

Guided Lab: Launching an EC2 Spot instance

Description

This lab is designed to give you a practical experience working with Amazon EC2 Spot Instances. By launching an EC2 Spot instance, you can take advantage of the unused EC2 capacity in the AWS cloud and save up to 90% compared to On-Demand prices. This lab is perfect for those who want to optimize costs and scale their applications to meet demand. It's an excellent opportunity to gain hands-on experience with one of the most innovative and cost-effective cloud solutions available today.

Objectives

In this lab, you will learn how to:

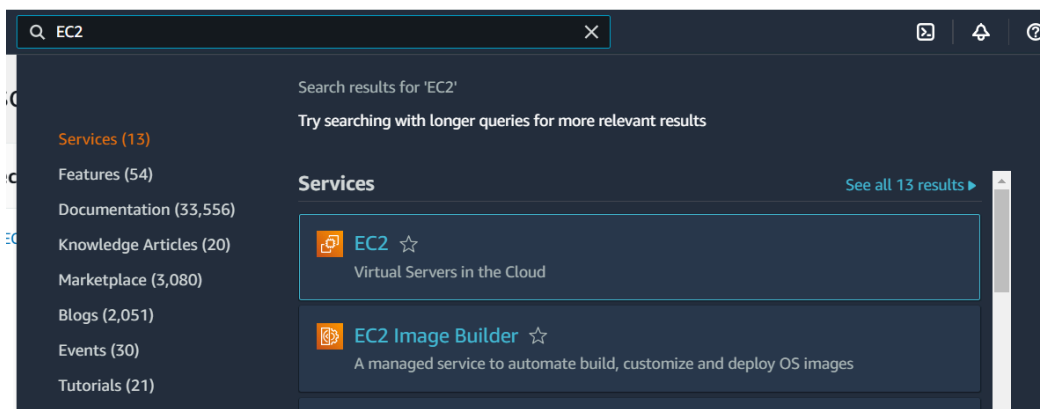
- Create Spot requests for EC2 instances
- Use Spot Instance pricing history
- Use Spot placement score

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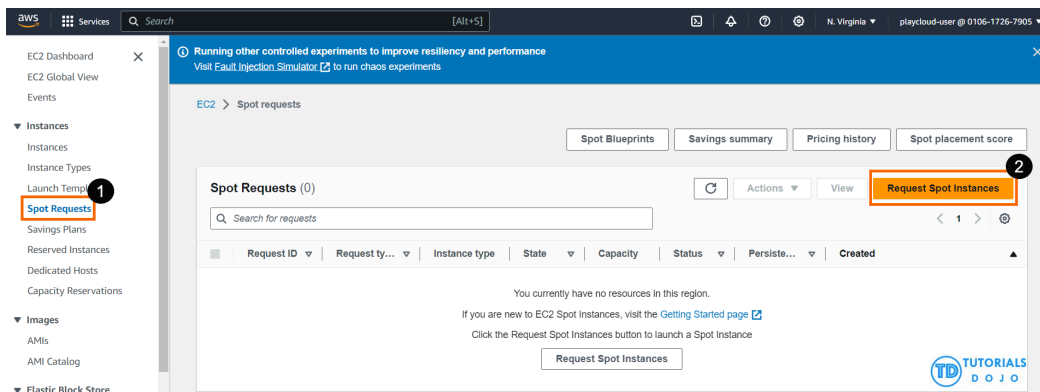
Lab Steps

