



# Denodo 8.0 Enterprise for Azure - Quick Start Guide

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[Denodo Platform](#), the data virtualization leader for unifying enterprise data and delivering data services for the business, is available on Azure as a pay as you go (PAYG) virtual machine (VM).

Thank you for your confidence in Denodo and for choosing the [Denodo for Azure](#) as your data virtualization technology!

This quick start guide will give you an overview of Denodo and how to quickly start building data virtualization solutions on Azure.

## 1 MARKETPLACE OFFERING OVERVIEW

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The Denodo Enterprise for Azure VM is based on a pay as you go (PAYG) model under your Azure account.

The hourly/pay-go subscription pricing is for the Denodo server (aka VDP - Virtual Data Port server), while the infrastructure (compute, storage) charges are separate and the user's responsibility.

Therefore it is expected that you already have an Azure subscription with an associated Billing Account that you can use to logon to the Azure Marketplace in order to subscribe, create and launch the Denodo Enterprise virtual machine through the Azure Portal.

For annual subscriptions, we highly recommend a private offer. The [Denodo Enterprise for Azure Annual subscription](#) includes the Denodo Solution Manager and a Denodo license for a development server. Kindly reach out to [cloud.solutions@denodo.com](mailto:cloud.solutions@denodo.com) or your account manager for more details about the private offer.

The Denodo Enterprise offer on Windows Server consists of:

- The Denodo Virtual DataPort (VDP), the core Denodo Data Virtualization engine, to integrate data from any data source and deliver it to any consumer in any format.
- The Denodo Scheduler, for scheduling data pipelines and cache loads among other tasks.
- The Denodo Data Catalog webtool to enable self-service and data discovery for end users.
- Additional tools for administering and developing like the Denodo Design Studio webtool and the Denodo VDP Administration Tool.

In the sections below you can find more information on how to deploy.

NOTE: this offering does not require a Denodo Solution Manager with a Denodo License Server to run the VDP services in the VM; the Solution Manager is an optional component and can be deployed separately, depending on your needs. There is no extra charge for it.

## 2 DEPLOY THE DENODO ENTERPRISE VM

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### 2.1 OVERVIEW

You must have an Azure subscription with a valid payment method. You are responsible for operating your own Azure subscription. You can create and launch your Denodo Enterprise for Azure PAYG VM using that Azure subscription.

As a summary of the instructions you will need to complete the following steps:

1. Use your Azure Subscription to subscribe to the Denodo Enterprise on the Azure Marketplace
2. Create the VM
3. Log into the Design Studio Web Tool
4. Log into the Scheduler Admin Web Tool
5. Log into the Data Catalog Web Tool
6. Register for Denodo Support

Note: The Azure Portal interface is subject to change and the exact options you see may change depending on your Azure account profile.

### 2.2 STEP 1 - SUBSCRIBE TO DENODO ENTERPRISE FOR AZURE ON WINDOWS SERVER

You are responsible for operating your own Azure subscription.

You can create and launch your Denodo Enterprise for Azure solution app using your Azure subscription.

Log on to the Azure Marketplace, search for the [Denodo Enterprise for Azure \(Hourly\) offer](#) and click on the Get It Now button.

Then you will go to Azure Portal



## Denodo Enterprise (Hourly)

Denodo

Create

Start with a pre-set configuration

Want to deploy programmatically? [Get started](#)

Overview

Plans + Pricing

Usage Information + Support

Re

Denodo Enterprise is a significant step forward to achieve the architectural data to business applications, in the most appropriate format for each cons

Denodo Enterprise for Azure helps you to accelerate your time-to-insight a data or perform any ETL (Extract Transform, Load) processes. Denodo Enter

Denodo's data virtualization provides real-time integrated views that can c or as data APIs.

Global Fortune 500 companies, financial institutions, and public organizatio

### Key Features:

- 150+ out-of-the-box connectors to quickly connect sources and targ
- An integrated, web-based experience across all tools with SSO supp
- Data catalog to enable self-service and data discovery for business u
- Design Studio tool for developers, providing ease-of-use across all c
- Apache Zeppelin for Denodo Notebook: data scientists can construc

We recommend that for an initial evaluation or testing you follow the “Start with a pre-set configuration” path. Next chapters will be based on that option.

### 2.3 **STEP 2 - DENODO ENTERPRISE VM CREATION**

You have to complete some few configuration steps in order to launch the Denodo VM through the Azure console.

## Choose recommended defaults that match your workload ...

To quickly customize your virtual machine, choose one of the following pre-set configurations. You can modify these configurations at any time.

