



Microsoft Azure Storage – Solution for Data Growth

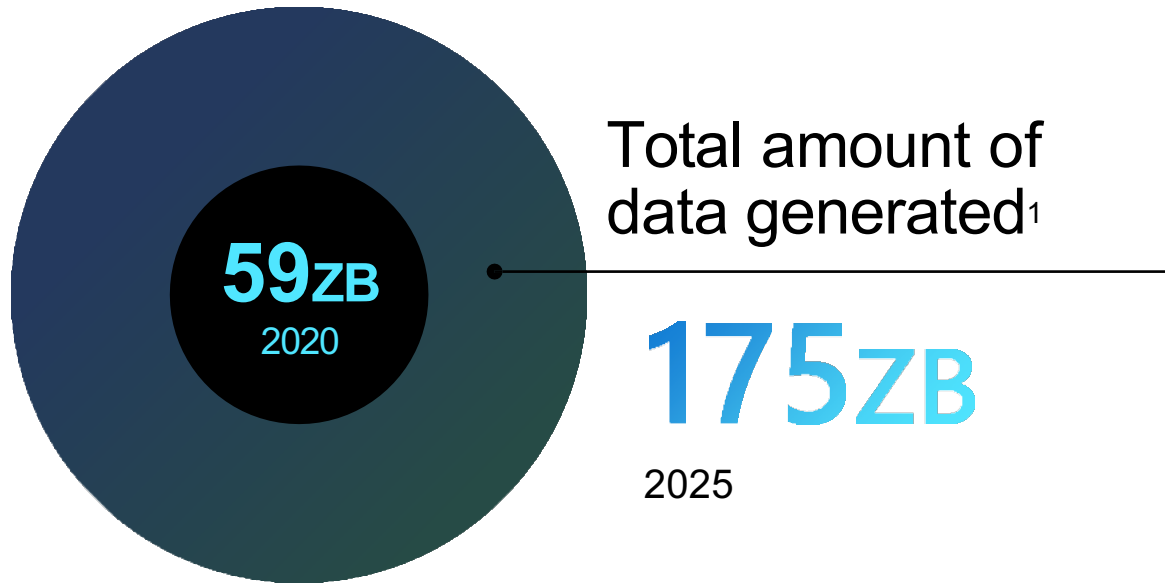
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Nikhil Jain
Principal Product Manager, Azure Storage
Jain.nikhil@microsoft.com



Every company is a data company

Data growth driving key data estate challenges



How do I store my data cost-effectively at a massive scale?

How do I secure and protect my data?

How can I meet regulatory and compliance needs?

How do I get the most value from my data?

How do I achieve the optimal price-performance for my workloads?

Azure Storage portfolio

- Durable, Highly Available, Massively Scalable



Block Storage

Azure Disk Storage

Ultra Disk Storage
Shared disks
Disk Pools (AVS)



Object Storage

Azure Blob and Data Lake Storage

Premium Blob
Multi-protocol access, e.g. NFS, HDFS



File Storage

Azure Files
Azure NetApp Files

Native NetApp File Storage
Azure File Sync

CATEGORY

SERVICES

UNIQUE CAPABILITIES

Azure Blob Storage

Massively scalable and secure object storage for unstructured data



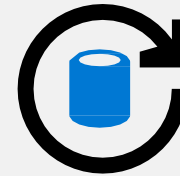
**Scalable, durable,
available**



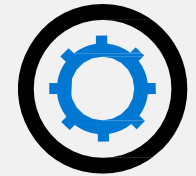
**Secure and
compliant**



Cost effective










**Comprehensive
data
management**



**Foundational
for demanding
workloads**

Storing data cost-effectively in Azure

As low as \$1 per TB per month

	 Premium	 Hot	 Cool	 Archive
	Low and consistent latency data	Frequently accessed data	Less frequently accessed data	Rarely accessed data
 PER TB PER MONTH	\$150.00	\$18.40	\$10.00	\$1.00
 PER 10K READ OPERATIONS	\$0.0014	\$0.004	\$0.01	\$5.00
 RETRIEVAL TIMES	Immediate (SSD)	Immediate (HDD)	Immediate (HDD)	Hours
USE CASE EXAMPLES	Interactive Transactions Telemetry	Cloud native application data	Server backups	Medical records archive

Choose between online Cool tier and offline Archive tier

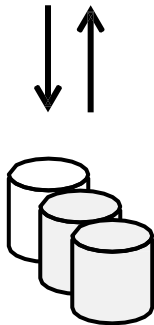
No more management or migrations of storage hardware!

