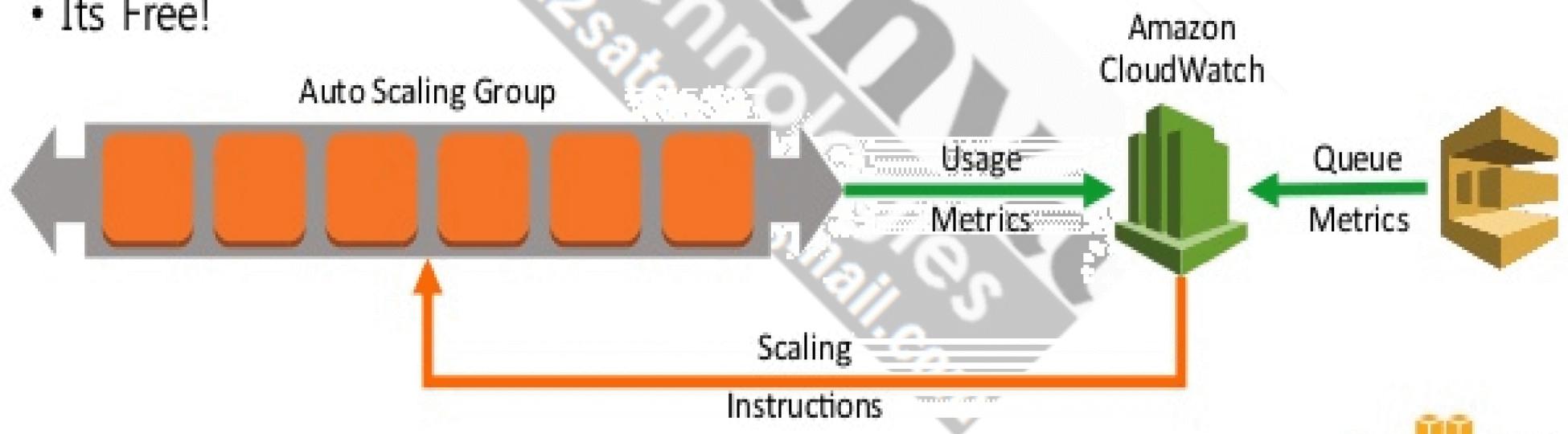


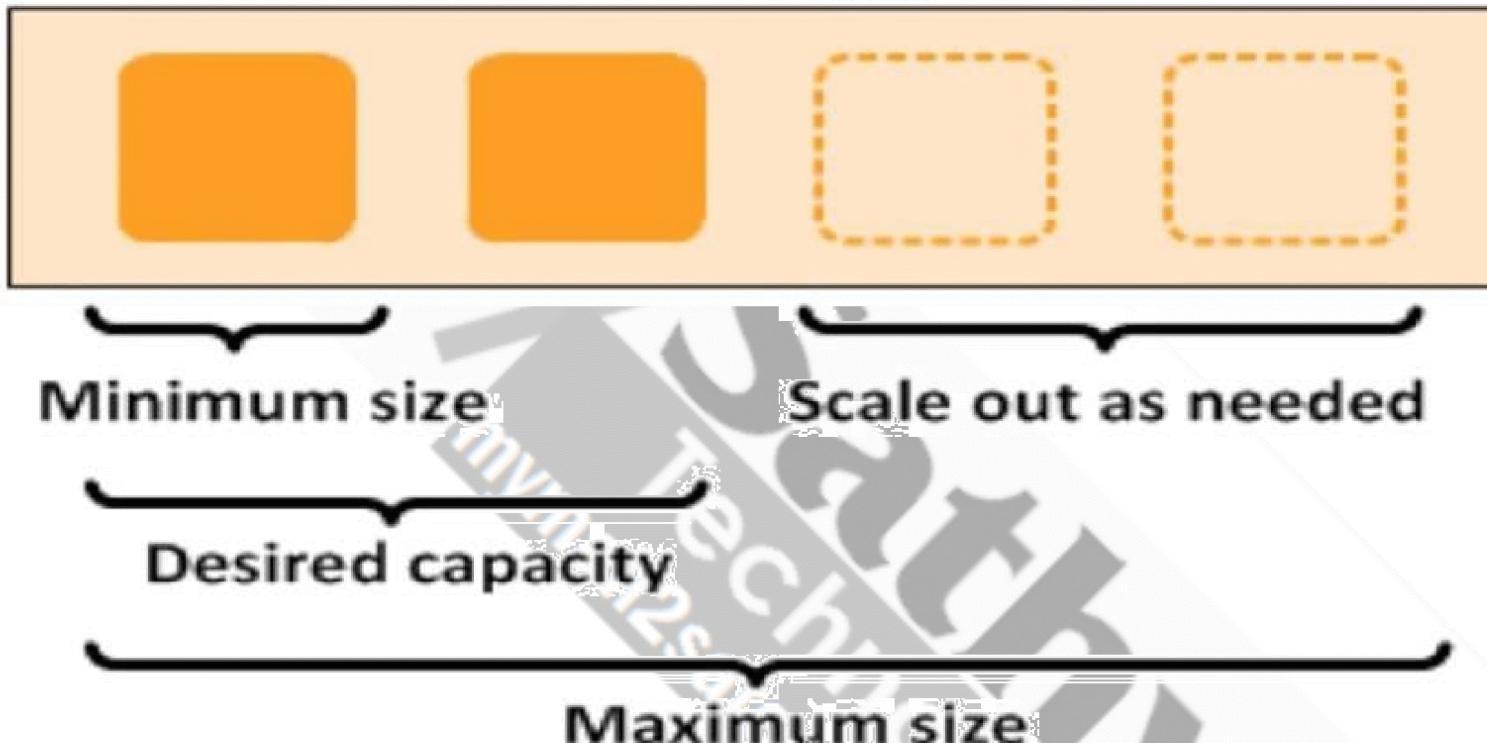


Auto Scaling

- Automatic resizing of compute clusters based on demand
- Define minimum and maximum number of instances
- Define when scaling out and in occurs
- Use metrics collected in Amazon CloudWatch to drive scaling
- Run Auto Scaling for On-Demand and Spot instance types
- Its Free!



Auto Scaling group



Example:

My application to be live

– Minimum 1 server

My application to perform normal

– Desired 3 servers

My application to perform during peak season – Maximum 20 servers

During peak load – Scale out by

- 2 Servers every 10 minutes

AWS Services Resource Groups

EC2 Dashboard Events Tags Reports Limits

INSTANCES

- Instances** (selected)
- Launch Templates
- Spot Requests
- Reserved Instances
- Dedicated Hosts

IMAGES

- AMIs
- Bundle Tasks

ELASTIC BLOCK STORE

- Volumes
- Snapshots

NETWORK & SECURITY

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

LOAD BALANCING

- Load Balancers
- Target Groups

Launch Instance (button highlighted with a red box)

Connect Actions

Filter by tags and attributes or search by keyword

1 to 1 of 1

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
GIT	i-09713dd0900406ead	t2.micro	us-east-2c	stopped	None	None	-

Instance: i-09713dd0900406ead (GIT) Private IP: 172.31.34.37

Description	Status Checks	Monitoring	Tags
Instance ID	i-09713dd0900406ead		
Instance state	stopped		
Instance type	t2.micro		
Elastic IPs			
Availability zone	us-east-2c		
Public DNS (IPv4)	-		
IPv4 Public IP	-		
IPv6 IPs	-		
Private DNS	ip-172-31-34-37.us-east-2.compute.internal		
Private IPs	172.31.34.37		



1. Choose AMI

2. Choose Instance Type

3. Configure Instance

4. Add Storage

5. Add Tags

6. Configure Security Group

7. Review

[Cancel and Exit](#)

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.

