



Dante Domain Manager Legacy Interop Considerations

Technical Note

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Revision History

Revision	Date	Author	Notes
1.3	14 th January 2019	ES	Ultimo / Ultimo X supported versions updated to 3.9.x
1.2	11 th July 2018	ES	Edits for DDM v1.0.3 – legacy devices are now discoverable by DDM.
1.0	14 th Nov 2017	VW	Minor edits
0.1	10 th Nov '17	ES	Initial version

1. Introduction

Legacy Interop is a feature in Dante Domain Manager (DDM) that allows Dante devices with legacy (pre-v4.0) firmware to exchange audio with 4.x devices that are enrolled in a Dante domain ('managed' devices) and on the same subnet.

Legacy Interop requires that communication which is normally restricted to managed devices in the DDM network is shared with unsecured devices in the 'unmanaged' Dante network. This can affect the behaviour of certain features, and the security of the Dante network.

Legacy devices are not enrolled into domains, they are 'associated' with domains. Association configures the PTP subdomain on these devices to match the devices enrolled in the domain, thus allowing audio to be passed between legacy and enrolled devices.

1.1. General Characteristics of the Legacy Interop Feature

1.1.1. Device Support

Legacy Interop is supported by the majority of Dante device types, for a subset of Dante firmware versions, as detailed in the table below.

Minimum versions may exhibit errors when associated due to existing bugs that were present in that release. Supported versions will provide a better user experience – it is recommended that you upgrade to this version if 4.0 firmware for your product is not yet available.

Product / Platform	Minimum	Supported
Brooklyn I	3.7.2	3.7.2
Brooklyn II	3.7.x	3.8.x
Dante-MY16-AUD	3.10.x	3.10.x
Dante-MY16-AUD2	3.10.x	3.10.x

Product / Platform	Minimum	Supported
Dante PCIe Cards	3.7.x	3.10.x
Ultimo (ULT-01-002/4)	2.2.x	3.9.x
Ultimo X (UXT-001-002/4)	3.9.x	3.9.x
Dante HC	3.9.x	3.10.x
Yamaha HY144-D	3.9.x	3.10.x



Note: Legacy support for Ultimo / Ultimo X v3.9 was introduced in DDM v1.0.6

Device types that do not appear in the above table do not support legacy Interop. An error will be displayed in the DDM UI on attempting to associate an unsupported device type or firmware version.

1.1.2. Enabling legacy Interop

Legacy Interop must be enabled globally in the Network & Security settings, and at domain level in the Domain Details page. It is not advisable to enable Legacy Interop at global or domain level if you do not specifically require the feature.

1.1.3. Device Responsiveness for Managed Devices

When legacy interop is enabled, managed (4.x firmware) devices are also affected – this means that they may take longer to respond to common actions such as domain enrolment, and may take longer to appear in Dante Controller.

1.2. Legacy Device Association

1.2.1. IP Address Changes

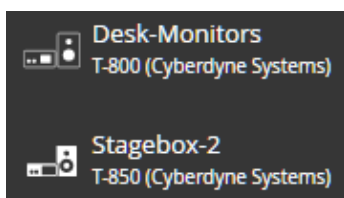
Legacy devices are manually associated with domains via their IP address. This means that changes to their IP address will break the association, and they must be associated again.

Change of IP address can be avoided by:

- Configuring static IP to MAC address mappings in your DHCP server for these devices
- Using static IP configuration for these devices

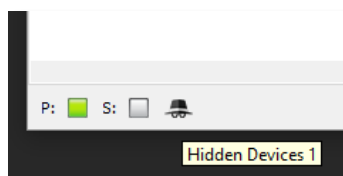
1.2.2. Legacy Device Presence in the DDM UI

Legacy devices are discovered by DDM in the same way as v4.x firmware devices. They are identified with an outlined device icon (the top device in the image below):



1.2.3. Device Presence in Dante Controller

If a legacy device that is still associated with a domain is moved to another Dante network, it will not appear by default in Dante Controller (because it is still configured with a special PTP subdomain). However, in this instance Dante Controller will display an icon at the bottom left of the UI:



To display the hidden device, select View > Show Hidden Devices.

1.2.4. Clearing the DDM Config

Legacy devices do not support the 'Clear config' function on associate / de-associate. To clear a legacy device that is still associated with a domain (i.e. to restore it to the default PTP subdomain):

1. In Dante Controller, select View > Show Hidden Devices.
2. Open the Device View for the device.
3. Select the Device Config tab.
4. Click 'Clear Config'.

1.2.5. Multiple DDM Instances

Because a legacy device does not locally store information about its association with a domain, it could be associated with a second DDM instance on the same subnet. However, only one of the associations will be functional.

1.3. Name Conflicts

It's possible for a managed (4.x) device in a domain with Legacy Interop enabled to have a silent name conflict with an unmanaged device in the same subnet.

As a consequence, subscriptions from a legacy device to the managed device may fail, as the subscriptions are actually directed to the other device with the same name. The reported subscription error will usually be 'mismatched clock domain', but other errors are possible.

To resolve the conflict, rename one of the affected devices, and power cycle both devices.

1.4. Audio Subscriptions and Flows

Legacy devices associated with a domain can exchange audio only with managed devices in that domain in the same subnet.

To set up subscriptions, Dante Controller must be connected to the same subnet as the legacy device.

If legacy devices are subscribed to a 4.x transmitter which is subsequently enrolled (without associating the legacy receivers), audio may continue to be received by the legacy receivers for several minutes.

1.5. Using Dante Controller with Legacy Devices

The latest (4.x) version of Dante Controller typically only displays associated legacy devices when connected to the relevant domain and the same subnet (the exception being when 'Show Hidden Devices' is enabled). User access controls (roles) applied by DDM to that domain will be implemented by Dante Controller – i.e. only users with the requisite domain permissions will be able to view an associated legacy device.

Older versions (3.10 and earlier) of Dante Controller do not support DDM's user access controls, meaning that they will always display legacy devices (in the same subnet), and users of that Dante Controller version will be able to freely configure those devices.

One implication of this is that a user of a legacy Dante Controller, or a third-party controller, could change the master clock for a domain to a legacy device and potentially disrupt clocking for the entire domain.

1.6. Reporting for Legacy Devices

Legacy devices support the following dashboard alerts:

- Connectivity – i.e. device comes online / goes offline
- Reboot required (to clear AES67 / pull-up configuration on associate)
- Device has a name conflict with another legacy device

Legacy devices support the following audit log entries:

- Association / disassociation
- Devices comes online / goes offline
- Reboot is required
- A name conflict with another legacy device exists / was cleared