# Dante Domain Manager

# Hyper-V Installation Instructions

v1.4

26<sup>th</sup> Feb 2024



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# 1. Installation Instructions for Hyper-V

# 1.1. Overview

Dante Domain Manger (DDM) is packaged as an ISO file, which includes a streamlined Linux distribution which has been preconfigured for the DDM application.

To install DDM you can create a bootable USB drive (for installing DDM on a bare-metal machine) or import the ISO directly into a virtualization platform. This guide will walk through importing the ISO file and creating a virtual machine in Hyper-V.

# 1.2. 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 machine based on the product edition.

- The Silver and Gold editions require a minimum of 2 CPUs, 20GB disk space and 4GB of RAM.
- The Platinum edition requires a minimum of 2 CPUs, 20GB disk space 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 and Hyper-V system requirements: <u>Windows Server</u> or <u>Windows 10</u> (with additional capacity for the OS and any other applications).

Important Note: Audinate recommends installing DDM software on server grade hardware. Installing DDM onto personal computer hardware running an OS (Windows, MacOS, Linux) may not be suitable for a production environment or permanent installation.

### 1.3. Enabling Hyper-V in Windows Server

- 1. In the Server Manager Window click Manage then Add Roles and Features.
- 2. On the Installation Type page of the Add Roles and Features Wizard select *Role-based or feature-based installation* then click *Next*.
- 3. On the Server Selection page select the server you wish to add Hyper-V to.
- 4. On the Server Roles page select *Hyper-V*. In the window that pop-ups click *Add Features* then click *Next*.
- 5. On the **Features** page don't make any changes and click *Next*.
- 6. On the **Confirmation** page click *Install*.
- 7. On the **Results** page wait for the Installation to complete and then click *Close*.

#### 1.4. Enabling Hyper-V in Windows 10

#### Not recommended for production environments or permanent install.

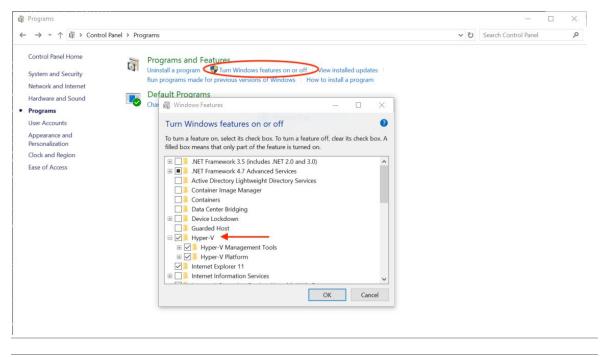
If Hyper-V is not already enabled on your Windows 10 machine, the following steps explain how to enable Hyper-V. If you already have Hyper-V enabled or are installing on a Hyper-V server skip to the next section.

#### **Hyper-V Requirements**

- o Windows 10 Enterprise, Pro, or Education
- 64-bit Processor with Second Level Address Translation (SLAT)
- o CPU support for VM Monitor Monde Extension (VT-c on Intel CPUs)
- Minimum 4 GB memory

Note: Hyper-V cannot be installed on Windows 10 Home and you will need more than 4GB memory total to successfully run DDM on a Windows machine.

- 8. Right click on the Windows button and select 'Apps and Features'.
- 9. Select **Programs and Features** on the right under related settings.
- 10. Select Turn Windows Features on or off.
- 11. Select Hyper-V and click OK.
- 12. When the installation has completed you will be prompted to restart your computer.



Steps 3 and 4, Turn Windows Features on or off and Select Hyper-V

# 1.5. Creating a DDM Virtual Machine in Hyper-V

- 1. Launch Hyper-V Manager (not Hyper-V Quick Create).
- 2. In Hyper-V Manager click **Connect to Server...** from the right column.
- 3. In the window that pops up select **Local computer** (*if you are installing DDM on the local machine*). Then click **OK**.

Hyper-V Manager	- 0	$\times$
File Action View Help		
🗢 🄿 📅 📝 🖬		
🕎 Hyper-V Manager	Hyper-V Manager provides the tools and information you can	
	use to manage a virtualization server. Hyper-V Manager	<b></b>
	Connect to Server	
	Introduction View	•
	A virtualization server is a physical computer that provides the resources required to run virtual machines. You can use Hyper-V Manager to create, configure, and manage the virtual machines on a	
	Virtu Select Computer X You	
	Connect to virtualization server     Provide Cancel      OK Cancel	
Opens a dialog that allows you to con	nnect to a specified virtualization server.	

