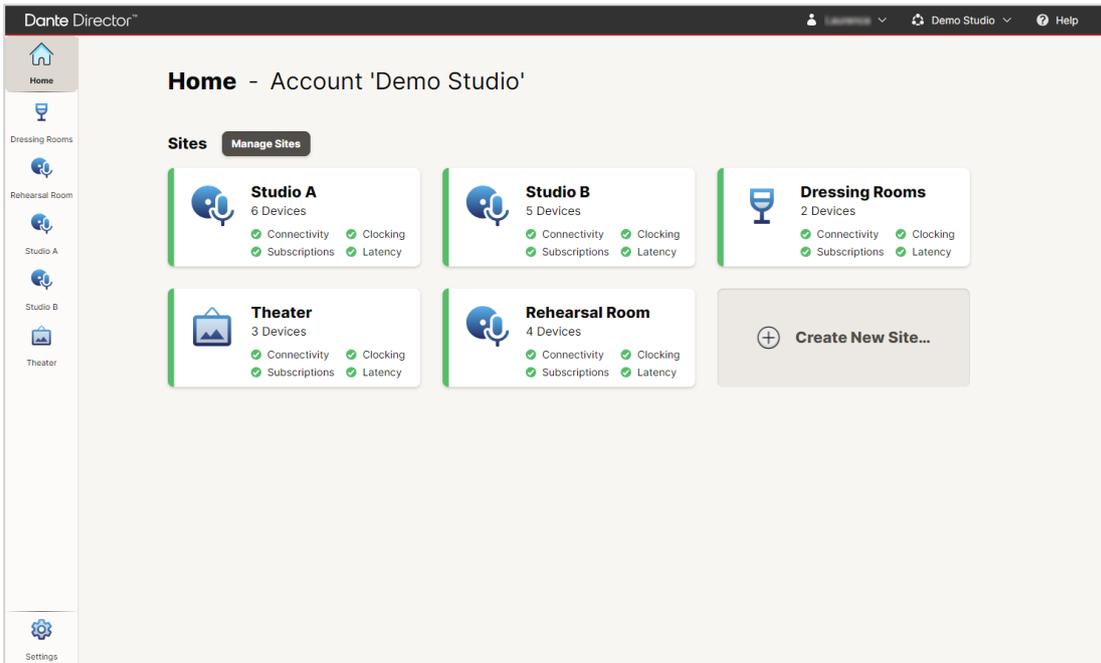


Dante Director

User Guide



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About Audinate

Audinate® is the leading provider of professional AV networking technologies globally. Audinate's Dante platform distributes digital audio and video signals over computer networks, and is designed to bring the benefits of IT networking to the professional AV industry. AV-over-IP (AVoIP) using Dante-enabled products ensures interoperability between AV devices and allows end users to enjoy high quality, flexible solutions – typically with a lower total cost of ownership.

About Dante

One Connection. Endless Possibilities.

Dante replaces all audio and video connections with a computer network, effortlessly sending video or hundreds of channels of audio over slender Ethernet cables with perfect digital fidelity.

Adopted by hundreds of manufacturers in thousands of products, Dante is the de facto standard for modern AV connectivity.

For more information, please visit the Audinate website at getdante.com.

Revision History

Version	Date	Notes
1.41	4th July 2024	Updated with GA features
1.4	16th May 2024	Promoted to GA release; reformatted
1.3	3rd November 2023	Updated for Dante Director release
1.2	17th April 2023	Updated link to Dante Managed API user guide
1.0	27th July 2022	Initial 'Dante Cloud' beta release version

Overview

What is Dante Director?

Dante Director is a cloud-based management platform for Dante devices.

What does Dante Director Do?

Dante Director enables remote access from Dante Controller to any of your Dante networks anywhere in the world that have Internet access. It also provides additional remote network (site) and device management functionality via its own dedicated web UI.

