

Process that needs to  
be setup to remote  
manage EC2 instances  
from an operations  
prospective

## Project 1 – Step 1: Create an Identity and Access Management (IAM) role

- a. Open the IAM console at <https://console.aws.amazon.com/iam/>.

console.aws.amazon.com/console/home?region=us-east-1

vocstartsoft/user859235=diego.betega.901@gmail.com @ 2801-57... N. Virginia Support

FSx AWS Panorama Amazon MQ  
S3 Glacier \*\*\* Blockchain Amazon Monitron Simple Notification Service  
Storage Gateway Amazon Managed Blockchain Amazon Lookout for Vision Simple Queue Service  
AWS Backup Satellite Analytics SWF  
Database Ground Station Athena Managed Apache Airflow  
RDS Quantum Technologies Amazon Redshift  
DynamoDB Amazon Braket EMR Customer Engagement  
ElastiCache Management & Governance CloudSearch Amazon Connect  
Neptune Amazon QLDB Elasticsearch Service Pinpoint  
Amazon DocumentDB AWS Organizations Kinesis Simple Email Service  
Amazon Keyspaces CloudWatch QuickSight Data Pipeline  
Amazon Timestream AWS Auto Scaling AWS Data Exchange Business Applications  
Migration & Transfer CloudFormation AWS Glue Alexa for Business  
AWS Migration Hub CloudTrail AWS Lake Formation Amazon Chime  
Application Discovery Service Config MSK WorkMail  
Database Migration Service OpsWorks AWS Glue DataBrew Amazon Honeycode  
Server Migration Service Service Catalog Security, Identity, & Compliance End User Computing  
AWS Transfer Family Systems Manager AWS Glue DataBrew WorkSpaces  
AWS Snow Family AppConfig IAM AppStream 2.0  
DataSync Trusted Advisor AWS Glue DataBrew WorkDocs  
Networking & Content Delivery Control Tower Resource Access Manager WorkLink  
AWS Well-Architected Tool AWS License Manager Cognito Internet of Things  
Personal Health Dashboard AWS Chatbot Secrets Manager IoT Core  
AWS Chatbot Launch Wizard GuardDuty FreeRTOS  
AWS Compute Optimizer Inspector IoT 1-Click  
Resource Groups & Tag Editor Amazon Macie IoT Analytics  
AWS Proton AWS Single Sign-On IoT Device Defender  
Key Management Service Certificate Manager IoT Device Management  
CloudHSM IoT Events  
AWS IoT Greengrass  
AWS SiteWise IoT Greengrass  
AWS IoT Things Graph  
Global Accelerator Media Services Directory Service Game Development  
Kinesis Video Streams WAF & Shield  
MediaConnect AWS Firewall Manager  
MediaConvert Artifact

Submit feedback to tell us about your experience with the AWS Management Console.

https://console.aws.amazon.com/iam/home?region=us-east-1

© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 1 – Step 1: Create an Identity and Access Management (IAM) role

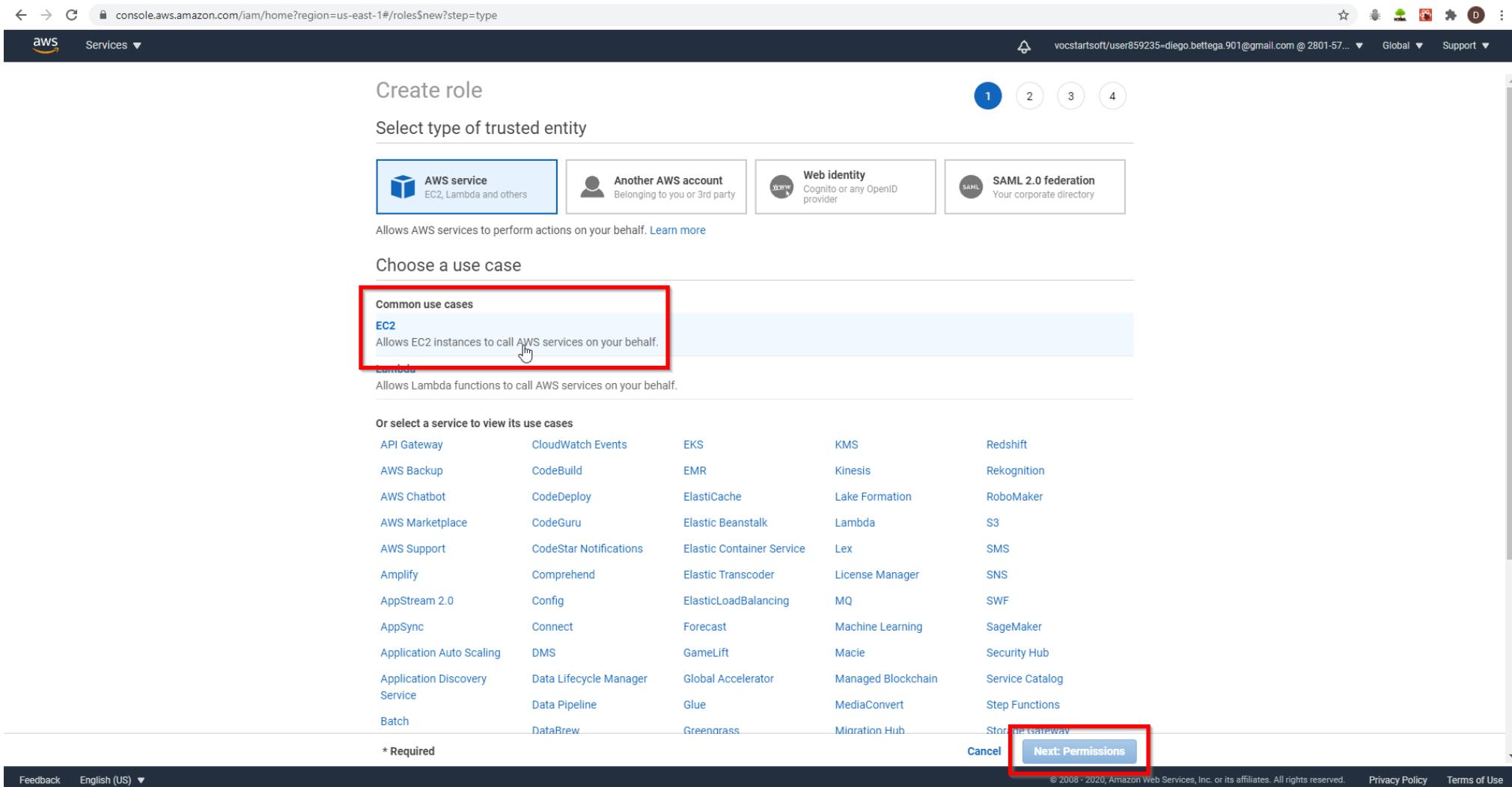
b. In the left navigation pane, choose Roles, and then choose Create role.

The screenshot shows the AWS Identity and Access Management (IAM) service dashboard. On the left, a navigation pane lists various IAM management options like Dashboard, Groups, Users, Policies, and Roles. The 'Roles' option is selected and highlighted with a red box. Below the navigation pane, there's a section titled 'Additional resources:' with links to IAM Roles FAQ, Documentation, and tutorials. The main content area displays a table of existing roles, each with a checkbox, the role name, the trusted entity (e.g., AWS service: cloud9), and the last activity date. At the top of this table, there are buttons for 'Create role' (which is also highlighted with a red box and has a cursor icon over it) and 'Delete role'. A search bar is located above the table, and a note at the bottom right says 'Showing 15 results'. The URL in the browser bar is [https://console.aws.amazon.com/iam/home?region=us-east-1#/roles\\$new](https://console.aws.amazon.com/iam/home?region=us-east-1#/roles$new).

Role name	Trusted entities	Last activity
AWSServiceRoleForAWSCloud9	AWS service: cloud9 (Service-Linked role)	None
AWSServiceRoleForCloudWatchEvents	AWS service: events (Service-Linked role)	None
AWSServiceRoleForECS	AWS service: ecs (Service-Linked role)	60 days
AWSServiceRoleForElastiCache	AWS service: elasticache (Service-Linked role)	None
AWSServiceRoleForElasticLoadBalancing	AWS service: elasticloadbalancing (Service-Link...	60 days
AWSServiceRoleForOrganizations	AWS service: organizations (Service-Linked rol...	None
AWSServiceRoleForSupport	AWS service: support (Service-Linked role)	None
AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Linked r...	None
ecsTaskExecutionRole	AWS service: ecs-tasks	60 days
EMR_AutoScaling_DefaultRole	AWS service: application-autoscaling and 1 more	None
EMR_DefaultRole	AWS service: elasticmapreduce	None
EMR_EC2_DefaultRole	AWS service: ec2	82 days
robomaker_students	AWS service: robomaker and 3 more	None

## Project 1 – Step 1: Create an Identity and Access Management (IAM) role

- c. On the Select type of trusted entity page, under AWS Service, choose EC2, and then choose Next: Permissions.



The screenshot shows the 'Create role' wizard in the AWS IAM console. The current step is 'Select type of trusted entity'. There are four options: 'AWS service' (selected), 'Another AWS account', 'Web identity', and 'SAML 2.0 federation'. Below each option is a brief description and a 'Learn more' link. The 'AWS service' section has a red box around it. Under 'Choose a use case', there is a 'Common use cases' section with a red box around the 'EC2' item, which is described as allowing EC2 instances to call AWS services on behalf of the user. Below this is a table of other services and their associated use cases. At the bottom right, the 'Next: Permissions' button is highlighted with a red box.

Create role

Select type of trusted entity

1 2 3 4

AWS service  
EC2, Lambda and others

Another AWS account  
Belonging to you or 3rd party

Web identity  
Cognito or any OpenID provider

SAML 2.0 federation  
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose a use case

Common use cases

**EC2**  
Allows EC2 instances to call AWS services on your behalf.

Lambda  
Allows Lambda functions to call AWS services on your behalf.

Or select a service to view its use cases

API Gateway	CloudWatch Events	EKS	KMS	Redshift
AWS Backup	CodeBuild	EMR	Kinesis	Rekognition
AWS Chatbot	CodeDeploy	ElastiCache	Lake Formation	RoboMaker
AWS Marketplace	CodeGuru	Elastic Beanstalk	Lambda	S3
AWS Support	CodeStar Notifications	Elastic Container Service	Lex	SMS
Amplify	Comprehend	Elastic Transcoder	License Manager	SNS
AppStream 2.0	Config	Elastic Load Balancing	MQ	SWF
AppSync	Connect	Forecast	Machine Learning	SageMaker
Application Auto Scaling	DMS	GameLift	Macie	Security Hub
Application Discovery Service	Data Lifecycle Manager	Global Accelerator	Managed Blockchain	Service Catalog
Batch	Data Pipeline	Glue	MediaConvert	Step Functions
	Data Rew	Greengrass	Migration Hub	Storage Gateway