4. Select **New** then **Virtual Machine...** from the right hand column

Hyper-V Manager							- 🗆 ×	
File Action View Help								
Hyper-V Manager	-					Actions		
DESKTOP-01U878E	Virtual Machines				DESKTOP-01U878E			
	Name	State	CPU Usage	Assigned Memory	Uptime	Quick Create		
		No virtual machin	es were found on	this server.		New New	•	Virtual Machine
						强 Import Virtual Machine		Hard Disk
						Hyper-V Settings		Floppy Disk
						Virtual Switch Manager		
						🔒 Virtual SAN Manager		
						Edit Disk		
						Inspect Disk  Stop Service		
						X Remove Server		~
	<					🖏 Refresh		B
	Checkpoints					View	•	
	Details					👔 Help		
		Ne	item selected.					
		NO	item selected.					
Displays the New Virtual Machine Wiz	<				>			

5. The New Virtual Machine Wizard window will open. On the first page give your virtual machine a **Name** and click **Next**.

🖳 New Virtual Machine Wi	zard
Specify Na	me and Location
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Obtions	Choose a name and location for this virtual machine. The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you easily identify this virtual machine, such as the name of the guest operating system or workload. Name: DDM You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server. Store the virtual machine in a different location
Installation Opports	Location:         C:\ProgramData\Wirrosoft\Windows\Hyper-V\         Browse           ▲         If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space.
	< Previous Next > Finish Cancel

6. On the second page specify **Generation 1** and click **Next**.

🖳 New Virtual Machine Wiza	rd ×
Specify Gene	eration
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	<ul> <li>Choose the generation of this virtual machine.</li> <li>Generation 1         This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V.         Generation 2             This virtual machine generation provides support for newer virtualization features, has UEFI-based from example and example of the previous versions of Hyper-V.         Once a virtual machine has been created, you cannot change its generation.     </li> </ul>
	< Previous Next > Finish Cancel

7. On the third page assign the appropriate memory based on the DDM edition and number of devices. (see "1.2 System Requirements for Hypervisors" Minimum: 4096 MB)

Static memory is recommended. Uncheck the 'Use dynamic memory for this virtual machine'.

Then click Next.

New Virtual Machine Wiza	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 251558240 MB. To improve performance, specify more than the minimum amount recommended for the operating system. Startup memory: <u>4096</u> MB Use Dynamic Memory for this virtual machine. When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.
	< Previous Next > Finish Cancel

8. On the fourth page select **Default Switch** from the drop-down menu then click **Next**. (*Note: If you* connect to your Dante network or the Internet with a non-built-in network adapter you may need to add that interface in the **Virtual Switch Manager** then edit your DDM virtual machine **Settings** to add the new Virtual Switch.)

🖳 New Virtual Machine Wizar	4 ×
🕮 Configure Ne	tworking
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected. Connection: Default Switch
	< Previous Next > Finish Cancel

9. On the fifth page select Create a virtual hard disk and specify Size then click Next. (Minimum: 20 GB)

🖳 New Virtual Machine Wiz	ard	×
🐸 Connect Vir	tual Hard Disk	
Before You Begin Specify Name and Location Specify Generation Assign Memory	A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties. Create a virtual hard disk Use this option to create a VHDX dynamically expanding virtual hard disk.	
Configure Networking Connect Virtual Hard Disk	Name: DDM.vhdx	
Installation Options Summary	Location: C: Users Public/Documents/Hyper-V/Virtual Hard Disks\ Browse Size: 20 GB (Maximum: 64 TB)	
	<ul> <li>Use an existing virtual hard disk</li> <li>Use this option to attach an existing virtual hard disk, either VHD or VHDX format.</li> </ul>	
	Location: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\ Browse	
	<ul> <li>Attach a virtual hard disk later</li> <li>Use this option to skip this step now and attach an existing virtual hard disk later.</li> </ul>	
	< Previous Next > Finish Cancel	

10. On the sixth page select **Install an operating system from a bootable CD/DVD-ROM** then select **Image File (iso)**, **Browse...** to locate your DDM ISO image then click **Next**.

