AWS re:Invent

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Simplify your file-based application migration with Amazon FSx

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Agenda

- Introduction to Amazon FSx
- Choosing the right file storage service for your applications
- Seamlessly migrate data into Amazon FSx

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Most on-premises workloads use file storage

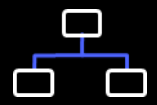
File storage…



Provides access to data that appears local



Allows multiple users, computers, and applications to access the same data



Provides high levels of throughput and IOPS with near-local latencies

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Migrating to a different storage solution can be time-consuming and complex

Customers have built applications, workflows, and skill sets around specific file systems:

- Feature sets
- Performance profiles
- Data management capabilities

Migrating to a different storage solution often requires **re-architecting, re-certifying, and re-training**

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FSx = *File System x*

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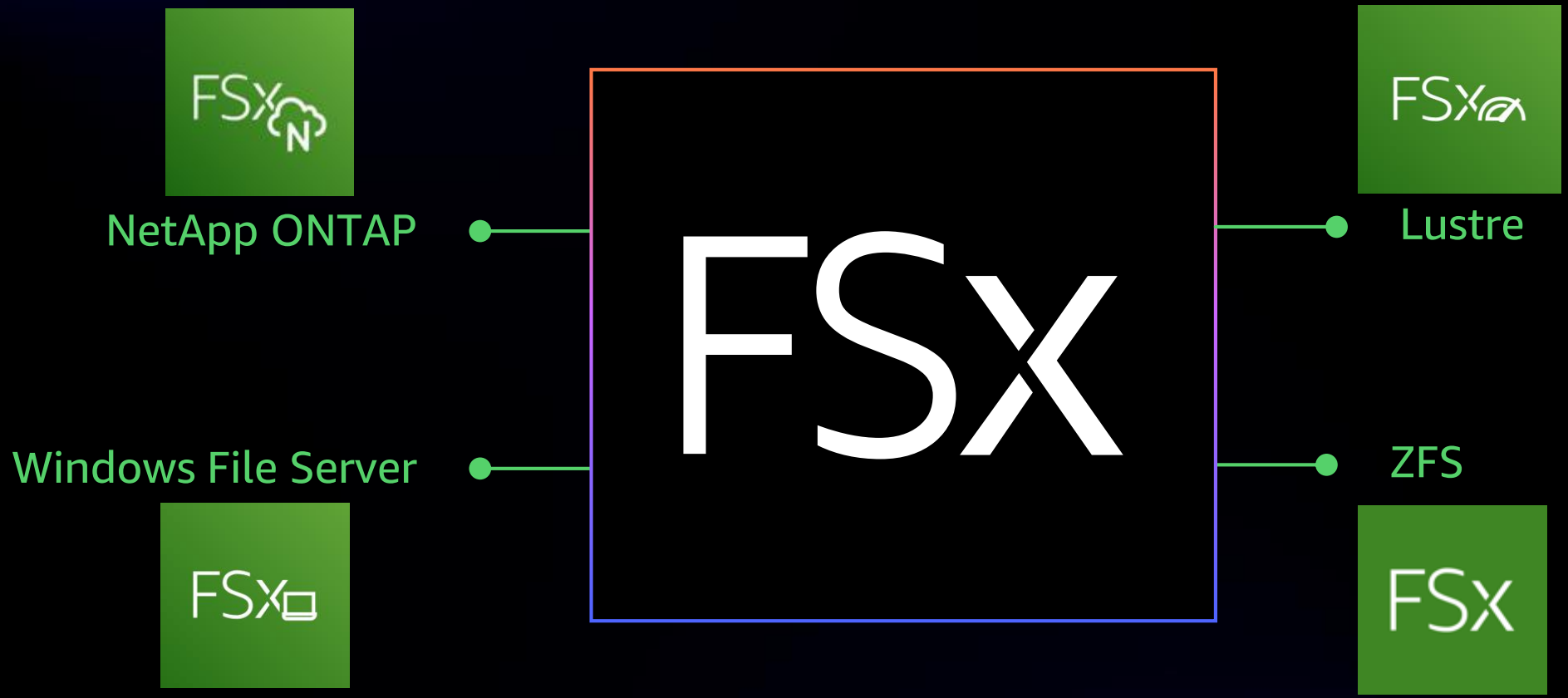
What does *x* represent?



Your choice
+
Any workload

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What do we mean by *your choice*?



…powered by **your choice** of the world's most popular file systems

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What do we mean by *any workload*?