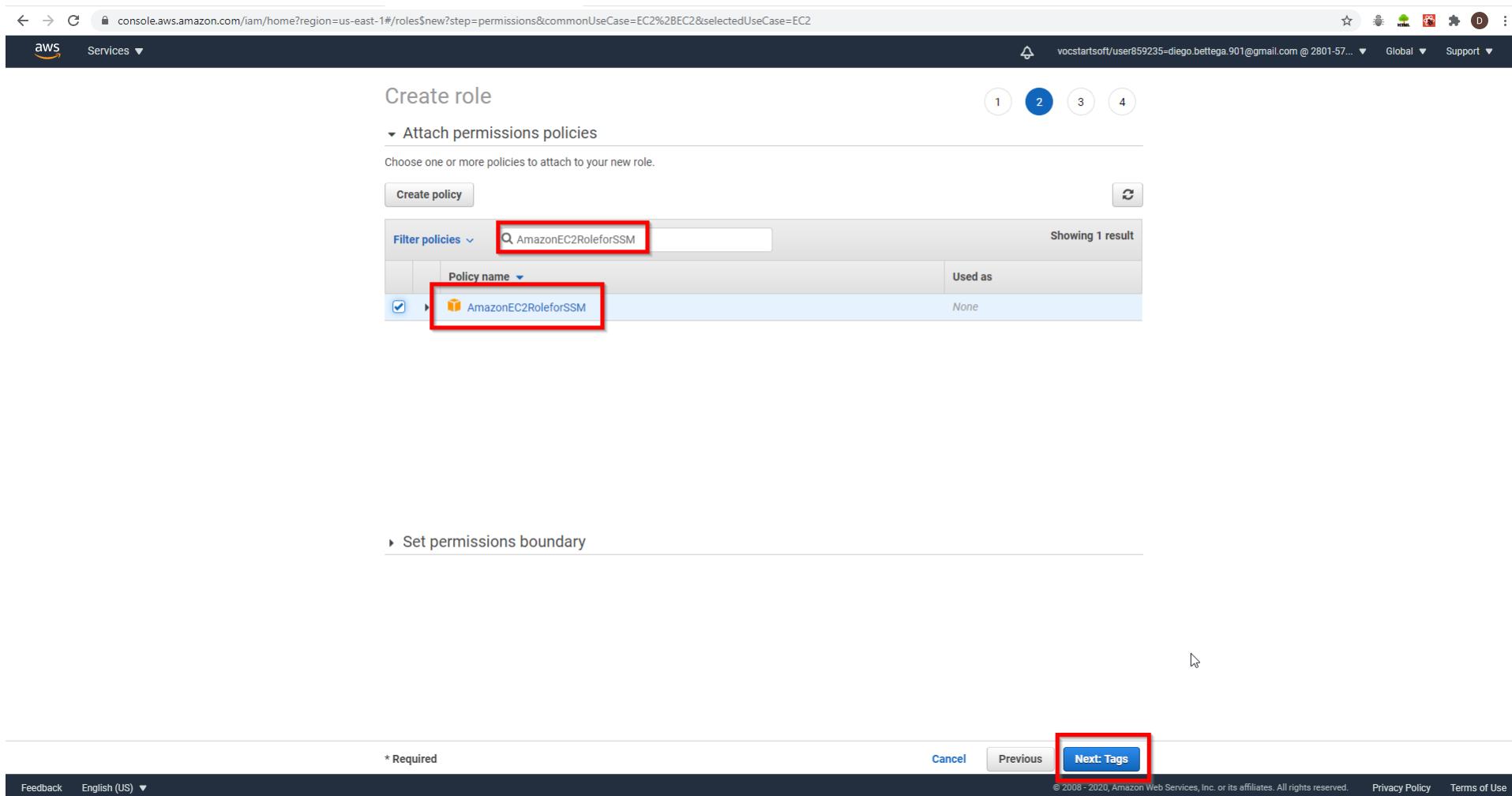
\* Required

Cancel **Next: Permissions**

Feedback English (US) ▾ © 2006 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 1 – Step 1: Create an Identity and Access Management (IAM) role

- d. On the Attached permissions policy page, in the search bar type *AmazonEC2RoleforSSM* then from the policy list select *AmazonEC2RoleforSSM*, and then choose Next: Review.



## Project 1 – Step 1: Create an Identity and Access Management (IAM) role

- e. On the Review page, in the Role name box type in *EnablesEC2ToAccessSystemsManagerRole*. In the Role description box type in *Enables an EC2 instance to access Systems Manager*. Choose Create role.

The screenshot shows the 'Create role' review step in the AWS IAM console. The 'Role name' field contains 'EnablesEC2ToAccessSystemsManagerRole' and the 'Role description' field contains 'Enables an EC2 instance to access Systems Manager'. Both fields are highlighted with red boxes. At the bottom right, the 'Create role' button is also highlighted with a red box. The top navigation bar shows the URL 'console.aws.amazon.com/iam/home?region=us-east-1#/roles\$new?step=review&commonUseCase=EC2%2BEC2&selectedUseCase=EC2&policies=arn:aws:iam::aws:policy%2FAmazonEC2RoleforSSM' and the user 'vocstartsoft/user859235=diego.bettega.901@gmail.com @ 2801-57...'. The bottom footer includes links for Feedback, English (US), Privacy Policy, and Terms of Use.

Create role

Review

Provide the required information below and review this role before you create it.

Role name\*  Use alphanumeric and '+-,.\_-' characters. Maximum 64 characters.

Role description  Maximum 1000 characters. Use alphanumeric and '+-,.\_-' characters.

Trusted entities AWS service: ec2.amazonaws.com

Policies AmazonEC2RoleforSSM

Permissions boundary Permissions boundary is not set

No tags were added.

\* Required

Cancel Previous Create role

Feedback English (US) © 2006–2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

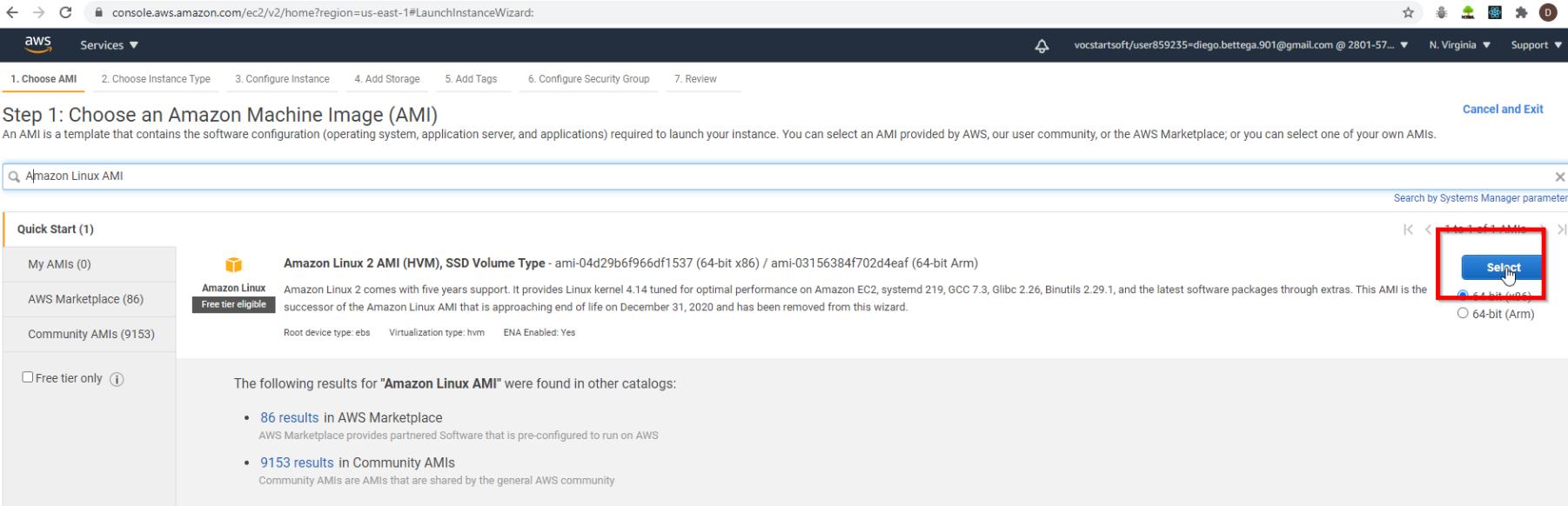
## Project 1 – Step 2: Create an EC2 instance

- a. Open the [Amazon EC2 console](#). From the EC2 console select your preferred [region](#). Systems Manager is supported in all AWS Regions. Now choose Launch Instance.

The screenshot shows the AWS EC2 console interface. On the left, a navigation sidebar lists various services under 'Instances' (Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations), 'Images' (AMIs), 'Elastic Block Store' (Volumes, Snapshots, Lifecycle Manager), 'Network & Security' (Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces). The main content area has tabs for 'Resources' and 'Launch instance'. The 'Launch instance' tab is active, showing a button labeled 'Launch instance' with a dropdown arrow, which is highlighted with a red box. Below it, a note says 'Note: Your instances will run in the US East (N. Virginia) Region'. To the right of the main content are three panels: 'Account attributes' (Supported platforms: VPC; Default VPC: 'vpc-a915fed4'); 'Explore AWS' (sections for Graviton2, FSR, and Spot Instances); and 'Additional information'.

## Project 1 – Step 2: Create an EC2 instance

b. Select the *Amazon Linux AMI*. Make sure you select Amazon Linux base AMI dated 2017.09 or later which includes the Systems Manager Agent by default. You can also install the Systems Manger Agent on your own Windows or Linux system.



The screenshot shows the AWS Launch Instance Wizard Step 1: Choose an Amazon Machine Image (AMI) page. The search bar at the top contains the text "Amazon Linux AMI". The results list shows one item: "Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-04d29b6f966df1537 (64-bit x86) / ami-03156384f702d4eaf (64-bit Arm)". This item is highlighted with a red box around the "Select" button. Below the result, there is a note about the successor of the Amazon Linux AMI. The sidebar on the left shows categories like "Quick Start (1)", "My AMIs (0)", "AWS Marketplace (86)", and "Community AMIs (9153)". At the bottom of the page, there are links to "Feedback", "English (US)", "Privacy Policy", and "Terms of Use".

## Project 1 – Step 2: Create an EC2 instance

- c. On the Step 2: Choose an Instance Type page, choose the t2.micro instance type and then click Next: Configure Instance Details.

The screenshot shows the AWS EC2 Launch Instance Wizard Step 2: Choose an Instance Type. The t2.micro instance type is selected and highlighted with a red box. The 'Free tier eligible' badge is also highlighted with a red box. The 'Review and Launch' button at the bottom right is also highlighted with a red box.

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 families ▾ Current generation ▾ Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, - 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	<b>t2.micro</b> Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t2	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t3	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.small	2	2	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.medium	2	4	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.large	2	8	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.xlarge	4	16	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.2xlarge	8	32	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous Review and Launch **Next: Configure Instance Details**

Feedback English (US) ▾ © 2008 – 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 1 – Step 2: Create an EC2 instance

d. On the Step 3: Configure Instance Details page, In the IAM role dropdown choose the EnablesEC2ToAccessSystemsManagerRole role you created earlier. Leave everything else as default. Choose Review and Launch.

The screenshot shows the 'Step 3: Configure Instance Details' page of the AWS EC2 instance creation wizard. The 'IAM role' dropdown is highlighted with a red box, containing the text 'EnablesEC2ToAccessSystemsManagerRole'. At the bottom right, the 'Review and Launch' button is also highlighted with a red box. The rest of the configuration fields are shown in their respective input fields or dropdown menus.

Number of instances: 1

Purchasing option: Request Spot instances

Network: vpc-a915fed4 (default)

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

Auto-assign Public IP: Use subnet setting (Enable)

Placement group: Add instance to placement group

Capacity Reservation: Open

Domain join directory: No directory

IAM role: EnablesEC2ToAccessSystemsManagerRole

CPU options: Specify CPU options

Shutdown behavior: Stop

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

Enable termination protection: Protect against accidental termination

Monitoring: Enable CloudWatch detailed monitoring  
Additional charges apply.

Tenancy: Shared - Run a shared hardware instance  
Additional charges will apply for dedicated tenancy.

Elastic Inference: Add an Elastic Inference accelerator  
Additional charges apply.

Credit specification: Unlimited

Buttons at the bottom: Cancel, Previous, Review and Launch (highlighted), Next: Add Storage

## Project 1 – Step 2: Create an EC2 instance

- e. On the Step 7: Review Instance Launch page, choose Launch to launch your instance.

The screenshot shows the 'Step 7: Review Instance Launch' page of the AWS EC2 instance creation wizard. The browser address bar indicates the URL is `console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard`. The top navigation bar shows the AWS logo, Services dropdown, user information, and N. Virginia region. Below the navigation, a breadcrumb trail shows steps 1 through 7. The current step, '7. Review', is highlighted with an orange underline.