### Select a workload environment

Dev/Test	Production default
<input checked="" type="checkbox"/> Boot diagnostics	<input checked="" type="checkbox"/> Boot diagnostics
<input checked="" type="checkbox"/> High availability	<input checked="" type="checkbox"/> High availability
<input checked="" type="checkbox"/> Azure backup (where available)	<input checked="" type="checkbox"/> Azure backup (where available)


### Select a workload type

General purpose (D-Series) default	Memory optimized (E-Series)	Compute optimized (F-Series)
<input checked="" type="checkbox"/> <b>Example sizes</b> DS2_v2: 2 CPU, 7 GB DS3_v2: 4 CPU, 14 GB	<input checked="" type="checkbox"/> <b>Example sizes</b> E2s_v3: 2 CPU, 16 GB E4s_v3: 4 CPU, 32 GB	<input checked="" type="checkbox"/> <b>Example sizes</b> F2s_v2: 2 CPU, 4 GB F4s_v2: 4 CPU, 8 GB
<input checked="" type="checkbox"/> Fast CPUs with optimal CPU-to-memory configuration	<input checked="" type="checkbox"/> High memory-to-core ratio optimized for heavy in-memory applications	<input checked="" type="checkbox"/> High CPU-to-memory ratio optimized for compute intensive workloads
<input checked="" type="checkbox"/> <b>Workload types</b> Enterprise applications, relational databases, analytics	<input checked="" type="checkbox"/> <b>Workload types</b> SAP HANA, SQL Hekaton, other large in-memory workloads	<input checked="" type="checkbox"/> <b>Workload types</b> Batch processing, web servers, gaming

Select Dev/Test and General Purpose. Then “Continue to create a VM”.

## Create a virtual machine ...

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Advanced](#) [Tags](#) [Review + create](#)

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#) 














### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * 	Pay-As-You-Go 
Resource group * 	(New) Resource group 

[Create new](#)

### Instance details

Virtual machine name * 	
Region * 	(Europe) UK West 
Availability options 	No infrastructure redundancy required 
Security type 	Standard 
Image * 	 Denodo 8.0 Enterprise VDP Hourly on Windows - Gen1  <a href="#">See all images</a>   <a href="#">Configure VM generation</a>
Azure Spot instance 	<input type="checkbox"/>
Size * 	Standard_D4_v3 - 4 vcpus, 16 GiB memory (\$11,253.68/month) 

[See all sizes](#)

### Parameters needed to create the VM:

- Resource Group. The recommendation is to create a new one for evaluation / testing purposes. Note that the name of the Resource Group will be the initial password for the *admin* user in all Denodo services and tools.
- VM name.
- Region. Select the region you prefer and take into account you have quote available to launch the VM.
- Availability: No infrastructure redundancy required
- Security: Standard.
- Administrator Account. This is the username and password for managing the VM Windows Operating System, not the username to log in Denodo tools.

Then click on “Review + Create”

In the next screen, click on “Create”

In around 10 minutes your VM will be ready.

## 2.4 **STEP 3 - LOG INTO THE DESIGN STUDIO WEB TOOL**

The Design Studio provides a web interface to the developers to create data sources, base views, derived views, publish web services, etc.

Check first the list of [Supported Browsers for the Design Studio tool](#). The VM is based on a Windows Server and it comes with Windows Explorer but you cannot use it because it is one of the browsers not supported by Denodo tools.

Then use a supported browser to point to the following URL of the Design Studio Web Tool following the pattern:

```
http://<vm_ip>:9090/denodo-design-studio/
```

Where *<vm\_ip>* is the IP address or DNS name for the Denodo VM. The default user is *admin* and the default password is the name of the Resource Group.

Note that services in the VM require some time to start, meanwhile you could get a 404, wait some minutes and try again.

Refer to [Main Areas of the Design Studio](#) for more information.

Note that certain administrative tasks like cache configuration, setting-up the authentication, user management, etc can be done graphically only by using the Virtual Dataport Administration tool (desktop based).

## 2.5 **STEP 4 - LOG INTO THE DENODO SCHEDULER ADMIN WEB TOOL**

The Scheduler Admin provides a web interface to administrators to create jobs.

```
http://<vm_ip>:9090/webadmin/denodo-scheduler-admin/
```

Where *<vm\_ip>* is the IP address or DNS name for the Denodo VM. The default user is *admin* and the default password is the name of the Resource Group.

Refer to [Denodo Scheduler Administration Guide](#) for more information.

## 2.6 **STEP 5 - LOG INTO THE DENODO CATALOG**

The Denodo Data Catalog is a web application that allows end users to query and browse all the information accessible through Denodo.

```
http://<vm_ip>:9090/denodo-data-catalog
```

Where *<vm\_ip>* is the IP address or DNS name for the Denodo VM. The default user is *admin* and the default password is the name of the Resource Group.

Refer to the [Denodo Data Catalog Documentation](#) for more information.

## 2.7 **STEP 6 - REGISTER FOR DENODO SUPPORT**

Denodo is committed to helping you succeed with the Denodo Platform through our comprehensive network of technical support and services.

Denodo Standard Support is available for all subscribers. To access this service, you must first register [on our website](#). After you have signed-up, you will have access to the [Denodo Support Site](#) where you can get web-based support, software updates



and DenodoConnects, which will improve your data virtualization experience. Denodo version upgrades are not available as version upgrades require migration between Azure instances.