Creating Spot requests for EC2 instances

1. Navigate to the search bar, type "EC2", and click to open the EC2 Dashboard.

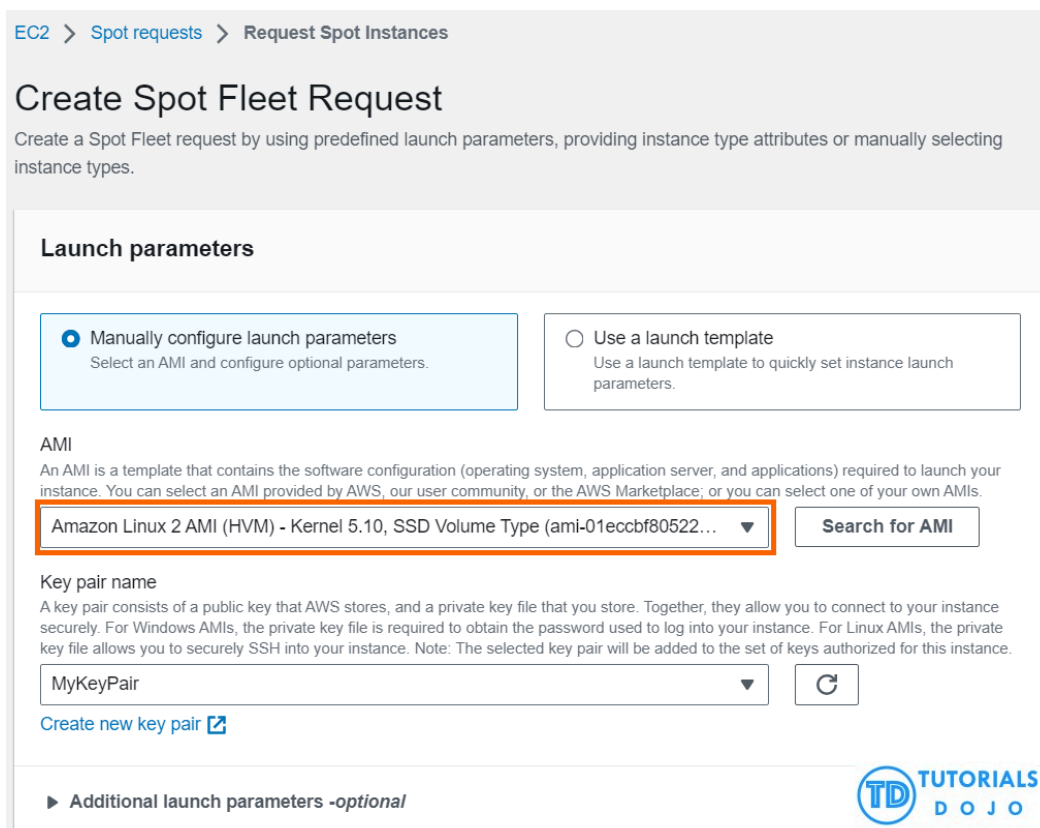


2. In the navigation pane, select “Spot Requests”, then choose “Request Spot Instances”.



3. On the “Create Spot Fleet Request” page, specify the parameters for your Spot instance request, such as instance type, AMI (Amazon Machine Image).

For this lab, choose the default AMI.



4. Under the “Additional request details” tab, choose the PlayCloud-Snadbox for the IAM fleet role.

Additional request details

☐ Apply defaults

IAM fleet role

PlayCloud-Sandbox

Use default role

Request valid from

The start date and time of when you would like your Spot request to begin.

2024/01/26



15:41

Request valid until

The end date and time of when you would like your Spot request to end.

2025/01/26



15:41

☒ Terminate the instances when the request expires

Load balancing

Configure Spot fleet to automatically register its instances with your load balancers

☐ Receive traffic from one or more load balancers

5. On the "Instance type requirements" tab, choose "Manually select instance types," then click "Add instance types." On the "Instance type requirements" tab, choose "Manually select instance types," then click "Add instance types."

Instance type requirements

Enter your compute requirements and let us choose optimal instance types to fulfill your Spot fleet request, or manually select the specific instance types you want to use.

☐ Specify instance attributes that match your compute requirements

☒ Manually select instance types

Fleet request

Amazon EC2 requests your target capacity from these instance types. The more instance types that you specify, the better your chances of having your target capacity fulfilled.