**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** (Edit AMI)  
Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-04d29b6f966df1537  
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 a...  
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	-	1	1	EBS only	-	Low to Moderate

**Security Groups** (Edit security groups)  
Security group name: launch-wizard-2  
Description: launch-wizard-2 created 2020-12-03T15:55:21.159+00:00  
This security group has no rules

**Instance Details** (Edit instance details)  
**Storage** (Edit storage)  
**Tags** (Edit tags)

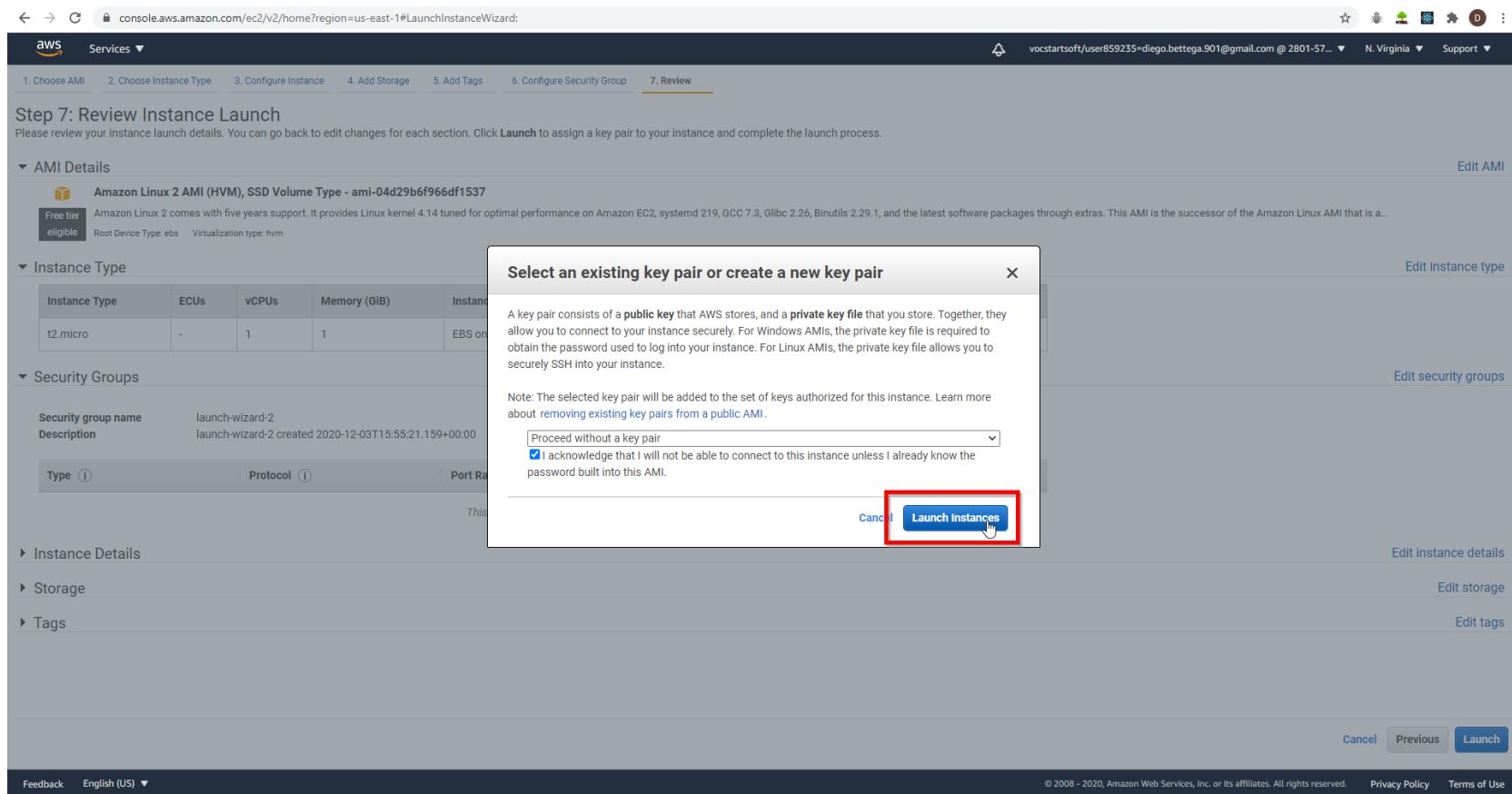
At the bottom right, there are three buttons: 'Cancel', 'Previous', and a large blue 'Launch' button, which is highlighted with a red rectangular box and has a mouse cursor icon pointing to it.

Page footer: Feedback English (US) © 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 1 – Step 2: Create an EC2 instance

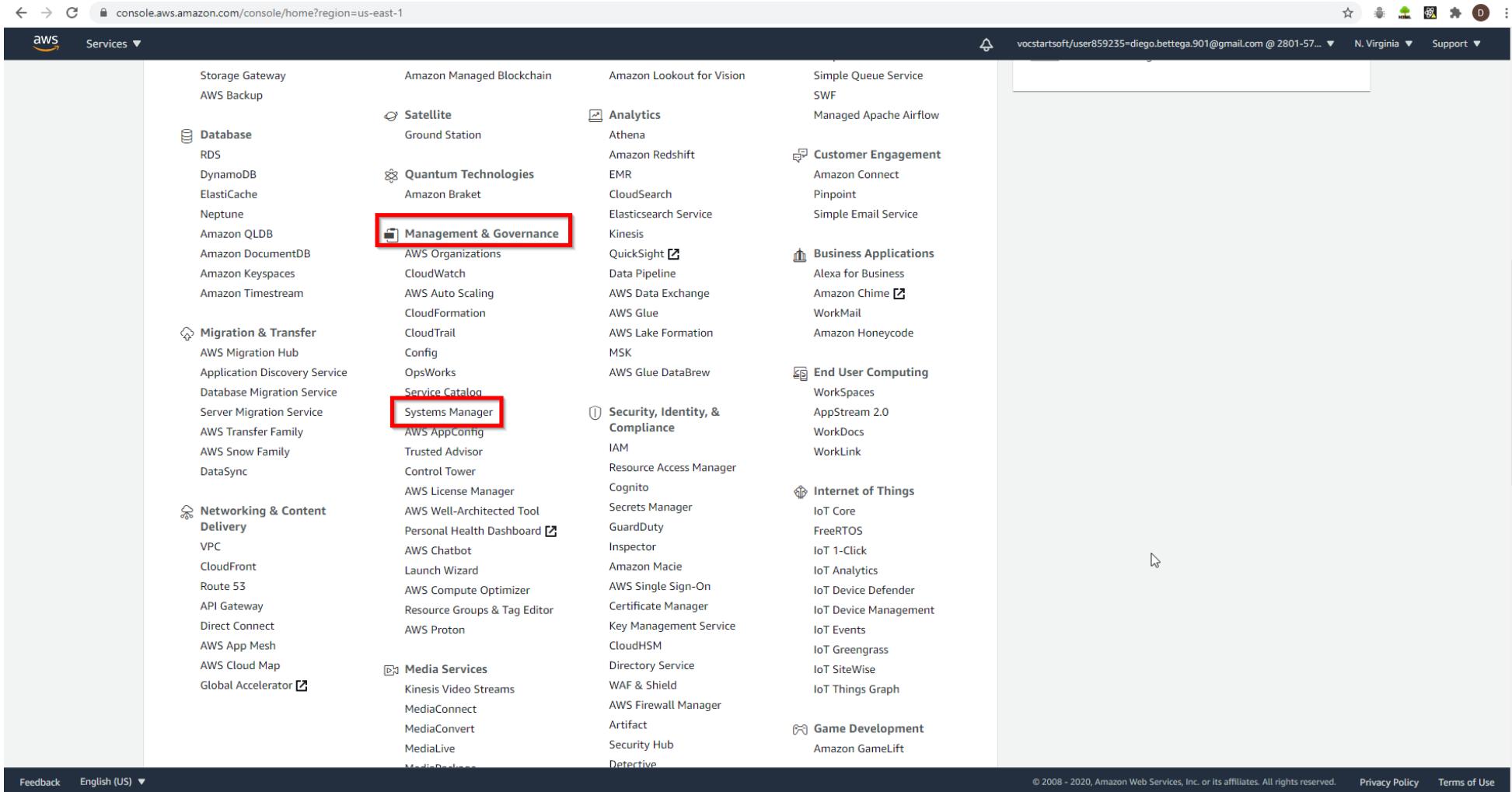
f. Next the Select an existing keypair or create a new key pair dialog will appear. You will not need a keypair to use Systems Manager to remotely run commands. From the Choose an existing pair dropdown choose Proceed without a key pair and tick the I acknowledge that... checkbox.

Next select Launch Instance.



## Project 1 – Step 3: Update the Systems Manager Agent

- In the top menu click on Services. Then, under Management Tools, select *Systems Manager* to open the Systems Manager console.



## Project 1 – Step 3: Update the Systems Manager Agent

- b. Under the Shared Resources section on the left navigation bar, choose Managed Instances.

The screenshot shows the AWS Systems Manager console interface. On the left, there is a vertical navigation bar with the following menu items:

- Quick Setup
- Operations Management
  - Explorer New
  - OpsCenter
  - CloudWatch Dashboard
  - PHD
- Application Management
  - Resource Groups
  - AppConfig New
  - Parameter Store
- Actions & Change
  - Automation
  - Change Calendar New
  - Maintenance Windows
- Instances & Nodes
  - Compliance
  - Inventory
  - Managed Instances** (this item is highlighted with a red box)
  - Hybrid Activations
  - Session Manager
  - Run Command
  - State Manager
  - Patch Manager
  - Distributor

The main content area features the title "AWS Systems Manager" and the subtitle "Gain Operational Insight and Take Action on AWS Resources." Below this, there is a "Get Started with Systems Manager" button and a descriptive text: "View operational data for groups of resources, so you can quickly identify and act on any issues that might impact applications that use those resources." The "How it works" section contains three cards: "Group your resources" (Icon: three squares, a cylinder, and two circles), "View insights" (Icon: three overlapping windows showing charts and graphs), and "Take action" (Icon: a laptop screen with various icons). To the right, there is a "More resources" sidebar with links to "Documentation," "API reference," and "FAQs". At the bottom, there are sections for "Features" like "Remote connect" and "Resource grouping". The browser address bar shows the URL <https://console.aws.amazon.com/systems-manager/home?region=us-east-1#>.

## Project 1 – Step 3: Update the Systems Manager Agent

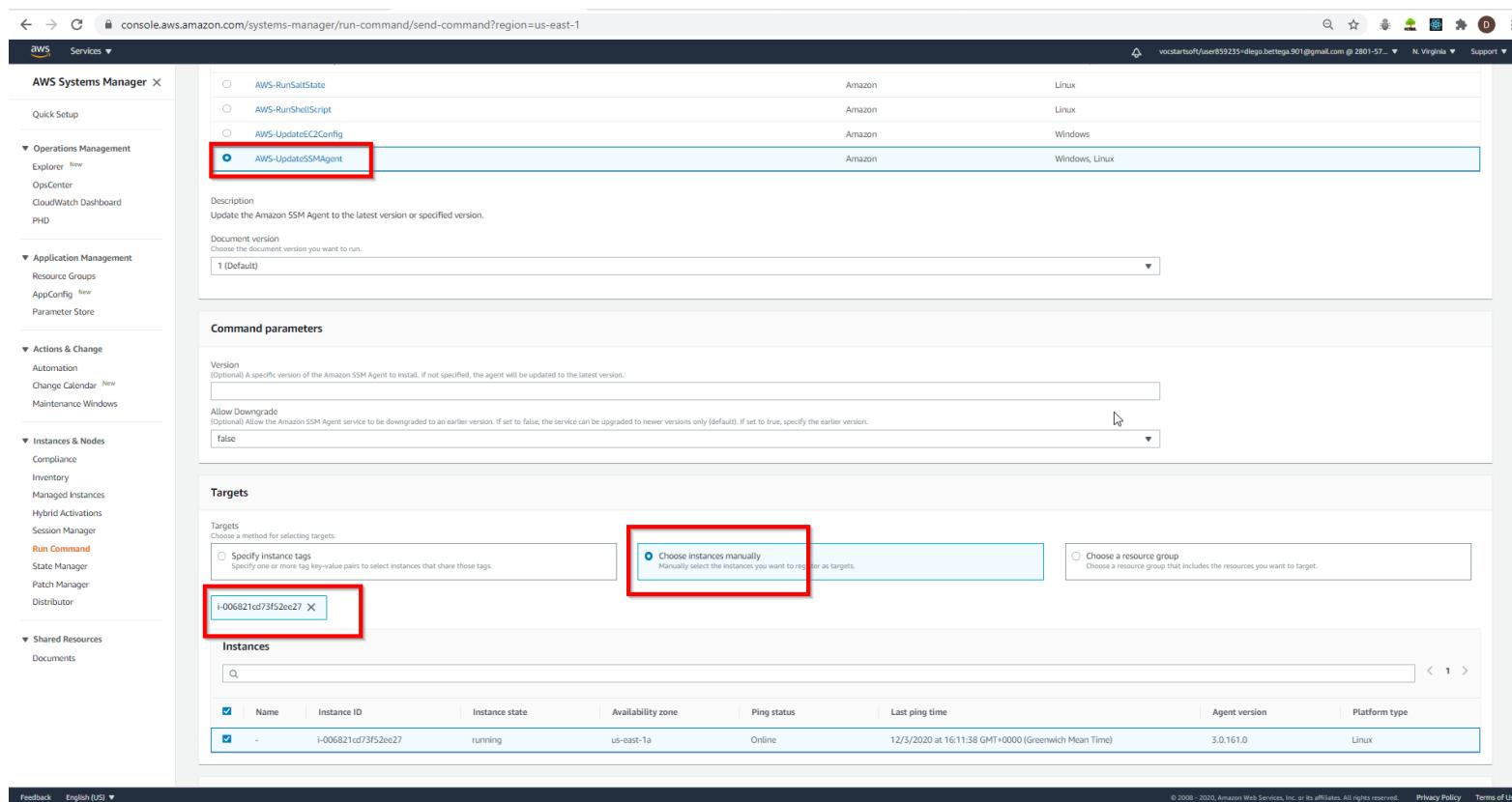
- c. On the Managed instances page, in the Actions drop down select Run Command.

