

PROJECT : 3

Amazon web services...

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Free tier eligible

Select

64-bit (x86)

64-bit (Arm)

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-07c8bc5c1ce9598c3 (64-bit x86) / ami-09a67037138f86e67 (64-bit Arm)

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.

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

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-0f4aaec5b3cce9152

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

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

Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0a54aeef4ef3b5f881 (64-bit x86) / ami-0e05c6e81b5100c04 (64-bit Arm)

Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type

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

Select

64-bit (x86)

64-bit (Arm)

Activate Windows
Go to Settings to activate Windows.

Feedback English (US)

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12:19 24-08-2020

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation ShowHide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)								
	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.3xlarge	2	0.5	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details
Go to Settings to activate Windows.

Feedback English (US)

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot Instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 2 Launch into Auto Scaling Group

You may want to consider launching these instances into an Auto Scaling Group to help you maintain application availability and for easy scaling in the future. [Learn how Auto Scaling can help your application stay healthy and cost effective.](#)

Purchasing option: Request Spot instances

Network: vpc-fd72d196 (default) Create new VPC

Subnet: No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP: Enable

Placement group: Add instance to placement group

Capacity Reservation: Open

IAM role: None Create new IAM role

Shutdown behavior: Stop

Stop - Hibernate behavior: Enable hibernation as an additional stop behavior

Buttons: Cancel, Previous, Review and Launch, Next: Add Storage

Feedback English (US) Type here to search Privacy Policy Terms of Use 12:21 24-08-2020

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-00a3ac8046ab803ef	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Buttons: Cancel, Previous, Review and Launch, Next: Add Tags

Feedback English (US) Type here to search Privacy Policy Terms of Use 12:22 24-08-2020

Launch instance wizard | EC2 Manager | IIS Windows Server | Welcome to nginx! | Tanu253/Lets_Upgrade_AWS | - | X

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

AWS Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum) Value (256 characters maximum)

This resource currently has no tags

Choose the Add tag button or [click to add a Name tag](#). Make sure your [IAM policy](#) includes permissions to create tags.

Add Tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group Go to Settings to activate Windows

Launch instance wizard | EC2 Manager | IIS Windows Server | Welcome to nginx! | Tanu253/Lets_Upgrade_AWS | - | X

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

AWS Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Anywhere	0.0.0.0/0, ::/0 e.g. SSH for Admin Desktop

Add Rule

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous Review and Launch Go to Settings to activate Windows

Launch instance wizard | EC2 Manager | IIS Windows Server | Welcome to nginx! | Tanu253/Lets_Upgrade_AWS | - | X

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

AWS Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

AMI Details

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-07c8bc5c1ce9598c3

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.
Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups

Security group name: launch-wizard-7

Activate Windows Go to Settings to activate Windows

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Step 7: Review Instance Launch

Instance Type

Instance Type	ECUs	vCPUs
t2.micro	Variable	1

Security Groups

Security group name: launch-wizard-7
Description: launch-wizard-7 created 2020-08-24

Type (i) Protocol (i)
All traffic All
All traffic All

Instance Details

Select an existing key pair or create a new key pair

A key pair consists of a public key that AWS stores, and a private key file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Choose an existing key pair
Select a key pair
LetsUpgrade

I acknowledge that I have access to the selected private key file (LetsUpgrade.pem), and that without this file, I won't be able to log into my instance.

Cancel Launch Instances

Feedback English (US)

Type here to search

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12:23 24-08-2020

The screenshot shows the AWS Launch Instance Wizard interface. The top navigation bar includes tabs for 'Launch instance wizard | EC2' and 'IIS Windows Server'. Below the tabs, the URL is 'us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard'. The main content area displays a green success message: 'Your instances are now launching' with the note 'The following instance launches have been initiated: i-07ada578dec929562, i-0ab6b884fcf38ae38' and a link to 'View launch log'. A blue info message box below it says 'Get notified of estimated charges' with the sub-note 'Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier)'.

Launch Status

Your instances are now launching
The following instance launches have been initiated: i-07ada578dec929562, i-0ab6b884fcf38ae38 [View launch log](#)

Get notified of estimated charges
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances
Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
Click [View Instances](#) to monitor your instances' status. Once your instances are in the **running** state, you can connect to them from the Instances screen. [Find out](#) how to connect to your instances.

