Create a Network File System

with Amazon Elastic File System (Amazon EFS)

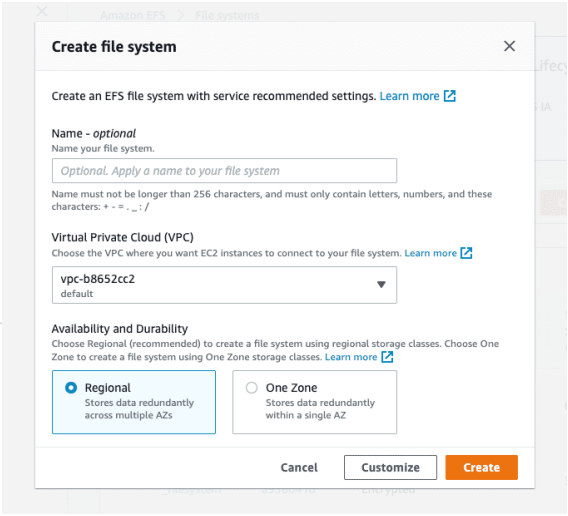
In this 10-minute tutorial, you will store your files in the cloud using Amazon EFS. You will create an Amazon EFS file system and launch a Linux virtual machine on Amazon Elastic Compute Cloud (Amazon EC2). You will then mount the file system, create a file, terminate the instance, and delete the file system.

Everything done in this tutorial is Free Tier eligible.

Step 1: Create a file system

You can create a highly available and scalable network file system from the Amazon EFS console.

a. On the Amazon EFS console, choose **Create file system**. If the default virtual private cloud (VPC) is not selected in the Virtual Private Cloud (VPC) dropdown list,select the dropdown arrow and select the default VPC. Accept all the defaults and then choose **Create**.



Step 2: Create and configure a virtual machine with Amazon EC2

To access your file system, you are now going to create an EC2 instance mounted to your Amazon EFS file system at launch.

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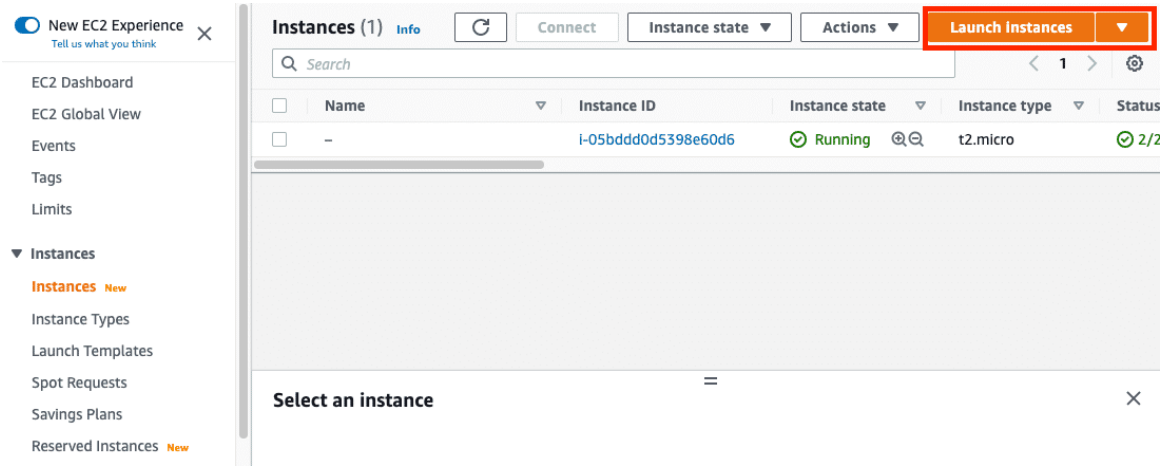
a. Click here to open the Amazon EC2 console. Go to the EC2 Instances console page and choose **Launch Instances** to create and configure your virtual machine.



