

FSx Windows File Share and Lustre

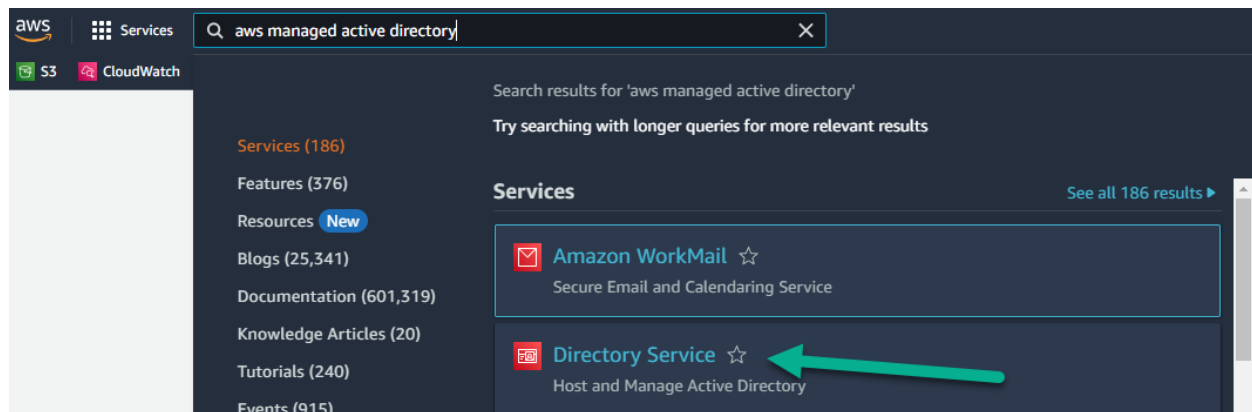
Problem Statement:

You work for XYZ Corporation and the current requirement in the organization is for faster file sharing, which can also help in data replication from On-Premises infrastructure.

You have been asked to:

1. Create an FSx file system for a Windows file server
 - a. Make sure you have an AWS Managed Active Directory with a valid domain name.
 - b. Connect it to your Windows EC2 server.
2. Create an FSx file system for Lustre and attach it to an Amazon Linux 2 instance

Answer:



Select Dropdown “AWS Managed Microsoft AD”

Click on **Setup Directory**

Select directory type [Info](#)

Directory types

☒ **AWS Managed Microsoft AD**

☐ Simple AD

☐ AD Connector

☐ Amazon Cognito User Pools

AWS Managed Microsoft AD

With AWS Managed Microsoft AD, you can easily enable your Active Directory-aware workloads and AWS resources to use managed actual Microsoft Active Directory in the AWS Cloud. Workload examples include Amazon EC2, Amazon RDS for SQL Server, custom .NET applications, and AWS Enterprise IT applications such as Amazon WorkSpaces.

[Learn more](#)

[View use cases](#)

Cancel

Next

Select "AWS Managed Microsoft AD" Click Next

[Directory Service](#) > [Directories](#) > Set up a directory

Step 1
[Select directory type](#)

Step 2
Enter directory information

Step 3
Choose VPC and subnets

Step 4
Review & create

Enter directory information [Info](#)

A managed Microsoft Active Directory domain.

Directory type
Microsoft AD

Operating system version
Windows Server 2019

Edition [Info](#)
Microsoft AD is available in the following two editions:

☒ **Standard Edition**
Best for small to medium sized businesses.

- 1GB of storage for directory objects
- Optimized for up to 30,000 objects

~USD 86.4000/mo (USD 0.1200/hr)*
* includes two domain controllers, USD 43.2000/mo for each additional domain controller.

☐ **Enterprise Edition**
Best for large businesses.

- 17GB of storage for directory objects
- Optimized for up to 500,000 objects

~USD 288.0000/mo (USD 0.4000/hr)*
* includes two domain controllers, USD 144.0000/mo for each additional domain controller.

Directory DNS name
A fully qualified domain name. This name will resolve inside your VPC only. It does not need to be publicly resolvable.

Directory NetBIOS name - optional
A short identifier for your domain. If you do not specify a NetBIOS name, it will default to the first part of your Directory DNS name.

Maximum of 15 characters, can't contain spaces or the following characters: '\ / : * ? " < > | ' . It must not start with '.'.

Directory description - optional
Descriptive text that appears on the details page after the directory has been created.

2 | Page

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Admin password

The password for the default administrative user named Admin.

Passwords must be between 8 and 64 characters, not contain the word "admin", and include three of these four categories: lowercase, uppercase, numeric, and special characters.

Confirm password

This password must match the Admin password above.

Cancel Previous Next

Provide Admin password and remember the password.


Click **Next**


Choose VPC and subnets [Info](#)

Networking


The VPC that contains your directory. If you do not have a VPC with at least two subnets, you must create one.


VPC [Info](#)


vpc-075375a9d0bf3861f (172.31.0.0/16) 

Create new VPC 

Subnets [Info](#)

subnet-056e0a94d760d13be (172.31.0.0/20, us-east-1a) 


subnet-0c4cd27c83e8d55ee (172.31.80.0/20, us-east-1b) 

Create new subnet 

Initial AD site name for this directory [Info](#)

Default-First-Site-Name

Cancel Previous Next



Select the Correct VPC in which subnets you wanted to deploy the Active Directory Services

Click **Next**

Review & create [Info](#)

Review

Directory type	VPC
Microsoft AD	vpc-075375a9d0bf3861f (172.31.0.0/16)
Operating system version	Subnets
Windows Server 2019	subnet-056e0a94d760d13be (172.31.0.0/20, us-east-1a)
Directory DNS name	subnet-0c4cd27c83e8d55ee (172.31.80.0/20, us-east-1b)
techarkit.com	
Directory NetBIOS name	
techarkit	
Directory description	
TechArkit Is the Domain Name	

Pricing

Edition	Free trial eligible Learn more
Standard	30-day limited trial
Domain controllers charge	
~USD 86.4000/mo (USD 0.1200/hr)*	
* Includes two domain controllers, USD 43.2000/mo for each additional domain controller.	

Cancel

Previous

Create directory

Review the provided information is correct then Click on “Create Directory”

[Directory Service](#) > Directories



Did you know?

You can deploy an AWS Managed Microsoft AD (Enterprise Edition) directory across AWS Regions. Once configured, AWS automatically replicates your directory data in multiple Regions so everything stays in sync. [Learn more](#)



Directories (1) [Info](#)



Actions

Set up directory

Find by directory ID or name

< 1 > ⌕

Directory ID	Directory name	Type	Size	Multi-Region	Status	Launch date
d-906782260a	techarkit.com	Microsoft AD	Standard	Not applicable	Creating	Sep 18, 2023

Wait for 30 to 40 Minutes, Active Directory will be ready.