Here are some helpful resources to get you started

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

- [Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)
- [Create and attach additional EBS volumes](#) (Additional charges may apply)
- [Manage security groups](#)

Activate Windows
Go to Settings to activate Windows.

The screenshot shows the Windows taskbar at the bottom of the screen. It features several pinned icons, including File Explorer, Edge, and File Explorer again. The system tray shows the date and time as '24-08-2020 12:23' and the language as 'ENG'. There is also a link to 'Activate Windows'.

The screenshot shows the AWS Instances page. The left sidebar includes sections for 'New EC2 Experience', 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Images', and 'Elastic Block Store'. The main content area displays a table of running instances:

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IP
linux	i-00c939492aa4ead2d	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-18-216-236-162.us...	18.216.236.162	-
ubuntu	i-0c3408ce3da739634	t2.micro	us-east-2b	running	2/2 checks ...	None	ec2-3-129-205-177.us...	3.129.205.177	-
Windows	i-01e26860bdd6f6885	t2.micro	us-east-2b	running	2/2 checks ...	None	ec2-18-216-164-10.us...	18.216.164.10	-
windows	i-041c4bd0241ad7bc6	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-18-220-202-51.us...	18.220.202.51	-
windows	i-0f68c708dec126da5	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-3-14-8-238.us-east...	3.14.8.238	-
linux_1	i-07ada578dec929562	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-3-16-155-177.us-e...	3.16.155.177	-
linux_2	i-0ab6b884fcf38ae38	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-3-22-223-222.us-e...	3.22.223.222	-

Below the table, a detailed view for the instance 'linux_2' is shown:

Instance: i-0ab6b884fcf38ae38 (linux_2) Public DNS: ec2-3-22-223-222.us-east-2.compute.amazonaws.com

Description **Status Checks** **Monitoring** **Tags**

Instance ID: i-0ab6b884fcf38ae38	Public DNS (IPv4): ec2-3-22-223-222.us-east-2.compute.amazonaws.com
Instance state: running	IPv4 Public IP: 3.22.223.222
Instance type: t2.micro	IPv6 IPs: -
Fairing: On	Flexa IPs: -

Activate Windows
Go to Settings to activate Windows.

The bottom of the screen shows the Windows taskbar with pinned icons and the system tray indicating the date and time as '24-08-2020 12:23'.

Screenshot of the AWS Management Console showing the Load Balancing section. The left sidebar includes options like AMIs, Elastic Block Store, Network & Security, Load Balancing (selected), and Auto Scaling. The main pane shows a search bar and a table with columns for Name, DNS name, State, VPC ID, Availability Zones, Type, and Actions. A message at the bottom states, "You do not have any load balancers in this region." The browser address bar shows the URL: https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LoadBalancers:sort=loadBalancerName.

Screenshot of the AWS Management Console showing the "Select load balancer type" wizard. The page title is "Create Load Balancer | EC2 Man...". It displays three options: Application Load Balancer (HTTP HTTPS), Network Load Balancer (TCP TLS UDP), and Classic Load Balancer (PREVIOUS GENERATION for HTTP, HTTPS, and TCP). Each option has a "Create" button. Below each option is a brief description and a "Learn more >" link. The browser address bar shows the URL: https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#SelectCreateELBWizard.

Step 1: Set Function Name and Runtime

Function name: Lets_Ugrade_AWS

Runtime: Node.js 12.x

Memory: 128 MB

Timeout: 300

Activate Windows

Cancel Next: Configure Security Settings

Go to Settings to activate Windows.

Step 1: Set Function Name and Runtime

Function name: LetsUpgradeelb

Runtime: Node.js 12.x

Memory: 128 MB

Timeout: 300

Activate Windows

Cancel Next: Configure Security Settings

Go to Settings to activate Windows.

The screenshot shows the AWS Lambda console with the 'Create Function' wizard. The current step is 'Step 1: Set Function Name and Region'. The function name is 'Lets_Ugrade_AWS' and the region is 'Ohio'. The 'Next Step' button is visible at the bottom.

Step 1: Set Function Name and Region

Function name: Lets_Ugrade_AWS

Region: Ohio

Next Step

The screenshot shows the AWS Lambda console with the 'Create Function' wizard. The current step is 'Step 2: Configure Trigger and Handler'. A warning message is displayed: '⚠ Improve your load balancer's security. Your load balancer is not using any secure listener. If your traffic to the load balancer needs to be secure, use the HTTPS protocol for your front-end connection. You can go back to the first step to add/configure secure listeners under Basic Configuration section. You can also continue with current settings.' The 'Next Step' button is visible at the bottom.