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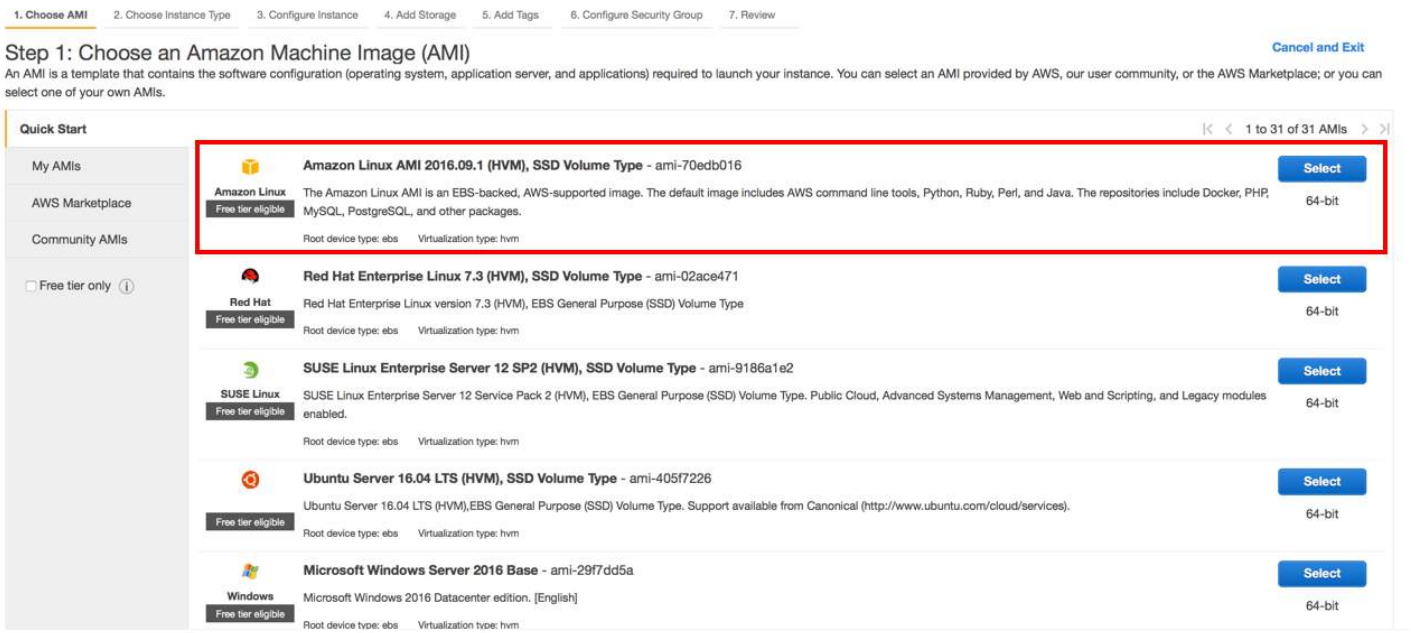
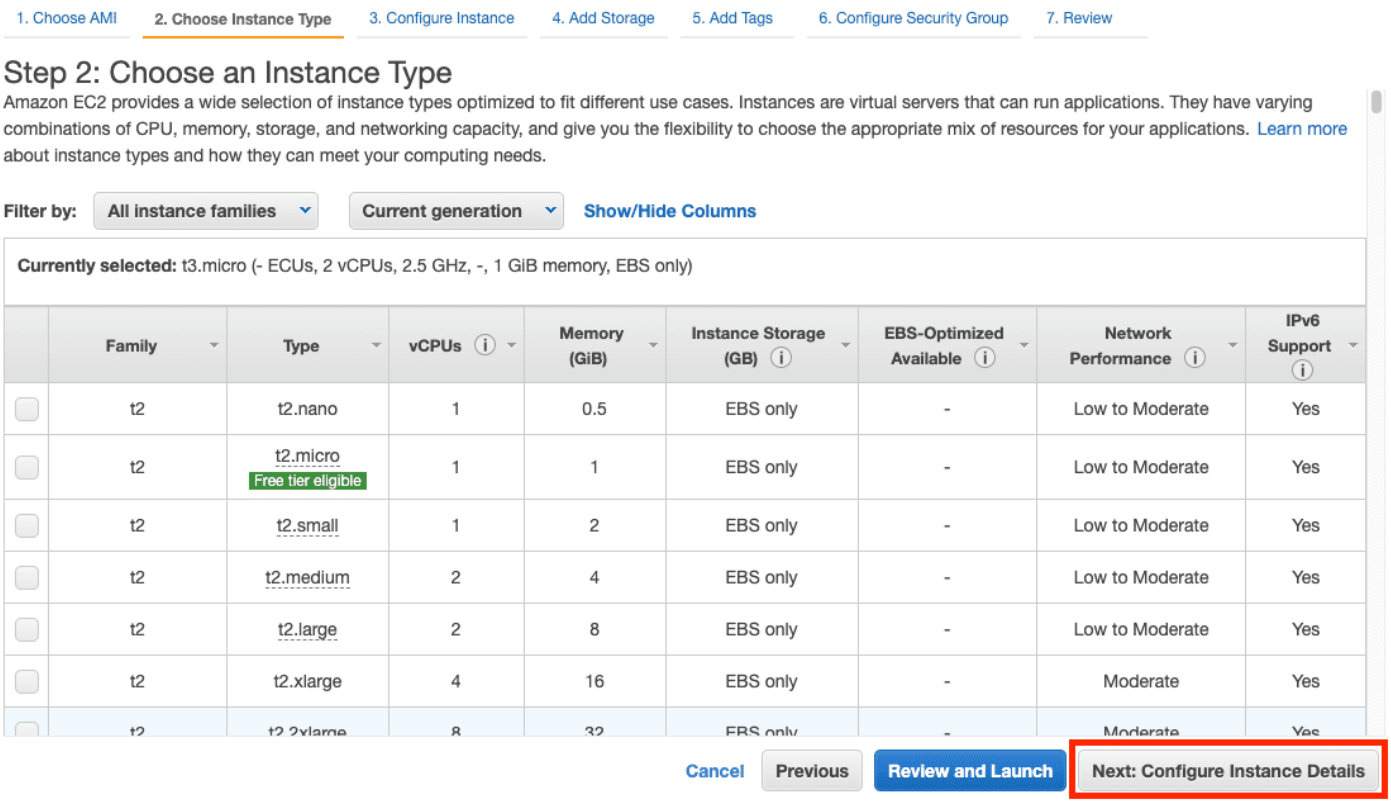
b. With Amazon EC2, you can specify the software and specifications of the instance you want to use. On this screen, you are shown options to choose an Amazon Machine Image (AMI). That is a template that contains the software configuration. This can include an operating system, an application server, and applications.

