

Azure SQL Data Warehouse: First Look

WAREHOUSING IN THE CLOUD



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What's in This Module?



Main Concepts of Azure SQL Data Warehouse

Advantages of Cloud Data Warehousing

Billing and provisioning of a Data Warehouse



What Is Azure SQL Data Warehouse?

**Service in
Microsoft Azure**

**It's a Platform as a
Service offering**

**It's a Massively
Parallel Processing
system**

**Distributed
Storage**

**Distributed
Compute**

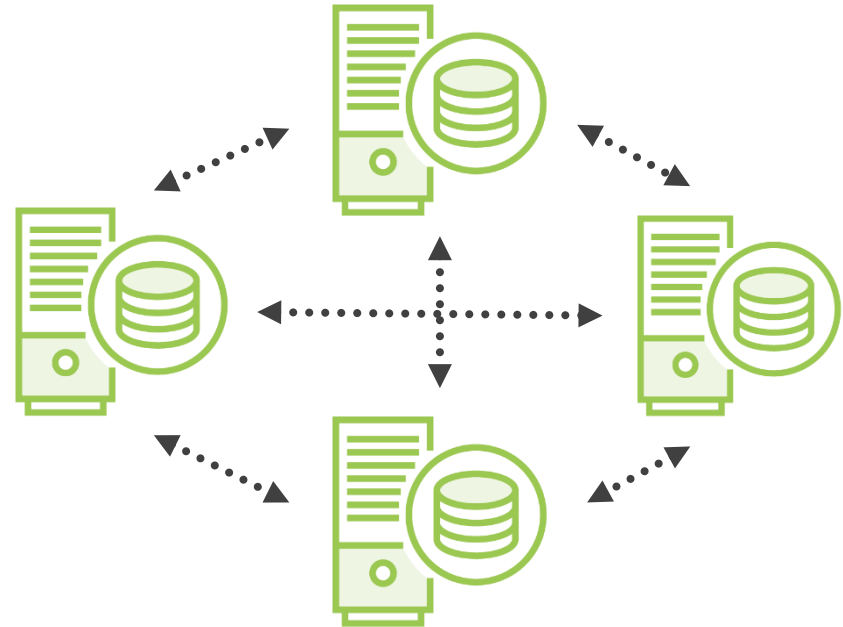


SMP vs MPP

Symmetric Multiprocessing



Massively Parallel Processing



Data Warehousing Unit

**A measure of the
underlying compute
power of the database**



For Example

100 DWU

I loaded 3 tables in 15 minutes

I ran my report in 20 minutes



500 DWU

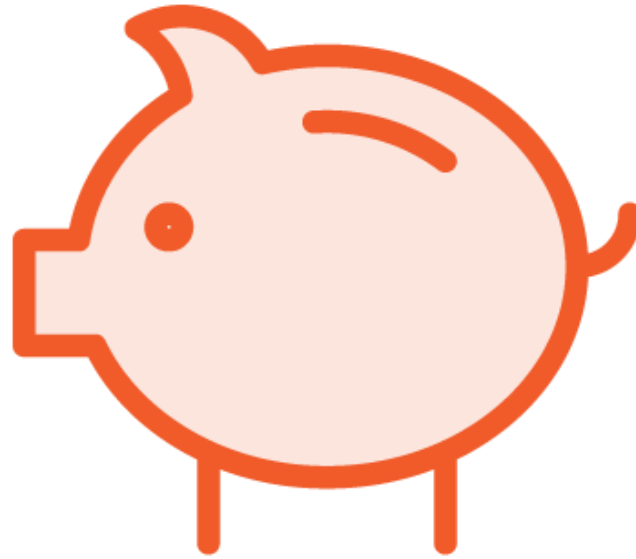
I loaded 3 tables in 3 minutes

I ran my report in 4 minutes



Why Choose Cloud Over On-Premises Traditional Warehousing?





Doesn't need large capital expenses to get started.





Doesn't need staff to maintain hardware, virtualization or the Operating System.





You can scale storage and compute
up or down on demand.



How Is the Service Billed?



