Dante Domain Manager
Quick Start Guide

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# Contacts

**Audinate Pty Ltd**  
Level 1, 458 Wattle Street  
Ultimo NSW 2007  
AUSTRALIA  
Tel. +61 2 8090 1000

**Postal address**  
Audinate Pty Ltd  
PO Box 855  
Broadway NSW 2007  
AUSTRALIA

**Audinate Inc**  
1200 NW Naito Parkway  
Suite 630  
Portland, OR 97209  
USA  
Tel: +1 503 224 2998  
info@audinate.com  
www.audinate.com

**European Office**  
Audinate Ltd  
Suite 104  
Werks Central  
15-17 Middle St  
Brighton, BN1 1AL  
United Kingdom  
Tel. +44 (0) 1273 921695

**Asia Pacific Office**  
Audinate Limited  
Suite 1106-08, 11/F Tai Yau Building  
No 181 Johnston Road  
Wanchai, Hong Kong  
澳迪耐特有限公司  
香港灣仔莊士敦道181號  
大有大廈11樓1106-8室  
Tel. +(852)-3588 0030  
+(852)-3588 0031  
Fax. +(852)-2975 8042
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1. Network Configuration

Dante Domain Manager (DDM) supports automatic device discovery using DNS or mDNS, and also manual device enrollment via IP address.

DNS and DHCP addressing is recommended for multi-subnet systems.

mDNS and link-local addressing is recommended for single-subnet systems.

Device enrollment via IP address can be used for multi-subnet systems that require static addressing (for example, to support third-party network control software).

**Note:** When using static addressing, the devices and the DDM server must be assigned static addresses, either locally (where DHCP is not used) or via static address mapping in DHCP.

1.1. Multi-subnet systems

If your network spans multiple IP subnets, you can use a DNS server to resolve the DDM server address for your Dante devices and controllers, and a DHCP server to automatically configure your Dante devices.

Static addressing and manual device enrollment via IP address can also be used, but it is not practical for networks with large device counts.

DISCOVERY OPTIONS FOR MULTI-SUBNET SYSTEMS

- DHCP + DNS (recommended)
- Static addressing + manual enrollment (not suitable for large device counts)

Refer to the DDM user guide for more information about bootstrapping Dante devices and controllers, including DNS and DHCP setup.
1.2. Single-subnet systems

For networks that reside on a single subnet, link-local addressing and mDNS-based discovery is recommended. The mDNS discovery feature (Dante Discovery Service) is on by default, and does not need to be activated or configured.

2. Installing DDM

2.1. Overview

DDM is packaged as an ISO file, which includes a streamlined Linux distribution which has been pre-configured for the DDM application.
To install DDM you can create a bootable USB drive (for installing DDM on a bare-metal machine, for example) or import the ISO directly into a virtualization platform such as Oracle VirtualBox® or VMWare ESXi®. You can also burn the ISO image to a DVD.

2.2. Creating a Bootable USB Drive

2.2.1. In Windows

There are various applications available for creating bootable USB drives in Windows. Rufus (https://rufus.ie/) is a popular (free and open-source) application, but there are other alternatives that may be more suitable for your own environment.

**Note:** Do not change the volume label.

When prompted, after clicking ‘START’, select ‘DD Image mode’ (not ‘ISO Image mode’) for writing.

2.2.2. In Linux

The industry-recommended method for creating a bootable USB drive in Linux is by using dd. The following instructions are adapted from the Centos instructions.

- Assuming your USB stick is seen as /dev/sdb:

  ```
  dd if=[filename].iso of=/dev/sdb
  ```

- You must write to the entire device, and not a partition on it (so, /dev/sdb not /dev/sdb1).

- When asked for the media to install from, select ‘Hard disk’ and then the device corresponding to the USB key.

- Make sure you select as destination the device corresponding to the USB key (/dev/sdb in the above example) and not a partition (such as /dev/sdb1).

2.2.3. Booting from USB

Once you have created a bootable USB drive, you must instruct the target computer BIOS to boot from the USB drive.

Computer manufacturers use many different BIOS implementations – refer to the instructions for your particular computer to find out how to configure the BIOS.

2.2.4. Importing the ISO Directly into a Virtualization Platform

ISO files are supported by all major virtualization platforms. Refer to the user guide for your particular platform to find out how to import an ISO file.

The process for installing in VirtualBox is described in ‘Appendix DDM Installation Instructions for Oracle VirtualBox’ below.
2.2.4.1. System Requirements for Hypervisors

The licensing model for DDM includes three editions: Silver, Gold, and Platinum. Each edition supports a different number of devices and domains, and the hypervisor must be configured to provide sufficient system resources for the virtual appliance based on the product edition.

