AWS re:Invent

WIN204-R

Everything you need to know about Amazon FSx for Windows File Server

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Agenda

1. Amazon FSx for Windows File Server overview
2. Amazon FSx deployment options
3. Migration to Amazon FSx
4. Amazon FSx use cases

Managing Windows file servers on-premises is a challenge . . .

Managing hardware

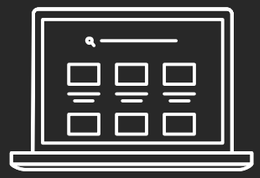
Planning capacity

Procuring and purchasing hardware

Setting up storage servers and volumes

Detecting and addressing hardware failures

Investing CapEx



Managing software

Installing and configuring server software

Setting up and configuring file systems

Applying Windows updates

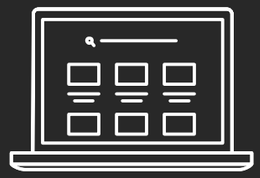
Managing software licenses

Managing backups

Monitoring security

Managing Windows file servers on AWS is better

Managing hardware



Managing software

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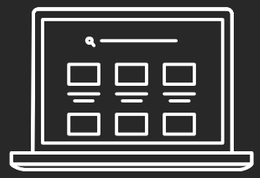
What if?

Managing hardware



Managing software

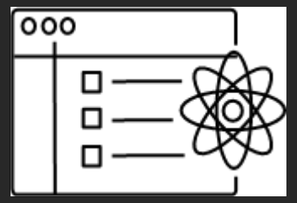
Introducing Amazon FSx for Windows File Server

Amazon FSx for Windows File Server overview

- What is Amazon FSx for Windows File Server?
- Technologies supported
  - NTFS permissions
  - SMB protocols
- Performance
- High availability

Amazon FSx for Windows File Server

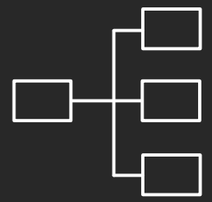
Lift and shift your Windows file storage with fully managed Windows file servers



Native Windows compatibility

Fast and flexible performance

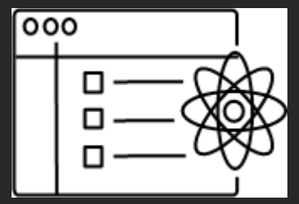
Enterprise-ready



Broad accessibility

Fully managed

Native Windows compatibility and features



Native Windows compatibility

NTFS

SMB

Native SMB 2.0 to 3.1.1

Active Directory

Integrates with Active Directory and supports Windows ACLs

DFS Namespaces and DFS Replication

Windows Server

Active Directory integration

Integrates with Active Directory

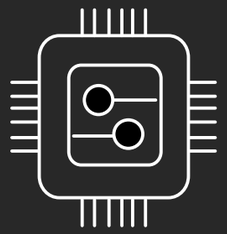
Customer-managed Active Directory (on-premises & cloud)

AWS-managed Active Directory

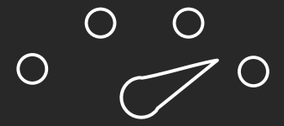
Shared AWS-managed Active Directory

Fast and flexible performance

Fast and flexible performance

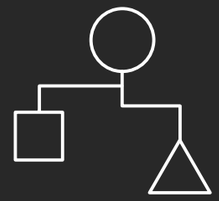


Built on SSD storage



High throughput

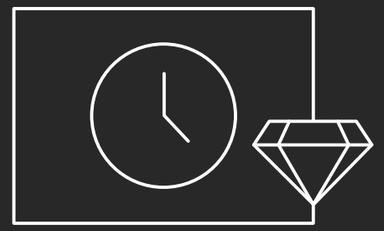
High IOPS



Choose throughput independent of storage

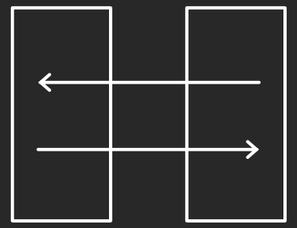
Consistent submillisecond latencies

Enterprise ready: Highly available and highly durable



Highly available and durable

Continually monitors and addresses hardware failures

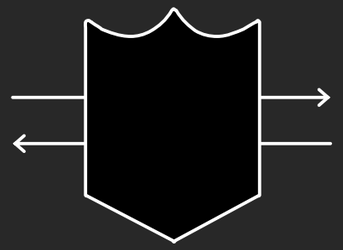


Replicates data within Availability Zone

Backups are stored in Amazon S3

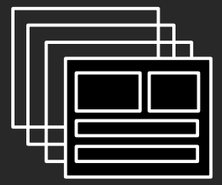
Supports Multi-AZ deployments

Enterprise ready: Secure and compliant



Secure and compliant

Data encrypted at-rest and in-transit



Integrates with Active Directory and supports Windows ACLs

Network traffic access control using Amazon VPC security groups

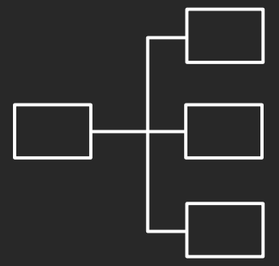
Admin API access control using AWS Identity and Access Management (IAM)

Monitor and log API calls using AWS CloudTrail

PCI-DSS + ISO-compliant and HIPAA-eligible

SOC 1, 2, and 3 compliant

Broad accessibility: What's supported?