Save even more with **Reserved capacity** –
Up to 38% savings 100TB and 1PB pre-purchases for 1-3 years

Redundancy Options

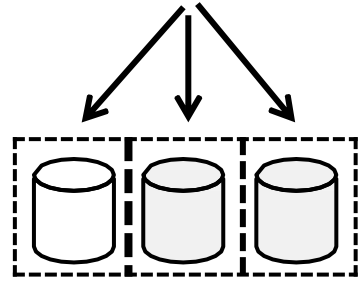
Single Region

LRS



3 replicas
1 region

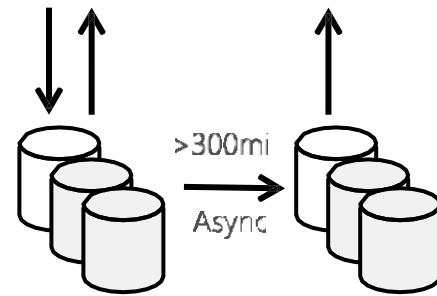
ZRS



Multiple availability zones
3 replicas
1 region

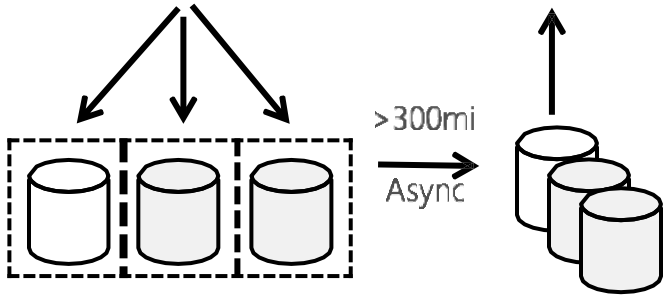
Dual Region

(RA-)GRS

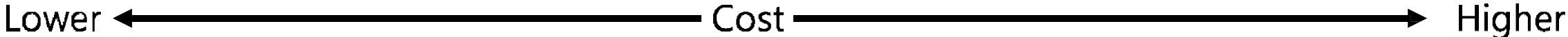


6 replicas
2 regions

GZRS



Multiple availability zones in primary, single DC in secondary
6 replicas
2 regions

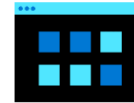


Azure Storage

Enables key data workloads



Enterprise Applications



Application Development



BCDR & Archive



HPC

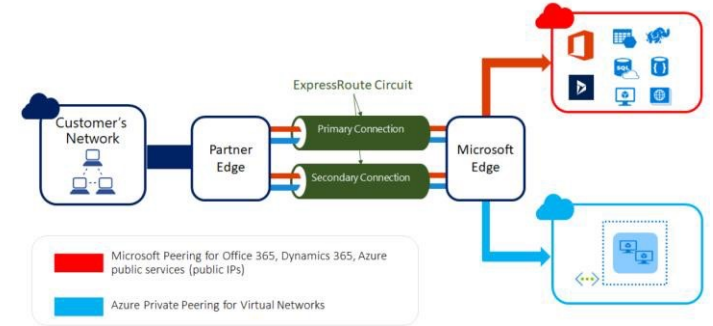


Analytics



Machine Learning & AI

Migrating PBs of Data to Azure



Data Box Family

Data Box enables offline data transfer to Azure when the network isn't an option

Data Box (100 TB)

Data Box Heavy (1 PB)

Offline Media Import Services

Our partners provide fully managed services to import tapes, optical drives, hard disks or film

Network Ingest and Egress

ExpressRoute provides a **secure, dedicated and high bandwidth link** for data ingestion into Azure Storage

Use ExpressRoute Direct Local for a **fixed port fee per month and no per GB egress charges**

Tape Storage



Mature and established Tape Ecosystem



Long history of tape technology and product development for enterprises



Still the most cost-effective storage medium

Storage Devices Designed for Cloud



- Storage technologies like HDDs and SSDs have largely pivoted their innovation and products to design for Cloud Infrastructure
- Examples: Dual Actuator HDDs, QLC NAND Devices, SMR, ZNS and many more
- These innovations have enabled TCO improvement, garnered mindshare and increase wallet share of the Cloud Industry
- Expectations from TAPE Industry is to follow suit and enable products and technologies that are designed for the Cloud

Tape Storage – Opportunities

- Better predictability and execution of product roadmap
- Innovate and Design products that can better Server Cloud Infrastructure
 - Technologies to improve Environmental Spec
 - Higher media densities
 - Consistent improvement in tape drive throughput
- Reverse the shrinking TCO gap between Tape and HDDs





Questions?

Thank You