Quick Start

1 to 35 of 35 AMIs

My AMIs	Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-25615740	Select
AWS Marketplace	Amazon Linux Free tier eligible 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	64-bit
Community AMIs	Amazon Linux 2 LTS Candidate 2 AMI (HVM), SSD Volume Type - ami-31c7f654 Amazon Linux 2 LTS Candidate 2 provides an updated version of the Linux Kernel (4.14) tuned for EC2, systemd support, a newer compiler (gcc 7.3), an updated C runtime (glibc 2.26), newer tooling (binutils 2.29.1), and the latest software packages through the extras mechanisms. Root device type: ebs Virtualization type: hvm	64-bit
<input type="checkbox"/> Free tier only <small>(i)</small>	SUSE Linux Enterprise Server 12 SP3 (HVM), SSD Volume Type - ami-57d3e732 SUSE Linux Enterprise Server 12 Service Pack 3 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled. Root device type: ebs Virtualization type: hvm	64-bit
	Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-916f59f4 Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services). Root device type: ebs Virtualization type: hvm	64-bit
	Red Hat Enterprise Linux 7.5 (HVM), SSD Volume Type - ami-0291866 Select	



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 ▾ Show/Hide 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 <small>Free tier eligible</small>	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	m5.large	2	8	EBS only	Yes	Up to 10 Gigabit	Yes
<input type="checkbox"/>	General purpose	m5.xlarge	4	16	EBS only	Yes	Up to 10 Gigabit	Yes

Cancel

Previous

Review and Launch

Next: Configure Instance Details

**Advanced Details****User data** (i) As text As file Input is already base64 encoded

```
#!/bin/bash
sudo su -
yum update -y
yum install httpd -y
service httpd start
```

[Cancel](#)[Previous](#)[Review and Launch](#)[Next: Add Storage](#)



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	Encrypted
Root	/dev/xvda	snap-0e604be649ef4be15	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.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)



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 ID	Name	Description	Actions
<input type="checkbox"/> sg-c40809af	default	default VPC security group	Copy to new
<input checked="" type="checkbox"/> sg-006f7f11406cf861a	mygroup	launch-wizard-1 created 2018-04-20T18:22:29.832+05:30	Copy to new

Inbound rules for sg-006f7f11406cf861a (Selected security groups: sg-006f7f11406cf861a)

Type <i>(i)</i>	Protocol <i>(i)</i>	Port Range <i>(i)</i>	Source <i>(i)</i>	Description <i>(i)</i>
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	::/0	
All TCP	TCP	0 - 65535	0.0.0.0/0	
All TCP	TCP	0 - 65535	::/0	
SSH	TCP	22	0.0.0.0/0	

[Cancel](#)[Previous](#)[Review and Launch](#)

The screenshot shows the AWS Auto Scaling Step 7: Review Instance Launch wizard. At the top, there are tabs: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review. The 7. Review tab is highlighted. The main content area is titled "Step 7: Review Instance Launch". It includes a warning message about security group settings, followed by sections for "AMI Details", "Instance Type", and "Security Groups". A large red arrow points downwards from the "Security Groups" section towards the "Launch" button at the bottom right.

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.

⚠ Improve your instances' security. Your security group, mygroup, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details

[Edit AMI](#)

Amazon Linux AMI 2017.09.1 (HVM), SSD Volume Type - ami-25615740

Free tier eligible

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

Instance Type

[Edit 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

[Edit security groups](#)

Security Group ID	Name	Description
sg-006f7f11406cf861a	mygroup	launch-wizard-1 created 2018-04-20T18:22:29.832+05:30

All selected security groups inbound rules



[Cancel](#) [Previous](#) **Launch**

AWS Services Resource Groups Auto Scaling satishdevops Ohio Support

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

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.

⚠ Improve your instances' security. Your security group, mygroup, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open additional ports or add new security groups.

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](#).

Create a new key pair Key pair name: satish Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel **Launch Instances**

AMI Details: Amazon Linux AMI 2017 (Free tier eligible) Instance Type: t2.micro (ECUs: Variable) Security Groups: sg-006f7f11406cf861a

Edit AMI Edit instance type Edit security groups

The repositories Network Performance Low to Moderate

0.832+05:30 Cancel Previous Launch

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SuperPutTY - ec2-user@ec2-18-188-179-62.us-east-2.compute.amazonaws.com

File View Tools Help

Protocol SSH Host east-2.compute.amazonaws.com Login Password Session AWS_SESSION v4

Commands

ec2-user@ec2-18-188-179-62....

Using username "ec2-user".
Authenticating with public key "imported-openssh-key"

Amazon Linux AMI

connect to amazon linux and check for ports

<https://aws.amazon.com/amazon-linux-ami/2017.09-release-notes/>

```
[ec2-user@ip-172-31-45-223 ~]$  
[ec2-user@ip-172-31-45-223 ~]$  
[ec2-user@ip-172-31-45-223 ~]$ sudo su -  
Last login: Sat Apr 21 01:49:11 UTC 2018  
[root@ip-172-31-45-223 ~]#  
[root@ip-172-31-45-223 ~]# netstat -lntp  
Active Internet connections (only servers)  
Proto Recv-Q Send-Q Local Address Foreign Address State  
PID/Program name  
tcp 0 0 0.0.0.0:111 0.0.0.0:* LISTEN  
N 2309/rpcbind
```

Opened session: ConnectBar/ec2-user@ec2-18-188-179-62.us-east-2.compute.amazonaws.com [SSH]

1.4.0.8 <Auto Restore>

31-45-223.us-east-2 compute internal

Feedback English (US)

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A screenshot of a web browser window. The address bar shows the URL `18.188.179.62`. The main content area of the browser displays the "Amazon Linux AMI Test Page". The page contains text about testing the Apache HTTP server and instructions for website administrators. At the bottom right, there is a "Powered by APACHE 2.2" logo.

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting `www.example.com`, you should send e-mail to "`webmaster@example.com`".

For information on Amazon Linux AMI , please visit the [Amazon AWS website](#).