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Directory Service > Directories > d-906782260a

d-906782260a

Directory details

Directory type Microsoft AD	Directory DNS name techarkit.com	Directory ID d-906782260a
Edition Standard	Directory NetBIOS name techarkit	Description - Edit TechArkit is the Domain Name
Operating system version Windows Server 2019	Directory administration EC2 instance(s) -	

Networking & security

Scale & share

Application management

Maintenance

Networking details

VPC vpc-075375a9d0bf3861f	Subnets subnet-0c4cd27d3e8d55ee subnet-056e0a94d760d13be	Status Active
Availability zones us-east-1a us-east-1b	DNS address 172.31.90.58 172.31.1.170	Last updated Monday, September 18, 2023
		Launch time Monday, September 18, 2023

Your Directory services will be active after sometime, then it will show as status = Active.

Inbound rules (18)

Filter security group rules

<input type="checkbox"/>	Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
<input type="checkbox"/>	-	sg-01bf5d139e77c7b8	IPv4	Custom TCP	TCP	1024 - 65535	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-01425f123fd0f80e5	IPv4	DNS (TCP)	TCP	53	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0b0995c180139d680	IPv4	Custom TCP	TCP	464	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-01a0fb07a3235a804	IPv4	DNS (UDP)	UDP	53	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-041364df295351ce2	IPv4	Custom TCP	TCP	135	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0e9520ce1ee3328ab	IPv4	All ICMP - IPv4	ICMP	All	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-05bb12f6b06552e69	IPv4	Custom TCP	TCP	636	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-05d1d11228ff0bc98	IPv4	Custom TCP	TCP	3268 - 3269	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-09c9aa85d2cede27	IPv4	Custom UDP	UDP	445	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0ce71a5a710ebb2b5	IPv4	Custom UDP	UDP	464	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-08a1384970409a6b5	IPv4	Custom UDP	UDP	88	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0a72c5498e8479cf6	IPv4	Custom UDP	UDP	138	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-05a5e35780d590502	IPv4	Custom UDP	UDP	389	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-02ebfee2e506fc7b6	IPv4	Custom UDP	UDP	123	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-07c26b21e4b0e762d	IPv4	Custom TCP	TCP	88	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0521463bc359f0ce0	IPv4	LDAP	TCP	389	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0edd52073923741c9	-	All traffic	All	All	sg-0bc4a871822fb939...	-
<input type="checkbox"/>	-	sg-08aff1ae1470cac80	IPv4	SMB	TCP	445	0.0.0.0/0	-

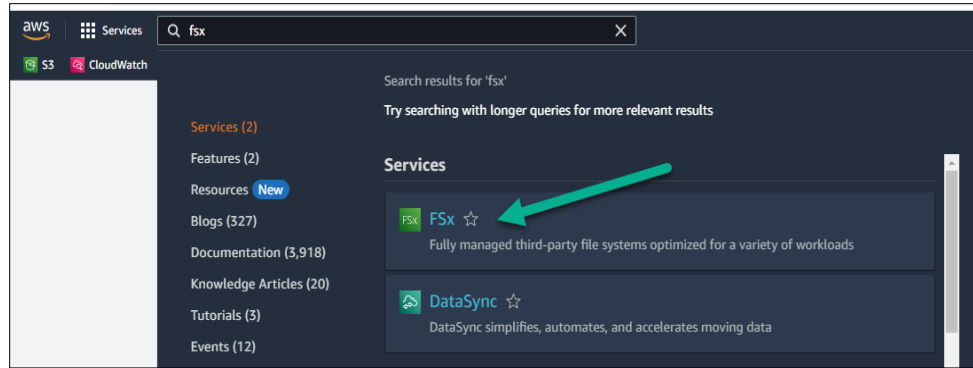
Above are the ports you need to allow from the Security group in order to communicate with Active Directory services.

Create FSx for Windows

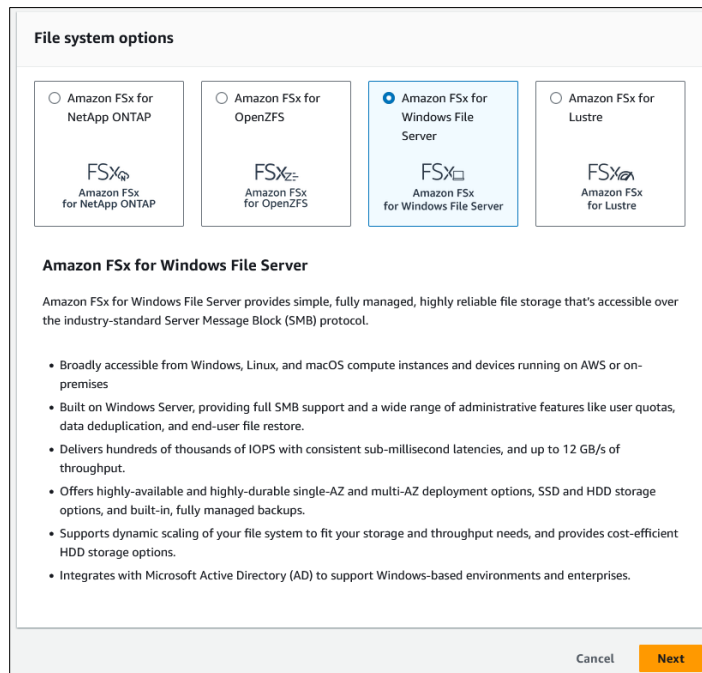
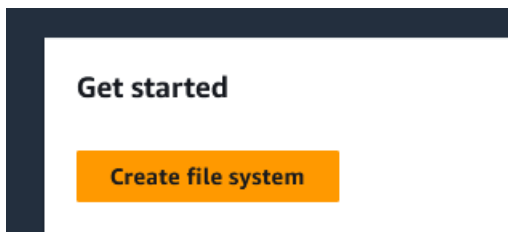
AWS Management console go for FSx service using search bar

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Click on “Create File System”



Select “Amazon FSx for Windows File Server”

Click **Next**

File system details

File system name - optional [Info](#)

techarkit_share

Maximum of 256 Unicode letters, whitespace, and numbers, plus + - = _ . : /

Deployment type [Info](#)

☐ Multi-AZ (Recommended)

Multi-AZ file systems are recommended for most production workloads because they have two file servers in separate Availability Zones (AZ), providing continuous availability to data and helping protect your data against instance failure and AZ disruption.

☐ Single-AZ 2

Single-AZ 2 is the latest generation of single Availability Zone file systems, and it supports SSD and HDD storage.

☒ Single-AZ 1

Storage type [Info](#)

☒ SSD

☐ HDD

Not supported on Single-AZ 1 file systems.

SSD storage capacity [Info](#)

34

GiB

Minimum 32 GiB; Maximum 65,536 GiB

Provisioned SSD IOPS [Info](#)

Amazon FSx provides 3 IOPS per GiB of storage capacity. You can also provision additional SSD IOPS as needed.