Corporate IT applications



Database applications



Home directories



Software build environments



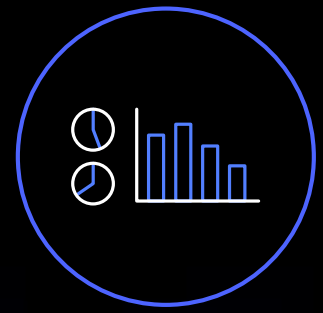
High-performance computing



Machine learning



Media rendering and transcoding



Big data analytics

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How do you *choose your* file system?









	Amazon FSx for NetApp ONTAP	Amazon FSx for Open ZFS	Amazon FSx for Windows File Server	Amazon FSx for Lustre
On-premises storage	NetApp, commodity NAS	ZFS, commodity NAS	Windows file servers	Scale-out file storage (Lustre, GPFS, Isilon)
Unique Features	Multi-protocol, replication, cloning, intelligent tiering, file access auditing, snapshots, compression, deduplication	Lowest latency, scale-up NFS storage built on Graviton, compression, snapshots	Native Windows file sharing, file access auditing, snapshots, deduplication, AWS native on-premises caching	Scale-out performance, compression, S3 data processing capabilities
Use Cases	Enterprise IT, databases, line-of-business apps, test/dev, backup and DR (NetApp)	Enterprise IT, databases, line-of-business apps using NFS	Windows based user and group shares, Windows applications, SQL Server with HA	Machine Learning, HPC, media processing, data analytics, compute intensive applications

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Data access from virtually anywhere

> Easily share data and enable hybrid workloads



Operating system

Microsoft Windows

Linux

macOS

Protocol

NFS (versions 3, 4, 4.1, 4.2)

SMB (versions 2.x, 3.x)