The screenshot shows the AWS Systems Manager Managed Instances page. On the left, there's a navigation sidebar with sections like Quick Setup, Operations Management (Explorer, OpsCenter, CloudWatch Dashboard, PHD), Application Management (Resource Groups, AppConfig, Parameter Store), Actions & Change (Automation, Change Calendar, Maintenance Windows), and Instances & Nodes (Compliance, Inventory, Managed Instances, Hybrid Activations, Session Manager, Run Command). The main area shows a table of Managed instances with columns: Instance ID, Name, Ping status, Platform type, Platform name, Platform version, Agent version, and IP address. One instance is listed: i-006821cd73f52ee27, Name -, Ping status Online, Platform type Linux, Platform name Amazon Linux, Platform version 2, Agent version 3.0.161.0, IP address 172.31.1.2. To the right of the table is a 'Actions' dropdown menu with options: Create Association, Run Command (which is highlighted with a red box and a cursor icon), Execute Automation, Edit AWS Config recording, Start Session, Reset Password, Change IAM role, and Deregister this managed instance. A red box also highlights the 'Actions' button itself. At the top of the page, there's a red error message: "User: arn:aws:sts::280157415142:assumed-role/vocstartsoft/user859235=diego.bettega.901@gmail.com is not authorized to perform: resource-groups>ListGroups on resource: arn:aws:resource-groups:us-east-1:280157415142:/groups-list with an explicit deny". The top right corner shows the user's email (vocstartsoft/user859235=diego.bettega.901@gmail.com), region (N. Virginia), and support links.

## Project 1 – Step 3: Update the Systems Manager Agent

- d. On the Run a command page, click in the search bar and select, Document name prefix, then click on Equal, then type in *AWS-UpdateSSMAgent*.

Now click on the radio button on the left of AWS-UpdateSSMAgent. This document will upgrade Systems Management agent on the instance. Scroll down to the Targets panel and click the check box next to your managed EC2 instance. Finally, scroll down and select Run.



## Project 1 – Step 4: Run a Remote Shell Script

- From the Systems Management console, in the left nav under Shared Resources select Managed instances. Then in the Actions menu, select the Run Command menu item.

The screenshot shows the AWS Systems Manager Managed Instances page. On the left, the navigation pane is open, showing sections like AWS Systems Manager, Operations Management, Application Management, Actions & Change, and Instances & Nodes. Under Instances & Nodes, the 'Managed Instances' link is highlighted with a red box. The main content area displays a table of managed instances. A context menu is open over the first instance in the table, listing options such as Create Association, Run Command, Execute Automation, Edit AWS Config recording, Start Session, Reset Password, Change IAM role, and Deregister this managed instance. The 'Run Command' option is highlighted with a red box and has a cursor arrow pointing to it.

AWS Systems Manager

Managed Instances

Managed instances

Instance ID	Name	Ping status	Platform type	Platform name	Platform version	Agent version	IP address
i-006821cd73f52ee27	-	Online	Linux	Amazon Linux	2	3.0.161.0	172.31.1.10

Actions

Create Association

**Run Command**

Execute Automation

Edit AWS Config recording

Start Session

Reset Password

Change IAM role

Deregister this managed instance

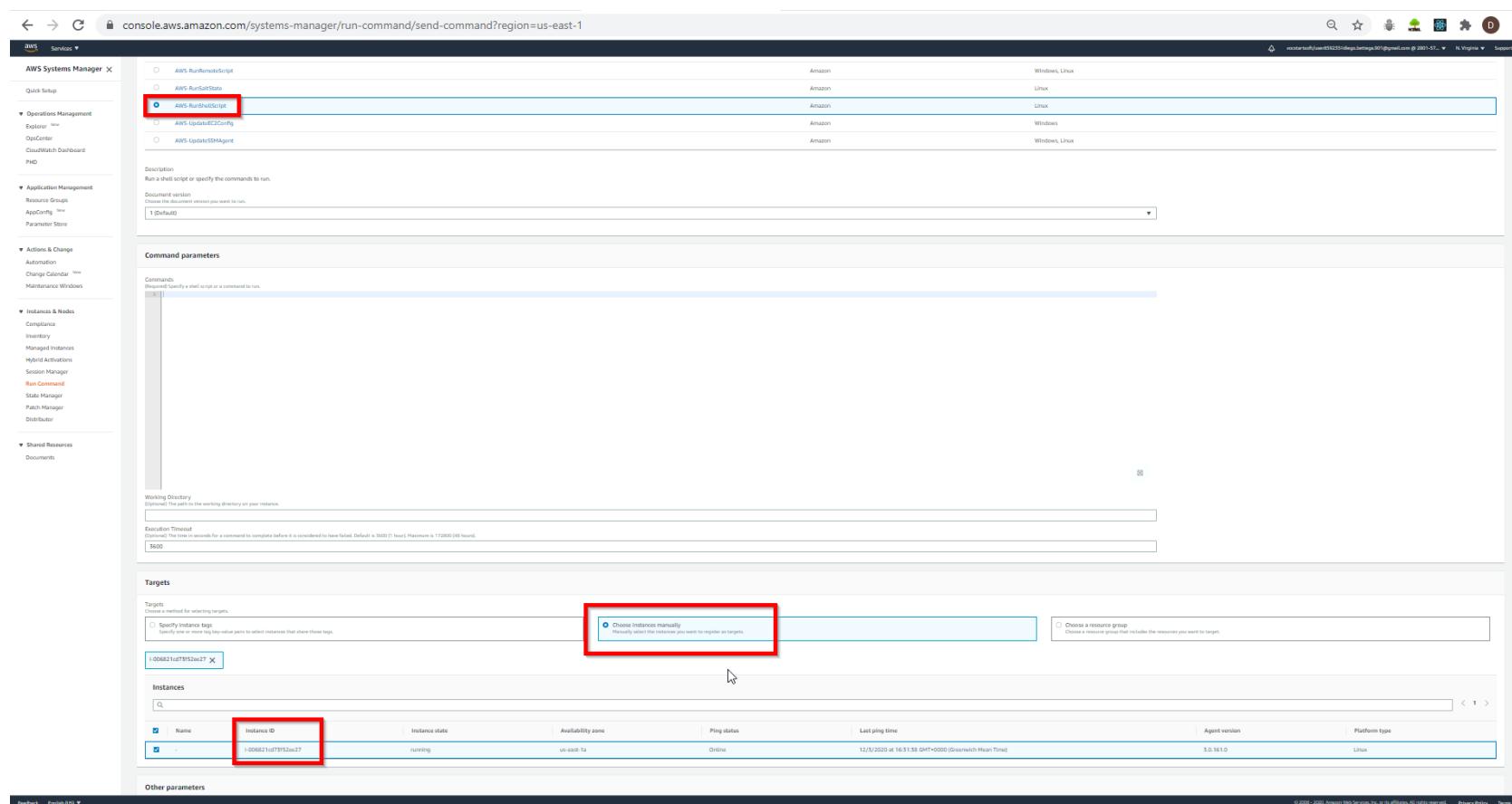
Feedback English (US) ▾

© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 1 – Step 4: Run a Remote Shell Script

- b. On the Run a command page, click in the search bar and select, Document name prefix, then click on Equal, then type in *AWS-RunShellScript*.

Now click on the radio button on the left of AWS-RunShellScript. This document will upgrade Systems Management agent on the instance. Scroll down to the Targets panel and click the check box next to your managed EC2 instance.



## Project 1 – Step 4: Run a Remote Shell Script

c. Scroll down to the Command Parameters panel and insert the following command in the Commands text box:

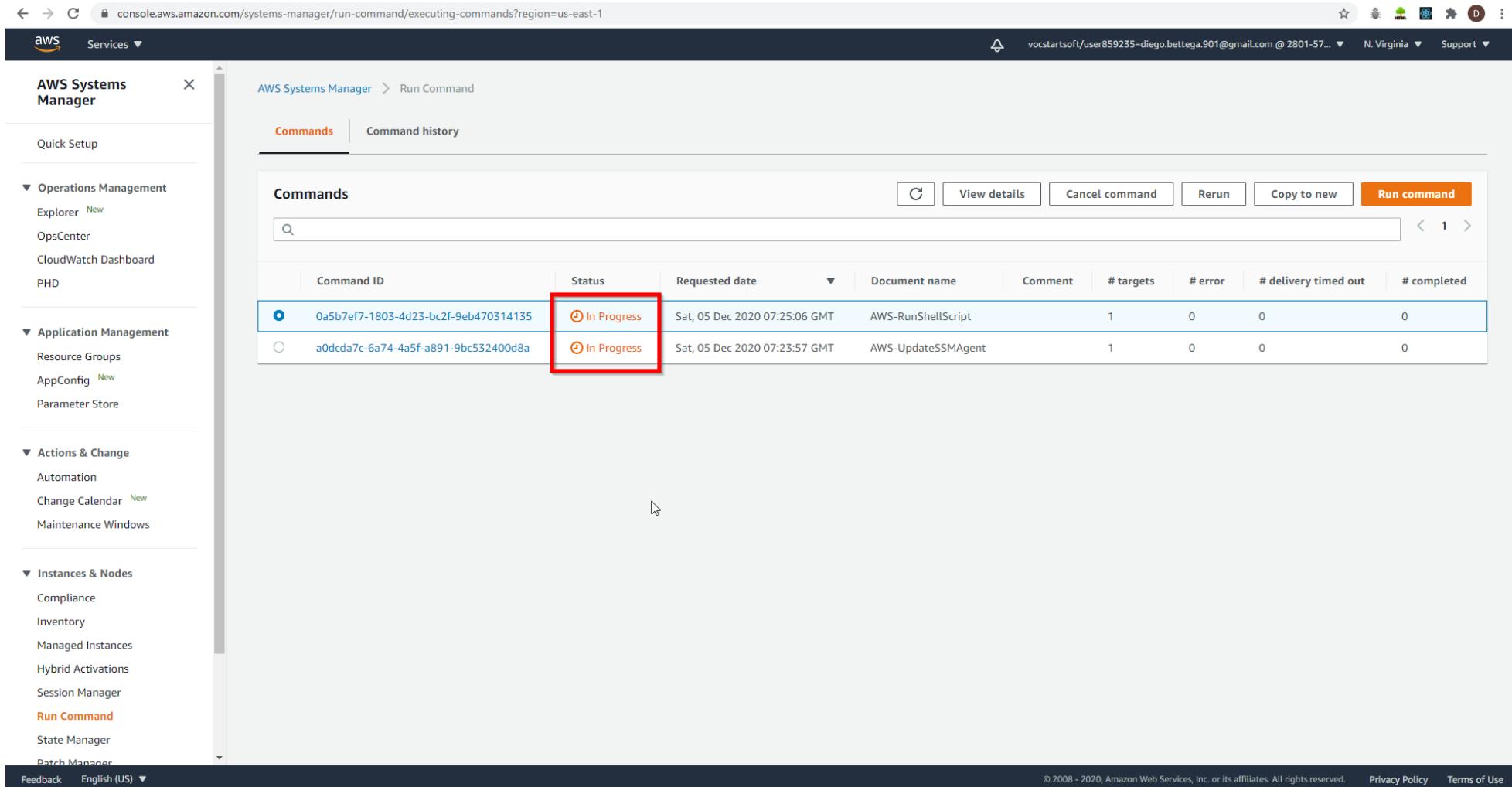
`sudo yum update -y`

Finally, scroll down and select Run.

The screenshot shows the AWS Systems Manager 'Run Command' interface. On the left, there's a sidebar with various management categories like Operations Management, Application Management, Actions & Change, Instances & Nodes, and a prominent 'Run Command' link which is highlighted in red. The main pane has a title 'Run a shell script or specify the commands to run.' and a dropdown for 'Document version' set to '1 (Default)'. Below that is a section titled 'Command parameters' with a 'Commands' field containing the command `sudo yum update -y`, which is also highlighted with a red box. At the bottom, there's a 'Working Directory' field and some footer links for feedback, language selection, and legal notices.