Instance Types

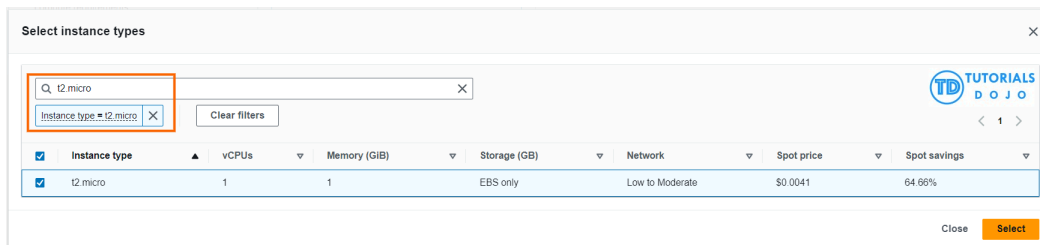
Delete

Add instance types

<input type="checkbox"/>	Instance type	vCPUs	Memory (GiB)	Spot price	Savings off On-Demand
<input type="checkbox"/>	c5.large	2	4	\$0.0425	50.00%
<input type="checkbox"/>	m5dn.12xlarge	48	192	\$1.3686	58.07%
<input type="checkbox"/>	r7iz.12xlarge	48	384	\$1.4694	67.08%
<input type="checkbox"/>	g3.16xlarge	64	488	\$1.6249	64.37%
<input type="checkbox"/>	x2iedn.2xlarge	8	256	\$0.5358	67.86%
<input type="checkbox"/>	c3.large	2	3.75	\$0.0555	47.14%
<input type="checkbox"/>	m6idn.large	2	8	\$0.0514	67.69%
<input type="checkbox"/>	c6i.4xlarge	16	32	\$0.3072	54.82%
<input type="checkbox"/>	r6idn.16xlarge	64	512	\$2.1038	66.35%



5. Select the "t2.micro" instance type from the available options.

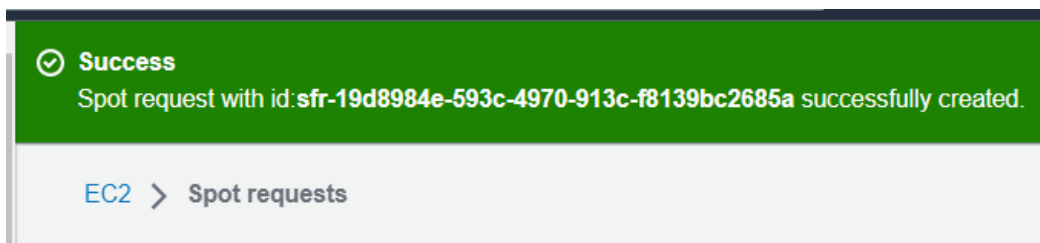


For other configurations, you can go through the different fields quickly, but for this lab, stick with the default values.

6. Review your settings.

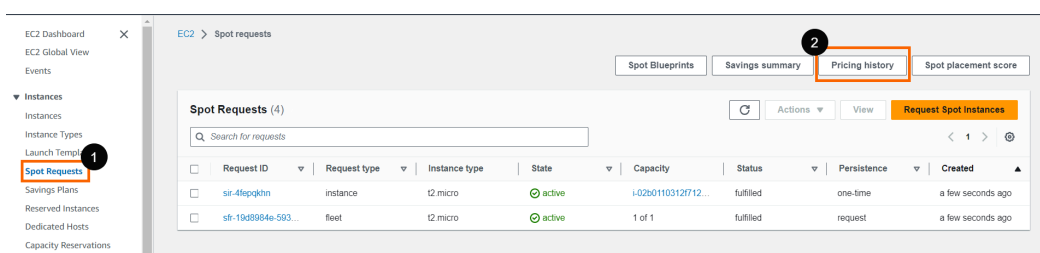
7. Click the “Launch” button.

8. After clicking the ‘Launch’ button, a confirmation will appear to let you know that the process has started and a spot request has been created.