If you are the website administrator:

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

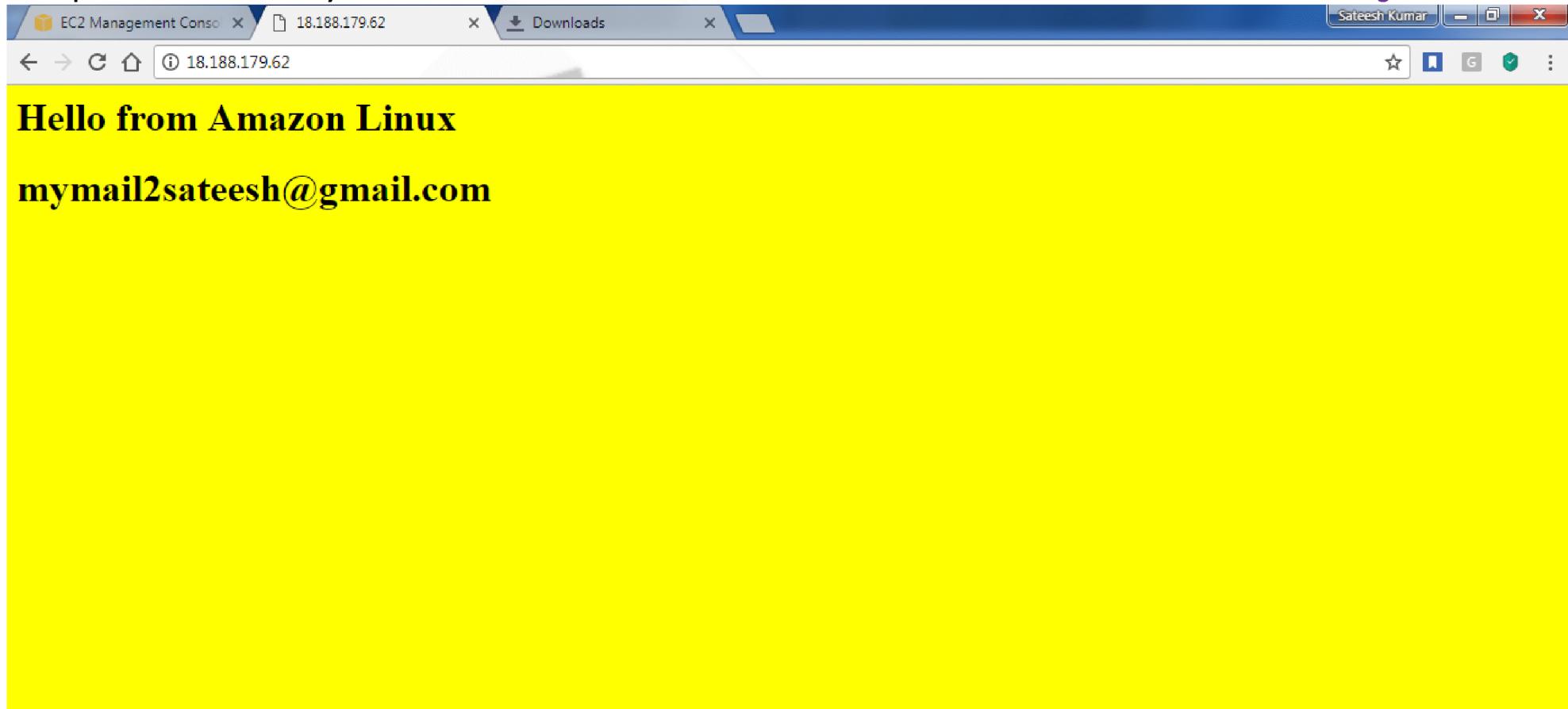
You are free to use the image below on web sites powered by the Apache HTTP Server:



The screenshot shows a SuperPuTTY window titled "SuperPuTTY - ec2-user@ec2-18-188-179-62.us-east-2.compute.amazonaws.com". The session is titled "AWS_SESSION". The terminal window displays the following command and its output:

```
[root@ip-172-31-45-223 ~]# cat /var/www/html/index.html
<body bgcolor="yellow">
<h1> Hello from Amazon Linux </h1>
<h1> mymail2sateesh@gmail.com </h1>
</body>
```

A yellow box highlights the command and its output. The session status at the bottom indicates "Opened session: ConnectBar/ec2-user@ec2-18-188-179-62.us-east-2.compute.amazonaws.com [SSH]" and "1.4.0.8 <Auto Restore>".



The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with various navigation links like EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Images, AMIs, and Bundle Tasks. The main area displays a table of instances. One instance, 'i-07e61dc16883' (AmazonLinux), is selected and highlighted with a blue border. A context menu is open over this instance, with 'Image' selected. The menu options include Connect, Get Windows Password, Launch More Like This, Instance State, Instance Settings, Image, Networking, and CloudWatch Monitoring. The 'Image' option has a submenu with 'Create Image' and 'Bundle Instance (instance store AMI)'. A large blue callout box with a white background and a black border is overlaid on the bottom right of the main content area. Inside the callout box, the text is written in red: '* here it will create a snapshot' and '* then it will create an Image (AMI)'.

Satish Devops Ohio Support

EC2 Dashboard Events Tags Reports Limits

Instances Launch Tem Spot Requests Reserved Inst Dedicated H

AMIs Bundle Task

Elastic Block Store Volumes Snapshots

Network & Security Security Groups Elastic IPs Placement Groups Key Pairs

Network Interfaces

Load Balancing Load Balancers Target Groups

Feedback English (US)

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Public DNS (IPv4) 2-18-188-179-62

Create Image

Instance ID: i-07e61dc1688372750
Image name: satish_AMI
Image description: this is source for auto scaling group
No reboot:

Instance Volumes

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0e604be649ef4be15	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Total size of EBS Volumes: 8 GiB
When you create an EBS image, an EBS snapshot will also be created for each of the above volumes.

Cancel Create Image

Instance State: Running
Instance type: t2.micro
Elastic IPs
IPv6 IPs: -
Private DNS: ip-172-31-45-223.us-east-2.compute.internal

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EC2 Dashboard Events Tags Reports Limits

Instances Launch Template Spot Requests Reserved Instances Dedicated Hosts

AMIs Bundle Task Definitions

Elastic Block Store Volumes Snapshots

Network & Security Security Groups Elastic IPs Placement Groups Key Pairs

Network Interfaces

Load Balancing Load Balancers Target Groups

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Public DNS (IPv4) 2-18-188-179-62

Create Image

Instance ID: i-07e61dc1688372750
Image name: satish_AMI
Image description: this is source for auto scaling group
No reboot:

Instance Volumes

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0e604be649ef4be15	8	General Purpose SSD (GP2)	100 / 8000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Total size of EBS Volumes: 8 GiB
When you create an EBS image, an EBS snapshot will also be created for each of the above volumes.

Cancel Create Image

Instance State: Running
Instance type: t2.micro
Elastic IPs
IPv6 IPs: -
Private DNS: ip-172-31-45-223.us-east-2.compute.internal

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Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0e604be649ef4be15	8	General Purpose SSD (GP2)	100 / 8000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

The system will reboot to create an AMI

The system is going down for reboot NOW!
Control-Alt-Delete pressed

Opened session: ConnectBar/ec2-user@ec2-18-188-179-62.us-east-2.compute.amazonaws.com [SSH]

Elastic IPs Private DNS ip-172-31-45-223.us-east-2.compute.internal

AWS Services Resource Groups ▾

EC2 Dashboard Events Tags Reports Limits

INSTANCES Instances Launch Templates Spot Requests Reserved Instances Dedicated Hosts

IMAGES AMIs Bundle Tasks

ELASTIC BLOCK STORE Volumes Snapshots

NETWORK & SECURITY Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces

LOAD BALANCING Load Balancers Target Groups

Launch Actions ▾

Owned by me Filter by tags and attributes or search by keyword

Name	AMI Name	AMI ID	Source	Owner	Visibility	Status	Creation Date
SOURCE_AMI	satish_AMI	ami-097112a2c798a7e6a	983610467624/s...	983610467624	Private	available	April 21, 2018 at 8:04

Image: ami-097112a2c798a7e6a

Details Permissions Tags Edit

AMI ID	ami-097112a2c798a7e6a	AMI Name	satish_AMI
Owner	983610467624	Source	983610467624/satish_AMI
Status	available	State Reason	-
Creation date	April 21, 2018 at 8:04:39 AM UTC+5:30	Platform	Other Linux
Architecture	x86_64	Image Type	machine



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.