Step 2: Configure Trigger and Handler

⚠ Improve your load balancer's security. Your load balancer is not using any secure listener.
If your traffic to the load balancer needs to be secure, use the HTTPS protocol for your front-end connection. You can go back to the first step to add/configure secure listeners under Basic Configuration section. You can also continue with current settings.

Next Step

Step 3: Configure Security Groups
A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.

Assign a security group: Create a new security group
 Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source
All traffic	All	0 - 65535	Anywhere (0.0.0.0/0, ::/0)

Add Rule

Activate Windows
Cancel Previous Next: Configure Routing
Go to Settings to activate Windows.

Step 4: Configure Routing
Your load balancer routes requests to the targets in this target group using the protocol and port that you specify, and performs health checks on the targets using these health check settings. Note that each target group can be associated with only one load balancer.

Target group

Target group:

Name:
▲ TargetGroup name cannot contain characters that are not letters, or digits or the dash.

Target type: Instance
 IP
 Lambda function

Protocol:

Port:

Health checks

Protocol:
Path:

► Advanced health check settings

Activate Windows
Cancel Previous Next: Register Targets
Go to Settings to activate Windows.

Screenshot of the AWS Lambda console showing the Step 5: Register Targets step of creating a Load Balancer. The target group table lists two instances: linux_2 and linux_1, both running on port 80. A modal window shows a search results table for instances named linux_2 and linux_1.

Step 5: Register Targets

Instance	Name	Port	State	Security groups	Zone
i-0ab6b884fcf38ae38	linux_2	80	running	launch-wizard-7	us-east-2c
i-07ada578dec929562	linux_1	80	running	launch-wizard-7	us-east-2c

Instances
To register additional instances, select one or more running instances, specify a port, and then click Add. The default port is the port specified for the target group. If the instance is already registered on the specified port, you must specify a different port.

Add to registered on port 80

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
i-0ab6b884fcf38ae38	linux_2	running	launch-wizard-7	us-east-2c	subnet-5d731b11	172.31.32.0/20
i-07ada578dec929562	linux_1	running	launch-wizard-7	us-east-2c	subnet-5d731b11	172.31.32.0/20
i-0c3408ce3da739634	ubuntu	running	launch-wizard-5	us-east-2b	subnet-e742429d	172.31.16.0/20
i-0f68c7c8cd126da5	windows	running	launch-wizard-4	us-east-2c	subnet-5d731b11	172.31.32.0/20
i-01e26860bdd6f885	Windows	running	launch-wizard-1	us-east-2b	subnet-e742429d	172.31.16.0/20
i-00c939492aa4ead2d	linux	running	launch-wizard-2	us-east-2c	subnet-5d731b11	172.31.32.0/20
i-041c4bd0241ad7bc6	windows	running	launch-wizard-6	us-east-2c	subnet-5d731b11	172.31.32.0/20

Activate Windows Cancel Previous Next: Review Go to Settings to activate Windows.

Screenshot of the AWS Lambda console showing the Step 6: Review step of creating a Load Balancer. The review page displays the configuration details: Name LetsUpgradeelb, Scheme internet-facing, Listeners Port 80 - Protocol:HTTP, IP address type ipv4, VPC vpc-fd72d196, Subnets subnet-ac468dc7, subnet-e742429d, and Tags. It also shows the Security groups (load-balancer-wizard-1) and Routing (Target group New target group, Target group name NewTargetGroupAWS, Port 80, Target type instance, Protocol HTTP, Health check protocol HTTP, Path /, Health check port traffic port, Healthy threshold 5).

Step 6: Review
Please review the load balancer details before continuing

Load balancer

Name	LetsUpgradeelb
Scheme	Internet-facing
Listeners	Port 80 - Protocol:HTTP
IP address type	IPv4
VPC	vpc-fd72d196
Subnets	subnet-ac468dc7, subnet-e742429d
Tags	

Security groups

Security groups	load-balancer-wizard-1
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Routing

Target group	New target group
Target group name	NewTargetGroupAWS
Port	80
Target type	instance
Protocol	HTTP
Health check protocol	HTTP
Path	/
Health check port	traffic port
Healthy threshold	5

Activate Windows Cancel Previous Create Go to Settings to activate Windows.













