

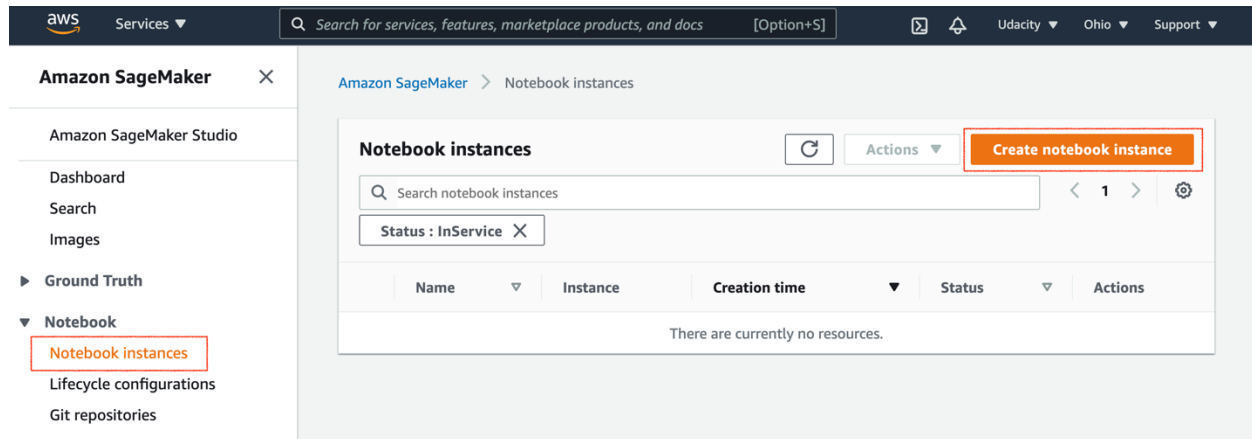
## Setting up a Notebook Instance

The deployment project you will be working on is intended to be done using Amazon's SageMaker platform. In particular, it is assumed that you have a working notebook instance in which you can clone the deployment repository.

If you have not yet done this, please see the beginning of **Lesson: Building a Model using SageMaker** where we have walked you by creating a notebook and cloning the deployment repository. Alternatively, you can follow the instructions below.

### Step 1. Go to AWS SageMaker

First, start by logging in to the [AWS console](#), opening the SageMaker dashboard, and clicking on **Create notebook instance**.



AWS SageMaker → Notebook instances service

### Step 2. Create a notebook instance

The **Create notebook instance** wizard will come up, asking you the following information:

1. **Notebook instance settings** - In this section, you may choose the notebook instance name of your choice. By default, a **ml.t2.medium** type is available. But, we will use **ml.p2.xlarge** for **training** a model and **ml.m4.xlarge** for **deployment**. These instances may not be available to all users by default. If you haven't requested **ml.p2.xlarge** so far, go to the [AWS Support Center](#) to raise a *Service limit increase* request.

Note that your notebook may have a different name than the one displayed here.

### Notebook instance settings

Notebook instance name

Maximum of 63 alphanumeric characters. Can include hyphens (-), but not spaces. Must be unique within your account in an AWS Region.

Notebook instance type

Elastic Inference [Learn more](#)

► Additional configuration

Create notebook instance → Notebook instance settings

2. **Permissions and encryption** - Next, under *IAM role* field select *Create a new role*.

### Permissions and encryption

**IAM role**  
Notebook instances require permissions to call other services including SageMaker and S3. Choose a role or let us create a role with the [AmazonSageMakerFullAccess](#) IAM policy attached.

Choose an IAM role ▲

Create a new role

Enter a custom IAM role ARN

Use existing role

**Encryption key - optional**  
Encrypt your notebook data. Choose an existing KMS key or enter a key's ARN.

No Custom Encryption ▼

Create notebook instance → Permissions and encryption. Create a new IAM role

3. **Create an IAM role** - You should get a pop-up dialog box, where you have to select **None** radio-button under **S3 buckets you specify** field, as is shown in the image below.  
Note that the IAM role name that appears may be different than the one displayed here.

Create an IAM role

×

Passing an IAM role gives Amazon SageMaker permission to perform actions in other AWS services on your behalf. Creating a role here will grant permissions described by the [AmazonSageMakerFullAccess](#) IAM policy to the role you create.

The IAM role you create will provide access to:

⊖ S3 buckets you specify - optional

☐ Any S3 bucket  
Allow users that have access to your notebook instance access to any bucket and its contents in your account.
 ☐ Specific S3 buckets  

Example: bucket-name-1, bucket-name-2

Comma delimited. ARNs, "\*" and "/" are not supported.

☒ None

☒ Any S3 bucket with "sagemaker" in the name
 ☒ Any S3 object with "sagemaker" in the name
 ☒ Any S3 object with the tag "sagemaker" and value "true" [See Object tagging](#)
☒ S3 bucket with a Bucket Policy allowing access to SageMaker [See S3 bucket policies](#)

Cancel

Create role

Create an IAM role dialog box

Permissions and encryption

**IAM role**  
Notebook instances require permissions to call other services including SageMaker and S3. Choose a role or let us create a role with the [AmazonSageMakerFullAccess](#) IAM policy attached.

AmazonSageMaker-ExecutionRole-20201218T222090

▼

☒ **Success! You created an IAM role.**

AmazonSageMaker-ExecutionRole-20201218T222090

×

**Root access - optional**

☒ Enable - Give users root access to the notebook
 ☐ Disable - Don't give users root access to the notebook  
Lifecycle configurations always have root access

**Encryption key - optional**  
Encrypt your notebook data. Choose an existing KMS key or enter a key's ARN.

No Custom Encryption

▼

Success, creating a new IAM role

- Network - optional** - Choose the *No VPC* option.

### ▼ Network - optional

#### VPC - optional

Your notebook instance will be provided with SageMaker provided internet access because a VPC setting is not specified.

No VPC

Create notebook instance → Network settings. Choose *No VPC*

5. **Git repositories** - Here you will clone the `https://github.com/udacity/sagemaker-deployment.git` repository to the current notebook instance only.

### ▼ Git repositories - optional

#### ▼ Default repository

##### Repository

Jupyter will start in this repository. Repositories are added to your home directory.

Clone a public Git repository to this notebook instance only



##### Git repository URL


Clone a repository to use for this notebook instance only.


`https://github.com/udacity/sagemaker-deployment.git`


[Add additional repository](#)

Create notebook instance → Git repositories setting

6. You're done! Click on **Create notebook instance** button. Your notebook instance is now set up and ready to be used! Once the Notebook instance has loaded, you will see a screen similar to the following snapshot.

**Notebook instances**  **Actions** ▼ **Create notebook instance**

< 1 > 

	Name ▼	Instance	Creation time ▼	Status ▼	Actions
<input type="radio"/>	myNotebook	ml.t2.medium	Dec 18, 2020 16:51 UTC	 InService	<a href="#">Open Jupyter</a>   <a href="#">Open JupyterLab</a>

A successfully created notebook instance (Status: InService). You can access your notebook using the **Open Jupyter** Action.