Storage is billed by Gigabyte
Standard or Premium Geo Redundant
No cost for storage transactions
Outbound data transfer is billed



Compute is billed by DWUs
Can go from 100 to 2000
Billed per hour

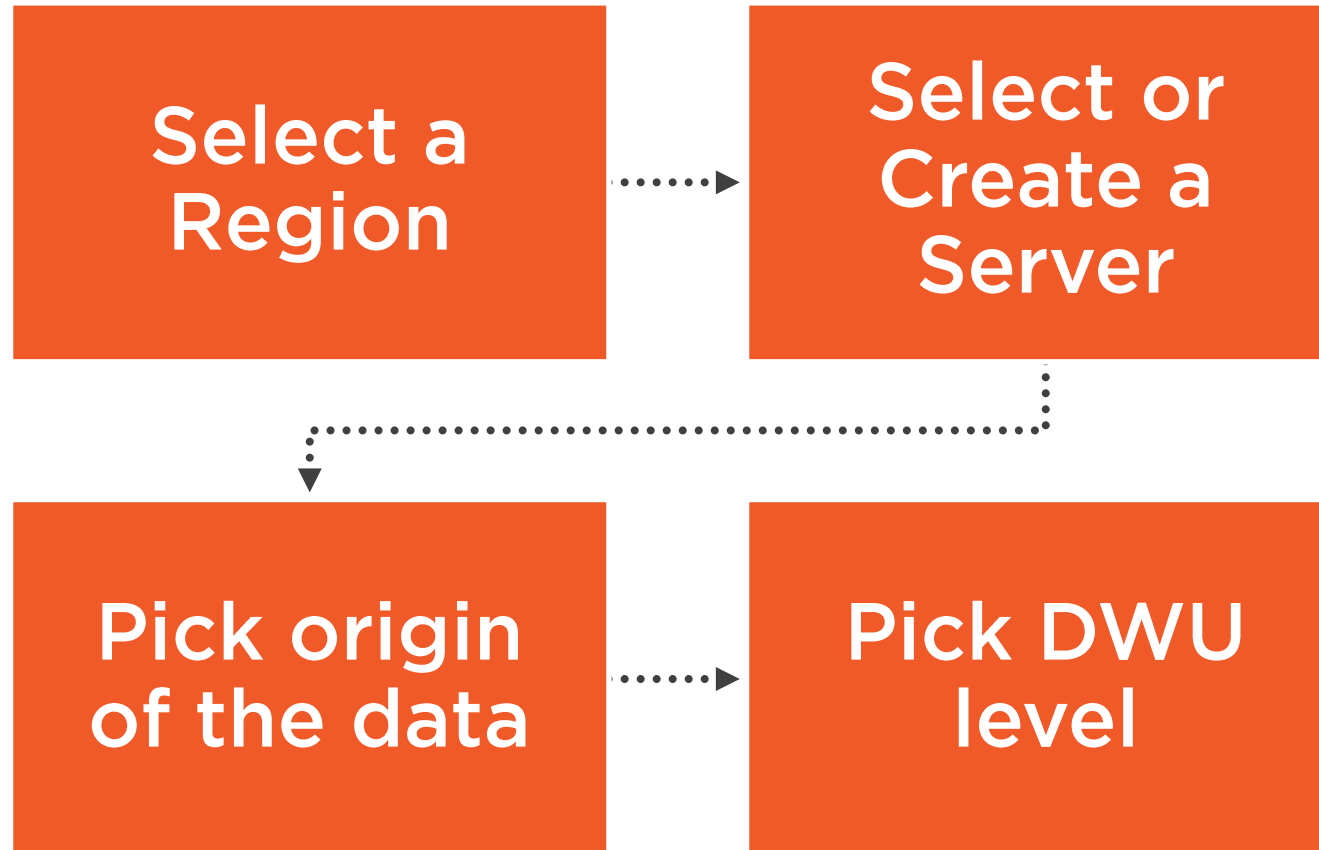




When not in use, compute power of the Data Warehouse can be completely paused for maximum savings.



Provisioning the Data Warehouse



Methods of Provisioning

Portal



- **New – Data + Storage**

PowerShell



- **New-AzureRmSqlDatabase Cmdlet**

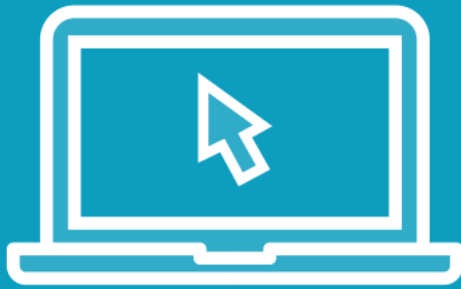
T-SQL



- **CREATE DATABASE command**



Demo



**Provision a Data Warehouse through
the Azure Web Portal**



Demo



Provision a Data Warehouse through Azure PowerShell



Summary



Azure Data Warehouse is a PaaS inside Microsoft Azure.

It offers multiple advantages over traditional on-premises Warehousing.

The service is billed based on storage and compute.

The service is easily provisioned through different methods.



Next Module: Designing for Azure SQL Data Warehouse