Dante Director allows you to:

- Monitor and manage Dante devices from anywhere
 - Wherever your physical Dante installations are, using Dante Director you can control, configure and monitor those installations at any time from anywhere in the world over a secure HTTPS Internet connection.
- Connect Dante Controller to remote installations
 - Simply connect Dante Controller to your Dante Director account to view and manage any of your Dante installations natively in Dante Controller, as if they were in the same room - with full support for all standard Dante Controller functionality (except Dante Updater, Dante Activator and device plugins for now).
- Manage multiple physically-separated sites
 - You can now control, configure and monitor multiple Dante installations for multiple clients (or projects) in multiple locations - from your office, your home, the road - wherever you can get an Internet connection.
- Route audio between IP subnets
 - [Cross subnet routing](#) (with unicast clocking) allows you to route audio between IP subnets, keeping devices connected but logically separated
- Control user access for Dante configuration
 - Enables you to remotely deny access, enable access or modify permissions for any users, at any time.
- See event history
 - Easily keep track of exactly who did what, where and when, without having to even visit the site.
- Use the Managed API to read Site and device status, and read and change channel subscriptions.
 - Please refer to the [Dante Managed API user guide](#) for more information.

 **Note:** Dante Director does not enable Dante audio transport over the Internet.

Prerequisites

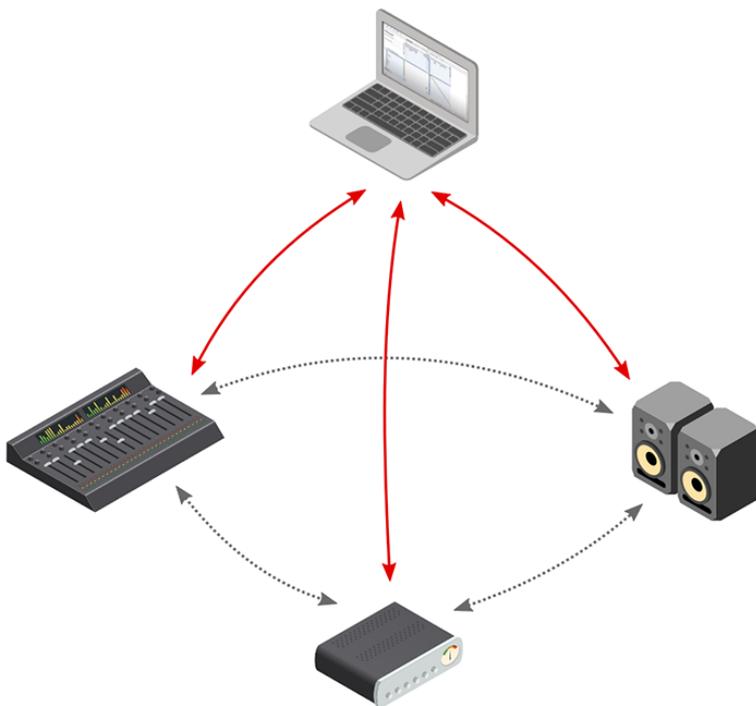
Before using Dante Director, please ensure:

- You have an active Dante Director account (please sign up at getdante.com), and you have set an Admin password
- You have installed the latest version of Dante Controller (available from getdante.com)
- You have updated your Dante devices to the latest firmware available in Dante Updater or from the device manufacturer
- Your Dante network has access to the Internet (see [this FAQ](#) for information about required ports)
- You can access your Dante devices directly via Dante Controller (on the local network) to connect them to Dante Director for the first time
 - Once they have been connected to Dante Director, you will no longer need local network access

