

DP - 900

Azure Sql database transparent data Encryption Encrypts the database to protect the data at the rest.

Object type of non-relational db is recommended for storing audio, videos which have the unique id.

Geo-Zone redundant ^{storage} ↑ have highest degree of durability with 160's

SQL Migrate → New → Azure VM with SQL

→ changing the exist → Azure SQL managed Instance.

Azure DB for postgres SQL :-

pricing tier

Basic

ideal for light Compute & I/O performance

General

balanced Compute for hosting mobile & web apps

Memory

High performance & faster transactions

Optimized.

Microsoft

Defender for storage x Azure-native of Security

Intelligence that detects unusual & potentially harmful attempt.

Azure Storage name must be unique within Azure.

Apache Spark "Open-Source distributed processing Engine for Azure Synapse Analytics.

PolyBase Enables your SQL Server instances to query data with T-SQL directly from SQL-Server, Oracle etc.

Transact-SQL (T-SQL) → Extension of SQL

LLS → has lowest Redundancy (L-Local)

Azure Storage Acc that data in acc must replicate outside the Azure Region automatically in Geo-Redundant Storage & Zone-redundant storage.

Data lake Storage Gen2 & Synapse Analytics is used (a) accessed via Power BI.

Azure Cosmos DB is Elastic Scale out & global distributed.
The Azure SQL DB Firewall lets you decide which IP address may or may not have access to either the SQL server or SQL data.

DOT :- Data Analytics & Azure SQL Edge
Managed Server for versions of the data
PostgreSQL has its own query language PostgreSQL.
Azure SQL Managed Instance is 100% Compatibility.
Azure DB (Database) :-

Automatic backups & point-in-time-restore for upto 35 days
CosmosDB → Non-relational data
Block blobs :- Set of blocks upto 100 MB, 50000 blocks

max size of 4.7 TB
Page blobs :- upto 8 TB of data.

Append blobs :- Max size of append blob is just 195 GB

Archive is low storage model
life cycle management policy can automatically move a blob from Hot to cool.
HDInsights, databricks, & Azure Synapse → distributed file system

Azure Data Lake Gen2 file system, Enables the Hierarchical Name Space.
Azure HDInsights & Synapse & Data Factory used to create pipeline.

Azure Synapse has massively parallel processing engine, it distributes data processing across datamask node.
real time telemetry data → stream processing.
power BI can connect to many data sources & SaaS apps

In Azure Synapse Analytics :- we can pause & resume the pool to reducing costs.

CRS's provided atleast of 11 9's

GRS " " " 16 9's (regions)

ZRS " " " 12 9's.

OAAP → Online Analytical processing :- multidimensional analysts

OETP : Online transaction processing

Relational db must be used when strong consistency guaranteed are required.

paas db service is Azure → Scaling options,

Reduced administrative Overheads, High Availability
Covers DB helps to develop native-apps, multi-model apps

power BI Report Builder Used to build paginated reports.

Spark ML Notebook Scala & python, R, SQL

Service Trust portal helps to secure data & comply with applicable laws & regulation information.

physical security of networks & hosts & data centre are responsible of cloud provider.

Data, Endpoints, Account Access Management are reported by user

Storage name blob.Core windows.net url of the blob storage (Binary large objects).

ARM templates used to automate the creation of an independent group of Azure resources in a repeatable way.

Integrating data used → Cold Archive Storage

Geo-Zone Redundant Storage (GZRS) is most Redundant Elastic pools have spread across time zones & have period of intermittent usage.

IOT @ Sensors → Azure Data Lake & IOT Hubs

Apache Spark → Databricks

data warehouse Solutions → Data denormalized
↳ Support for massive amount of data.

CosmosDB → low latency & NOSQL.

If you need more instances in your current region, Send a support request to extend the quota using Azure portal.

ELT :- Transformation occurs in target data store
Collect Application Metrics, Streaming query Events & application log messages → Azure log analytics.

SQL Cmd utility let you to able to run queries against Azure SQL DB.

In PaaS db. of Azure SQL DB automatically backup.
DL :- Drop

Search Engine db. is Semi-Structured & unstructured files & folders within a linux file system are. Cannot be secured with Azure role-based access control.

100% compatibility to Azure managed instances.

Azure Synapse & data lake of unlimited data storage
RDBMS → transactional writer.

data lake stores raw data
warehouse stores structured data

Single - page dashboard in power-BI is canvas.
Zone redundancy storage (ZRS) replicates

your storage account synchronously across three Azure Availability Zones.

NSG :- Limit types of connections from the web server to db server (filter the internet traffic)

Azure private link makes to connect Azure VM to Azure SQL without exposing the db.

Apache HIVE on HDInsight → MPP. (multiprocessor per node)
Data analyst

Azure SQL DB, SQL Server in Azure VM → (Symmetrical PP)

Data lake → name space.

Data warehouse → central repository.

Standard & professional Direct plans are available at \$7.

Vertical Scaling → Upgrading VM to larger size.

NoSQL → Cost Effective.

Application data should be provided by us in SaaS.

Foundational Elements of AI → Data, Cloud, algorithm.

Knowledge mining AI solution can help extract useful insights from unstructured amount of data. (Cognitive Search Azure).

Pipeline Component can triggered to run data ingestion task.

Cosmos DB allows you to set provisioned throughput on your db & containers.

JOIN → SQL → used to combine row in one table with row in another table.

Time Series db → updates are rare.

~~Support~~, Standard, Developer, professional Direct are used to open support request.

Real-time data processing → low latency
Azure Data Box is one time migration of on-premise
to Azure.

Azure tables used position keys & row key for retrieving
data.

Big Data benefits increased Scalability

Azure File Sync → Sync data to on-premise & Azure.

Azure data factory → Data Engineer.
(define pipeline & create)

Azure SQL Database → PaaS & Minimal ongoing maintenance

Azure Storage is (cheap rate for storage)

Billing is done for monthly.

CRS replicates your storage account three times within a
Single datacenter.

Region pair → 30 miles away from each other.

Azure SQL Managed Instance → native support from core
db queries & transactions.

Verus can be used to present a virtual table at data base
on query.

Azure DevTest lab is service for easily creating & managing
IaaS & PaaS in labs

physical layer → defense in depth layer

Horizontal Scaling → adding more servers to web farm