iSCSI

Compute instance


EC2


WorkSpaces

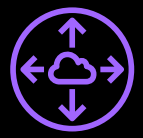

ECS


AppStream 2.0


EKS


VMware Cloud

Networking and caching

In-VPC access, VPC Peering, and Transit Gateway


Direct Connect


VPN



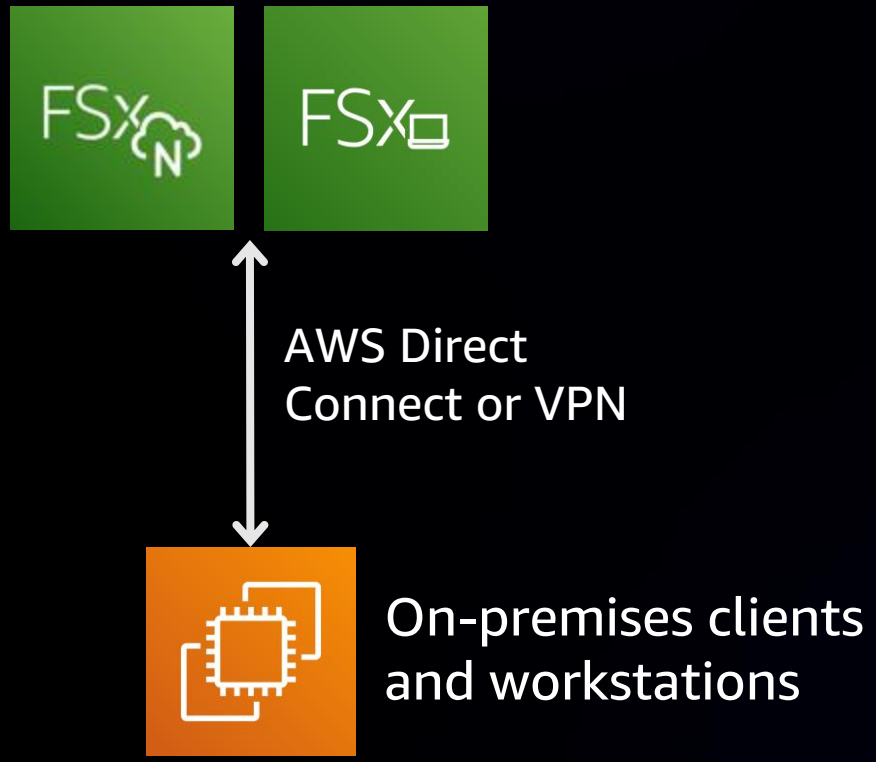
FSx File Gateway


NetApp Global File Cache

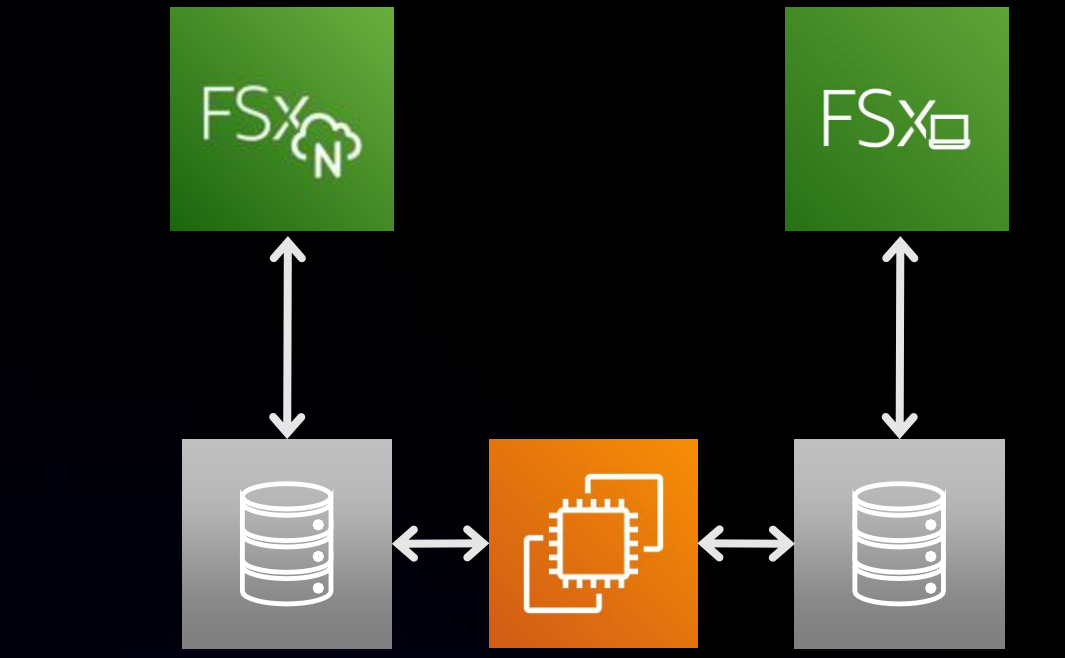
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Fast access to your data from on premises

Direct access from on premises



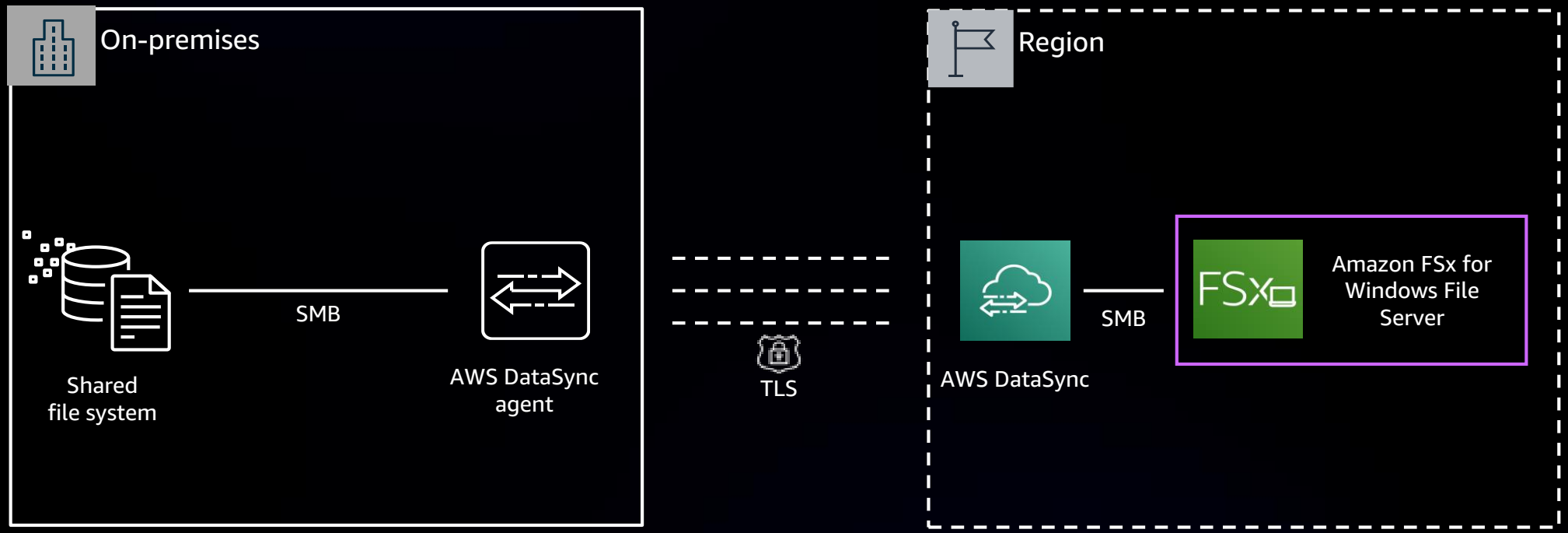
With on-premises caching



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Simple and seamless migration