The screenshot shows the "My AMIs" section of the AWS Auto Scaling wizard. A red box highlights the selected AMI, "satish_AMI - ami-097112a2c798a7e6a". The AMI details are as follows:

- AMI Name: satish_AMI - ami-097112a2c798a7e6a
- Description: this is source for auto scaling group
- Root device type: ebs
- Virtualization type: hvm
- Owner: 983610467624

On the left sidebar, there are filters for "Ownership" (Owned by me), "Architecture" (32-bit, 64-bit), and "Root device type" (EBS, Instance store).

AWS Services Resource Groups

Welcome to Auto Scaling

You can use Auto Scaling to manage Amazon EC2 capacity automatically, maintain the right number of instances for your application, operate a healthy group of instances, and scale it according to your needs.

Learn more

Create Auto Scaling group

Note: To create your Auto Scaling groups in a different region, select your region from the navigation bar.

Benefits of Auto Scaling

Reusable Instance Templates

Automated Provisioning

Adjustable Capacity

Additional Information

Getting Started Guide

Documentation

All EC2 Resources

Forums

Pricing

Contact Us

ELASTIC BLOCK STORE

- Volumes
- Snapshots

NETWORK & SECURITY

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

LOAD BALANCING

- Load Balancers
- Target Groups

AUTO SCALING

- Launch Configurations
- Auto Scaling Groups

SYSTEMS MANAGER SERVICES

- Run Command
- State Manager
- Configuration
- Compliance
- Automations
- Patch Compliance
- Patch Baselines

SYSTEMS MANAGER

Auto Scaling Groups



Provision instances based on a reusable template you define, called a launch configuration.

Keep your Auto Scaling group healthy and balanced, whether you need one instance or 1,000.

Maintain a fixed group size or adjust dynamically based on Amazon CloudWatch metrics.



Create Auto Scaling Group

[Cancel and Exit](#)

To create an Auto Scaling group, you will first need to choose a template that your Auto Scaling group will use when it launches instances for you, called a launch configuration. Choose a launch configuration or create a new one, and then apply it to your group.

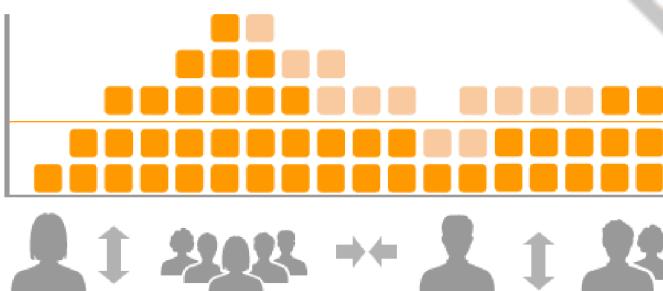
Later, if you want to use a different template, you can create another launch configuration and apply it to this group, even if you already have instances running in it. Using this method, you can update the software that your group uses when it launches new instances.



Step 1: Create launch configuration

First, define a template that your Auto Scaling group will use to launch instances.

You can change your group's launch configuration at any time.



Step 2: Create Auto Scaling group

Next, give your group a name and specify how many instances you want to run in it.

Your group will maintain this number of instances, and replace any that become unhealthy or impaired.

You can optionally configure your group to adjust its capacity according to demand, in response to Amazon CloudWatch metrics.

[Cancel](#)[Create launch configuration](#)



1. Choose AMI

2. Choose Instance Type

3. Configure details

4. Add Storage

5. Configure Security Group

6. Review

[Cancel and Exit](#)

Create Launch Configuration

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.

Quick Start

Search my AMIs

My AMIs

satish_AMI - ami-097112a2c798a7e6a
this is source for auto scaling group
Root device type: ebs Virtualization type: hvm Owner: 983610467624

Select

64-bit

Owner: me

Architecture: 64-bit

Root device type: EBS

Cancel and Exit

Cancel

Next Step

Previous Step

1 to 1 of 1 AMIs

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Ownership

Owned by me

Shared with me

Architecture

32-bit

64-bit

Root device type

EBS

Instance store



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

Create Launch Configuration

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](#) [Show/Hide 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
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate
<input checked="" type="checkbox"/>	General purpose	t2.micro	1	1	EBS only	-	Low to Moderate
	General purpose	t2.small	1	2	EBS only	-	Low to Moderate
	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
	General purpose	t2.large	2	8	EBS only	-	Low to Moderate
	General purpose	t2.xlarge	4	16	EBS only	-	Moderate
	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate
	General purpose	m5.large	2	8	EBS only	Yes	Up to 10 Gigabit
	General purpose	m5.xlarge	4	16	EBS only	Yes	Up to 10 Gigabit
	General purpose	m5.2xlarge	8	32	EBS only	Yes	Up to 10 Gigabit

[Cancel](#)

[Previous](#)

[Next: Configure details](#)



- IP Address Type (i)
- Only assign a public IP address to instances launched in the default VPC and subnet. (default)
 - Assign a public IP address to every instance.
 - Do not assign a public IP address to any instances.
- Note: this option only affects instances launched into an Amazon VPC

you can choose VPC

Cancel Previous Skip to review Next: Add Storage



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

Create Launch Configuration

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.

<https://docs.aws.amazon.com/console/ec2/launchinstance/storage> about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0c245c9a71e8c3edd	8	General Purpose (SSD)	100 / 3000	N/A	<input checked="" type="checkbox"/>	No

Add New Volume

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

[Cancel](#) [Previous](#) [Skip to review](#) [Next: Configure Security Group](#)



Create Launch Configuration

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 ID	Name	VPC ID	Description	Actions
<input type="checkbox"/> sg-c40809af	default	vpc-36325d5e	default VPC security group	Copy to new
<input checked="" type="checkbox"/> sg-006f7f11406cf861a	mygroup	vpc-36325d5e	launch-wizard-1 created 2018-04-20T18:22:29.832+05:30	Copy to new

Inbound rules for sg-006f7f11406cf861a Selected security groups: sg-006f7f11406cf861a.

Type <i>i</i>	Protocol <i>i</i>	Port Range <i>i</i>	Source <i>i</i>
HTTP	TCP	80	0.0.0.0/0
All TCP	TCP	0 - 65535	0.0.0.0/0
SSH	TCP	22	0.0.0.0/0
HTTPS	TCP	443	0.0.0.0/0
All ICMP	All	N/A	0.0.0.0/0

[Cancel](#) [Previous](#) [Review](#)



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

Create Launch Configuration

Review the details of your launch configuration. You can go back to edit the details of each section before you finish.

