Volumez

Data Infrastructure as a Service
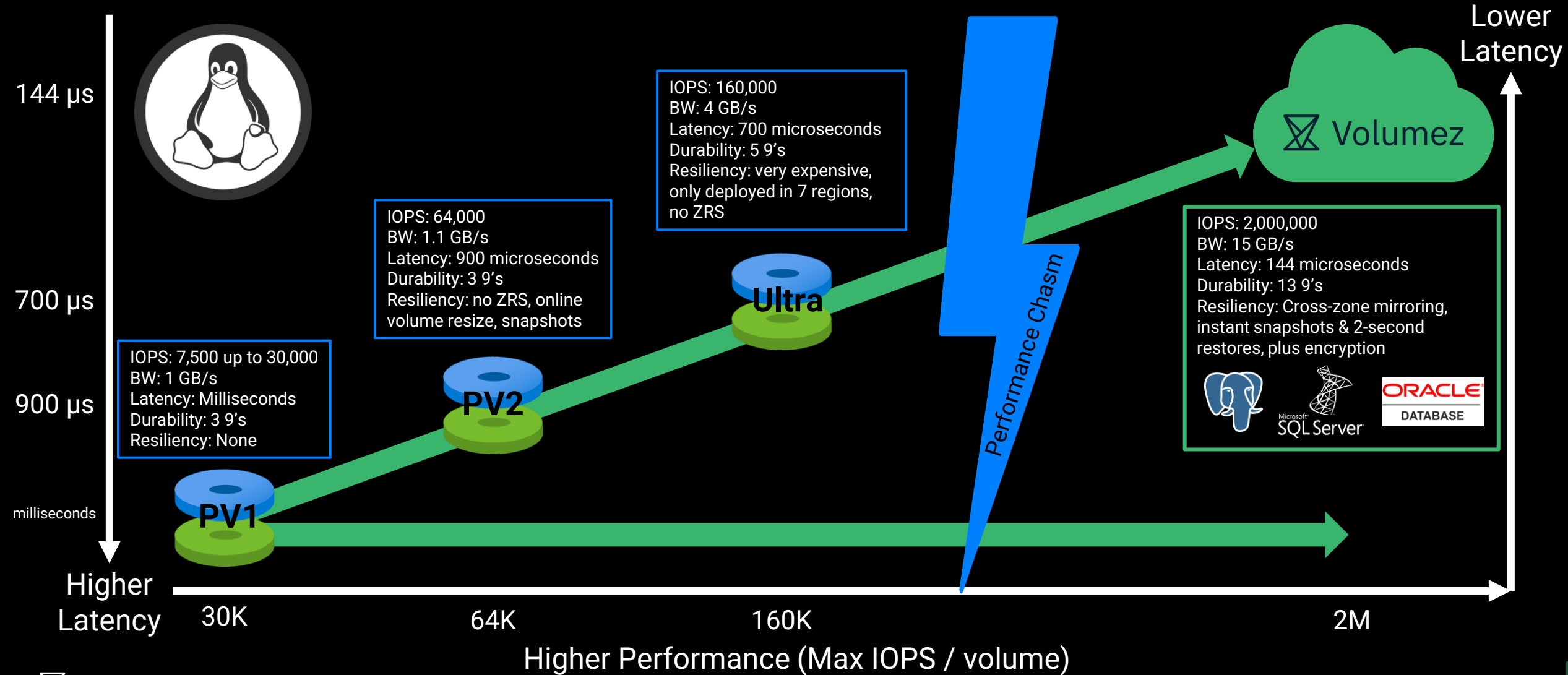
Unlock Database Performance & Cost Optimization