AWS DataSync integration – FSx for Windows



SMB to SMB, same protocol as on-premises
No need to re-factor or re-architect

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Amazon FSx for Windows File Server



Simple and seamless migration

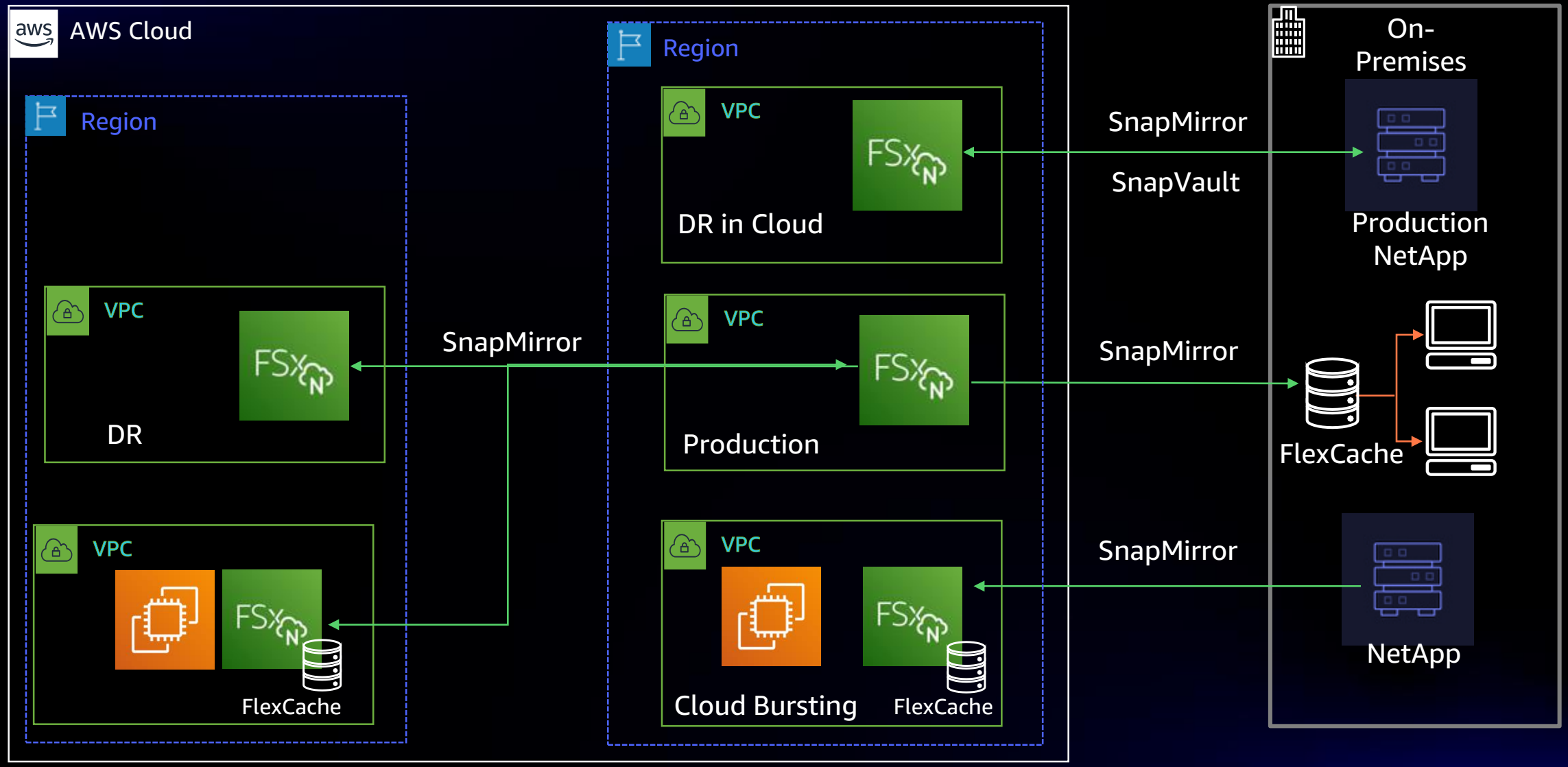
Things you won't need to change when moving to AWS

- Active Directory
- Permissions / Access Control Lists (ACLs)
- DNS names
- DFS namespace names
- File share configuration
- Shadow copies settings
- Storage quotas settings

