

Project 7: Launching a Spot Instance with EC2

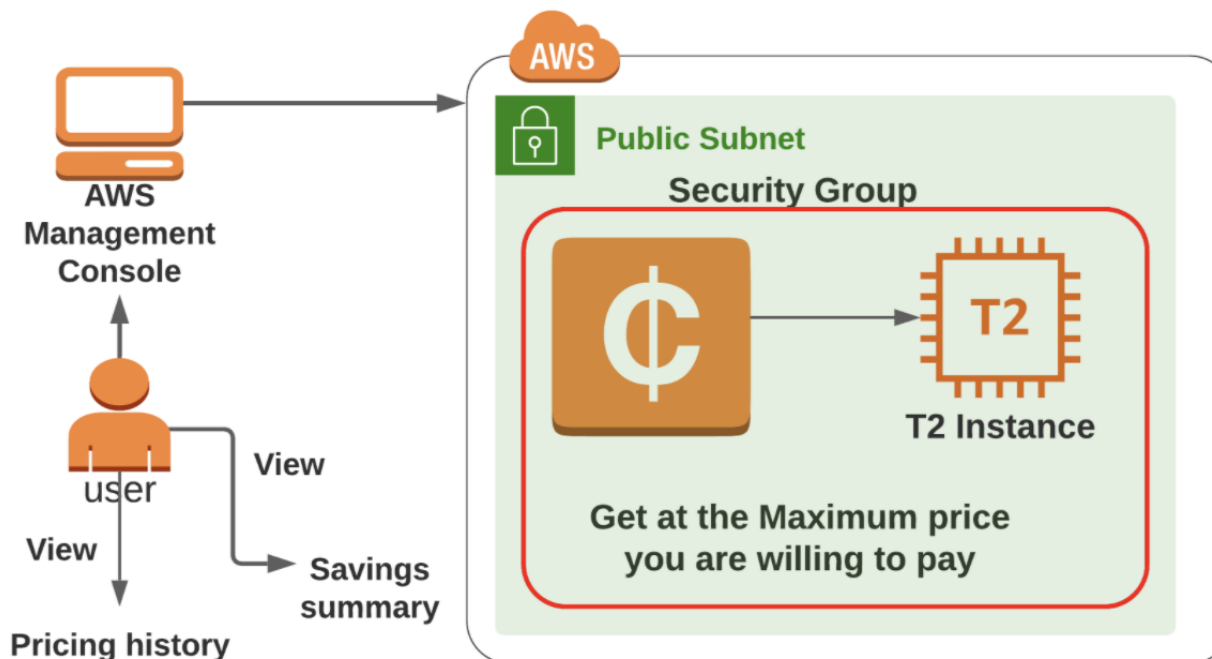
What is EC2 Spot Instance?

- Spot Instance are an unused part of Amazon EC2, using which you can save up to 90% on cost as compared to On-Demand but AWS can interrupt your spot instances if the Current Price is higher than the Maximum price you specified.

Objective:


- We will launching an EC2 Spot Instance and we'll explore the Savings Summary and Price History

Architecture Diagram:



Step 1: Launch an EC2 Instance

- Choosing an AMI

 **Amazon Linux 2 AMI (HVM), SSD Volume Type** - ami-0ab4d1e9cf9a1215a (64-bit x86) / ami-0d296d66f22f256c2 (64-bit Arm) Select

Amazon Linux
Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is approaching end of life on December 31, 2020 and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

☒ 64-bit (x86)
☐ 64-bit (Arm)

- Choosing an Instance Type

	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
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- Configuring Instance Details
 - While configuring instance details, we also request spot instances.

Purchasing option ⓘ

☒ Request Spot instances

Current price ⓘ

Availability Zone	Current price
us-east-1a	\$0.0035
us-east-1b	\$0.0037
us-east-1c	\$0.0035
us-east-1d	\$0.0035
us-east-1e	\$0.0035
us-east-1f	\$0.0035

Maximum price ⓘ

\$

Persistent request ⓘ

☐ Persistent request

- We then add the EBS Volume storage to the instance.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete on Termination ⓘ	Encrypted ⓘ
Root	/dev/xvda	snap-03e9050b362f59715	<input type="text" value="8"/>	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

- We then add the tags consisting of a key/value pair.

<input type="text" value="Name"/>	<input type="text" value="NewSpotInstance"/>
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- We then configure the security group which is a set of firewall rules that control traffic to your instance.

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
SSH ▾	TCP	22	Custom ▾ 0.0.0.0/0	e.g. SSH for Admin Desktop
HTTP ▾	TCP	80	Custom ▾ 0.0.0.0, ::/0	e.g. SSH for Admin Desktop

- We create the key pair and launch the instance

Create a new key pair ▾

Key pair name

newwrittenword

Download Key Pair

We then test the instance by testing it on a browser with the utilization of the IP address. It shows that the instance is working.

Welcome to Whizlabs Server

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Step 2: View The Spot Request

sir-4fs9hajk	instance	t2.micro	✔ active	i-0059b...	fulfilled	one-time	9 minutes ago
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Request ID sir-4fs9hajk	Max price \$0.010	Request type instance
Persistence one-time	Created 07/02/2021, 8:39 am	Key pair name newwrittenword
State ✔ active	IAM role -	Status fulfilled
EBS-optimized no	Monitoring no	Instance Id i-0059b6775b409049e
Tenancy default	Interruption behavior terminate	Instance type(s) t2.micro
AMI ID ami-0ab4d1e9cf9a1215a	Subnet subnet-7be84745	Product description Linux/UNIX
Availability Zone us-east-1e	Launch group -	Request valid from -
Request valid until -	Availability Zone group -	

Step 3: Explore the Saving Summary and Pricing History

- Here's the saving summary across all of the running and recently terminated spot instances.

Spot usage and savings

1	1	1	\$0.01	\$0.00	70%
Spot Instances	vCPU-hours	Mem(GiB)-hours	On-Demand total	Spot total	Savings
				\$0.0035	\$0.0035
				Average cost per VCPU-hour	Average cost per mem(GiB)-hour

Details

t2.micro (1)	1 vCPU hours	1 mem(GiB)-hours	\$0.00 total	70% savings
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- Here's the pricing history consisting of instance type requirements, budget requirements, and applicatio design.