From an AMI, you launch an instance, which is a copy of theAMI running as a virtual server in the cloud.

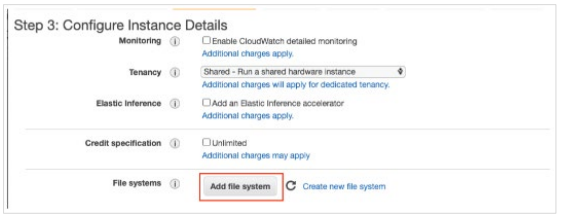
For this tutorial, find Amazon Linux AMI and choose **Select**.



You will now choose an instance type. Instance types include varying combinations of central processing unit (CPU), memory, storage, and networking capacity. You can choose the appropriate mix for your applications. For more information, see Amazon EC2 Instance Types. If the default option of t2.micro is not already selected, select it. This instance type is covered within the Free Tier and offers enough compute capacity to tackle simple workloads. Then choose **Next: Configure Instance Details**.



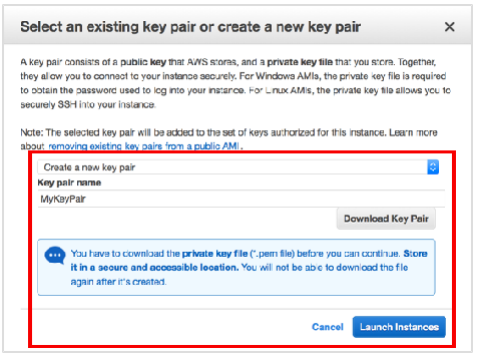
c. On the Configure Instance Details screen, you have the option to change multiple configuration options. You can view the one we want to change by scrolling down to **File systems**.