## Project 1 – Step 4: Run a Remote Shell Script

d. While your script is running remotely on the managed EC2 instance, the Overall status will be In Progress. **Soon the Overall status would turn to Success if not using an AWS Educate Account (that I have used for this project).**



The screenshot shows the AWS Systems Manager interface with the 'Run Command' tab selected. A red box highlights the 'Status' column for the first two rows of the command table, which both show 'In Progress'. The table includes columns for Command ID, Status, Requested date, Document name, Comment, # targets, # error, # delivery timed out, and # completed.

Command ID	Status	Requested date	Document name	Comment	# targets	# error	# delivery timed out	# completed
0a5b7ef7-1803-4d23-bc2f-9eb470314135	In Progress	Sat, 05 Dec 2020 07:25:06 GMT	AWS-RunShellScript		1	0	0	0
a0dcda7c-6a74-4a5f-a891-9bc532400d8a	In Progress	Sat, 05 Dec 2020 07:23:57 GMT	AWS-UpdateSSMAgent		1	0	0	0

Below the table, there is a note: 'Soon the Overall status would turn to Success if not using an AWS Educate Account (that I have used for this project).'

## Project 1 – Step 5: Terminate Your Resources

- a. Open the [Amazon EC2 console](#) and from the left nav under the Instances heading select Instances.

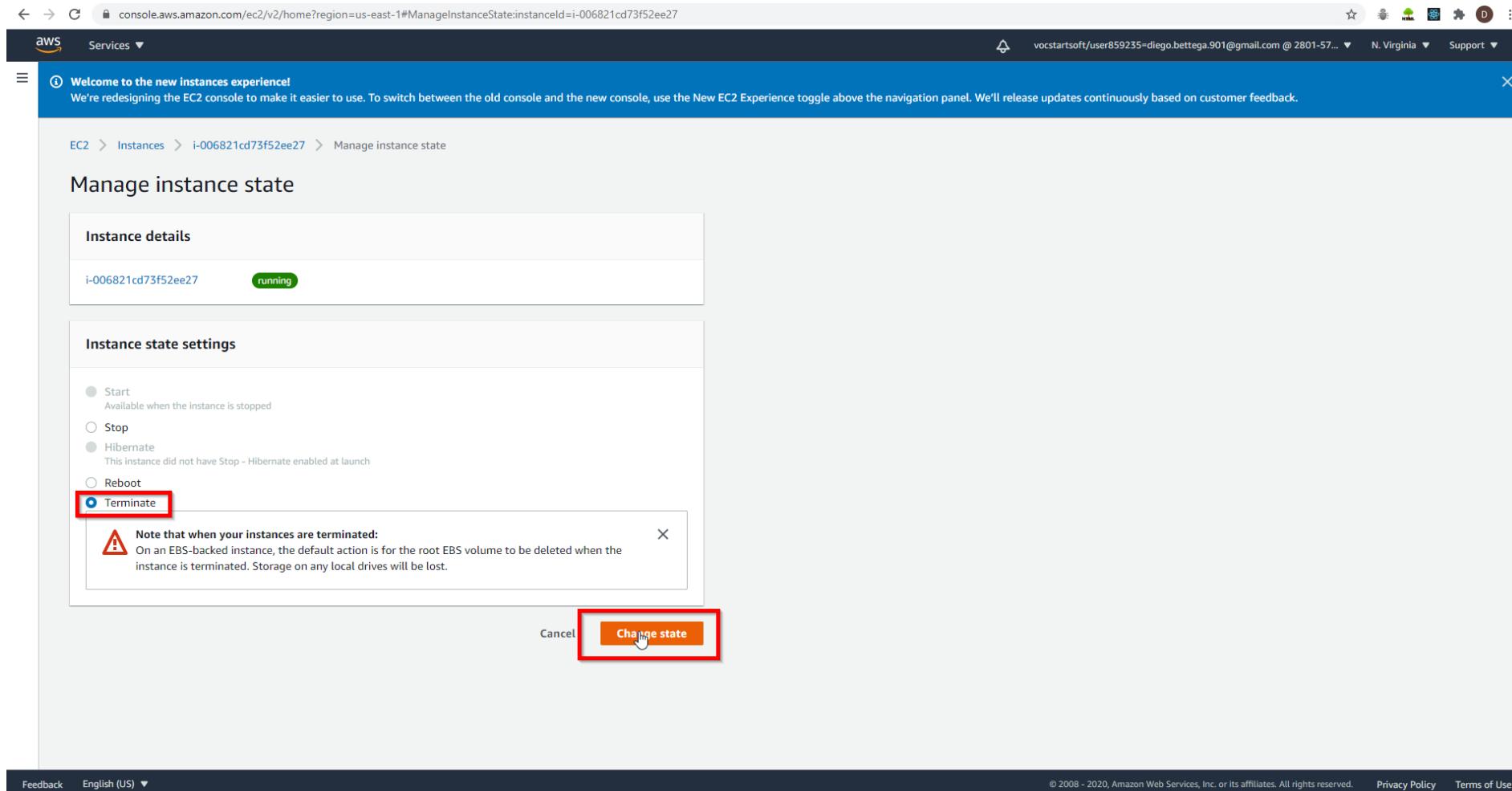
The screenshot shows the AWS EC2 console interface. The left navigation bar is open, and the 'Instances' link under the 'Instances' heading is highlighted with a red box. The main content area displays various EC2 resources and features:

- Welcome to the new EC2 console!**: A message about the console redesign.
- Resources**: Summary of resources in the US East (N. Virginia) Region:
  - Instances (running): 1
  - Dedicated Hosts: 0
  - Elastic IPs: 0
  - Instances (all states): 1
  - Key pairs: 1
  - Load balancers: 0
  - Placement groups: 0
  - Security groups: 5
  - Snapshots: 0
  - Volumes: 1
- Launch instance**: A button to start a new instance.
- Scheduled events**: Shows 'US East (N. Virginia)' with 'No scheduled events'.
- Service health**: Status for the US East (N. Virginia) region, showing 'This service is operating normally'.
- Zone status**: Status for three availability zones:
  - us-east-1a (use1-az2): Zone is operating normally
  - us-east-1b (use1-az4): Zone is operating normally
  - us-east-1c (use1-az6): Zone is operating normally
- Account attributes**: Lists supported platforms (VPC), default VPC (vpc-a915fed4), settings, EBS encryption, zones, default credit specification, and console experiments.
- Explore AWS**: Promotional links for Graviton2, FSR, and Spot Instances.

The URL in the address bar is <https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#instances>.

## Project 1 – Step 5: Terminate Your Resources

b. Select your instance's checkbox and click Actions, then Instance State, then Terminate. This will terminate your instance completely.



Build a Jenkins server  
for the development  
team

## Project 2 – Step 1: Create a Security Group for Your Amazon EC2 Instance

The screenshot shows the AWS Management Console interface for the EC2 service. The left sidebar contains a navigation menu with sections like New EC2 Experience, Instances, Images, Elastic Block Store, Network & Security (with Security Groups selected), and others. The main content area displays a table titled "Security Groups (8) Info" with columns for Name, Security group ID, Security group name, VPC ID, Description, Owner, Inbound rules count, and Outbound rules count. The "Create security group" button is located at the top right of the table header, highlighted with a red box. The URL in the browser bar is `console.aws.amazon.com/ec2/v2/home?region=us-east-1#SecurityGroups:`.

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
-	sg-02c27aa3a81f7624f	cassandra-ports	vpc-a915fed4	Open multiple ports fo...	280157415142	1 Permission entry	1 Permis
-	sg-052d5c06c2c6e8122	launch-wizard-4	vpc-a915fed4	launch-wizard-4 create...	280157415142	1 Permission entry	1 Permis
-	sg-06da3137ba6c607e5	default	vpc-0b92c2a779e326af6	default VPC security gr...	280157415142	1 Permission entry	1 Permis
-	sg-07a6e532924cbce80	launch-wizard-1	vpc-a915fed4	launch-wizard-1 create...	280157415142	1 Permission entry	1 Permis
-	sg-081977a810f411baf	launch-wizard-3	vpc-a915fed4	launch-wizard-3 create...	280157415142	1 Permission entry	1 Permis
-	sg-0b2203bd4545cd18b	launch-wizard-5	vpc-a915fed4	launch-wizard-5 create...	280157415142	1 Permission entry	1 Permis
-	sg-0e6e1021b23854660	launch-wizard-2	vpc-a915fed4	launch-wizard-2 create...	280157415142	1 Permission entry	1 Permis

## Project 2 – Step 1: Create a Security Group for Your Amazon EC2 Instance

The screenshot shows the AWS EC2 console interface. The left sidebar navigation includes 'New EC2 Experience' (selected), 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances' (with sub-options like Instances, Instance Types, Launch Templates, etc.), 'Images' (AMIs), 'Elastic Block Store' (Volumes, Snapshots, Lifecycle Manager), and 'Network & Security' (Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces). The main content area displays a success message: 'Inbound security group rules successfully modified on security group (sg-09c9fb767aae5753c | WebServerSG)'. Below this is a table titled 'Security Groups (1/9)' showing nine entries. The row for 'sg-09c9fb767aae5753c | WebServerSG' is highlighted with a red box. The table columns include Name, Security group ID, Security group name, VPC ID, Description, Owner, Inbound rules count, and Outbound rules count. The 'Inbound rules' tab for the selected security group is expanded, showing three rules: HTTP (TCP port 80, source 0.0.0.0/0), Custom TCP (TCP port 8080, source 82.24.89.137/32), and SSH (TCP port 22, source 82.24.89.137/32). A red box highlights the 'Edit inbound rules' button.

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
sg-02c27aa3a81f7624f	cassandra-ports	vpc-a915fed4	Open multiple ports fo...	280157415142	1 Permission entry	1 Permis...	
sg-052d5c06c2c6e8122	launch-wizard-4	vpc-a915fed4	launch-wizard-4 create...	280157415142	1 Permission entry	1 Permis...	
sg-06da3137ba6c607e5	default	vpc-0b92c2a779e326af6	default VPC security gr...	280157415142	1 Permission entry	1 Permis...	
sg-07a6e532924cbce80	launch-wizard-1	vpc-a915fed4	launch-wizard-1 create...	280157415142	1 Permission entry	1 Permis...	
sg-081977a10f411baf	launch-wizard-3	vpc-a915fed4	launch-wizard-3 create...	280157415142	1 Permission entry	1 Permis...	
<input checked="" type="checkbox"/> sg-09c9fb767aae5753c	WebServerSG	vpc-a915fed4	SG Capstone Project	280157415142	3 Permission entries	1 Permis...	
sg-0b2203bd4545cd18b	launch-wizard-5	vpc-a915fed4	launch-wizard-5 create...	280157415142	1 Permission entry	1 Permis...	
sg-0e6e1021b23854660	launch-wizard-2	vpc-a915fed4	launch-wizard-2 create...	280157415142	1 Permission entry	1 Permis...	

sg-09c9fb767aae5753c - WebServerSG

Inbound rules

Type	Protocol	Port range	Source	Description - optional
HTTP	TCP	80	0.0.0.0/0	-
Custom TCP	TCP	8080	82.24.89.137/32	-
SSH	TCP	22	82.24.89.137/32	-

## Project 2 – Step 2: Launch Your EC2 Instance

console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

AWS Services ▾ N. Virginia ▾ Support ▾

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

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" Search by Systems Manager parameter

Quick Start

My AMIs

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-04d29b6f966df1537 (64-bit x86) / ami-03156384f702d4eaf (64-bit Arm)  
Amazon Linux 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

Select 64-bit (x86) 64-bit (Arm)

AWS Marketplace

Community AMIs

macOS Catalina 10.15.7 - ami-0e813c305f63cecb  
The macOS Catalina AMI is an EBS-backed, AWS-supported image. This AMI includes the AWS Command Line Interface, Command Line Tools for Xcode, Amazon SSM Agent, and Homebrew. The AWS Homebrew Tap includes the latest versions of multiple AWS packages included in the AMI.  
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select 64-bit (Mac)

macOS Mojave 10.14.6 - ami-0b05e8bf4137583f4  
The macOS Mojave AMI is an EBS-backed, AWS-supported image. This AMI includes the AWS Command Line Interface, Command Line Tools for Xcode, Amazon SSM Agent, and Homebrew. The AWS Homebrew Tap includes the latest versions of multiple AWS packages included in the AMI.  
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select 64-bit (Mac)

Free tier only ⓘ

Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-096fda3c22c1c990a (64-bit x86) / ami-09b4418342d60f7aa (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)