☒ Automatic (3 IOPS per GiB of SSD storage)

☐ User-provisioned

Minimum 102 IOPS; Maximum 3,50,000 IOPS

Throughput capacity [Info](#)

The sustained speed at which the file server hosting your file system can serve data. The file server can also burst to higher speeds for periods of time.

32 MB/s (recommended)

Network & security

Virtual Private Cloud (VPC) [Info](#)

Specify the VPC from which your file system is accessible.

vpc-075375a9d0bf3861f (CIDR: 172.31.0.0/16)

VPC Security Groups [Info](#)

Specify VPC Security Groups to associate with your file system's network interface.

Choose VPC security group(s)

sg-0bc4a871822fb9396 (d-906782260a_controllers) X

Subnet [Info](#)

Specify the subnet in which your file system's network interface resides.

subnet-056e0a94d760d13be (us-east-1a | use1-az1)

Windows authentication

Choose an Active Directory to provide user authentication and access control for your file system [Info](#)

☒ AWS Managed Microsoft Active Directory

☐ Self-managed Microsoft Active Directory

AWS Managed Microsoft Active Directory [Info](#)

techarkit.com | d-906782260a

[Create new directory](#)

Select the Correct **VPC**, **Subnet**, and **Security Group** to avoid access level issues.

Select “**AWS Managed Microsoft Active Directory**” then select the AD you created on the first step. In my case “techarkit.com” which I have created.

Encryption

Encryption key [Info](#)

aws/fsx (default) ▼

Description	Account	KMS key ID
Default key that protects my FSx resources when no other key is defined	208253838762	a6e8876e-030b-4968-9cc1-cf64cacee399

► Auditing - *optional*

► Access - *optional*

► Backup and maintenance - *optional*

► Tags - *optional*

CancelBackNext

Let's leave all the default options and Click **Next**

Encryption

Encryption key [Info](#)

aws/fsx (default) ▼

Description	Account	KMS key ID
Default key that protects my FSx resources when no other key is defined	208253838762	a6e8876e-030b-4968-9cc1-cf64cacee399

► Auditing - *optional*

► Access - *optional*

► Backup and maintenance - *optional*

► Tags - *optional*

CancelBackNext

Windows authentication

Attribute	Value	Editable after creation
Active Directory Type	AWS Managed Microsoft Active Directory	✗
Microsoft Active Directory ID	d-906782260a	✗

Encryption

Attribute	Value	Editable after creation
KMS key ID	arn:aws:kms:us-east-1:208253838762:key/a6e8876e-030b-4968-9cc1-cf64cacee399	✗

Auditing

Attribute	Value	Editable after creation
File access auditing	Disabled	✓

Access

< 1 >

DNS aliases

Access

< 1 >

DNS aliases

Backup and maintenance

Attribute	Value	Editable after creation
Daily automatic backup window	No preference	✓
Automatic backup retention period	30 days	✓
Weekly maintenance window	No preference	✓

Tags

< 1 >

Tag key	Value
You don't have any tags.	

Cancel Back Create file system

Click on **Create File System**.

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FSx > File systems

File systems (1)

Filter file systems

	File system name	File system ID	File system type	Status	Deployment type	Storage type	Storage capacity	Throughput capacity	Creation time
<input type="radio"/>	techarkit_share	fs-068548d584eb46385	Windows	Creating	Single-AZ 1	SSD	34 GiB	32 MB/s	2023-09-19T13:14:12+05:30

Creating will take around 25Mins for the general availability use.

FSx > File systems

File systems (1)

Filter file systems

	File system name	File system ID	File system type	Status	Deployment type	Storage type	Storage capacity	Throughput capacity	Creation time
<input type="radio"/>	techarkit_share	fs-068548d584eb46385	Windows	Available	Single-AZ 1	SSD	34 GiB	32 MB/s	2023-09-19T13:30:51+05:30

FSx > File systems > fs-068548d584eb46385

techarkit_share (fs-068548d584eb46385)

Attach Actions

Summary

File system ID fs-068548d584eb46385	Storage type SSD	Availability Zones us-east-1a
Lifecycle state Available	Storage capacity 34 GiB	Creation time 2023-09-19T13:30:51+05:30
File system type Windows	Provisioned SSD IOPS Automatic	
Deployment type Single-AZ 1	Throughput capacity 32 MB/s	

Network & security Monitoring & performance Administration Backups Updates Tags

Network & security

VPC Default VPC vpc-075373ad0b0f3861f	KMS key ID arn:aws:kms:us-east-1:20825385762:key/a68876e-030b-4968-9c1c-f54acee399
DNS name fs-068548d584eb46385.techarkit.com	AWS Managed AD directory ID d-906782260a
DNS aliases -	Type AWS Managed Microsoft Active Directory

Spin up Windows EC2 Instance

In EC2 console Click on Launch Instance then Select Windows AMI → Select Type

Name

WinServer

Add additional tags

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q

Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Li

SUS

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Microsoft Windows Server 2022 Base

Free tier eligible

ami-0be0e902919675894 (64-bit (x86))

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Microsoft Windows Server 2022 Full Locale English AMI provided by Amazon

Architecture

AMI ID

64-bit (x86)

ami-0be0e902919675894

Verified provider

Provide Instance Name and Select Windows Server

▼ Network settings Info

VPC - required Info

vpc-075375a9d0bf3861f

(default)

172.31.0.0/16

Subnet Info

subnet-056e0a94d760d13be

VPC: vpc-075375a9d0bf3861f Owner: 208253838762 Availability Zone: us-east-1a

IP addresses available: 4089 CIDR: 172.31.0.0/20

Create new subnet

Auto-assign public IP Info

Enable

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

Common security groups Info

Select security groups

d-906782260a_controllers sg-0bc4a871822fb9396

VPC: vpc-075375a9d0bf3861f

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

► Advanced network configuration

11 | Page

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Select the VPC and Security Group which you have used to deploy the AD Services.

▼ Configure storage Info Advanced

1x 30 GiB gp2 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems Edit

► Advanced details Info

d-906782260a_controllers

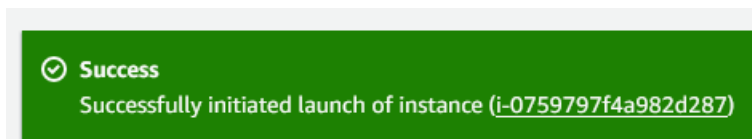
Storage (volumes)

1 volume(s) - 30 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance Review commands

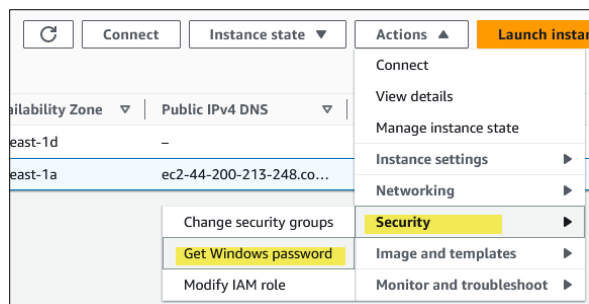
Click on **Launch Instance**.