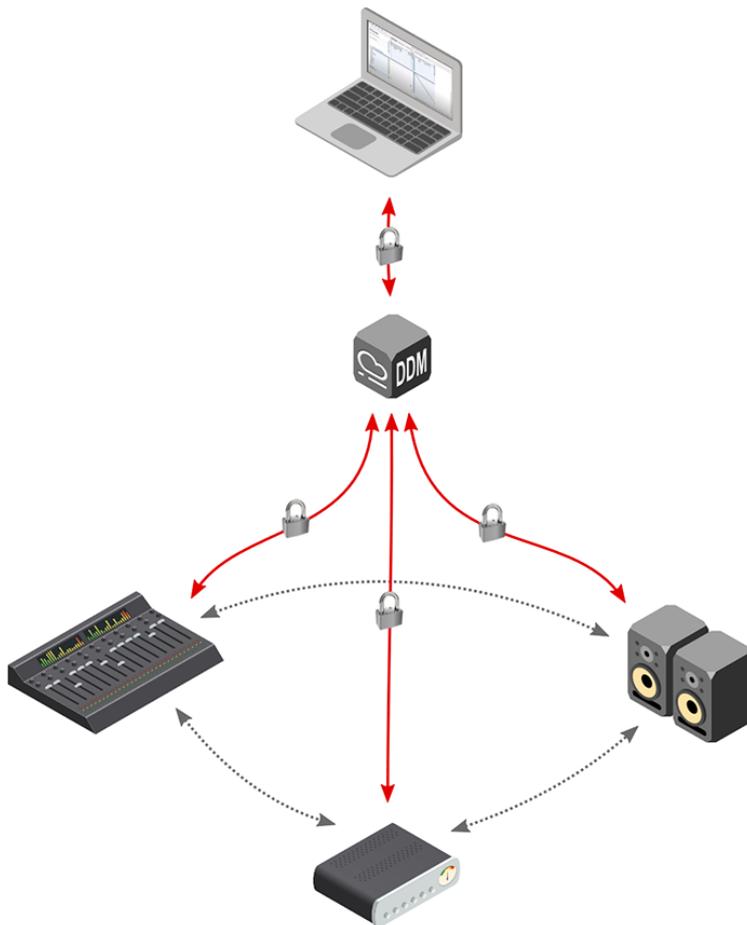
Concepts

Managed Dante

In standard or 'Unmanaged' Dante networks, devices can be discovered and configured directly by any user of Dante Controller on the same physical local network.



In 'Managed Dante', devices are 'enrolled' in the management platform (Dante Director or Dante Domain Manager), then all control and configuration is securely routed through the manager. This allows user access control over configuration, logging of events and a single point of coordination for all devices.



Once devices are configured, they will continue to route media to each other even if the manager is no longer actively connected to the network.

To be compatible with Managed Dante, hardware devices need to have a Dante firmware version of 4.0 or greater.

Sites

A site is a logical grouping of devices on the same local network. Dante Director can support multiple sites within one account.

Dante devices within a site support audio routing to other devices in the same site. Standard Dante label-based routing can be used. All devices within a site are synchronized to the same PTP (network time) clock. Each site is an independent clock domain - this means a change in clocking for a given site does not affect clocking in any other sites.

Multiple sites can co-exist within a single network, but devices in one site do not interact with devices in a different site. Different sites within the same Dante Director account can be on physically-separated networks, including separate geographical locations.

Sites can contain devices in multiple IP subnets, and audio can be [routed between those devices](#) (within the site).

i Note: Sites may sometimes be referred to as Domains, as they serve a similar purpose to Domains in Dante Domain Manager.

Dante Controller and Dante Director

As well as being used locally for unmanaged devices, Dante Controller can connect directly to Dante Director to allow remote management of devices assigned to a site.

For Dante Director, all the device management functionality of Dante Controller works remotely, except for Dante Updater and Dante Activator.