⚠ Improve security of instances launched using your launch configuration, Satisf_Launch_configure. Your security group, mygroup, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.

You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details

[Edit AMI](#)**satish_AMI - ami-097112a2c798a7e6a**

this is source for auto scaling group

Root device type: ebs Virtualization Type: hvm

Instance Type

[Edit instance type](#)

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

Launch configuration details

[Edit details](#)

Name: Satisf_Launch_configure

Purchasing option: On demand

EBS Optimized: No

Monitoring: No

IAM role: None

Tenancy: Shared tenancy (multi-tenant hardware)

Kernel ID: Use default

[Cancel](#)[Previous](#)[Create launch configuration](#)

AWS Services Resource Groups Auto Scaling satishdevops Ohio Support

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

Create Launch Configuration

Review the details of your launch configuration. You can go back to edit the details of each section before you finish.

! Improve security of instances launched using your launch configuration, Satisf_Launch_configure. Your security group, mygroup, is open to the world.

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports. Edit security groups

AMI Details

satisf_AMI - ami-097111
this is source for auto scaling
Root device type: ebs Virtualized

Instance Type

Instance Type t2.micro

Launch configuration details

Purchasing option: On demand

EBS Optimized: No
Monitoring: No
IAM role: None
Tenancy: Shared tenancy (multi-tenant hardware)
Kernel ID: Use default

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: satisf

Select a key pair: satisf

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

Cancel Create launch configuration

Cancel Previous Create launch configuration



1. Configure Auto Scaling group details

2. Configure scaling policies

3. Configure Notifications

4. Configure Tags

5. Review

Create Auto Scaling Group

[Cancel and Exit](#)

Launch Configuration

devops

Group name

MyGroup

Group size

Start with instances

Network

vpc-36325d5e (172.31.0.0/16) (default)



Create new VPC

Subnet

subnet-fcd80586(172.31.16.0/20) | Default in us-east-2b

subnet-8ed5b0e6(172.31.0.0/20) | Default in us-east-2a

[Create new subnet](#)Each instance in this Auto Scaling group will be assigned a public IP address. [\(i\)](#)

Advanced Details

Load Balancing

 Receive traffic from one or more load balancers[Learn about Elastic Load Balancing](#)

Health Check Grace Period

 seconds

Monitoring



Amazon EC2 Detailed Monitoring metrics, which are provided at 1 minute frequency, are

[Cancel](#)[Next: Configure scaling policies](#)



Create Auto Scaling Group

You can optionally add scaling policies if you want to adjust the size (number of instances) of your group automatically. A scaling policy is a set of instructions for making such adjustments in response to an Amazon CloudWatch alarm that you assign to it. In each policy, you can choose to add or remove a specific number of instances or a percentage of the existing group size, or you can set the group to an exact size. When the alarm triggers, it will execute the policy and adjust the size of your group accordingly. [Learn more](#) about scaling policies.

- Keep this group at its initial size
- Use scaling policies to adjust the capacity of this group

Scale between and instances. These will be the minimum and maximum size of your group.

Scale Group Size

Name: Satisf Scale Group Size

Metric type: Average CPU Utilization

Target value: 1

Instances need: 60 seconds to warm up after scaling

Disable scale-in:

Scale the Auto Scaling group using step or simple scaling policies [\(i\)](#)

[Cancel](#) [Previous](#) [Review](#) [Next: Configure Notifications](#)

AWS Services Resource Groups Auto Scaling satishtdevops Ohio Support

1. Configure Auto Scaling group details 2. Configure scaling policies 3. Configure Notifications 4. Configure Tags 5. Review

Create Auto Scaling Group

Keep this group at its initial size
 Use scaling policies to adjust the capacity of this group

Scale between and instances. These will be the minimum and maximum size of your group.

Increase Group Size

Name: ScalingUp

Execute policy when: No alarm selected Add new alarm

Take the action: Add instances

Add step

Instances need: seconds to warm up after each step

Create a simple scaling policy

Cancel Previous Review Next: Configure Notifications

AWS Services Resource Groups Auto Scaling satishdevops Ohio Support

1. Configure Auto Scaling group details 2. Configure scaling policies 3. Configure Notifications 4. Configure Tags 5. Review

Create Auto Scaling Group

Create Alarm

You can use CloudWatch alarms to be notified automatically whenever metric data reaches a level you define.

To edit an alarm, first choose whom to notify and then define when the notification should be sent.

Send a notification to: No SNS topics found... [create topic](#)

Whenever: Average of CPU Utilization

Is: \geq [] Percent

For at least: 1 consecutive period(s) of 5 Minutes

Name of alarm: awsec2-MyGroup-High-CPU-Utilization

CPU Utilization Percent

Time	CPU Utilization (%)
4/21 18:00	0.0
4/21 20:00	0.0
4/21 22:00	0.0

Create Alarm

Cancel Previous Review Next: Configure Notifications

Satish DevOps

Services ▾ Resource Groups ▾

1. Configure Auto Scaling group details 2. Configure scaling policies 3. Configure Notifications 4. Configure Tags 5. Review

Create Auto Scaling Group

Create Alarm

You can use CloudWatch alarms to be notified automatically whenever metric data reaches a level you define.

To edit an alarm, first choose whom to notify and then define when the notification should be sent.

Send a notification to: myGroup [cancel](#)

With these recipients: mymail2sateesh@gmail.com

Whenever: Average of CPU Utilization

Is: ≥ 50 Percent

For at least: 2 consecutive period(s) of 1 Minute

Name of alarm: awsec2-MyGroup-High-CPU-Utilization

CPU Utilization Percent

4/21 18:00 4/21 20:00 4/21 22:00

MyGroup

Cancel Create Alarm

CPU utilization is more than 50% for 2 consecutive intervals for 1 minute then new instance will start

Cancel Previous Review Next: Configure Notifications

AWS Services Resource Groups satishtdevops Ohio Support

1. Configure Auto Scaling group details 2. Configure scaling policies 3. Configure Notifications 4. Configure Tags 5. Review

Create Auto Scaling Group

Instances need: seconds to warm up after each step

Add step *i*

Create a simple scaling policy *i*

Decrease Group Size

Name: Decrease Group Size

Execute policy when: No alarm selected *C* Add new alarm

Take the action: Remove instances *i*

Add step *i*

Create a simple scaling policy *i*

Scale the Auto Scaling group using a target tracking scaling policy *i*

Cancel Previous Review Next: Configure Notifications

Servicess Resource Groups Auto Scaling

1. Configure Auto Scaling group details 2. Configure scaling policies 3. Configure Notifications 4. Configure Tags 5. Review

Create Auto Scaling Group

Create Alarm

You can use CloudWatch alarms to be notified automatically whenever metric data reaches a level you define.

To edit an alarm, first choose whom to notify and then define when the notification should be sent.