You can always post your question directly on the [Q&A](#) section, a moderated forum on our [Community Site](#), where data virtualization professionals and enthusiasts will assist you. Our community is knowledgeable and tenacious and there is no question without a valid answer. Technical resources such as product documentation, Knowledge Base articles, step-by-step tutorials, and how-to videos are also available.

## 3 OPTIONAL ACTIONS AFTER DEPLOYING

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### 3.1 REVIEW THE SECURITY CONFIGURATION

There are a couple of optional steps that we recommend you to take in order to improve the security of your Azure deployment.

#### 3.1.1 Changing the Default VDP Administration Password

As the first step of the configuration of your new Denodo virtual machine you should change the default administrator password. It is extremely important that you change this default password to ensure that you are operating under a secure environment.

#### 3.1.2 Configuring the Security Groups

Please, check first the list of [Denodo default ports](#) to review which ones are needed for operating your environment.

When a new virtual image is started Azure creates by default a new security group. This group contains all TCP ports that Denodo may need to use plus the RDP (for server administration). The default configuration specifies that all those ports can be reached from any IP addresses - our strong recommendation is to modify the groups so they can only be accessed from the range of authorized IP addresses that you control instead of being publicly accessible.

To do this, follow the steps in the Azure guide located at: <https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-manage-nsg-arm-portal>

#### 3.1.3 VDP Client Access from Outside of VM

You have to configure the Virtual DataPort server in order to receive connections from external clients to the VM.

The default ports for Denodo based on the connection protocol are:

- JDBC: TCP 9999.
- ODBC and ADO.NET: TCP 9996.
- Web Container: TCP 9090.

VM must be configured to allow the connections to ports enumerated above according to the connection protocol needed:

1. Update the Azure network Security Group associated with the VM network interface using the Azure Portal.
2. Update the Windows firewall in the Denodo for Azure VM. You have to set up the appropriate Windows firewall rules. Log in the VM, start Control Panel > System and Security > Windows Firewall (or open PowerShell or Command Prompt and enter 'firewall.cpl'), clicking the advanced settings button, and create the Inbound Rules needed.

As a side note, take into account that by default an ephemeral external IP address is assigned to the VM instance. If you require a static external IP address, you may promote the address to static. Be sure that the VDP server is set correctly for accepting connections through that IP by [changing the Host Name in the VDP server](#).

### **3.2 START & STOP DENODO SERVICES**

Logged in with your Administrator Account user through Remote Desktop Connection and once a Denodo license is installed you can start enjoying Denodo software.

Launch the [Services app to start Denodo Servers](#) in the following order:

1. *Start Denodo Virtual DataPort Server, wait until getting status *Running*.*
2. *Start Denodo Scheduler Server, wait until getting status *Running*.*
3. *Start Denodo Index Engine Server, wait until getting status *Running*.*
4. *Start Denodo Web Design Studio, wait until getting status *Running*.*
5. *Start Denodo Scheduler Web Admin Tool, wait until getting status *Running*.*
6. *Start Denodo Data Catalog, wait until getting status *Running*.*

For stopping the services follow the reverse order.

### **3.3 MIGRATE EXISTING METADATA FROM ANOTHER DENODO INSTALLATION**

If you wish to migrate data from an existing Denodo installation to a new VM, proceed with the steps below. Note that each existing environment should be migrated to a different instance.

Start by exporting the metadata from the existing Virtual DataPort and importing it in the new one. The steps are detailed in [the Virtual DataPort metadata export and import guide](#).

A similar approach is to be taken to migrate Scheduler metadata. The steps are detailed in [the Scheduler metadata export and import guide](#).

If you wish to migrate Data Catalog metadata, the equivalent steps are detailed in the [Data Catalog metadata export and import guide](#).

Last, if you wish to migrate existing Diagnostic & Monitoring Tool metadata, follow the steps in [the Diagnostic & Monitoring metadata export and import guide](#).

### **3.4 DEPLOYING THE DENODO SOLUTION MANAGER**

This is optional and may be needed if you are planning to use SSO configuration with Denodo webtools (Design Studio, Scheduler Admin...) using a third party IDP such as Okta.

You need to sign-up for Denodo Support and request a license key for the Denodo Solution Manager. Later, you can use the license key with the Solution Manager BYOL instance on the Marketplace.

## 4 FURTHER STEPS

Once you are all set to start building your data virtualization solutions on Azure, we recommend that you check out all the available Denodo information:

- [Denodo tutorials](#)
- [How-to videos](#)
- [Denodo Test Drives](#)
- [Knowledge base](#)
- [Product documentation](#)
- [Denodo on Cloud Marketplace FAQ](#)

If you want to move on to professionally guided training you can always check our course offerings on [our training site](#).

To get up and running on the Denodo Enterprise for Azure 7.0 in the quickest time, we recommend that you take advantage of [Denodo Professional Services](#).