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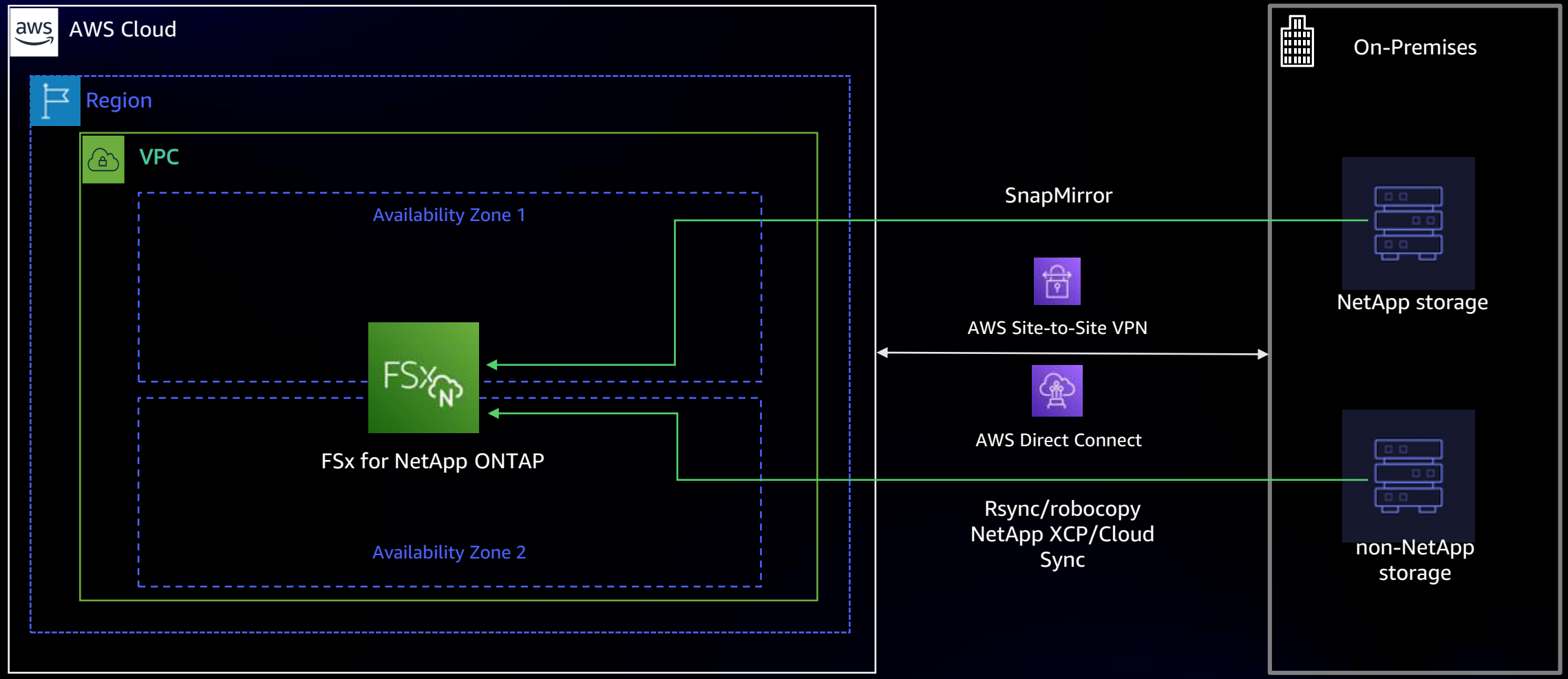
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Hybrid Use cases



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Simple and seamless migration



SnapMirror performs quick, efficient, incremental transfers of data
No need to re-factor or re-architect

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Amazon FSx for NetApp ONTAP



Simple and seamless migration

Things you won't need to change when moving to AWS

- Automation built on ONTAP CLI, REST APIs or Ansible
- Full NetApp ONTAP feature set
  - SnapMirror, Snapshots, FlexClone, SnapRestore, FlexCache, Multi-Protocol, FabricPool, QOS, etc.
- Active Directory / LDAP integration
- Permissions / Access Control Lists (ACLs)
- Storage Efficiencies

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Thank you!

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Choice of scale-up and scale-out file systems





	Scale-up	Scale-out
File systems	NetApp ONTAP Windows File Server ZFS	Lustre
Benefit	Highest speed with ultra-low latencies	Virtually unlimited scale
Performance	Multiple GB/s throughput, sub-millisecond latencies and 100s thousands IOPS	100s GB/s throughput, sub-millisecond latencies and millions of IOPS

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