Windows EC2 instance has been launched successfully.

Note: Ensure that your EC2 is launched in the correct availability zone where your AD services are launched.

Accessing the Windows EC2 instance



Select the Instance click on Actions → Security → Get Windows Password

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Get Windows password [Info](#)

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID
i-0fc02248ebe569899 (WinServer)

Key pair associated with this instance
WinKey

Private key
Either upload your private key file or copy and paste its contents into the field below.

Upload private key file

WinKey.pem
1.678KB

Private key contents - optional

-----BEGIN RSA PRIVATE KEY-----

PAFgcwGDLu1O87DKXY8TntySFQvECF6A1715+QIDAQABaoIBAQLTn2iWO6TJ6f1
MnpTwpPzSIB1N/6VYFjtmMGOBtBv91D1Whepv0WDpJpTe9ICGgAN/8miqAapemPD

Cancel Decrypt password

From EC2 instances select the Windows instance which you have just created, then copy the Public IP address.

Windows Start → Run → mstsc

Run

Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: mstsc

OK Cancel Browse...

Remote Desktop Connection

Remote Desktop Connection

Computer: 44.200.213.248

User name: None specified

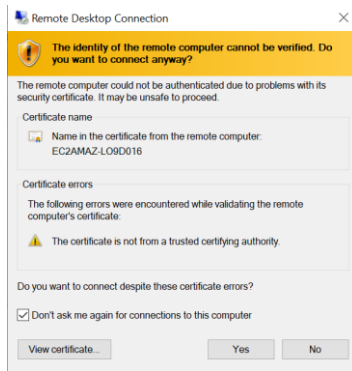
You will be asked for credentials when you connect.

Show Options Connect Help

Click Connect then provide the UserName: Administrator Password: which is decrypted

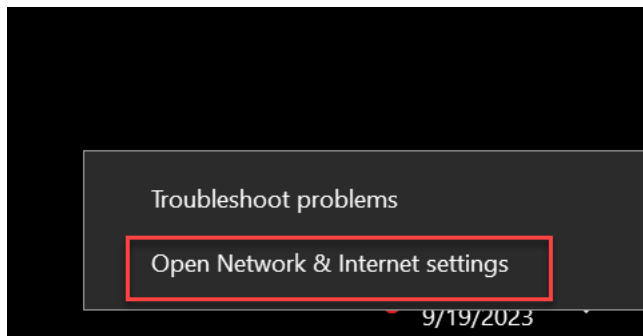
Created by TechArkit

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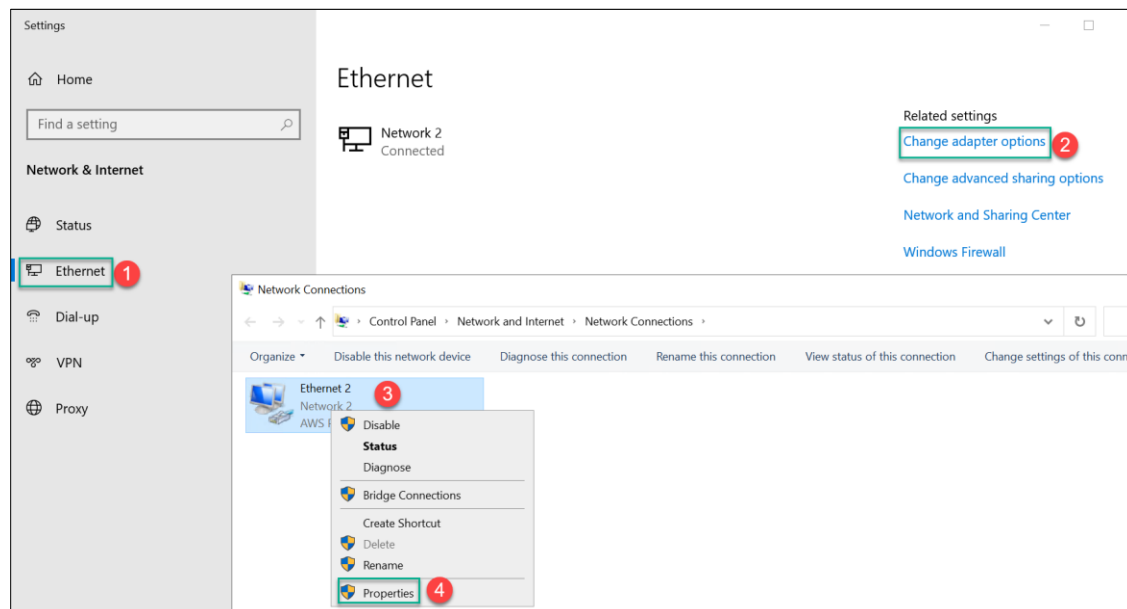


Click **Yes**

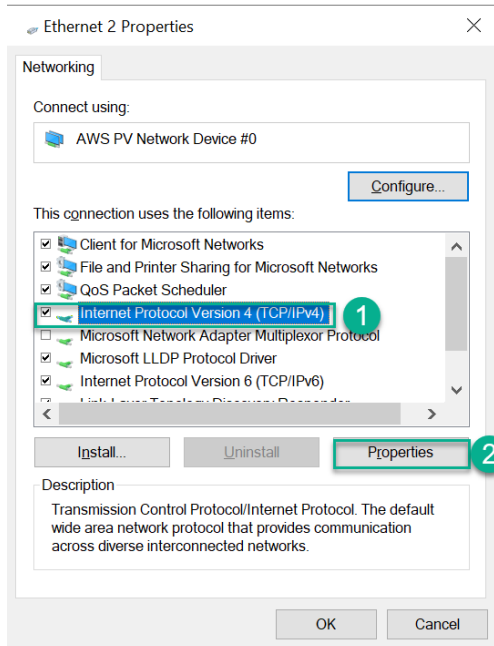
Right Click on Network Icon



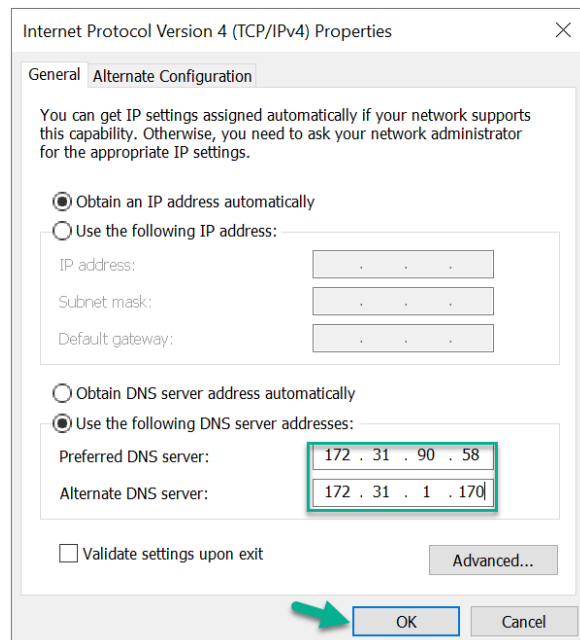
Click on **"Open Network & Internet Settings"**