Choose **Add file system**.

The file system you just created should appear, and its prospective mount point. Keep these default settings, including the option to create the appropriate security group settings for your instance, and then select the option to **review and launch your instance**.

d. On the next screen, you will be asked to choose an existing key pair or create a new key pair. A key pair is used to log in to your instance (just as your house key is used to enter your home).



Here, you have a choice. You can do either of the following:

- Select **Choose an existing key pair** and select the key pair (if you already have one).
- Select **Create a new key pair**.

If you create a new key pair, name it **MyKeyPair**, and then choose **Download Key Pair**.

Make sure to save the key pair in a safe location on your computer.

After you have stored your key pair, to start your Linux instance, choose **Launch Instances**. Note: It will take several minutes to launch your instance.

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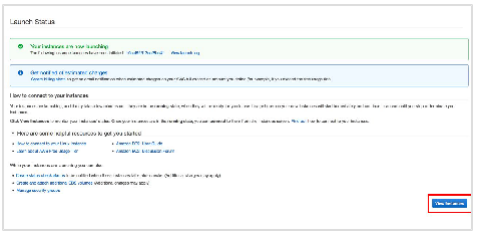
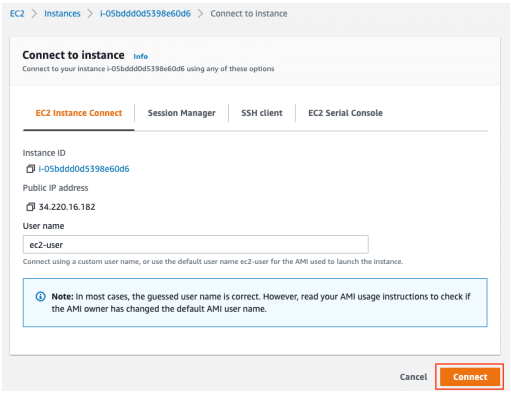
e. Choose **View Instances** on the next screen to view your instances and see the status of the instance you have just started.



Step 3: Connect to your instance

After launching your EC2 instance, it's time to connect to it.

a. After you choose Connect from the previous screen, make sure that the EC2 Instance Connect tab is selected (the far left tab). Then choose **Connect**.