Migrate the Unmigratable Data Workloads

December 16, 2024
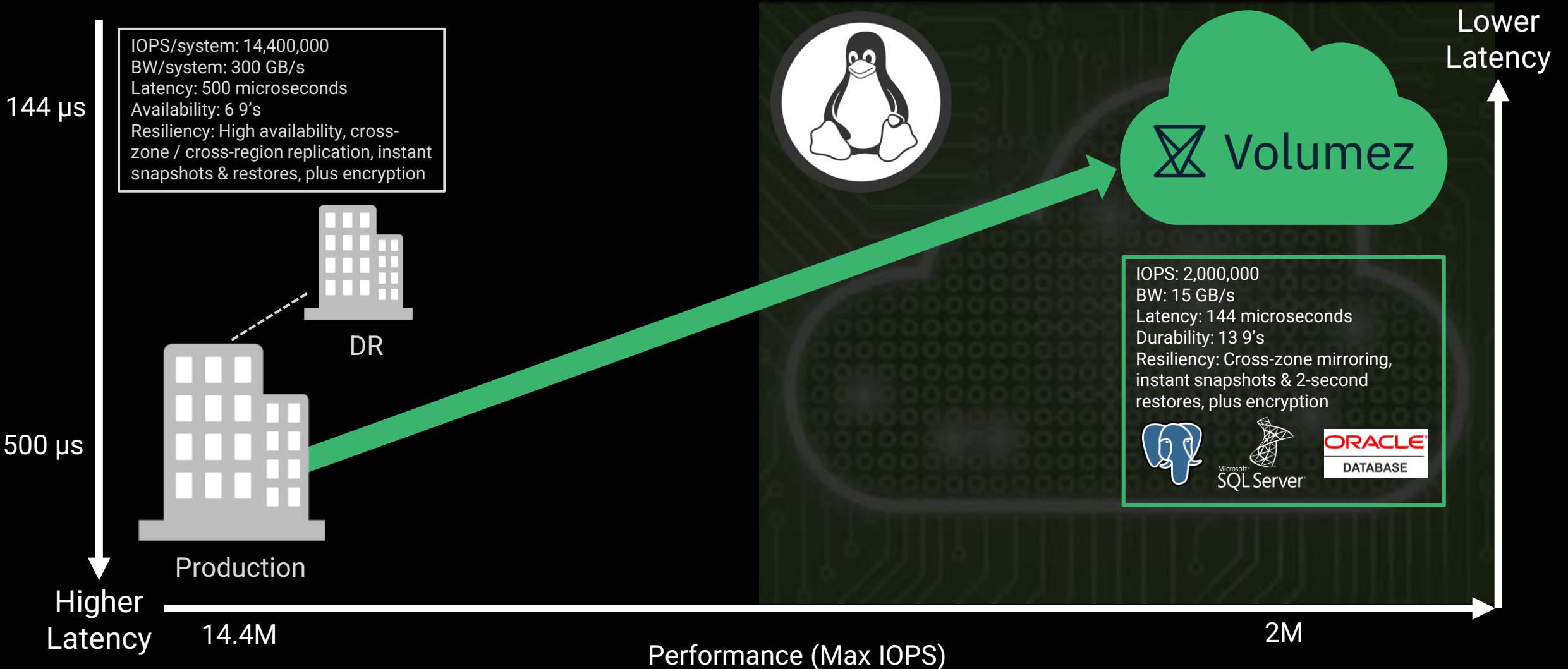
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The Azure brownfield journey – Cloud optimization
Performance + latency + bandwidth = More topline revenue (78K Transactions Per Second)

Lower Latency

144 μs

IOPS: 160,000
BW: 4 GB/s
Latency: 700 microseconds
Durability: 5 9's
Resiliency: very expensive, only deployed in 7 regions, no ZRS

IOPS: 2,000,000
BW: 15 GB/s
Latency: 144 microseconds
Durability: 13 9's
Resiliency: Cross-zone mirroring, instant snapshots & 2-second restores, plus encryption

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700 μs

IOPS: 64,000
BW: 1.1 GB/s
Latency: 900 microseconds
Durability: 3 9's
Resiliency: no ZRS, online volume resize, snapshots

Ultra

Performance Chasm

900 μs

IOPS: 7,500 up to 30,000
BW: 1 GB/s
Latency: Milliseconds
Durability: 3 9's
Resiliency: None