Select the **Ethernet** → **Change Adapter Options** → Select the Network Card (**Right Click**) → Select **Properties**

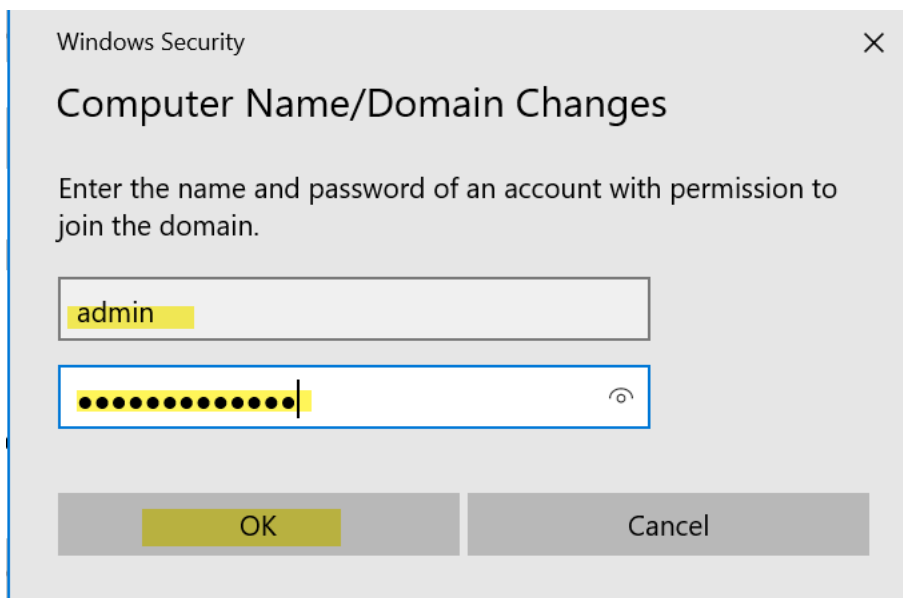
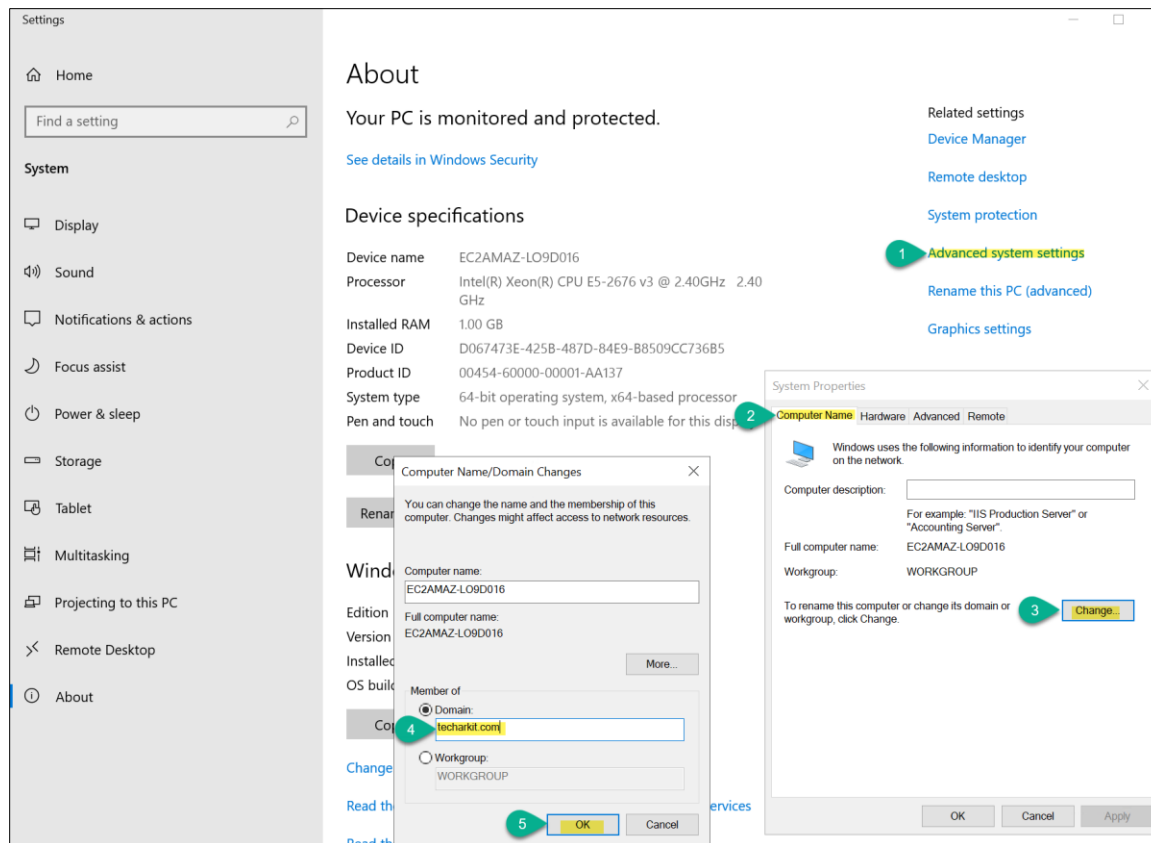


Select Internet Protocol Version 4(TCP/IPV4) → Properties



Use the Following DNS Server Addresses → Provide the DNS IPs from your domain details then Click **OK**.