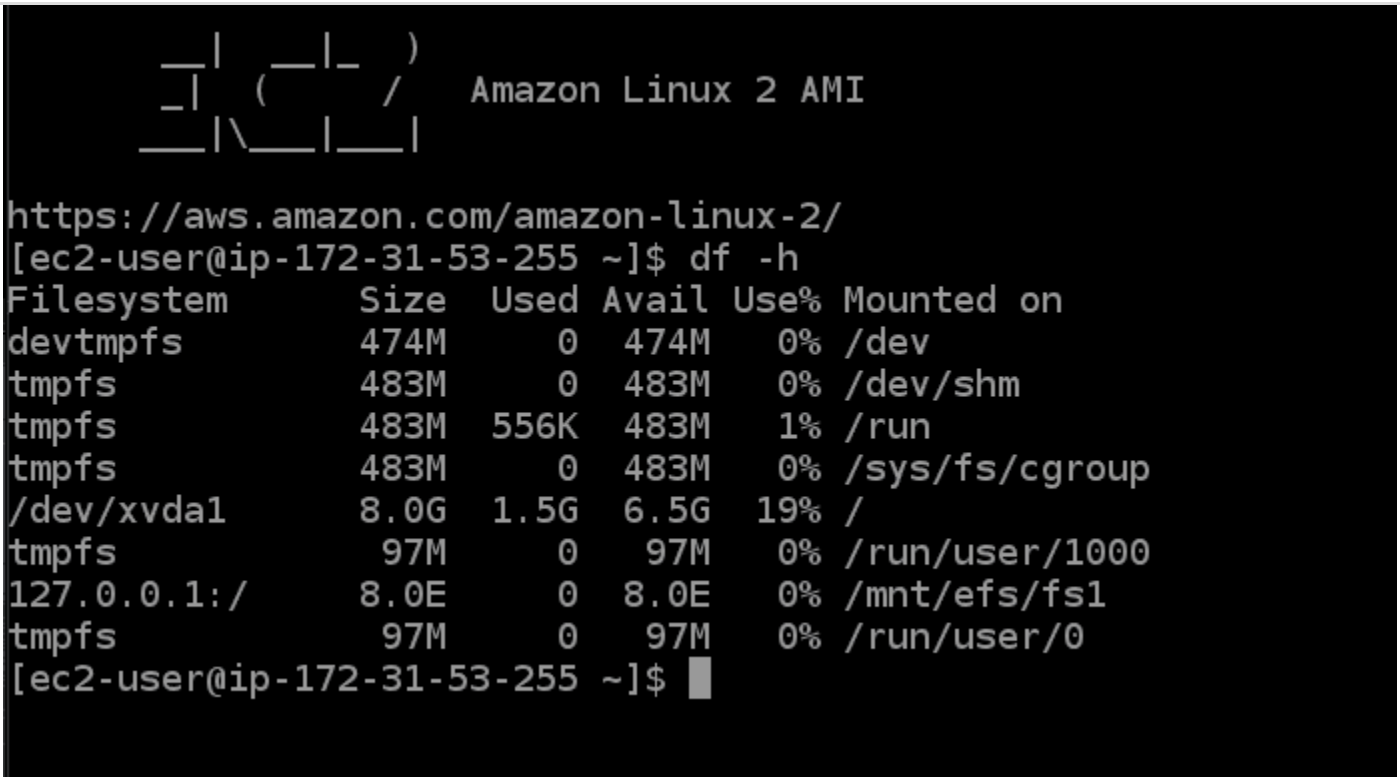


b. After choosing Connect on the EC2 Instance Connect screen, a new terminal should open in a new browser window, from which you will be able to issue commands directly to your newly created instance.

Step 4: Confirm your new EFS system is mounted and available

After your instance has been launched, a startup script will automatically issue the appropriate commands for mounting your new Amazon EFS shared file system. This process might take over 2 minutes to complete.

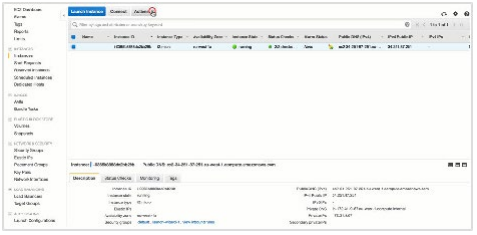
After it is complete, you should be able to list the attached storage devices on your Amazon EC2 instance by issuing the df -h command. The output of your command should look similar to the following, with your new Amazon EFS file system mounted on something like /mnt/efs/fs1 with 8.0E (exabytes) of available storage.



Step 5: Terminate your resources

You can terminate your virtual machine and file system from the AWS Management Console. In fact, it is a best practice to terminate the resources you are no longer using so you don't keep getting charged for them.

First, you will terminate your EC2 instance. Click here to open the Amazon EC2 console. Select the check box next to the instance you created. Then choose the **Actions** button, navigate to **Instance State**, and choose **Terminate**.



You will be asked to confirm your termination. Choose **Yes,Terminate**.

Note: This process can take several seconds to complete. When your instance has been terminated, the instance state will change to *terminated* on your EC2 console.

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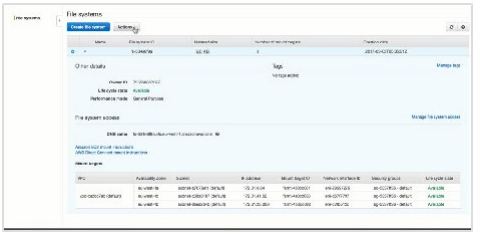
a. You will now delete your file system from the Amazon EFS console. Click here to open the Amazon EFS console. Select the radio button next to the file system you created. Then choose the **Actions** button, and choose **Delete file system**.



Confirm that you want to delete the file system by typing the file system ID in the text box. Choose **Delete File System**.

Congratulations!

Congratulations! You have created your first network file system in the cloud. Amazon EFS is a simple, scalable shared file system that grows and shrinks automatically as you add and remove files. You only pay for the amount of storage that you are using.