- For the Silver and Gold editions, the virtual appliances require a minimum of 2 CPUs and 4GB of RAM.
- For the Platinum edition, the virtual appliances require a minimum of 2 CPUs and 8GB of RAM. For systems that include more than 200 devices, 16GB of RAM is recommended.

The physical host machine on which the hypervisor is installed must also meet the above specifications (with additional capacity for any other applications).

Start Menu

The startup script displays a dialog showing the Dante interface and the IP address for the VM, plus a configuration menu.

2.3. Network Diagnostics

The Network Diagnostics function performs a set of high-level tests to establish the status of some basic network configuration parameters relevant to the DDM server. Refer to the Network Diagnostics Results page in the DDM user guide for more information.

The license server is at https://software-license-ddm.audinate.com on port 443.

2.4. Set Hostname

Use this option if you specifically need to change the hostname (for example, if you are running two DDM servers on the same subnet).

2.5. Configure Interfaces

This feature allows you to specify the network interface that DDM will use to connect to the network.

2.6. Set NTP Servers

This feature allows you to specify up to four NTP (Network Time Protocol) servers.

By default, the virtual machine on which DDM is installed will derive its time from a public NTP server on the Internet, unless one or more alternative NTP servers are specified here.

Note: If your DDM system is configured to use HA and your network is not connected to the Internet, specifying an alternative NTP server is a requirement to ensure accurate database replication.

2.7. Set Update Key

Use this function only if instructed to by Audinate technical support.
2.8. Fix LMX Time Gone Backwards

Use this function only if instructed to by Audinate technical support.

2.9. Shutdown/Reboot

Use this option to shut down or reboot the DDM instance.

2.10. Quit

Closes the start menu and returns you to the VM main console.

3. Licensing and Setup

1. Open up a web browser on a device connected to the virtual machine and navigate to http://<Virtual Machine IP address>
2. The initial screen presents the End User License Agreement (EULA). Read the EULA and click “I Accept” to proceed.
3. The following screen allows you to select between starting with a fresh installation, or restoring your configuration from a backup of an existing system. Choose the ‘Fresh Installation’ option (unless you have a saved configuration that you want to restore).
4. Step 1 of the installation wizard allows you to upload and use your own TLS certificate to secure the Dante Domain Manager. This configuration can be skipped for now and accessed later under Settings. If you want to use a TLS Certificate, refer to the DDM User Guide for more information.
5. Step 2 of the wizard allows you to set the administrator user’s password. Enter and confirm the password, generate and record the recovery code, and click Submit to proceed to the next step.
6. Step 3 of the wizard prompts you to enter your Dante Domain Manager product key to license the product. Enter your product key and click Activate to proceed. Note: This step requires the DDM to have an active internet connection.
7. Step 4 of the wizard allows you to create your first Dante Domain. Enter the name of the Domain and click Submit to complete the wizard. You can easily delete this domain and add new domains later.
8. You are now ready to begin enrolling devices in your newly created domain via the devices page.
9. After enrolling devices, launch Dante Controller and click on the Domains icon on the far right of the toolbar.
10. Enter the host details and login details for your Dante Domain Manager in the domain connection dialog, and click Connect to view and configure the domain-connected devices. Use the drop-down menu to select different domains.
4. Appendix

4.1. DDM Installation Instructions for Oracle VirtualBox

To install a DDM ISO image in Oracle VirtualBox v6:

1. Go to New, to create a new Virtual Machine (VM).
2. Type a name for the DDM VM – for example, DDM v1.1.
3. Set the memory size to 4GB (4096 MB).
4. Click Create.
5. On the next screen, set the File size to 10 GB.
6. Click **Create** again.

![Create Virtual Hard Disk](image)

7. Go to Settings > **Storage**.

8. Select the ‘Empty’ device, and click the disk icon in the Attributes panel.

![DDM 1.1A - Settings](image)

9. Select ‘Choose Virtual Optical Disk File’.

10. Browse to the DDM ISO file and click **Open** to select the file.

11. Click **OK**.

12. Click **Start**.

13. In the VM start screen, hit Enter to start the installation process. The process will take a few minutes.
Note: If the screen goes black during installation, the installation will still progress, but you can press the space bar to cancel the screensaver.

14. When the installation process has finished (‘Installation complete’), press Enter to quit.

15. Close the VM.

16. In VirtualBox, go to **Settings > System** for the VM and change the Boot Order so that ‘Hard Disk’ is at the top.
17. Select the Network tab and change Adapter 1 to ‘Bridged Adapter’.

![Image: Network settings with Bridged Adapter selected]

18. Ensure the correct network interface is selected (when installing, this should be an interface to a network that has Internet access, to allow online activation).

19. Click **OK**.

20. Start the VM and follow the prompts to install DDM.