SUSE Linux Enterprise Server 15 SP2 (HVM), SSD Volume Type - ami-0e177db77b59b21a3 (64-bit x86) / ami-0e37a72080e52404c (64-bit Arm)  
SUSE Linux Enterprise Server 15 Service Pack 2 (HVM), EBS General Purpose (SSD) Volume Type. Amazon EC2 AMI Tools preinstalled; Apache 2.2, MySQL 5.5, PHP 5.3, and Ruby 1.8.7 available.  
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select 64-bit (x86) 64-bit (Arm)

Explore AWS

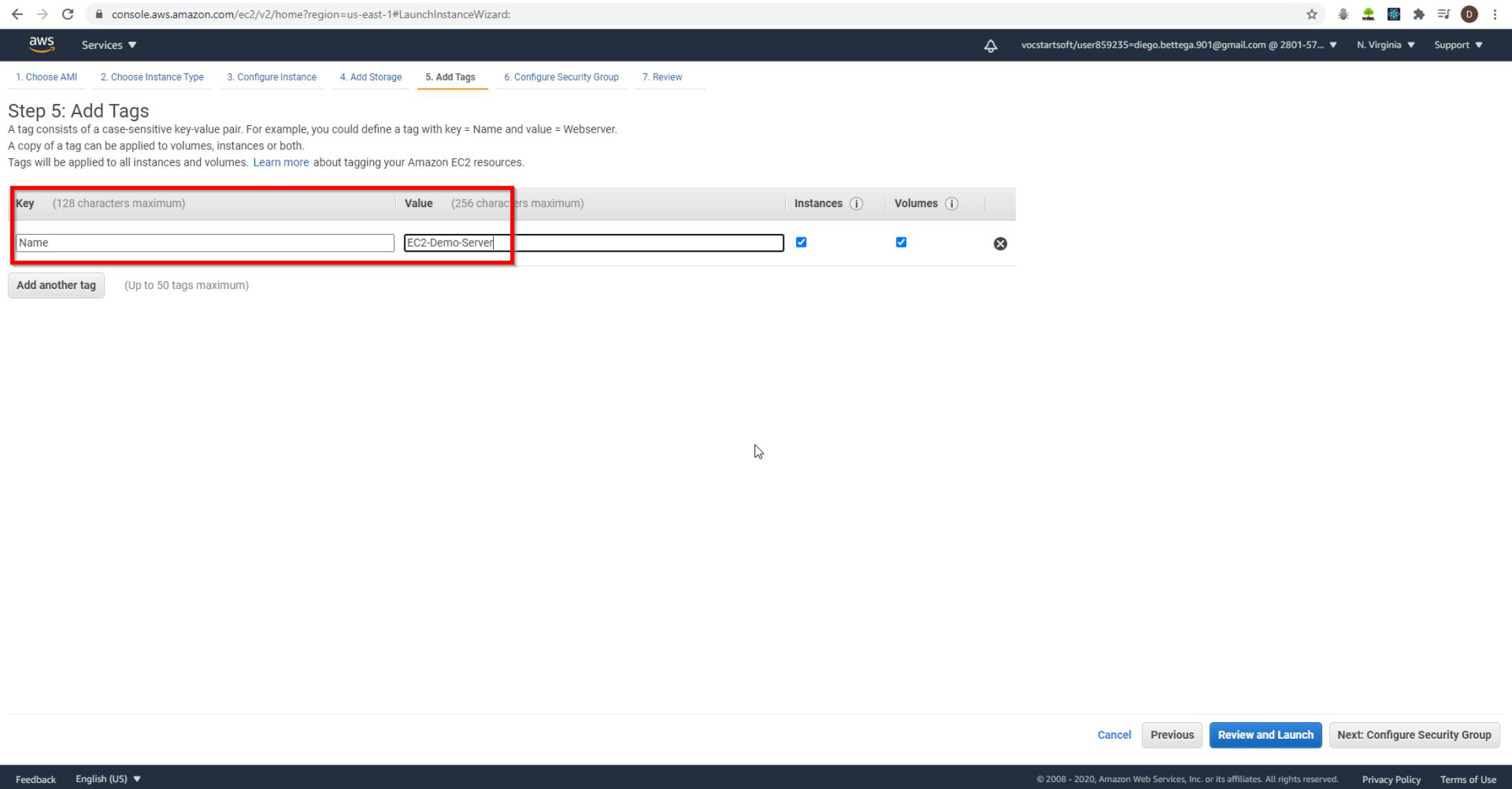
## Project 2 – Step 2: Launch Your EC2 Instance

The screenshot shows the AWS EC2 Launch Instance Wizard at Step 3: Configure Instance Details. The user is configuring an instance with the following settings:

- Number of instances:** 1
- Purchasing option:** Request Spot instances (unchecked)
- Network:** vpc-a915fed4 (default) | Create new VPC
- Subnet:** subnet-0e8d282f | Default in us-east-1a | Create new subnet (4091 IP Addresses available)
- Auto-assign Public IP:** Enable
- Placement group:** Add instance to placement group (unchecked)
- Capacity Reservation:** Open
- Domain join directory:** No directory | Create new directory
- IAM role:** None | Create new IAM role
- CPU options:** Specify CPU options (unchecked)
- Shutdown behavior:** Stop
- Stop - Hibernate behavior:** Enable hibernation as an additional stop behavior (unchecked)
- Enable termination protection:** Protect against accidental termination (unchecked)
- Monitoring:** Enable CloudWatch detailed monitoring (Additional charges apply.)
- Tenancy:** Shared - Run a shared hardware instance | Additional charges will apply for dedicated tenancy.
- Elastic Inference:** Add an Elastic Inference accelerator (Additional charges apply.)

At the bottom, there are navigation buttons: Cancel, Previous, Review and Launch (highlighted in blue), and Next: Add Storage.

## Project 2 – Step 2: Launch Your EC2 Instance



The screenshot shows the AWS Launch Instance Wizard at Step 5: Add Tags. The URL in the browser is `console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard`. The navigation bar includes the AWS logo, Services dropdown, and user information: `vocstartsoft/user859235=diego.bettega.901@gmail.com @ 2801-57...`, N. Virginia, and Support.

The wizard steps are: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags (highlighted in orange), 6. Configure Security Group, 7. Review.

**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.

The 'Add Tags' section shows one tag being added:

Key (128 characters maximum)	Value (256 characters maximum)
Name	EC2-Demo-Server

Buttons include 'Add another tag' and '(Up to 50 tags maximum)'. Navigation buttons at the bottom are: Cancel, Previous, **Review and Launch** (highlighted in blue), and Next: Configure Security Group.

Page footer links: Feedback, English (US), © 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved., Privacy Policy, Terms of Use.

## Project 2 – Step 2: Launch Your EC2 Instance

console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Services ▾ vocstartsoft/user859235=diego.bettega.901@gmail.com @ 2801-57... N. Virginia ▾ Support ▾

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

### 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
sg-02c27aa3a81f7624f	cassandra-ports	Open multiple ports for cassandra to communicate	<a href="#">Copy to new</a>
sg-d90fe9e1	default	default VPC security group	<a href="#">Copy to new</a>
sg-07a6e532924cbce80	launch-wizard-1	launch-wizard-1 created 2020-10-24T15:40:26.821+01:00	<a href="#">Copy to new</a>
sg-0e6e1021b23854660	launch-wizard-2	launch-wizard-2 created 2020-12-03T15:55:21.159+00:00	<a href="#">Copy to new</a>
sg-081977a810f411baf	launch-wizard-3	launch-wizard-3 created 2020-12-04T07:31:45.601+00:00	<a href="#">Copy to new</a>
sg-052d5c06c2c6e8122	launch-wizard-4	launch-wizard-4 created 2020-12-04T07:37:57.830+00:00	<a href="#">Copy to new</a>
sg-0b2203bd4545cd18b	launch-wizard-5	launch-wizard-5 created 2020-12-04T07:41:35.314+00:00	<a href="#">Copy to new</a>
<input checked="" type="checkbox"/> sg-09c9fb767aae5753c	WebServerSG	SG Capstone Project	<a href="#">Copy to new</a>

Inbound rules for sg-09c9fb767aae5753c (Selected security groups: sg-09c9fb767aae5753c)

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	
Custom TCP Rule	TCP	8080	0.0.0.0/0	
SSH	TCP	22	0.0.0.0/0	

Cancel Previous **Review and Launch**

Feedback English (US) ▾ © 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

## Project 2 – Step 2: Launch Your EC2 Instance

console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:

Services ▾

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.

AMI Details

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-04d29b6f966df1537

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 a...  
Root Device Type: ebs Virtualization type: hvm

Edit AMI

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instances
t2.micro	-	1	1	EBS only

Edit instance type

Security Groups

Security Group ID	Name
sg-09c9fb767aae5753c	WebServerSG

All selected security groups inbound rules

Type	Protocol	Port Range
HTTP	TCP	80
Custom TCP Rule	TCP	8080
SSH	TCP	22

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](#).

Create a new key pair

Key pair name

capstone-project-key

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

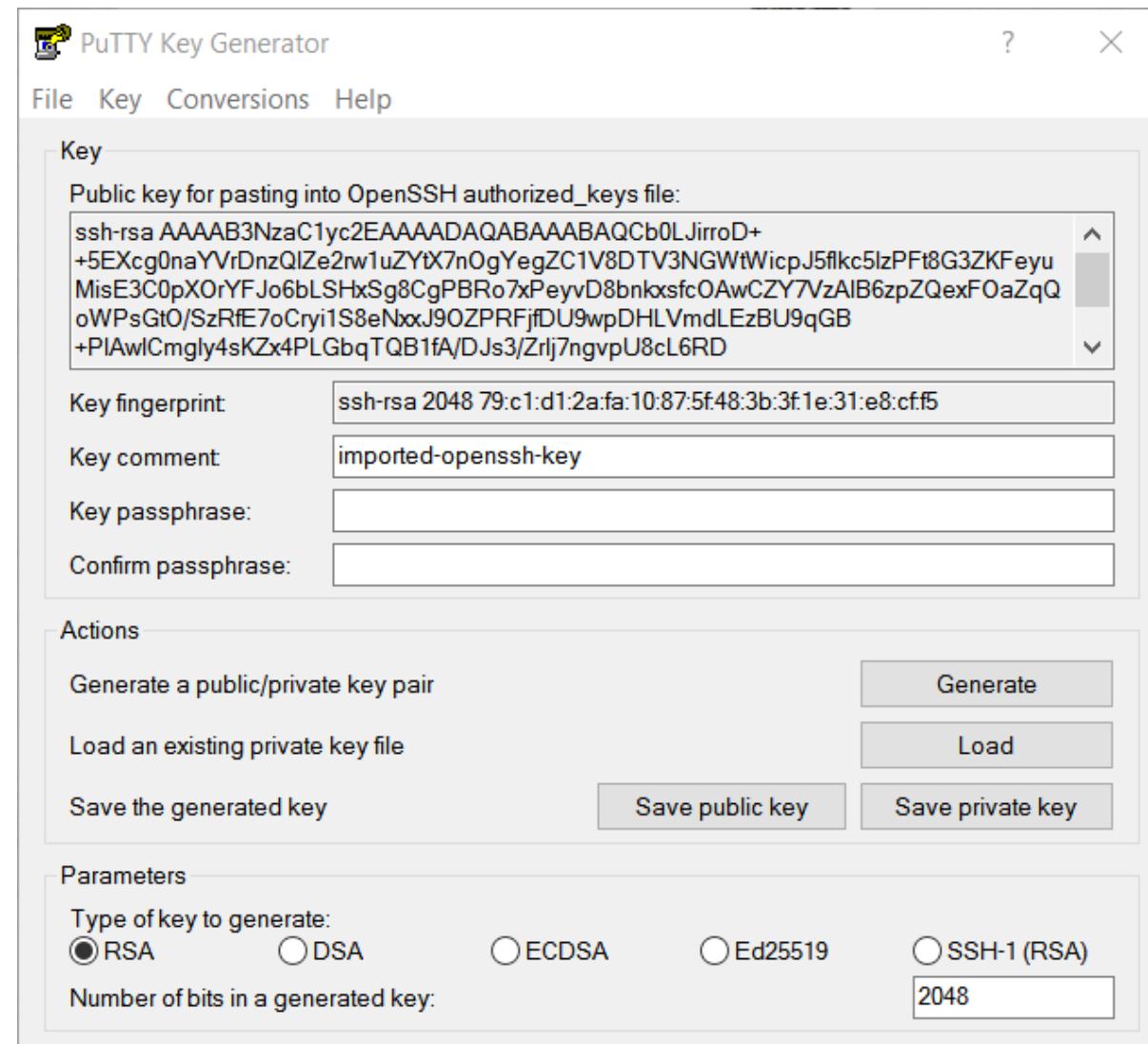
Feedback English (US) ▾

© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

Show all X

Cancel Previous Launch

## Project 2 – Step 3: Install and Configure Jenkins



## Project 2 – Step 3: Install and Configure Jenkins

The screenshot shows the AWS Management Console interface for the EC2 service. A modal window titled "PuTTY Configuration" is open, displaying the "Basic options for your PuTTY session". The "HostName (or IP address)" field contains "ec2-user@52.86.185.232", which is highlighted with a red box. The "Port" field is set to 22. The "Connection type" section has "SSH" selected. Below the session configuration, there are buttons for "About", "Help", "Open", and "Cancel".