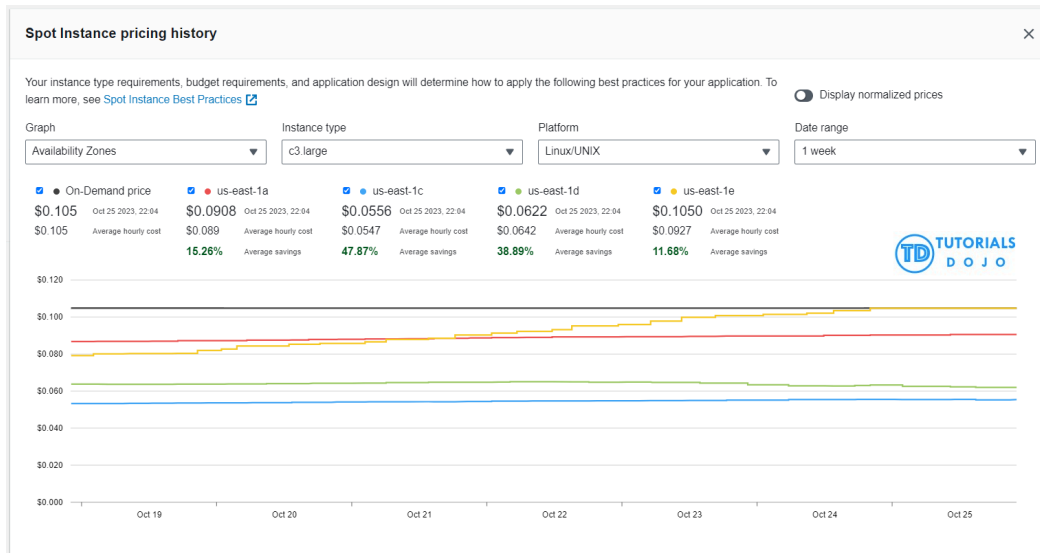


Use Spot Instance pricing history

1. In the navigation pane, select “Spot Requests,” then choose “Pricing History”.



2. Here you can view the Spot price history for each instance type in each region.



Use Spot placement score

1. In the navigation pane, select "Spot Requests", then choose "Spot placement score".

EC2 Dashboard EC2 Global View Events

Instances Instance Types Launch Templates **Spot Requests** Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations

Spot Requests (4)

Search for requests

Request ID	Request type	Instance type	State	Capacity	Status	Persistence	Created
si-4lepqkhn	instance	t2.micro	active	i-02b0110312712...	fulfilled	one-time	a few seconds ago
sf-19d8984e-593...	fleet	t2.micro	active	1 of 1	fulfilled	request	a few seconds ago

Spot Blueprints Savings summary Pricing history **Spot placement score**

Request Spot Instances

2. Spot placement score feature can recommend an AWS Region or Availability Zone based on your Spot capacity requirements. Spot capacity fluctuates, and you can't be sure that you'll always get the capacity that you need. A Spot placement score indicates how likely it is that a Spot request will succeed in a Region or Availability Zone.

Spot placement score

Spot placement score helps you to select optimal Regions or Availability Zones to run workloads that can use multiple instance types.

Target capacity and instance type requirements

[Enter requirements](#)

Provide your target Spot capacity and instance type requirements to get a scored list of possible locations.

[Enter requirements](#)

Placement scores

We calculate placement scores based on factors such as the number and composition of the instance types, the target capacity, the Spot usage trends, and the time of the request. Scores serve as a guideline, and no score guarantees that your Spot request will be fully or partially fulfilled. A score of 10 means that your Spot capacity request is highly likely to succeed in that Region or Availability Zone at the time of the request. A score of 1 means that your Spot capacity request is not likely to succeed.

[Calculate placement scores](#)

Regions to evaluate

Regions to score

☐ Provide placement scores per Availability Zone

[Clear filters](#)

Region

Placement score

Placement scores will appear here after you've entered your target capacity and instance type requirements. You can recalculate the placement scores for these requirements to see if they change at different points in the day.

You can use the Spot placement score feature for the following:

- To relocate and scale Spot compute capacity in a different Region, as needed, in response to increased capacity needs or decreased available capacity in the current Region.
- To identify the most optimal Availability Zone in which to run single-Availability Zone workloads.
- To simulate future Spot capacity needs so that you can pick an optimal Region for the expansion of your Spot-based workloads.
- To find an optimal combination of instance types to fulfill your Spot capacity needs.