Send a notification to: myGroup (mymail2sateesh@gmail.com) [create topic](#)

Whenever: Average of CPU Utilization

Is: <= 15 Percent

For at least: 2 consecutive period(s) of 1 Minute

Name of alarm: awsec2-MyGroup-High-CPU-Utilization

CPU Utilization Percent

15
10
5
0

4/21 18:00 4/21 20:00 4/21 22:00

MyGroup

**CPU utilization is less than 15% for 2 times in 1 min.
then remove an existing instance ...**

[Cancel](#) [Create Alarm](#)

Cancel Previous Review Next: Configure Notifications

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[1. Configure Auto Scaling group details](#)[2. Configure scaling policies](#)[3. Configure Notifications](#)[4. Configure Tags](#)[5. Review](#)

Create Auto Scaling Group

Instances need: seconds to warm up after each step

[Create a simple scaling policy](#)

Decrease Group Size



Name:

Execute policy when: awsec2-MyGroup-High-CPU-Utilization [Edit](#) [Remove](#)
breaches the alarm threshold: CPUUtilization <= 15 for 2 consecutive periods of 60 seconds
for the metric dimensions AutoScalingGroupName = MyGroup

Take the action: when >= CPUUtilization > -infinity

[Add step](#)

[Create a simple scaling policy](#)

[Scale the Auto Scaling group using a target tracking scaling policy](#)

[Cancel](#)[Previous](#)[Review](#)[Next: Configure Notifications](#)

[1. Configure Auto Scaling group details](#)[2. Configure scaling policies](#)[3. Configure Notifications](#)[4. Configure Tags](#)[5. Review](#)

Create Auto Scaling Group

Configure your Auto Scaling group to send notifications to a specified endpoint, such as an email address, whenever a specified event takes place, including: successful launch of an instance, failed instance launch, instance termination, and failed instance termination.

If you created a new topic, check your email for a confirmation message and click the included link to confirm your subscription. Notifications can only be sent to confirmed addresses.

Send a notification to: [create topic](#) ×

Whenever instances: launch
 terminate
 fail to launch
 fail to terminate

[Add notification](#)

[Cancel](#)[Previous](#)[Review](#)[Next: Configure Tags](#)



1. Configure Auto Scaling group details

2. Configure scaling policies

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5. Review

Create Auto Scaling Group

A tag consists of a case sensitive key-value pair that you can use to identify your group. For example, you could define a tag with Key = Environment and Value = Production. You can optionally choose to apply these tags to instances in the group when they launch. [Learn more](#).

Key	Value	Tag New Instances
name	satish-ASG	<input checked="" type="checkbox"/>

Add tag 49 remaining

Cancel **Previous** **Review**

[1. Configure Auto Scaling group details](#)[2. Configure scaling policies](#)[3. Configure Notifications](#)[4. Configure Tags](#)[5. Review](#)

Create Auto Scaling Group

Please review your Auto Scaling group details. You can go back to edit changes for each section. Click **Create Auto Scaling group** to complete the creation of an Auto Scaling group.

Auto Scaling Group Details

[Edit details](#)

Group name MyGroup

Group size 1

Minimum Group Size 1

Maximum Group Size 3

Subnet(s) subnet-fcd80586,subnet-8ed5b0e6

Health Check Grace Period 300

Detailed Monitoring No

Instance Protection None

Service-Linked Role AWSServiceRoleForAutoScaling

Scaling Policies

[Edit scaling policies](#)

ScalingUp With alarm = awsec2-MyGroup-High-CPU-Utilization; Add 1 instances and 60 seconds for instances to warm up

Decrease Group Size With alarm = awsec2-MyGroup-High-CPU-Utilization; Remove 1 instances



Notifications

[Edit notifications](#)[Cancel](#)[Previous](#)[Create Auto Scaling group](#)



Auto Scaling group creation status

✓ Successfully created Auto Scaling group

[View creation log](#)

▼ View

- [View your Auto Scaling groups](#)
- [View your launch configurations](#)

► Here are some helpful resources to get you started

[Close](#)

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances (which is selected), Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Images (AMIs), and Elastic Block Store (Volumes, Snapshots). The main content area has tabs for Launch Instance, Connect, and Actions. A search bar at the top says "Filter by tags and attributes or search by keyword". Below it is a table with columns: Name, Instance ID, Instance Type, Availability Zone, Instance State, and Status Checks. One row is highlighted with a red box: ASG_INSTANCE (Instance ID i-0564aecb8d0481e74, t2.micro, us-east-2a, running, Initializing). Other instances listed are HAProxy, Server-1, AmazonLinux, and GIT, all in stopped states. A large watermark "MANAGE YOUR STYLES" is overlaid across the middle of the page. A blue annotation text "on instance will run automatically (min. no.of instnaces : 1)" is placed over the watermark.

	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
<input checked="" type="checkbox"/>	ASG_INSTANCE	i-0564aecb8d0481e74	t2.micro	us-east-2a	● running	Initializing
<input type="checkbox"/>	HAProxy	i-0564aecb8d0481e74	t2.micro	us-east-2c	● stopped	
<input type="checkbox"/>	Server-1	i-06731a19912d0eb...	t2.micro	us-east-2c	● stopped	
<input type="checkbox"/>	AmazonLinux	i-07e61dc1688372750	t2.micro	us-east-2c	● stopped	
<input type="checkbox"/>	GIT	i-09713dd0900406e...	t2.micro	us-east-2c	● stopped	

aws

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

Instances

Launch Templates

Spot Requests

Reserved Instances

Dedicated Hosts

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

Volumes

Snapshots

NETWORK & SECURITY

Security Groups

Feedback

Connect To Your Instance

I would like to connect with A standalone SSH client A Java SSH Client directly from my browser (Java required)

To access your instance:

1. Open an SSH client. (find out how to [connect using PuTTY](#))
2. Locate your private key file (mykey.pem). The wizard automatically detects the key you used to launch the instance.
3. Your key must not be publicly viewable for SSH to work. Use this command if needed:
`chmod 400 mykey.pem`
4. Connect to your instance using its Public DNS:
`ec2-52-14-179-167.us-east-2.compute.amazonaws.com`

Example:

```
ssh -i "mykey.pem" root@ec2-52-14-179-167.us-east-2.compute.amazonaws.com
```

Please note that in most cases the username above will be correct, however please ensure that you read your AMI usage instructions to ensure that the AMI owner has not changed the default AMI username.

If you need any assistance connecting to your instance, please see our [connection documentation](#).