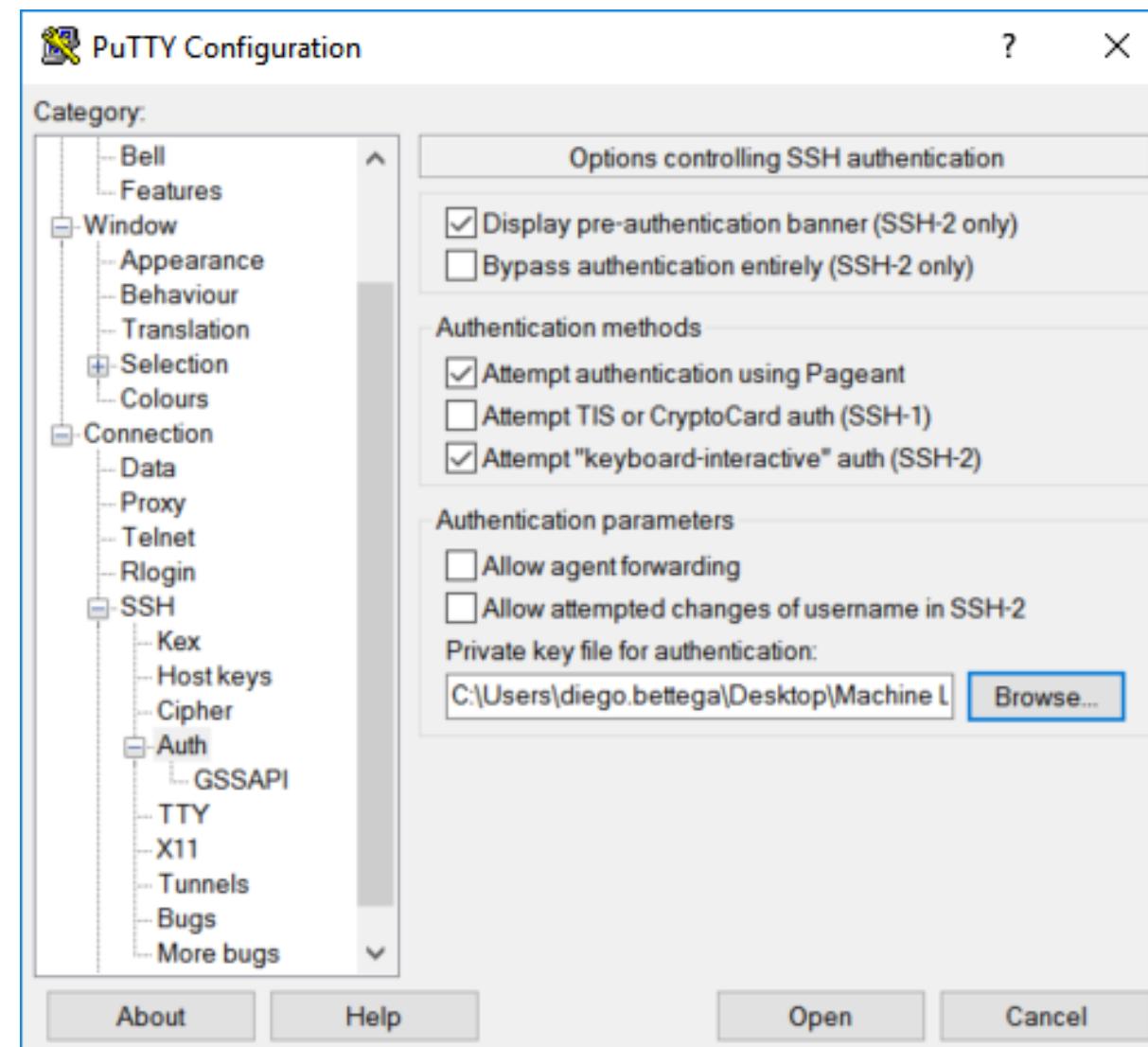
On the right side of the screen, the "Instance summary for i-096fcb1fcfd62a744b (EC2-Demo-Server)" is displayed. It includes a "Public IPv4 address" section with the value "52.86.185.232" (also highlighted with a red box) and a "Private IPv4 addresses" section listing "172.31.52.221". Other sections visible include "Public IPv4 DNS", "Private IPv4 DNS", "Elastic IP addresses", "VPC ID", and "Subnet ID".

At the bottom of the page, the "Details" tab is selected under the "Instance details" section. It shows the following information:

Platform	AMI ID	Monitoring
Amazon Linux (Inferred)	ami-04d29b6f966df1537	disabled
Platform details	AMI name	Termination protection

At the very bottom of the page, there are links for "Feedback", "English (US)", "© 2008 - 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.", "Privacy Policy", and "Terms of Use".

## Project 2 – Step 3: Install and Configure Jenkins



## Project 2 – Step 3: Install and Configure Jenkins

```
ec2-user@ip-172-31-52-221:~$ Using username "ec2-user".
ec2-user@ip-172-31-52-221:~$ Authenticating with public key "imported-openssh-key"

   _|_(_|_ / ) Amazon Linux 2 AMI
   _\|_\_|_|
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-52-221 ~]$ ^M
-bash: $'\r': command not found
[ec2-user@ip-172-31-52-221 ~]$ sudo yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                         | 3.7 kB     00:00
No Match for argument: -y
No packages marked for update
[ec2-user@ip-172-31-52-221 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
No packages marked for update
[ec2-user@ip-172-31-52-221 ~]$ sudo wget -O
wget: option requires an argument -- 'O'
Usage: wget [OPTION]... [URL]...
Try `wget --help' for more options.
[ec2-user@ip-172-31-52-221 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo http://pkg.jenkinsci.org/redhat/jenkins.repo
--2020-12-06 08:49:16--  http://pkg.jenkinsci.org/redhat/jenkins.repo
Resolving pkg.jenkinsci.org (pkg.jenkinsci.org)... failed: Name or service not known.
wget: unable to resolve host address 'pkg.jenkinsci.org'
[ec2-user@ip-172-31-52-221 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo http://pkg.jenkins-ci.org/redhat/jenkins.repo
--2020-12-06 08:50:58--  http://pkg.jenkins-ci.org/redhat/jenkins.repo
Resolving pkg.jenkins-ci.org (pkg.jenkins-ci.org)... 52.202.51.185
Connecting to pkg.jenkins-ci.org (pkg.jenkins-ci.org)|52.202.51.185|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 71
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 71      --.-K/s  in 0s

2020-12-06 08:50:58 (13.3 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [71/71]
```

## Project 2 – Step 3: Install and Configure Jenkins

```
[ec2-user@ip-172-31-52-221 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io.key
[ec2-user@ip-172-31-52-221 ~]$ sudo yum install jenkins -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
jenkins
jenkins/primary_db
Resolving Dependencies
--> Running transaction check
--> Package jenkins.noarch 0:2.269-1.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version       Repository      Size
=====
Installing:
jenkins          noarch   2.269-1.1   jenkins        67 M

Transaction Summary
=====
Install 1 Package

Total download size: 67 M
Installed size: 68 M
Downloading packages:
jenkins-2.269-1.1.noarch.rpm                                         | 67 MB  00:00:02
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.269-1.1.noarch                               1/1
  Verifying  : jenkins-2.269-1.1.noarch                               1/1

Installed:
  jenkins.noarch 0:2.269-1.1

complete!
[ec2-user@ip-172-31-52-221 ~]$
```

## Project 2 – Step 3: Install and Configure Jenkins

```
ec2-user@ip-172-31-52-221:~ Verifying : giflib-4.1.6-9.amzn2.0.2.x86_64 43/63  
Verifying : libXinerama-1.1.3-2.1.amzn2.0.2.x86_64 44/63  
Verifying : libXi-1.7.9-1.amzn2.0.2.x86_64 45/63  
Verifying : libXxf86vm-1.1.4-1.amzn2.0.2.x86_64 46/63  
Verifying : libfontenc-1.1.3-3.amzn2.0.2.x86_64 47/63  
Verifying : libwayland-client-1.17.0-1.amzn2.x86_64 48/63  
Verifying : libxslt-1.1.28-6.amzn2.x86_64 49/63  
Verifying : fribidi-1.0.2-1.amzn2.1.x86_64 50/63  
Verifying : python-javapackages-3.4.1-11.amzn2.noarch 51/63  
Verifying : pcsc-lite-libs-1.8.8-7.amzn2.x86_64 52/63  
Verifying : libXtst-1.2.3-1.amzn2.0.2.x86_64 53/63  
Verifying : libXft-2.3.2-2.amzn2.0.2.x86_64 54/63  
Verifying : copy-jdk-configs-3.3-10.amzn2.noarch 55/63  
Verifying : alsa-lib-1.1.4.1-2.amzn2.x86_64 56/63  
Verifying : jasper-libs-1.900.1-33.amzn2.x86_64 57/63  
Verifying : libX11-common-1.6.7-2.amzn2.noarch 58/63  
Verifying : hicolor-icon-theme-0.12-7.amzn2.noarch 59/63  
Verifying : libICE-1.0.9-9.amzn2.0.2.x86_64 60/63  
Verifying : graphite2-1.3.10-1.amzn2.0.2.x86_64 61/63  
Verifying : 1:java-1.8.0-openjdk-1.8.0.265.b01-1.amzn2.0.1.x86_64 62/63  
Verifying : javapackages-tools-3.4.1-11.amzn2.noarch 63/63  
  
Installed:  
java-1.8.0-openjdk.x86_64 1:1.8.0.265.b01-1.amzn2.0.1  
  
Dependency Installed:  
alsa-lib.x86_64 0:1.1.4.1-2.amzn2  
cairo.x86_64 0:1.15.12-4.amzn2  
dejavu-fonts-common.noarch 0:2.33-6.amzn2  
fontpackages-filesystem.noarch 0:1.44-8.amzn2  
giflib.x86_64 0:4.1.6-9.amzn2.0.2  
gtk2.x86_64 0:2.24.31-1.amzn2.0.2  
jasper-libs.x86_64 0:1.900.1-33.amzn2  
libICE.x86_64 0:1.0.9-9.amzn2.0.2  
libX11-common.noarch 0:1.6.7-2.amzn2  
libXcursor.x86_64 0:1.1.15-1.amzn2  
libXfixes.x86_64 0:5.0.3-1.amzn2.0.2  
libXinerama.x86_64 0:1.1.3-2.1.amzn2.0.2  
libXtst.x86_64 0:1.2.3-1.amzn2.0.2  
libglvnd.x86_64 1:1.0.1-0.1.git5baale5.amzn2.0.1  
libthai.x86_64 0:0.1.14-9.amzn2.0.2  
libxcb.x86_64 0:1.12-1.amzn2.0.2  
lksctp-tools.x86_64 0:1.0.17-2.amzn2.0.2  
mesa-libgbm.x86_64 0:18.3.4-5.amzn2.0.1  
pcsc-lite-libs.x86_64 0:1.8.8-7.amzn2  
python-lxml.x86_64 0:3.2.1-4.amzn2.0.2  
xorg-x11-font-utils.x86_64 1:7.5-21.amzn2  
  
atk.x86_64 0:2.22.0-3.amzn2.0.2  
copy-jdk-configs.noarch 0:3.3-10.amzn2  
dejavu-sans-fonts.noarch 0:2.33-6.amzn2  
fribidi.x86_64 0:1.0.2-1.amzn2.1  
graphite2.x86_64 0:1.3.10-1.amzn2.0.2  
harfbuzz.x86_64 0:1.7.5-2.amzn2  
java-1.8.0-openjdk-headless.x86_64 1:1.8.0.265.b01-1.amzn2.0.1  
libSM.x86_64 0:1.2.2-2.amzn2.0.2  
libXau.x86_64 0:1.0.8-2.1.amzn2.0.2  
libXdamage.x86_64 0:1.1.4-4.1.amzn2.0.2  
libXft.x86_64 0:2.3.2-2.amzn2.0.2  
libXrandr.x86_64 0:1.5.1-2.amzn2.0.3  
libXxf86vm.x86_64 0:1.1.4-1.amzn2.0.2  
libglvnd-egl.x86_64 1:1.0.1-0.1.git5baale5.amzn2.0.1  
libwayland-client.x86_64 0:1.17.0-1.amzn2  
libxshmfence.x86_64 0:1.2-1.amzn2.0.2  
mesa-libEGL.x86_64 0:18.3.4-5.amzn2.0.1  
mesa-libglapi.x86_64 0:18.3.4-5.amzn2.0.1  
pixman.x86_64 0:0.34.0-1.amzn2.0.2  
ttmkfdirc.x86_64 0:3.0.9-42.amzn2.0.2  
xorg-x11-fonts-Type1.noarch 0:7.5-9.amzn2  
  
avahi-libs.x86_64 0:0.6.31-20.amzn2  
cups-libs.x86_64 1:1.6.3-51.amzn2  
fontconfig.x86_64 0:2.13.0-4.3.amzn2  
gdk-pixbuf2.x86_64 0:2.36.12-3.amzn2  
gtk-update-icon-cache.x86_64 0:3.22.30-3.amzn2  
hicolor-icon-theme.noarch 0:0.12-7.amzn2  
javapackages-tools.noarch 0:3.4.1-11.amzn2  
libX11.x86_64 0:1.6.7-2.amzn2  
libXcomposite.x86_64 0:0.4.4-4.1.amzn2.0.2  
libXext.x86_64 0:1.3.3-3.amzn2.0.2  
libXi.x86_64 0:1.7.9-1.amzn2.0.2  
libXrender.x86_64 0:0.9.10-1.amzn2.0.2  
libfontenc.x86_64 0:1.1.3-3.amzn2.0.2  
libglvnd-glx.x86_64 1:1.0.1-0.1.git5baale5.amzn2.0.1  
libwayland-server.x86_64 0:1.17.0-1.amzn2  
libxslt.x86_64 0:1.1.28-6.amzn2  
mesa-libGL.x86_64 0:18.3.4-5.amzn2.0.1  
pango.x86_64 0:1.42.4-4.amzn2  
python-javapackages.noarch 0:3.4.1-11.amzn2  
tzdata-java.noarch 0:2020a-1.amzn2  
  
Complete!  
[ec2-user@ip-172-31-52-221 ~]$
```