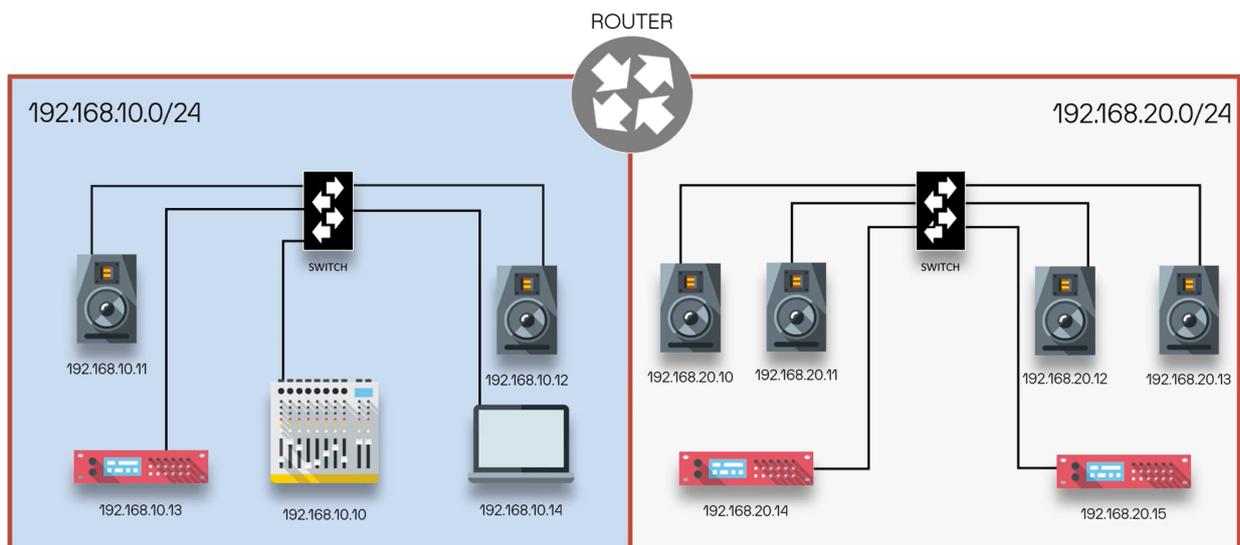
Cross Subnet Routing

Dante Director supports audio routing between Dante devices in different IP subnets.

The devices must all be enrolled in the same site in order to route audio between them. Additionally, at least one device in each subnet must be set to 'Unicast Clocking' to enable cross subnet routing. This can be done automatically or manually via the Clocking page for the site.

A multi-subnet network must be IP-routed: It must include a router, or layer 3 switches configured for inter-VLAN routing. See the managed switch configuration guides at getdante.com for more information about configuring managed switches.

To initially add devices to Dante Director, you must physically connect Dante Controller to each individual subnet. Once the devices have been added and then enrolled in a site, you can use Dante Controller to remotely manage and route audio between the devices in those subnets.



➔ See [Configuring Cross Subnet Routing](#) for more information.

Using Dante Director

Accessing Dante Director

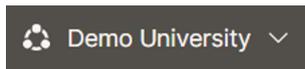
Access to the Dante Director UI is via a web browser at director.dante.cloud.

You can also connect Dante Controller to Dante Director once your account has been set up (see '[Connecting Dante Controller to Dante Director](#)').

You will be prompted to set a password the first time you access the Dante Director UI.

Note: Most Dante Director setup operations can be done remotely, but local network access is initially required to connect Dante devices to your Dante Director account.