Close

Support

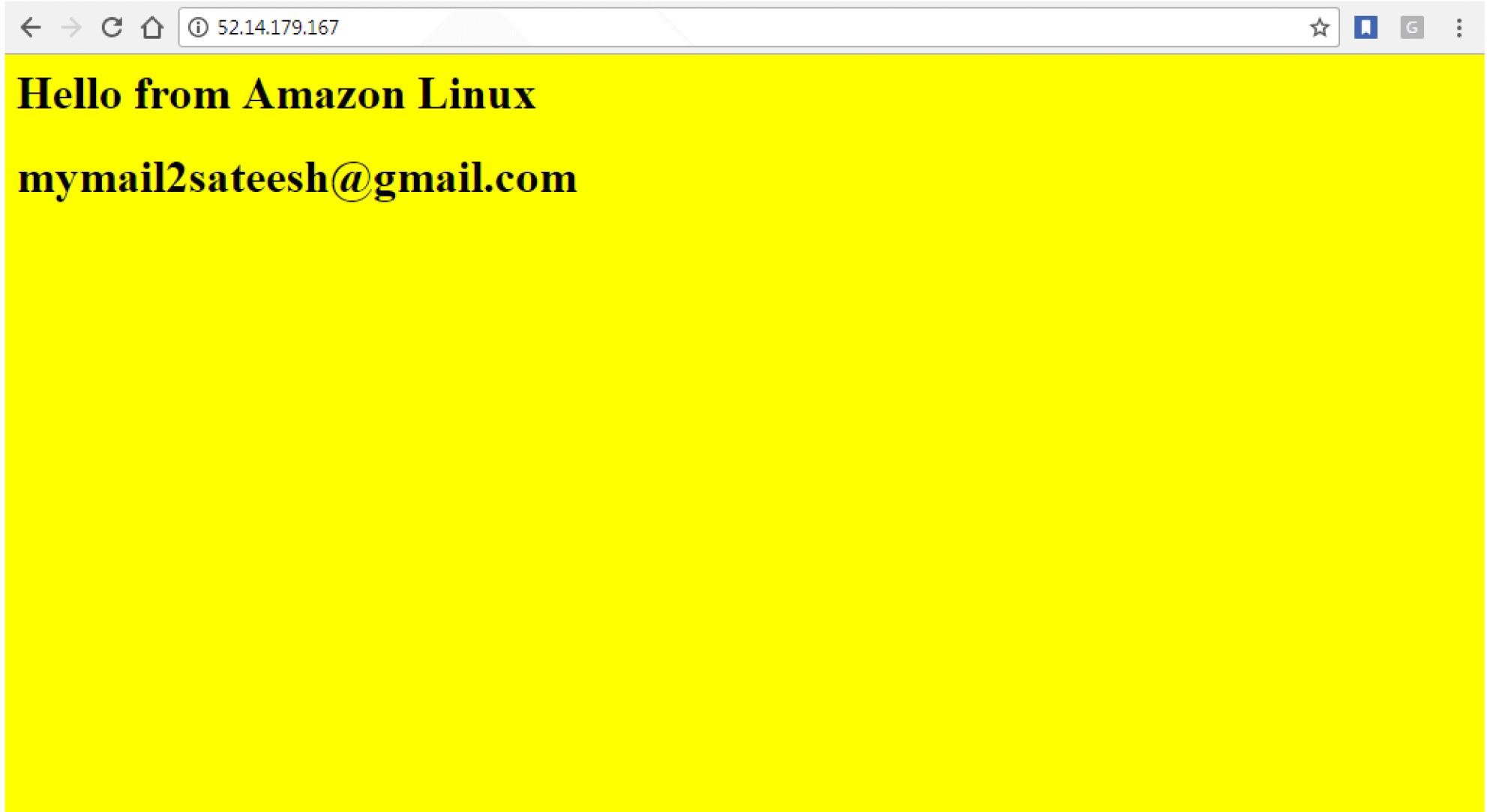
1 to 5 of 5 > >

Status Checks

2/2 checks ...

ec2-52-14-179-167.us-

Policy Terms of Use



Commands

ec2-52-14-179-167.us-east-2....

```
LISTEN      2515/sshd
[root@ip-172-31-4-209 ~]# service httpd start
Starting httpd:                                         [  OK  ]
[root@ip-172-31-4-209 ~]# yum install stress -y
Loaded plugins: priorities, update-mota, upgrade-helper
amzn-main                                         | 2.1 kB  00:00
amzn-updates                                      | 2.5 kB  00:00
Resolving Dependencies
--> Running transaction check
---> Package stress.x86_64 0:1.0.4-4.2.amzn1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch    Version       Repository      Size
=====
Installing:
stress           x86_64  1.0.4-4.2.amzn1  amzn-main   38 k
```



AWS Services Resource Groups Actions ▾

EC2 Dashboard Events Tags Reports Limits

INSTANCES

- Instances**
- Launch Templates
- Spot Requests
- Reserved Instances
- Dedicated Hosts

IMAGES

- AMIs
- Bundle Tasks

ELASTIC BLOCK STORE

- Volumes
- Snapshots

NETWORK & SECURITY

- Security Groups

Launch Instance Connect Actions ▾

Filter by tags and attributes or search by keyword ? < 1 to 5 of 5 >

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
ASG_INSTANCE	i-0564aecb8d0481e74	t2.micro	us-east-2a	running	2/2 checks
HAProxy	i-05cec71ce728ca650	t2.micro	us-east-2c	stopped	
Server-1	i-06731a19912d0eb	t2.micro	us-east-2c	stopped	

Instance: i-0564aecb8d0481e74 (ASG_INSTANCE) Public DNS: ec2-52-14-179-167.us-east-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

CloudWatch alarms: **No alarms configured** Create Alarm

CloudWatch metrics: Basic monitoring. Enable Detailed Monitoring Showing data for: Last Hour

Below are your CloudWatch metrics for the selected resources (a maximum of 10). Click on a graph to see an expanded view. All times shown are in UTC. > View all CloudWatch metrics

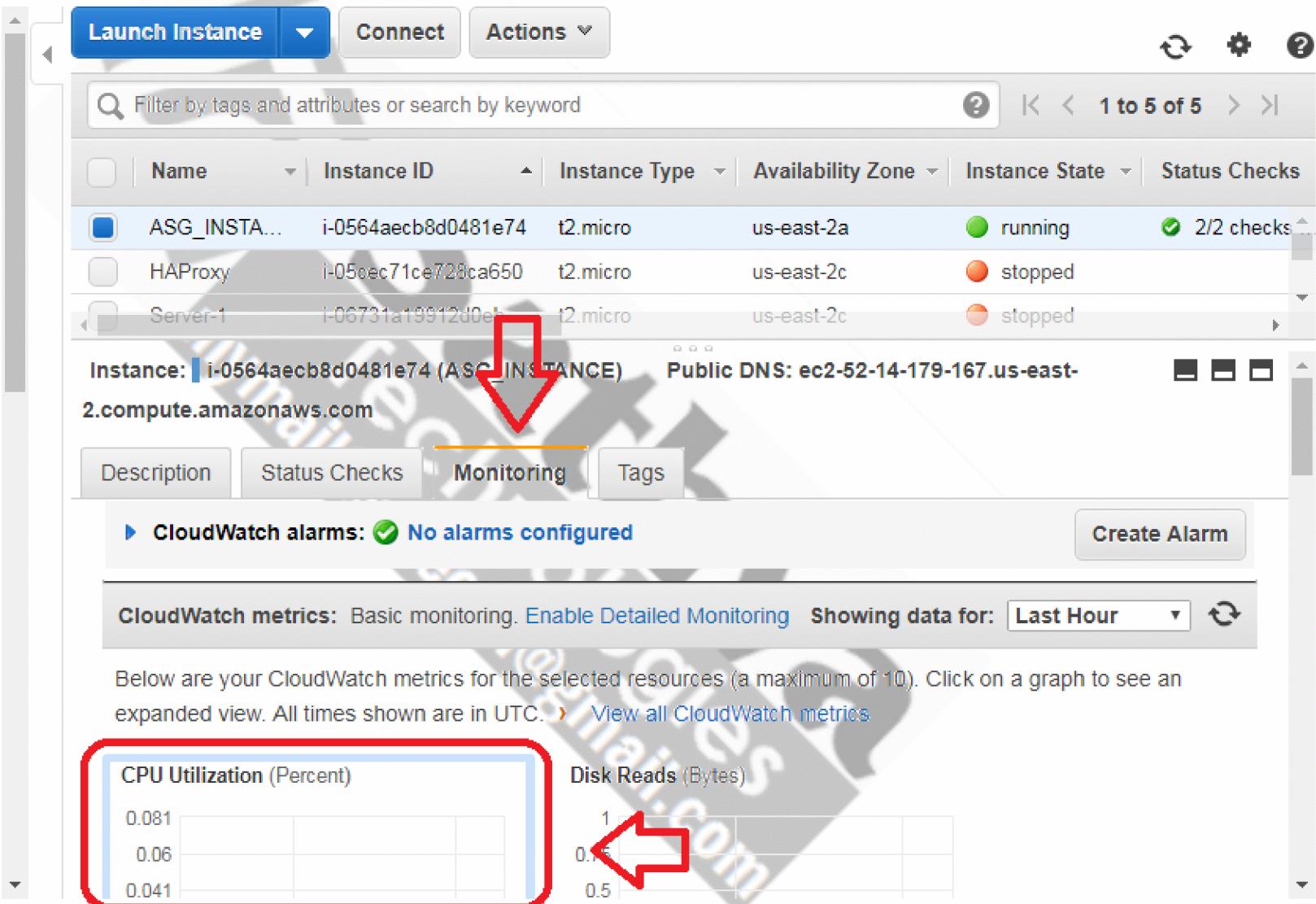
CPU Utilization (Percent)