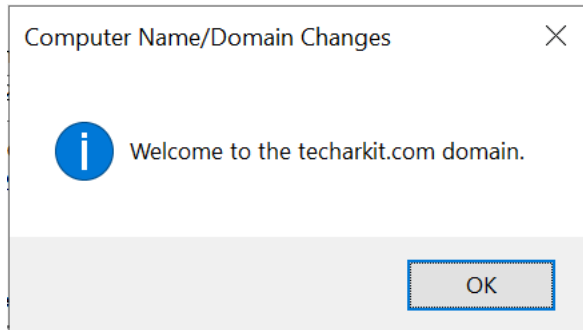
Click on **Start Menu** → **File Explorer** → **This PC** (Right Click) → **Properties** → **Advanced System Settings** → **Change** → **Select Domain** → (**Domain Name** (techarkit.com)) → Click **OK**



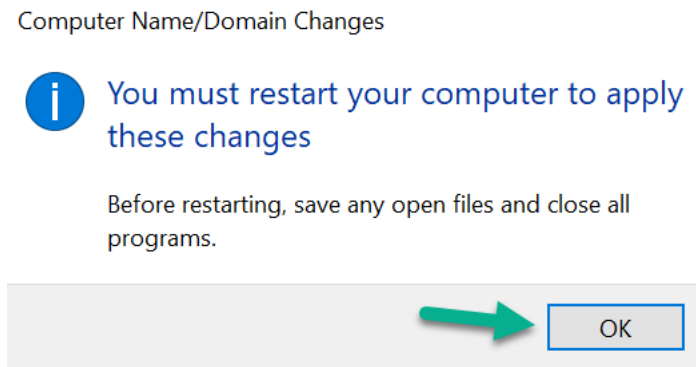
Provide the Domain Admin credentials which you have created while creating your **Active Directory Service**

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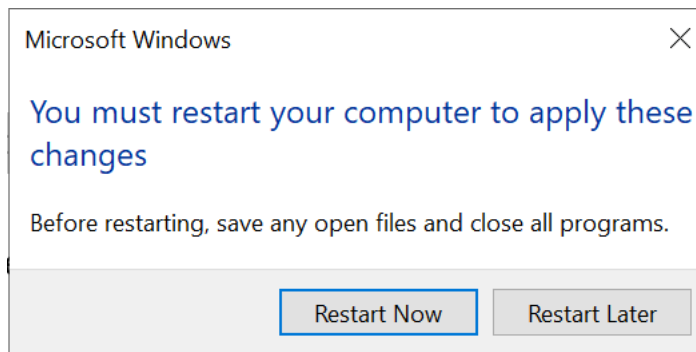
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Now you successfully joined your Windows server to Active Directory (**Domain**(techarkit.com)) Click **OK**



Click **OK**



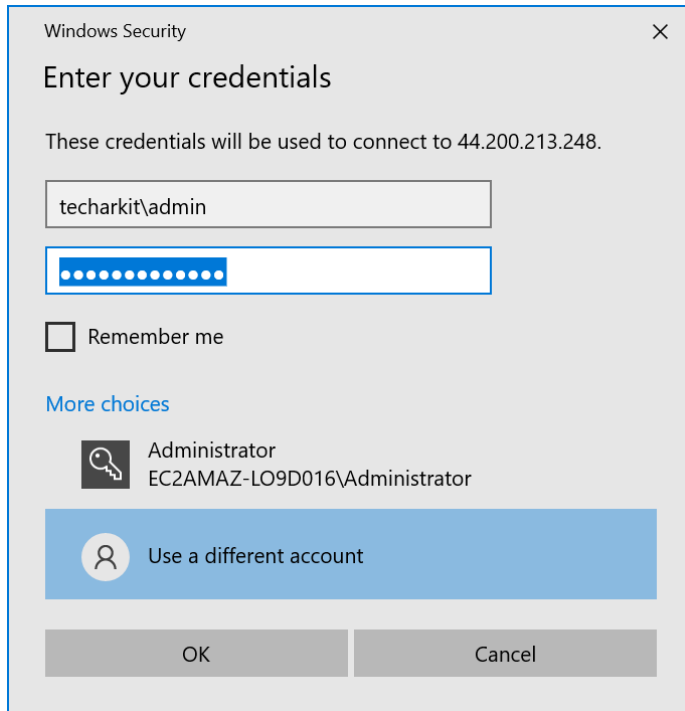
Restart Now

Domain Change will take effect, after the reboot you need to use domain admin credentials to log in to the Windows server.

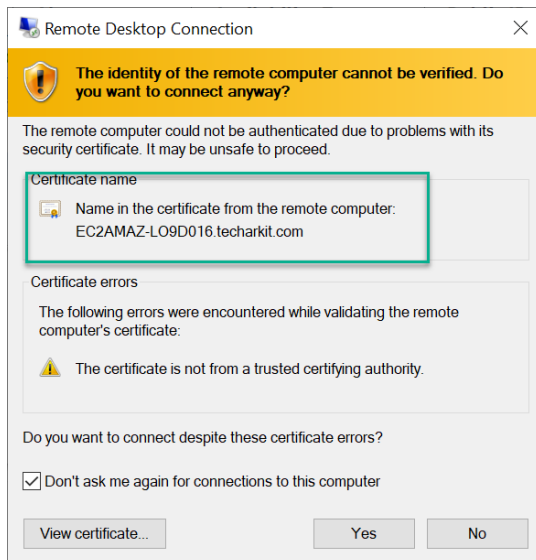
Start Menu → Run → mstsc → Provide your Windows instance Public IP Address then Click OK

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Provide Domain Admin credentials then click OK



Now you can observe the change on the computer domain name in the screenshot

Click **Yes**

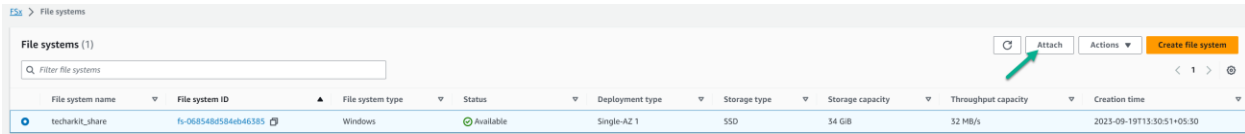
[Attaching Network Drive \(FSx Windows Share\)](#)

Go back to your FSx for Windows File systems

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Select the one which you wanted to attached



File systems (1)

File system name	File system ID	File system type	Status	Deployment type	Storage type	Storage capacity	Throughput capacity	Creation time
techarkit_share	fs-068548d584eb46385	Windows	Available	Single-AZ 1	SSD	34 GiB	32 MiB/s	2023-09-19T13:30:51+05:30

Click **Attach**

Attach file system

▼ From Windows instances (Amazon EC2, Amazon WorkSpaces, VMware Cloud on AWS)

▼ Prerequisites

- Join an EC2 Windows instance to your Active Directory d-906782260a
 - Launch new EC2 Windows instance joined to ActiveDirectory
 - Manually join an existing EC2 Windows instance to ActiveDirectory
- Connect to EC2 Windows instance

▼ Attach instruction - using the default DNS name

- Open a command prompt.
- Execute the following command (you can replace "Z:" with any other available drive letter):

```
net use Z: \\fs-068548d584eb46385.techarkit.com\share
```