🖳 New Virtual Machine Wiza	rd	×
🖳 Installation	Options	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	You can install an operating system now if you have access to the setup media, or you can install it later.  Install an operating system later  Install an operating system from a bootable CD/DVD-ROM  Media  Physical CD/DVD drive:  Install an operating system from a bootable floppy disk  Media  Virtual floppy disk (.vfd):  Install an operating system from a network-based installation server	
	< Previous Next > Finish Cance	I

11. Review your setup on the Summary page then click Finish.

12. With your DDM Virtual Machine selected in the Virtual Machines list click **Settings...** in the right-hand column.

Hyper-V Manager							-		×	
File Action View Help										
🗢 🔿 🙍 📰 🔯 📷										
Hyper-V Manager	Virtual Machines			Actions						
ESKTOP-01U878E	Name	State	CPU Usage	Assigned Memory	DESKTOP-01U878E					
	DDM	Off	er o osage	Assigned Memory	Uptime	🖳 Quick Create				
						New			•	
						强 Import Virtual Machine				
						Hyper-V Settings				
						🚰 Virtual Switch Manager				
						🔒 Virtual SAN Manager				
						🚄 Edit Disk				
						🖃 Inspect Disk				
						Stop Service				
	<			_		× Remove Server				
				🔁 Refresh						
	Checkpoints			View		•				
	DDM			🛛 👔 Help						
	Created:		5/17/2019 10:35:33	AM Clustered: N	-	DDM			•	
		ation Version:		Clustered. In	0	📲 Connect				
	Generati		1			Settings				
	Notes:		None			( Start				
						🔂 Checkpoint				
						P Move				
	Summary Memory Network	ing				Export				
	<				>	🛒 Rename			~	

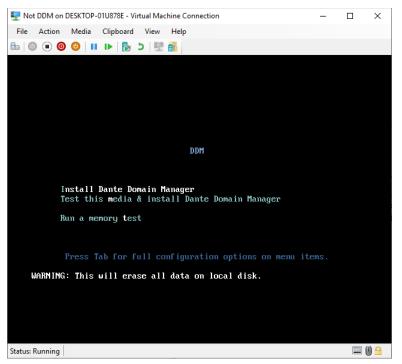
In the Settings window click Processor in the left-hand column and specify Number of virtual processors based on the DDM edition and number of devices. (Minimum: 2) Click Apply then OK to close the Settings window.

DM	$\sim$	ব ⊨ 0
Hardware	^	Processor -
Add Hardware		
BIOS		You can modify the number of virtual processors based on the number of processors on the physical computer. You can also modify other resource control settings.
Boot from CD		
Security Key Storage Drive disabled		Number of virtual processors: 2
Memory		Resource control
4096 MB		You can use resource controls to balance resources among virtual machines.
Processor		Virtual machine reserve (percentage): 0
2 Virtual processors		Percent of total system resources:
Hard Drive		Percent of total system resources: 0
DDM-testing.vhdx		Virtual machine limit (percentage): 100
IDE Controller 1		
DVD Drive		Percent of total system resources: 25
ddm-1.1.0.16.iso		Relative weight: 100
SCSI Controller		Relative weight:
📱 Network Adapter		A Hyper-V is not configured to enable processor resource controls.
Default Switch		
COM 1		Learn more about Hyper-V processor configuration options.
None		
COM 2 None		
Diskette Drive		
None		
Management		
1 Name		
DDM		
Integration Services		
Some services offered		
Checkpoints Standard		
Standard Smart Paging File Location		
C: \ProgramData \Microsoft \Wi		

14. Now click **Connect...** to launch the Virtual Machine console and click **Start** in the console window that pops up to start the installation process.

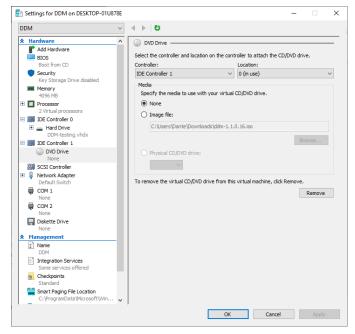
🖳 DDN	VI on DESK	TOP-01U8	78E - Vii	tual Ma	achine Co	nnection				-	×
File	Action	Media	View	Help							
fi   🕑		©   II		5 B	1						
				The v	rirtual ma	achine 'D	DM' is	turned o	off		
			To sta	art the vi	irtual mach	ine, select	'Start' fro	m the Acti	on menu		
						Start					
Status: O	Off										

15. On the DDM Installation screen make sure Install Dante Domain Manager is highlighted and hit enter.



16. Let the installation process run until you see the message: **Installation Complete**. Rather than press return to quit (*as suggested on screen*) click the **Shut Down** button so you don't end up in an install loop.

17. Go the Virtual Machine's **Settings** window again this time click on **DVD Drive** and change the selection to **None**, click Apply then **OK**.



- 18. Click **Start** to boot up the virtual machine.
- 19. Once booted up the start-up script displays a dialog showing the Dante interface and the IP address for the VM, plus an administration menu. Make any changes needed in the administration menu, open up a web browser and navigate to the IP address, then follow the steps to complete DDM setup and licensing.
- 20. More information on the Administration Menu options and licensing process is available in the <u>Dante</u> <u>Domain Manager Quick Start Guide</u>.