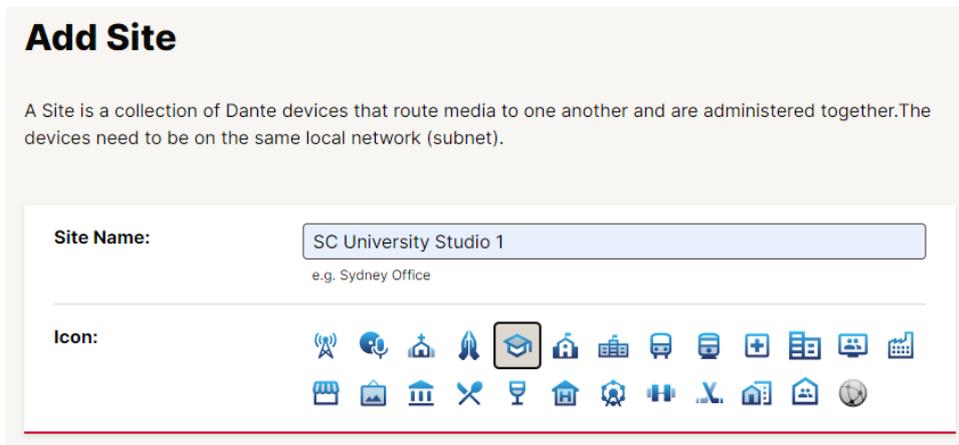
Once logged in, if you have access to multiple accounts from your user login you can switch accounts using the drop-down menu at the top right of the user interface:



Creating a Site

To use Managed Dante, devices need to be assigned to a site. Therefore, the first step in setting up a Dante Director account is to create a site. To do this, click the 'Create New Site...' card on the home page of the Dante Director web UI.

The Add Site page is displayed:



Enter a descriptive name, and select an appropriate icon to represent the type of installation for the site.

Site names need to be unique within a Dante Director account, but multiple sites can use the same icon.

 **Note:** See 'Concepts > [Sites](#)' for more information about sites.

Connecting Dante Controller to Dante Director

 **Note:** The latest version of [Dante Controller](#) is required.

There are two ways to connect Dante Controller to Dante Director: (1) launch Dante Controller from Dante Director (recommended), or (2) log in using Dante Director credentials in Dante Controller.

To launch Dante Controller from Dante Director:

1. Log in to Dante Director (from a machine with Dante Controller installed).
2. Open a site on the Status page.
3. Click the 'Open Dante Controller' button.



4. Accept the system dialog allowing Dante Controller to be launched.

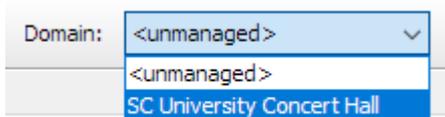
Dante Controller will be opened already connected to Dante Director, with the site selected and devices in that site showing.

To log into Dante Director from Dante Controller:

1. In Dante Controller, click the 'DDM / Dante Director Login' button: 
2. Enter the Dante Director URL: device.director.dante.cloud (port: 443 or 8443) as well as your Dante Director username (email address) and password.

If it's the first time you are connecting to the server, you will see a pop-up in Dante Controller confirming the server security fingerprint.

3. A 'Domain' drop-down menu will appear, allowing you to select the site (currently referred to in this dialog as the 'Domain') to which you want to connect Dante Controller. Select 'unmanaged' to see unmanaged devices on the local network.

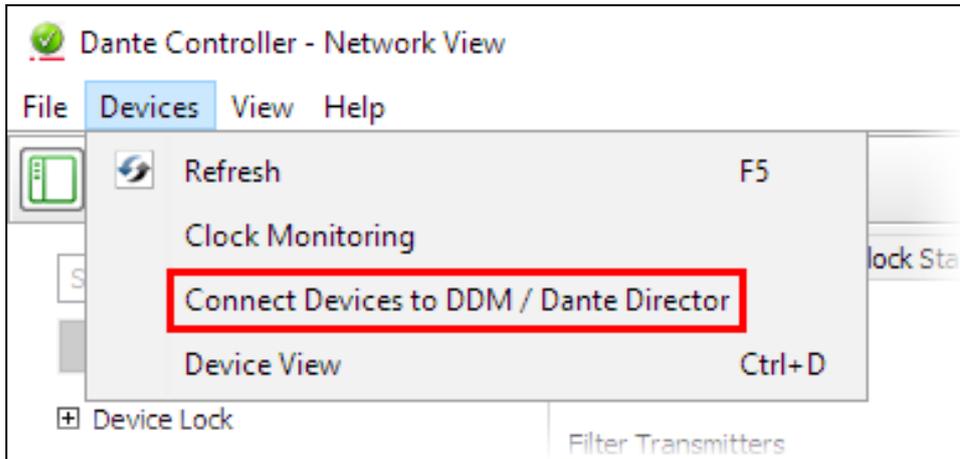


Connecting Devices to Dante Director

Before connecting a Dante device to Dante Director, you will need to run Dante Controller on the same local network as the device. You will also need to have Dante Controller connected to Dante Director (see '[Connecting Dante Controller to Dante Director](#)').