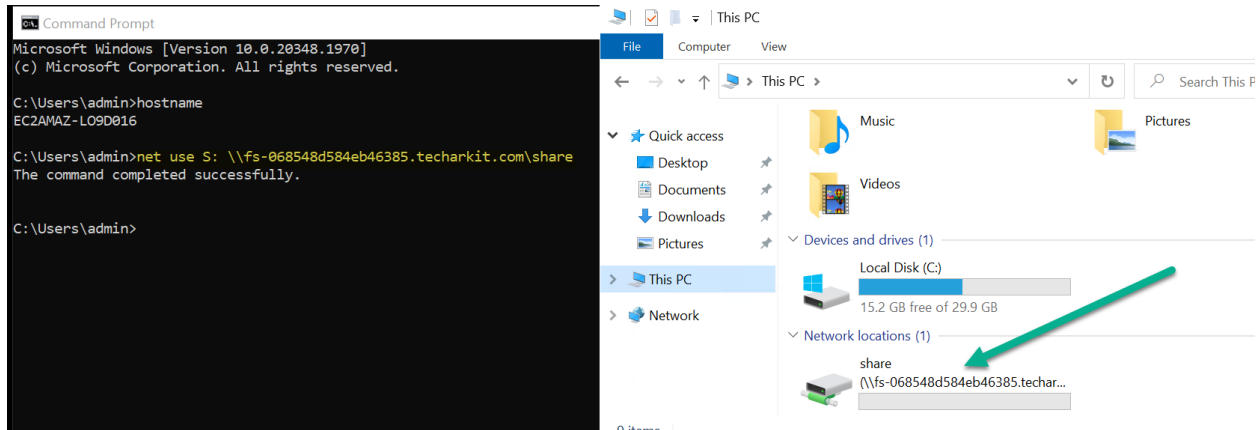
▼ Attach instruction - using DNS aliases

- If you have not yet already, create Service Principal Names (SPNs) and DNS CNAME records for the DNS alias
- Open a command prompt.
- Execute the following command (you can replace "Z:" with any other available drive letter):

```
net use Z: \\alias\share
```

where "alias" is any alias you have associated with the file system.

Note: As per my FSx creation it given me the unique file server share details it might be different for you.



In Windows instance open a Command prompt as Administrator mode then execute the command

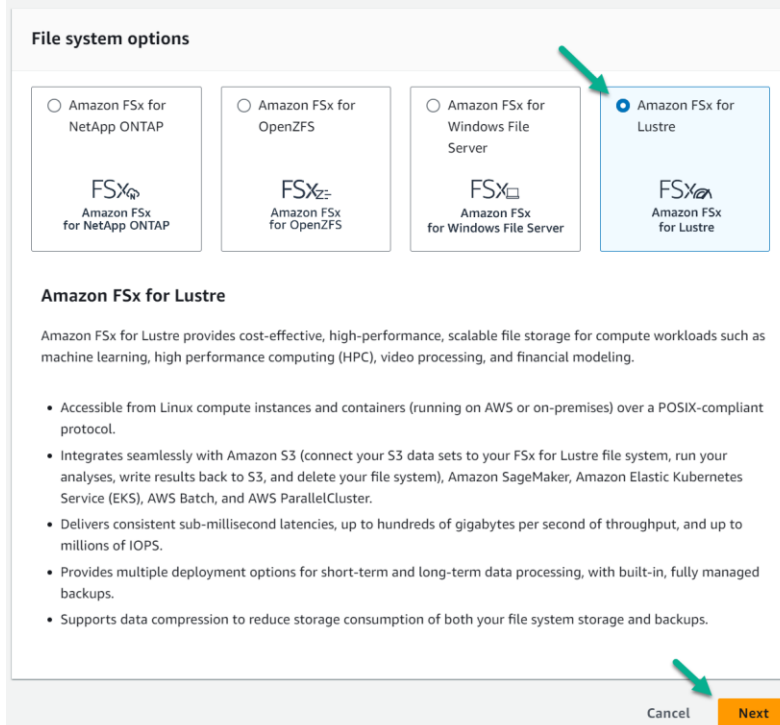
```
net use Z: \\fs-068548d584eb46385.techarkit.com\share
```

That's the conclusion you successfully completed, implementing AWS Managed Active Directory Services and Mapped FSx Windows Share to Windows Machine.


Creating Lustre File Share

Go to FSx console and select Create File System → Amazon FSx for Lustre → Next

Select file system type



Specify file system details

 **Did you know?**
With Amazon FSx for Lustre, you can reduce storage costs by 50% using Data Compression.
[Learn more about this capability.](#)

File system details

File system name - optional [Info](#)

Maximum of 256 Unicode letters, whitespace, and numbers, plus + - = , _ : /

Deployment and storage type [Info](#)

Select a deployment type and storage type to fit your workload requirements.

☒ Persistent, SSD

☐ Persistent, HDD

☒ with SSD cache

☐ Scratch, SSD

Throughput per unit of storage [Info](#)

Throughput (MB/s) per unit of storage (TiB)

☒ 125 MB/s/TiB

☐ 250 MB/s/TiB

☐ 500 MB/s/TiB

☐ 1000 MB/s/TiB

Storage capacity [Info](#)

TiB

Supported sizes: 1.2 TiB or increments of 2.4 TiB

Throughput capacity [Info](#)

Throughput capacity = Storage capacity (TiB) * Per unit storage throughput (MB/s)

150 MB/s

Data compression type [Info](#)

Data compression reduces the physical disk space needed to store file data. Select LZ4 to enable data compression.

Lustre version [Info](#)

Lustre version 2.15 is recommended for all new file systems.

2.15

Provide the **File System Name** → **Storage Capacity** must be 1.2TiB or 2.4TiB

Network & security

Virtual Private Cloud (VPC) [Info](#)
Specify the VPC from which your file system is accessible.

vpc-075375a9d0bf3861f (CIDR: 172.31.0.0/16)

VPC Security Groups [Info](#)
Specify VPC Security Groups to associate with your file system's network interface.

Choose VPC security group(s)

sg-002101bc8b3395383 (default) ✕

The VPC Security Groups associated with your file system's network interfaces must allow inbound Lustre traffic (TCP ports 988, 1018-1023).

Subnet [Info](#)
Specify the subnet in which your file system's network interface resides.

subnet-056e0a94d760d13be (us-east-1a | use1-az1)

Encryption

Encryption key [Info](#)

aws/fsx (default)

Description	Account	KMS key ID
Default key that protects my FSx resources when no other key is defined	208253838762	a6e8876e-030b-4968-9cc1-cf64cacee399

► Data Repository Import/Export - *optional*

► Logging - *optional*

► Backup and maintenance - *optional*

► Root Squash - *optional*

► Tags - *optional*

Cancel Back **Next**

Select the VPC, Subnet and Security Group where you wanted to deploy FSx for Lustre










Click **Next**

Review and create




Verify the following attributes before proceeding

 To mount your filesystem use the mount name parameter in the summary section of the file system overview page


File system details

Attribute	Value	Editable after creation
File system type	Amazon FSx for Lustre	
File system name	linux_share	
Deployment type	Persistent 2	
Storage type	SSD	
Throughput per unit of storage	125 MB/s/TiB	
Storage capacity	1.2 TiB	
Throughput capacity	150 MB/s	
Data compression type	NONE	
Lustre version	2.15	


