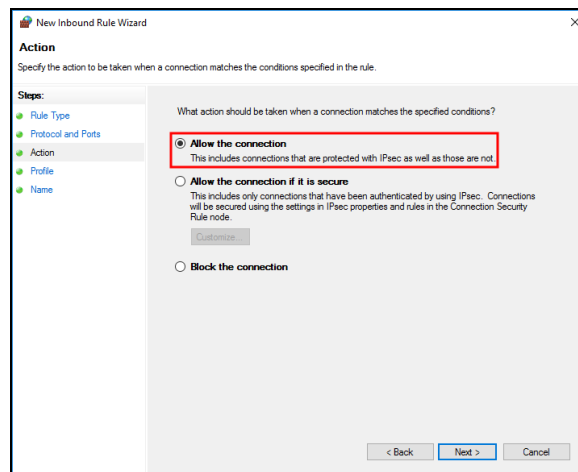
7. On the **Protocol and Ports** page, under **Does the rule apply to TCP or UDP?**, select **UDP**.

8. Under **Does this rule apply to all local ports or specific local ports?**, in **Specific local ports**, enter **60006**, and then select **Next**.



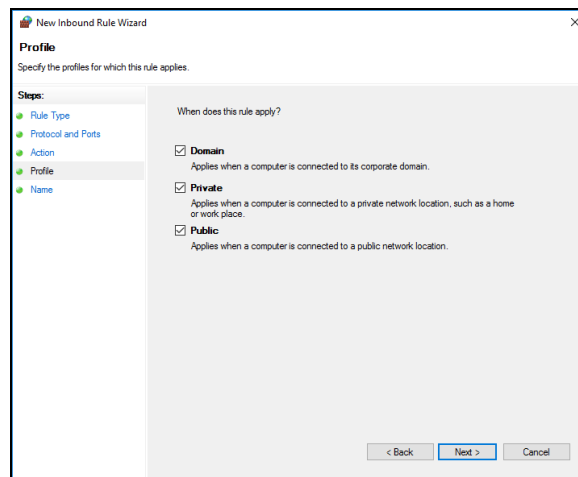
*Figure 45: UDP protocol and specific local ports*

9. On the **Action** page, select **Allow the connection**, and then select **Next**.



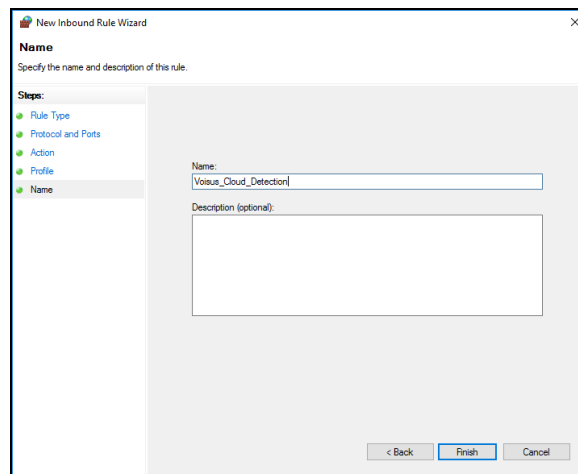
*Figure 46: Allow the connection*

10. On the **Profile** page, select **Domain**, **Private**, and **Public**, and select **Next**.



*Figure 47: Profile check boxes*

11. On the **Name** page, in **Name**, enter a name for the rule (e.g., Voisus Cloud Detection), and then select **Finish**.



*Figure 48: Rule Name*

## 4.5 Scenarios

Each scenario contains customized communications and audio resources for Voisus clients, including the following:

- **Comm Plan:** a collection of virtual communications nets with customizable parameters, such as frequency, waveform modulation type, crypto, and frequency-hopping. Nets fill simulated radios with communication channels.
- **Roles/Radios:** each role is a collection of simulated radios, and each radio consists of one or more virtual nets from the Comm Plan. Roles are assigned to clients.
- **Clients:** **Manage Clients** maps each client to a role, DIS exercise, and other resources in the scenario. To learn more about client management, go to "Manage Clients" in the [Voisus Client User Guide](#).
- **DIS Settings:** set DIS options for a specific exercise. For more information about DIS, go to "DIS Networking" in the [Voisus Client User Guide](#).

The Voisus server runs one scenario at a time, but you can dynamically edit scenarios while they are running. This section discusses how to:

- Add a scenario
- Import or export scenarios

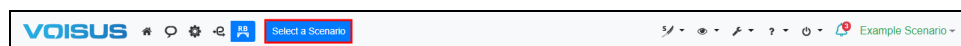
### 4.5.1 Add a scenario

Before Voisus clients can communicate with each other, you must build and run a new scenario in the Voisus web interface. To build and run a scenario, 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:

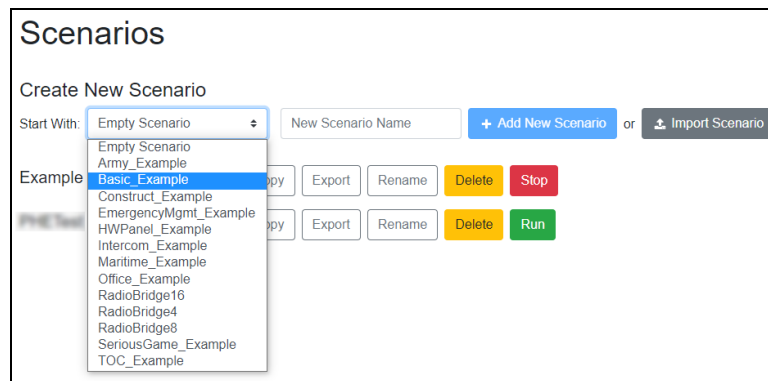
Username	Password
admin	astirules

4. From the top navigation bar, go to [Select a Scenario](#).



*Figure 49: Select a Scenario*

- Under **Create New Scenario**, select **Start with**, and choose a scenario template.



*Figure 50: New scenarios*

The example scenarios come with a Comm Plan, roles, and radios that you can modify as needed.

- In **New Scenario Name**, enter a unique name for the scenario.
- Select **+ Add New Scenario**.
- Select **Run** to run the scenario and **Open** to view/edit its resources. You can dynamically edit scenarios while they are running.

## 5.0 Next steps

After you set up licensing, network settings, and scenarios in the Voisus web interface, you'll need to connect a Voisus client to the Voisus server. For more information about client connection, go to "CONNECTION tab" or "Connect the Voisus Client to the Voisus server" in the [\*Voisus Client User Guide\*](#).

Voisus scenario templates come with a preconfigured Comm Plan, a role, and multiple radios that allow you to communicate right away. However, Voisus 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 and jammers
- Adding new playsounds and sound effects

To learn more about these custom configurations, go to the [\*Voisus Client User Guide\*](#).