THE DENODO PLATFORM ON MICROSOFT AZURE CLOUD:

Frequently Asked Questions

1. What is the Denodo Platform offering on Microsoft Azure?

The Denodo Platform for Azure is a logical data management, data integration, and data delivery platform that provides real-time access to curated, high-quality data. Powered by data virtualization, the Denodo Platform establishes a logical abstraction layer across all enterprise data assets that enables immediate access to any dataset without needing to first copy or replicate it. The Denodo Platform enables self-service BI, advanced analytics, hybrid/multi-cloud integration, and enterprise data services solutions transforming how our customers innovate and operate their businesses.

1b. What are the key customer challenges addressed by the Denodo Platform?

Denodo Platform addresses multiple challenges such as:

- Data silos that lead to duplication of effort, inconsistencies in data, and difficulty in accessing and sharing data across the organization.
- Complex data integration: Integrating data from different sources can be challenging, complex, and time-consuming, especially using legacy data integration methods.
- Data Teams Stretched Thin: The complex distributed nature of data requires multiple data teams to get involved in all requests for data.

2. How can I get started with the Denodo Platform for Azure Cloud?

The Denodo Platform can be installed on the Azure Cloud as Infrastructure as a Service (IaaS) or via the **Azure Marketplace**. When using Azure as a cloud infrastructure, you can install the Denodo Platform via Bring your own License (BYOL), working directly with the Denodo sales team. The Denodo Platform for Azure is available via four subscription offerings. Denodo Professional is an entry-level subscription designed to help you get started with data virtualization, Denodo Standard provides data virtualization to your entire company while Enterprise and Enterprise Plus provide logical data fabric solutions that take data virtualization to advanced levels. The Denodo Platform on Azure Cloud **landing page** is a good resource for further exploration.

3. Is Denodo a partner with Microsoft?

Yes, Denodo is an IP Co-Sell ready partner with Microsoft. What it really means is that the Denodo Platform solution is commercially available, including on Azure Marketplace and has undergone additional technical review to qualify for co-sell status.

4. Does Denodo have a SaaS offering on Azure?

Currently, there is no SaaS offering from Denodo. It is currently available in the form of an Azure Virtual Machine (VM). In the future, Denodo might offer a SaaS-based offering.

5. Is there a Denodo Platform BYOL image available on the Azure Marketplace?

Yes, users are highly encouraged to use the Denodo Platform **BYOL image** as a starting point with their BYOL deployment on Azure cloud. Please keep in mind that this image is separate from the 14 days free trial BYOL image.

6. Is Denodo available on Azure Gov Marketplace and is it FedRamp compliant?

Yes, Denodo offerings are available on **Azure Gov Marketplace**. The offerings are similar to what is commercially available via Azure Marketplace. Denodo is not a Cloud Service Provider (CSP), so it does not need to be FedRamp compliant, but Government agencies can leverage a CSP to deploy and manage the Denodo Platform on the government Marketplace or similar.

7. What type of Azure data sources and services are supported by Denodo Platform?

The Denodo Platform supports a wide range of data sources on the Azure Cloud. You can use JDBC or ODBC to connect to a variety of data sources for integration purposes. Here are some of the key data sources supported via connectors in the Denodo Platform:

- Azure SQL Data Warehouse
- Azure SQL Database and SQL Server
- Azure Data Lake Storage (ADLS) gen2
- Azure Cosmos DB
- Azure Databricks
- Snowflake on Azure
- Azure HDInsight
- Microsoft Dynamics 365 and Dynamics AX
- Azure Analysis Services
- Power BI (as a visualization tool)
- Others third party data sources/services on Azure

We are always adding new data sources so please check the documentation for future reference.

8. Does Denodo Platform support a hybrid cloud architecture?

Yes, the Denodo Platform can be installed on the Azure Cloud and in an on-premises datacenter and the two instances can talk to each other. The best practice is to deploy Denodo closer to your data sources. In case of a hybrid cloud architecture, the network connectivity (say using Azure Direct Connect) between your datacenter and Azure public cloud becomes a key driver for performance SLA considerations. Most of the clients migrating to the cloud leverage a hybrid deployment architecture.

9. Does Denodo have customers running on Azure Cloud?

There are several customers who have a Denodo Platform deployment on Azure Cloud. You can find their **case studies** on Denodo website. Some examples are TransAlta, Swiss Re and many more.

10. What are the key use cases that customers are leveraging Denodo on the Azure Cloud?

Customers can exercise a variety of use cases with some of the popular ones such as logical data warehouse (LDW), semantic data access layer, cloud data warehouse modernization, accelerating data science in the cloud, and data as a service tou can refer to the **Denodo Azure datasheet** for more details.