Broad accessibility

Amazon EC2

VMware Cloud on AWS

Amazon WorkSpaces

Amazon AppStream 2.0

Microsoft Windows Server 2008+

Windows 7+

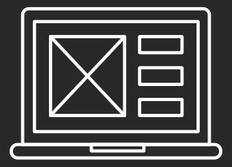
Linux (Samba client)

SMB
2.0–3.1.1

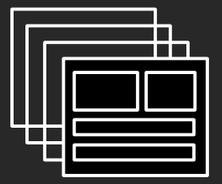
Windows Server

Supports a wide spectrum of use cases

Home directories



Line-of-business applications



Web serving and content management

Software development environments

Media workflows

Analytics

Data migration to Amazon FSx for Windows File Server

- File copy with Robocopy
- Packaging files with WinRAR and using AWS Snow* family
- Migration of existing file share configuration

https://docs.aws.amazon.com/fsx/latest/WindowsGuide/migrate-to-fsx.html

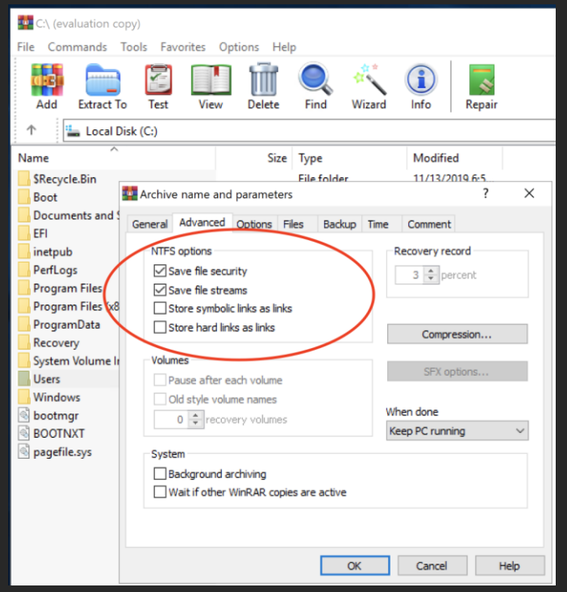
Migrating data into Amazon FSx: Robocopy

The Robocopy command is a flexible file transfer utility with multiple options to control the data transfer process. Because of this Robocopy command execution, all the files and directories from the source share are copied to the Amazon FSx target share. The copy preserves file and folder NTFS ACLs, attributes, time stamps, owner information, and auditing information.

```
robocopy <Source> <Destination> [<File>[ ...]] [<Options>]

/copy:DATSOU

    D – data

    A – attributes

    T – time stamps

    S – NTFS ACLs

    O – owner information

    U – auditing information.

/secfix – Fixes file security on all files, even skipped ones.

/e – Copies subdirectories, including empty ones

/z – Copies files in restartable mode.

/MT:8 – Specifies number of threads to use for copying

/b - Copies files in Backup mode
```

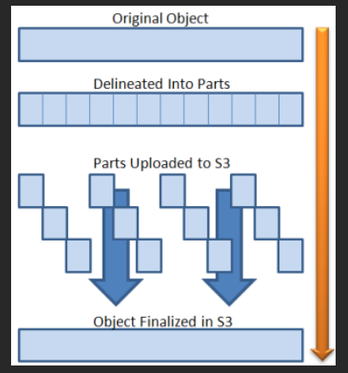
Migrating data: 3rd-party tools (WinRAR)

- WinRAR archives can:
  - Preserve NTFS permissions and file streams
  - Encapsulate file shares into a single archive
    - One large file may transfer faster than hundreds/thousands of smaller files
  - Simplify packaging of files for an AWS Snowball migration
  - Split into a multi-part upload to Amazon S3 if there are no bandwidth constraints



AWS Snowball

or



Multipart upload

FSx

Recap

Active Directory / Availability Zone configuration	Migration methods and tools		
	DFS-R	Robocopy	WinRAR
AWS Managed AD – Single AZ	✗	✓	✓
AWS Managed AD – Multi AZ	✗	✓	✓
Self Managed AD – Single AZ	✓	✓	✓
Self Managed AD – Multi AZ	✗	✓	✓

Let’s talk—discussion topics

1. Do you see the need for migrating Windows file shares to the managed service?
2. What specific use cases are your highest priority?
3. Is cost or performance your highest priority?
4. Any use cases you can think of that have not been mentioned yet?
5. Would you deploy Amazon FSx with AWS Directory Service or self-managed AD?
6. Would you deploy Amazon FSx to host SQL Server databases assuming the required levels of performance and HA are achieved (with continuous available file share support)?
7. Do you have requirements for anti-malware agents on your file servers?

Thank you!

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