Network & security

Attribute	Value	Editable after creation
Virtual Private Cloud (VPC)	vpc-075375a9d0bf3861f	
VPC Security Groups	sg-002101bc8b3395383	
Subnet	subnet-056e0a94d760d13be	

Encryption

Attribute	Value	Editable after creation
KMS key ID	arn:aws:kms:us-east-1:208253838762:key/a6e8876e-030b-4968-9cc1-cf64cacee399	

Data Repository Association

Attribute	Value	Editable after creation
Import data from and export data to S3	Disabled	

Logging

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Data Repository Association

Attribute	Value	Editable after creation
Import data from and export data to S3	Disabled	✔

Logging

Attribute	Value	Editable after creation
Log errors	Enabled	✔
Log warnings	Enabled	✔
CloudWatch logs destination	/aws/fsx/lustre	✔

Backup and maintenance

Attribute	Value	Editable after creation
Daily automatic backup window	No preference	✔
Automatic backup retention period	30 days	✔
Weekly maintenance window	No preference	✔

Root Squash

Attribute	Value	Editable after creation
Root Squash	0:0	✔
Exceptions to Root Squash		✔

Tags

< 1 >

Tag key	Value
You don't have any tags.	

Cancel Back **Create file system**

Click Create File System

File systems (1)

Filter file systems

Attach

Actions

Create file system

File system name	File system ID	File system type	Status	Deployment type	Storage type	Storage capacity	Throughput capacity	Creation time
linux_share	fs-0009P5S8731950d1	Lustre	Creating	Persistent 2	SSD	1,200 GiB	150 MB/s	2023-09-19T22:25:56+05:30

Note: Creating a File system will take around 20 – 30Mins of time

Creating Amazon Linux 2 EC2 Instance

In EC2 console Click on **Launch instance** → Provide **Instance Name** → Select **Amazon Linux** → **Amazon Linux 2 AMI** → Select **VPC, Subnet and Security Group** (Where your Lustre is created)

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Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name

LinuxServer

[Add additional tags](#)

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

Quick Start



Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
ami-00c6177f250e07ec1 (64-bit (x86)) / ami-0571d1c0feed82a15 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20230912.0 x86_64 HVM gp2

Architecture

64-bit (x86)

AMI ID

ami-00c6177f250e07ec1

Verified provider

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

techarkit17072023

[Create new key pair](#)

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-075375a9d0bf3861f

(default)

172.31.0.0/16

Subnet [Info](#)

subnet-056e0a94d760d13be

VPC: vpc-075375a9d0bf3861f Owner: 208253838762 Availability Zone: us-east-1a
IP addresses available: 4088 CIDR: 172.31.0.0/20

Auto-assign public IP [Info](#)

Enable

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group

☒ Select existing security group

Common security groups [Info](#)

Select security groups

default sg-002101bc8b3395383

VPC: vpc-075375a9d0bf3861f

[Compare security group rules](#)

Security groups that you add or remove here will be added to or removed from all your network interfaces.

[► Advanced network configuration](#)

Click on “Launch Instance”

EC2 > Instances > Launch an instance

✔ Success

Successfully initiated launch of instance (i-02ed5bc078179db9c)

Linux EC2 instance is created successfully, Wait for 5 mins let it come online

Then access the EC2 instance and install required packages

Select the EC2 instance → Click Connect

```

[ec2-user@ip-172-31-5-235 ~]$ sudo -i
[root@ip-172-31-5-235 ec2-user]# amazon-linux-extras install -y lustre2.10
Installing lustre-client
Loaded plugins: extras_suggestions, langpacks, priorities, update-notif
Loading repos: amazonlinux amazonlinux-docker amazonlinux-kernel-5.10 amazonlinux-lustre2.10
17 metadata files removed
8 xz files removed
8 metadata files removed
Loaded plugins: extras_suggestions, langpacks, priorities, update-notif
amazon2-core
amazon2extra-docker
amazon2extra-kernel-5.10
amazon2extra-lustre2.10
(1/9) amazon2-core/2/x86_64/group.gi
(2/9) amazon2-core/2/x86_64/updateinfo
(3/9) amazon2extra-docker/2/x86_64/updateinfo
(4/9) amazon2extra-lustre2.10/2/x86_64/updateinfo
(5/9) amazon2extra-lustre2.10/2/x86_64/primary.db
(6/9) amazon2extra-kernel-5.10/2/x86_64/updateinfo
(7/9) amazon2extra-docker/2/x86_64/primary.db
(8/9) amazon2extra-kernel-5.10/2/x86_64/primary.db
(9/9) amazon2-core/2/x86_64/primary.db
Resolving Dependencies
--> Running transaction check
--> Package lustre-client.x86_64 0:2.10.8-6.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
-----
Installing:
lustre-client x86_64 2.10.8-6.amzn2 amazon2extra-lustre2.10 538 k
Transaction Summary
-----
Install 1 Package

Total download size: 538 k
Installed size: 1.2 M
Downloading packages:
lustre-client-2.10.8-6.amzn2.x86_64.rpm | 538 kB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : lustre-client-2.10.8-6.amzn2.x86_64
Verifying : lustre-client-2.10.8-6.amzn2.x86_64
Installed:
lustre-client.x86_64 0:2.10.8-6.amzn2
Complete!

```

sudo -s

amazon-linux-extras install -y lustre2.10

```

[root@ip-172-31-5-235 ec2-user]# mkdir /data
[root@ip-172-31-5-235 ec2-user]# sudo mount -t lustre -o noatime,flock fs-0089ff558731950d1.fsx.us-east-1.amazonaws.com@tcp:/qgd4zbev /data
[root@ip-172-31-5-235 ec2-user]# df -h
Filesystem                Size      Used Avail Use% Mounted on
devtmpfs                   468M          0  468M   0% /dev
tmpfs                      477M          0  477M   0% /dev/shm
tmpfs                      477M    408K  476M   1% /run
tmpfs                      477M          0  477M   0% /sys/fs/cgroup
/dev/xvda1                  8.0G    1.7G   6.4G  22% /
tmpfs                      96M          0   96M   0% /run/user/1000
172.31.9.184@tcp:/qgd4zbev 1.2T    7.5M   1.2T   1% /data
[root@ip-172-31-5-235 ec2-user]#

```

[root@ip-172-31-5-235 ec2-user]# mkdir /data

[root@ip-172-31-5-235 ec2-user]# sudo mount -t lustre -o noatime,flock fs-0089ff558731950d1.fsx.us-east-1.amazonaws.com@tcp:/qgd4zbev /data

[root@ip-172-31-5-235 ec2-user]# df -h

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Filesystem	Size	Used	Avail	Use%	Mounted on
172.31.9.184@tcp:/qgd4zbev	1.2T	7.5M	1.2T	1%	/data

That's completed the given tasks.