PV2

ORACLE
DATABASE

Microsoft SQL Server

milliseconds

PV1

Higher Latency

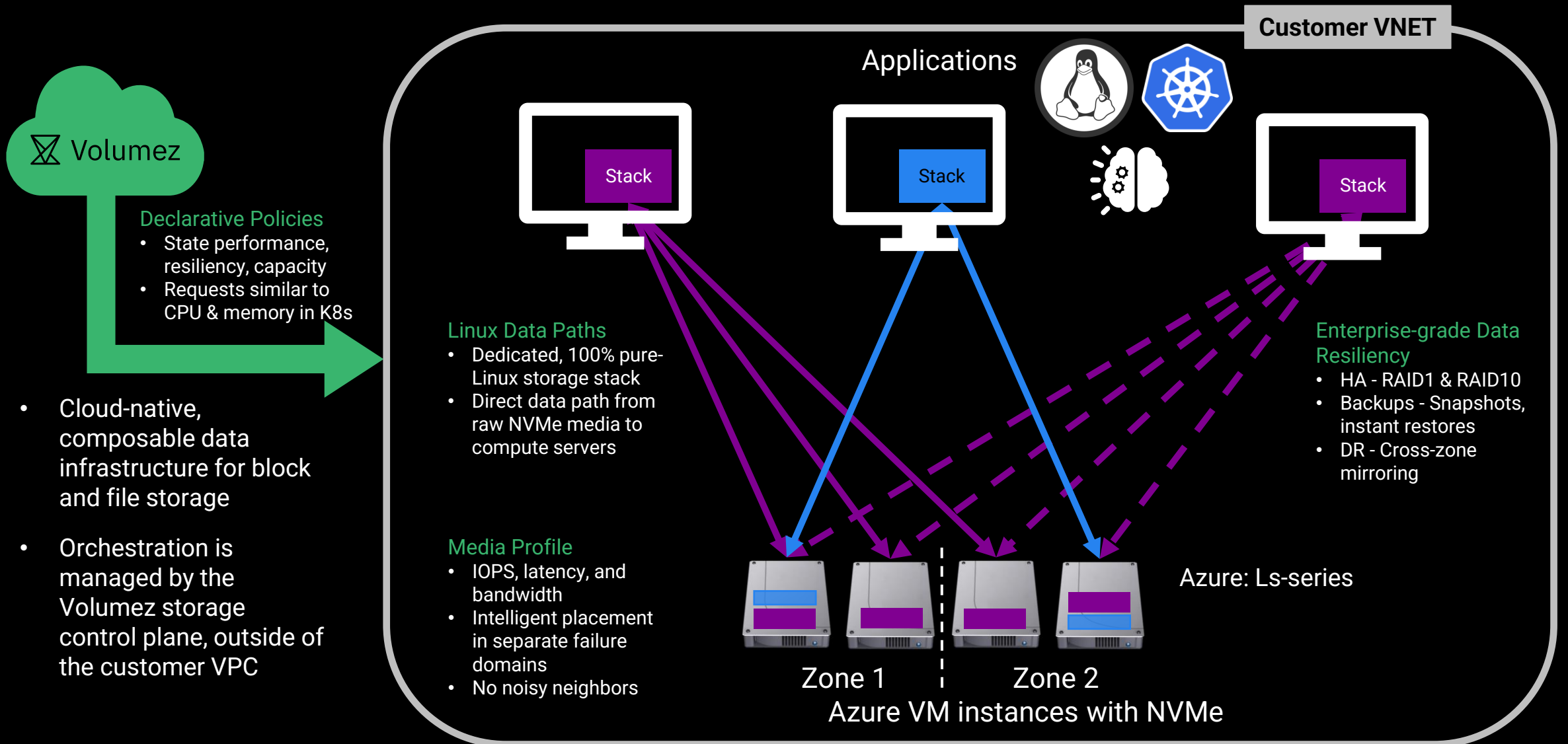30K   64K   160K   2M

Higher Performance (Max IOPS / volume)

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The greenfield journey − Cloud adoption

Greater agility and scalability without compromising performance, availability & cost

144 µs

IOPS/system: 14,400,000
BW/system: 300 GB/s
Latency: 500 microseconds
Availability: 6 9's
Resiliency: High availability, cross-zone / cross-region replication, instant snapshots & restores, plus encryption