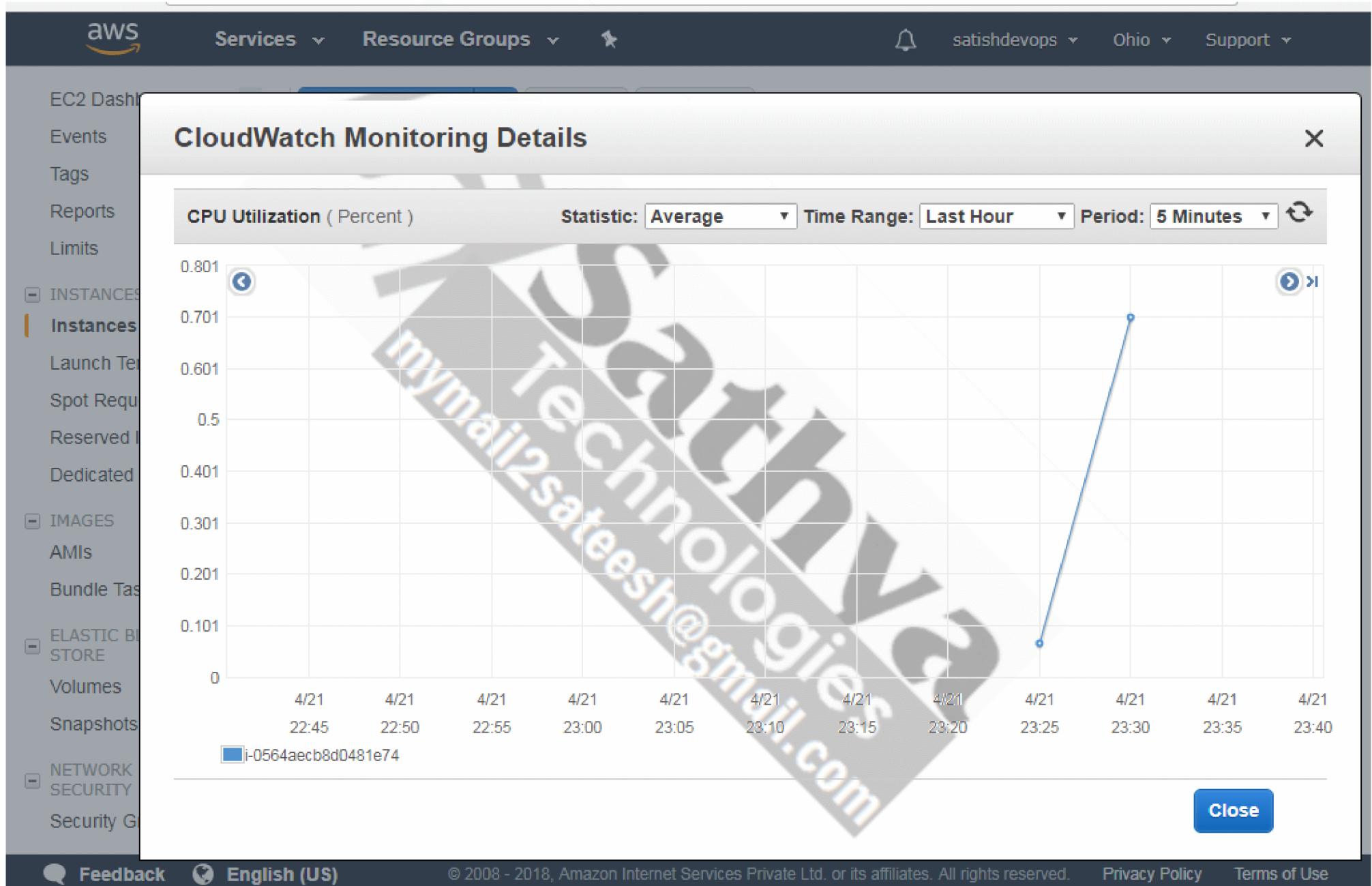
0.081
0.06
0.041

Disk Reads (Bytes)

1
0.5

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```
ubuntu@ec2-18-221-195-11.us-... ec2-13-59-222-159.us-east-2....
```

```
stress: info: [2799] dispatching hogs: 50 cpu, 0 io, 0 vm, 0 hdd
^C
[root@ip-172-31-18-86 ~]# stress --cpu 50
stress: info: [2850] dispatching hogs: 50 cpu, 0 io, 0 vm, 0 hdd
^C
[root@ip-172-31-18-86 ~]# stress --cpu 50
stress: info: [2901] dispatching hogs: 50 cpu, 0 io, 0 vm, 0 hdd
^[[A^[[A^C
[root@ip-172-31-18-86 ~]# stress --cpu 500
stress: info: [2952] dispatching hogs: 500 cpu, 0 io, 0 vm, 0 hdd
^C
[root@ip-172-31-18-86 ~]# stress --cpu 500
stress: info: [3453] dispatching hogs: 500 cpu, 0 io, 0 vm, 0 hdd
^C
[root@ip-172-31-18-86 ~]# stress -c 50
# stress -c 50
[root@ip-172-31-18-86 ~]#
Broadcast message from root@ip-172-31-18-86
        (unknown) at 1:13 ...

The system is going down for power off NOW!
```