Once Dante Controller is connected to Dante Director and has discovered the unmanaged devices on the local network, these devices can be connected to Dante Director by enrolling them in a site.

1. In Dante Controller, select Devices > Connect Devices to DDM / Dante Director.



2. A dialog will appear allowing you to select the devices that you wish to connect. Select the required devices, and the site you wish to enroll them in, and click **OK**.

These devices should shortly appear in Dante Director in the selected site. You may need to click the 'Refresh'

button in Dante Controller: 



Note: Once these devices have been enrolled in a Dante Director site, they can no longer be seen and managed by standard Dante Controller users on the local network.

Managing Devices Remotely via Dante Controller

Once devices are enrolled in a site within Dante Director, they can be managed remotely via Dante Director or Dante Controller.

To manage your devices in Dante Controller, connect Dante Controller to Dante Director as described in '[Connecting Dante Controller to Dante Director](#)'. Dante Controller does not need to be connected to the same physical network as the devices for this step.

Once connected to Dante Director, you can select a site via the 'Domain' drop-down menu. Devices in the selected site will then appear in Dante Controller, and can be managed and routed as normal.

Adding Additional Users

Additional users can be added to a Dante Director account. Users can be given full administrator access, or restricted to specific sites. Only administrator users can add other users, create sites, and see unassigned devices.

To create a new user:

1. Go to Settings > Users in the Dante Director UI.
2. Provide an email address, and optionally a display name for the new user. Access levels can also be spe-

cified.

3. Click **Add User**.

Add User

Users are able to log into Dante Director and Dante Controller.

Email:

Privileges
Only administrator users can manage users, sites and Dante Director settings.

Site Access:

Full Administrator Access to All Sites

Restricted Access...

Foyer

Meeting room

On creation, the new user will receive an invitation email with a link to set their password and provide additional information about the Dante Director account.

To view site users, select the site from the home page or the main menu, then click **Site Users**.

Unassigning Devices from a Site

To return a device to unmanaged mode, simply unassign it from its site.

In the Dante Director UI:

1. Go to the Devices page for the site to which the device is assigned.
2. Select the device card, and click **Unassign Selected** to return the device to unmanaged mode.

The device will once again be visible to Dante Controller running locally on the same network as the device.

All devices should be unassigned from sites before terminating a Dante Director account.

Viewing the Event Log

An event log is maintained for each individual site.

To view the event log, select the site from the home page or the main menu, then click **Event Log**.

Home | Status | Devices | Site Users | **Event Log**

Event Log

Date & Time	Event	User	Device
27 Jul, 10:31	Device Desk-CH-Monitors enrolled in SC University Concert Hall came back online	--	Desk-CH-Monitors <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:31	Device Stagebox-1-CH enrolled in SC University Concert Hall came back online	--	Stagebox-1-CH <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:31	Device Stagebox-2-CH enrolled in SC University Concert Hall came back online	--	Stagebox-2-CH <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:31	Device Desk-CH-Main enrolled in SC University Concert Hall came back online	--	Desk-CH-Main <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:30	Device Desk-CH-Monitors enrolled in SC University Concert Hall went offline	--	Desk-CH-Monitors <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:30	Device Stagebox-1-CH enrolled in SC University Concert Hall went offline	--	Stagebox-1-CH <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:30	Device Stagebox-2-CH enrolled in SC University Concert Hall went offline	--	Stagebox-2-CH <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:30	Device Desk-CH-Main enrolled in SC University Concert Hall went offline	--	Desk-CH-Main <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:29	Device Desk-CH-Monitors enrolled in SC University Concert Hall came back online	--	Desk-CH-Monitors <small>Ekym-H-PDK (Audinate)</small>
27 Jul, 10:29	Device Stagebox-1-CH enrolled in SC University Concert Hall came back online	--	Stagebox-1-CH <small>Ekym-H-PDK (Audinate)</small>