DR

500 µs

Production

Lower Latency

▽ Volumez

IOPS: 2,000,000
BW: 15 GB/s
Latency: 144 microseconds
Durability: 13 9's
Resiliency: Cross-zone mirroring, instant snapshots & 2-second restores, plus encryption

Higher Latency

14.4M

2M

Performance (Max IOPS)

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Data Infrastructure as a Service

Customer VNET

Applications

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Declarative Policies
- State performance, resiliency, capacity
- Requests similar to CPU & memory in K8s

- Cloud-native, composable data infrastructure for block and file storage

- Orchestration is managed by the Volumez storage control plane, outside of the customer VPC

Linux Data Paths
- Dedicated, 100% pure-Linux storage stack
- Direct data path from raw NVMe media to compute servers

Media Profile
- IOPS, latency, and bandwidth
- Intelligent placement in separate failure domains
- No noisy neighbors

Enterprise-grade Data Resiliency
- HA - RAID1 & RAID10
- Backups - Snapshots, instant restores
- DR - Cross-zone mirroring

Stack

Stack
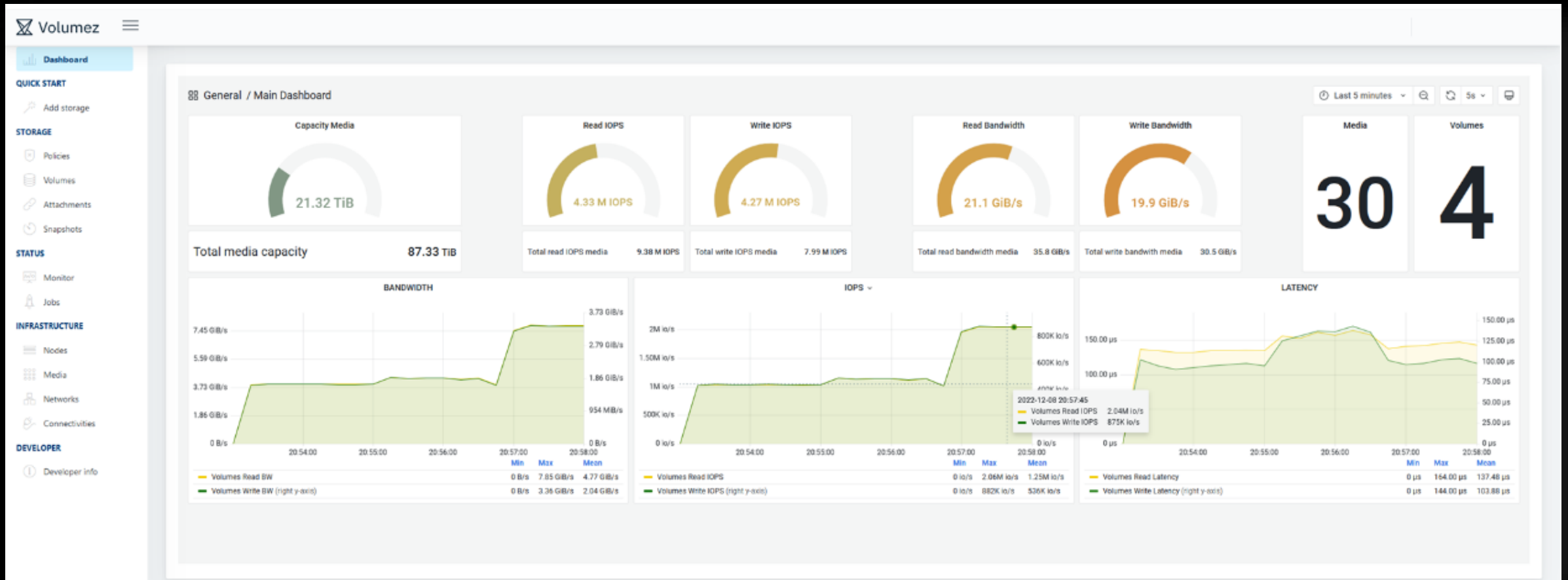
Stack

Azure: Ls-series

Zone 1

Zone 2

Azure VM instances with NVMe

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Dashboard
Provides real-time data regarding the media capacity, IOPS, bandwidth, latency, and more

Thank you

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