11. Where can I learn more about Denodo on Azure Cloud?

We have several learning assets for you to get started with, including:

- **Denodo on Azure Cloud datasheet**
- **Denodo Test Drive for Azure** (Agile BI Analytics)

12. How is Denodo licensed on Azure Cloud?

Denodo is licensed the same way in the cloud as on-premises, which is based on CPU cores/vCPU. Users typically go through a sizing exercise which then determines the number of vCPUs needed for the VM instances. On the Marketplace, the pricing is a combination of the offering type (based on the number of data sources and such) together with the VM instance type where it's deployed.

13. What type of VM instances are recommended for Denodo Platform on Azure Cloud?

Azure is always coming up with newer and better VM instances for a variety of workloads. We usually recommend general purpose compute virtual machine (such as D-series), or memory optimized (such as M-Series or Mv2 Series) or compute optimized such as the F-series. Users go through a sizing exercise and depending on the number of data sources, types of queries, and user concurrency, they can choose the vCPUs accordingly. Marketplace instances are available for Windows and Linux platforms, although you can leverage any type of VM instance when deploying using BYOL.

14. Does Denodo have a container version (such as Docker) and can it be deployed on Azure ACS or AKS?

Yes, Denodo has a docker container version that can be used for automated deployment. Please refer to the **Denodo Platform and Docker** datasheet for more details. Denodo can also be deployed using the Azure ACS (container) service and AKS (Kubernetes) services. The licensing/pricing for the container version is the same as that for the enterprise version.

15. Can Denodo be deployed with Azure Kubernetes?

Yes, Denodo can be configured with Kubernetes. Please refer to the Deploying **Denodo in Kubernetes** Knowledge Base article for further details.

16. What data sources can be used as a cache with Denodo on Azure?

Azure SQL data warehouse or Azure Databricks can be configured as the Denodo Cache for performance optimization. Here's a list of overall **data sources** that can be used as a caching database with Denodo.

17. What are the authentication options if we don't have our directory service (LDAP) in Azure?

Denodo supports various forms of authentication such as Active Directory, LDAP, etc. Most of the customers have VPN access back to on-premise Active Directory/ LDAP and use the same authentication mechanism for their cloud instances, assuming that they do not have AD services configured in Azure. Denodo also supports third party authentication services such as PingFederate and Okta (which uses SAML and OAuth). In Denodo 8, there will be support for single-sign-on (SSO) in all the modules of the platform.

18. What is the recommended setup for Denodo on Azure? What ports need to be opened to connect to Denodo VDP Server?

If your data consumers are going to be running outside of the Azure virtual network (VNet) where Denodo is deployed, the VDP should have a public IP address within the VNet such that it can be accessed by the data consumers. If Denodo server is assigned a private IP within the VNet, the load balancer can be configured with a public IP such that it communicates with the Denodo VDP server. The data consumers can easily connect to the load balancer which then delegates the requests as needed. The ports used by the Denodo Platform on Azure are the same as those used by the Denodo Platform when deployed on-premise. Remember to open the inbound ports in the Azure network security group.

The Azure VM scale sets can span across availability zones in an Azure region to support failover and redundancy. Using SQLDB for the Denodo cache also allows you to create 'read replicas' on another region for resilience within the cache.

19. What are the different Azure services required for Denodo on Azure Cloud?

Denodo works with variety of Azure services, some of which are mandatory while others are optional.

- Azure Virtual Machine (VM) - This is the VM (instance) where the Denodo Platform is installed
- Azure Virtual Network (VNet) - Denodo Platform is usually installed in a virtual network
- Azure Load Balancer- Support Denodo HA configuration
- Azure Scale Sets - Setup Denodo for auto scaling
- Azure Managed Disk - Denodo software will be installed here.
- Azure Monitor - Integration with Denodo monitoring capabilities
- Azure Data Sources (SQLDW, SQLDB, Databricks, ADLS, HDInsight, Dynamics 365, etc.) - These are some of the data sources that Denodo can connect/integrate on Azure cloud.
- Azure Direct Connect/VPN (optional) - This is a service that enterprise users would normally have in their setup to establish a high bandwidth connection for hybrid architecture setup

20. Is there a free trial available to conduct a POC/ validation with Denodo on Azure?

Yes indeed. You can take advantage of the 30 days free trial of **Denodo Professional** available via Cloud Marketplaces. You can register here to get access to a solution architect and cloud SME during the **free trial**. Please note that you would need an Azure cloud account and preferably your data sources are in the Azure cloud to make the best of it.

21. Does Denodo support Azure private offers via Marketplace?

Yes, users can opt for transacting a **private offer** via the Azure Marketplace. This allows pricing and licensing terms to be negotiated with Denodo. To get started with a private offer, kindly discuss with your Denodo Account Manager.

22. Is Denodo technical support included when buying a Denodo subscription via the Azure Marketplace?

Yes, Denodo Standard Support is included with all Marketplace subscriptions. You can register for support via the Azure Marketplace after signing up for the subscription. Users are also eligible for on-demand training courses which are included as part of their subscription. You can find more details **here** or watch this **video** for step by step instruction.