[Go to First Page](#) | 1 ... [Next >](#)

Site Status

You can site status indicators in the relevant site card on the homepage, and the Status tab of the site page.

Green ticks indicate that there are no detected problems.

See the [Dante Controller User Guide](#) for more information about device and subscription configuration and troubleshooting.

Click the **Add Devices** button to open the 'Connect Devices to DDM / Dante Director' dialog in Dante Controller.

Click **Open Dante Controller** to open the main Network View in Dante Controller.

Connectivity

The Connectivity status displays information about the online status of devices in the site, and any detected device name conflicts.

Subscriptions

The subscriptions status displays information about media subscriptions between devices. Subscription problems can arise from devices going offline, media format mismatches between devices, exceeded transmit flow limits, and various other conditions.

Latency

The Latency status displays information about dropped media packets due to exceeded flow latency settings. Setting higher latencies for your devices or restructuring your Dante network should resolve any latency issues.

Clocking

The Clocking status displays information about the clocking configuration for the site. Errors may occur if there are conflicting clock leaders, or a device is unable to sync with the leader clock for the site.

➔ See '[Configuring Cross Subnet Routing](#)' for related information.

Settings

Sites

Use the Sites page to add new sites, or view, edit and delete existing sites.

Users

Use the Users page to add new users, and edit or delete existing users.

Manage Subscription

Use the Manage Subscription page to modify or cancel your Dante Director subscription.

Account owners can also rename accounts on this page.

Account Log

Use the Account Log page to view all account-level activity you have performed.

Server Details

The Server Details page includes information about the server.

API Keys

Use the API Keys page to add, edit and delete API keys.

➔ See the [Managed API User Guide](#) for more information about API keys.

Support & Feedback

The Support & Feedback page includes a link to the Dante Director support page in the Dante website.

Release Notes

The Release Notes page includes information about new features and bug fixes in the latest Dante Director releases.

Known Issues

The Known Issues page includes information about current known issues, plus links to the service status web page, and FAQs.

User Preferences

Select the drop-down menu at the top right of the UI next to your username to open the User Preferences.

Use the User Preferences page to edit your email address or display name, and to reset your password.

Configuring Cross Subnet Routing

To route audio between devices in the same site but different IP subnets, at least one device in each subnet must be set to Unicast Clocking.

 **Note:** The default clocking protocol for Dante devices is multicast (PTP v1), which synchronises all devices in a single subnet, but cannot be routed between subnets. Unicast clocking (PTP v2) can be routed between subnets, but only directly between individual devices. Typically the unicast clock device in each subnet will then use multicast clocking to synchronise the other devices in its own subnet.

To set up cross subnet routing:

1. First make sure all devices have been added to Dante Director by physically connecting Dante Controller to each subnet and adding the devices as normal.
2. Ensure all the devices are enrolled in the same site.
3. Open the Clocking page for the site.
4. Either:
 - Click 'Auto Configure' - this will automatically assign unicast clocking devices in each subnet; or:
 - Scroll down the page and manually set Unicast Clocking for the devices that you want to act as boundary clocks to transmit PTP v2 clocking between the subnets. You must choose at least one for each subnet, but two is recommended in case one of the devices goes offline. Note that you should typically only have one device set to 'Preferred Leader' for the entire site. In subnets without a preferred leader, the unicast clocking device will act as the clock leader for that subnet.

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