## Project 2 – Step 3: Install and Configure Jenkins

---

```
[ec2-user@ip-172-31-52-221 ~]$ sudo alternatives --config java
There is 1 program that provides 'java'.

Selection      Command
-----
*+ 1           java-1.8.0-openjdk.x86_64 (/usr/lib/jvm/java-1.8.0-openjdk-1.8.0.265.b01-1.amzn2.0.1.x86_64/jre/bin/java)

Enter to keep the current selection[+], or type selection number: 1
[ec2-user@ip-172-31-52-221 ~]$ sudo service jenkins start
Starting jenkins (via systemctl): [ OK ]
[ec2-user@ip-172-31-52-221 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
62a819cf25bc4dd5942086b7c7a70049
[ec2-user@ip-172-31-52-221 ~]$ █
```

## Project 2 – Step 3: Install and Configure Jenkins

← → ⌂ Not secure | 52.86.185.232:8080/login?from=%2F

Getting Started

## Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

`/var/lib/jenkins/secrets/initialAdminPassword`

Please copy the password from either location and paste it below.

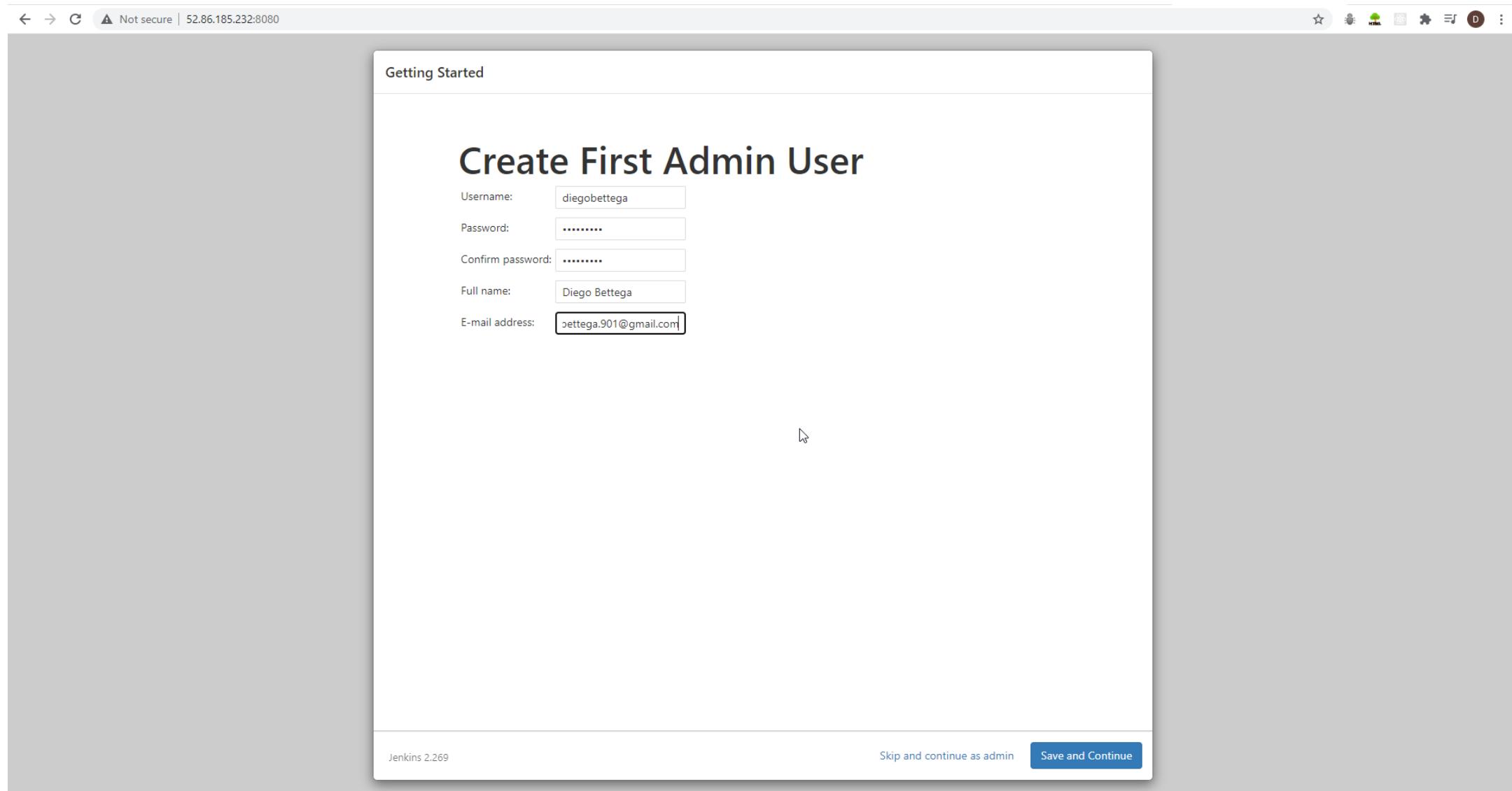
Administrator password

.....



Continue

## Project 2 – Step 3: Install and Configure Jenkins



## Project 2 – Step 3: Install and Configure Jenkins

The screenshot shows a web browser window with the address bar displaying "Not secure | 52.86.185.232:8080". The main content is a "Getting Started" dialog titled "Instance Configuration". It contains a "Jenkins URL:" field with the value "http://52.86.185.232:8080/". Below the field, a descriptive text explains that the Jenkins URL is used for absolute links to various resources and is required for proper operation of features like email notifications and PR status updates. It also notes that the value is generated from the current request and is not yet saved. At the bottom of the dialog, there are "Jenkins 2.269", "Not now", and "Save and Finish" buttons.

Not secure | 52.86.185.232:8080

Getting Started

## Instance Configuration

Jenkins URL:

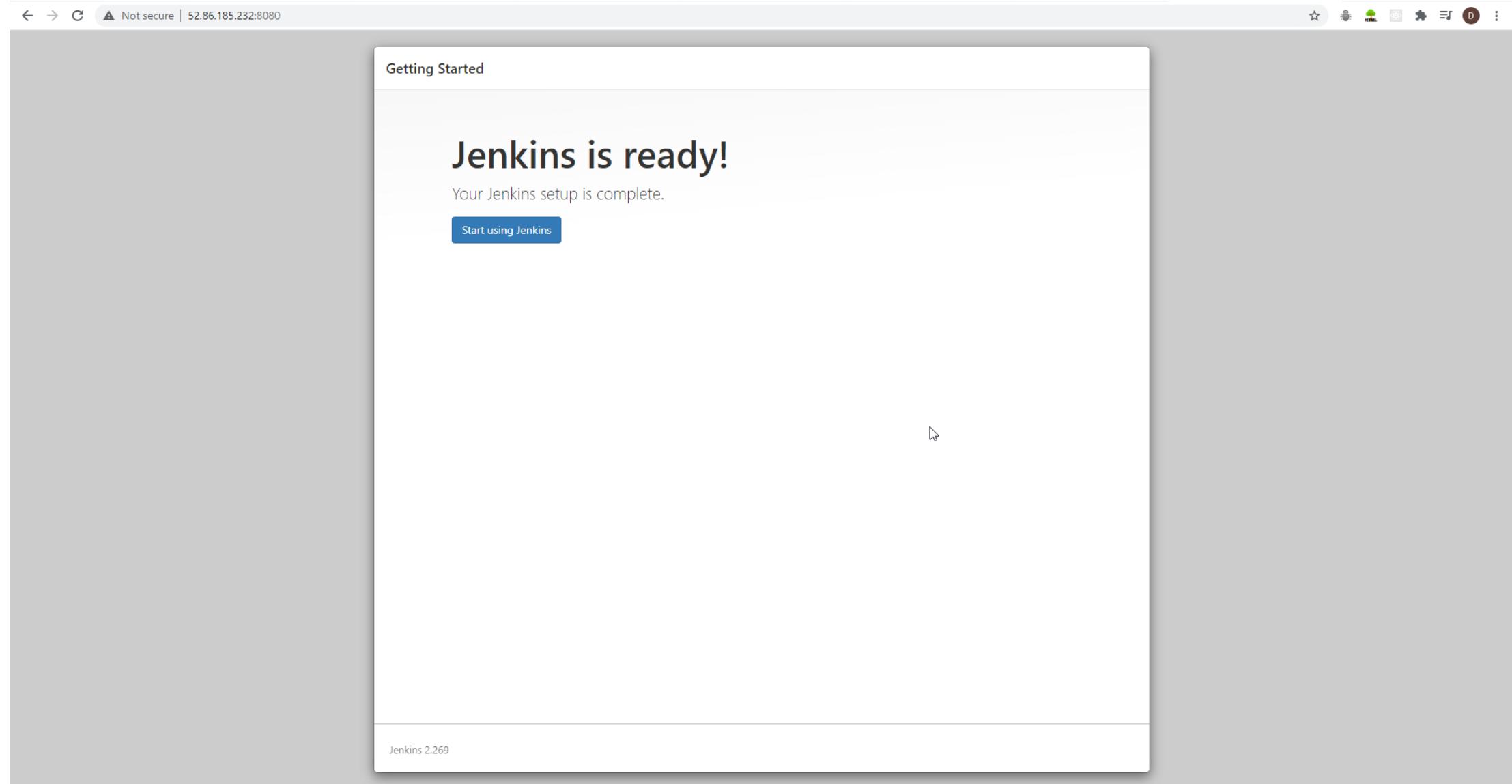
The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the `BUILD_URL` environment variable provided to build steps.

The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Jenkins 2.269

Not now Save and Finish

## Project 2 – Step 3: Install and Configure Jenkins



## Project 2 – Step 3: Install and Configure Jenkins

The screenshot shows the Jenkins dashboard at the URL <http://52.86.185.232:8080>. The page is titled "Welcome to Jenkins!" and provides instructions for starting a software project. It includes links to "Create a job", "Set up an agent", "Configure a cloud", and "Learn more about distributed builds". On the left sidebar, there are sections for "Build Queue" (No builds in the queue) and "Build Executor Status" (1 Idle, 2 Idle). The top navigation bar includes links for "Dashboard", "New Item", "People", "Build History", "Manage Jenkins", "My Views", "Lockable Resources", "New View", and "Logout". A search bar and a user profile for "Diego Bettega" are also present.

Not secure | 52.86.185.232:8080

Jenkins

Dashboard

New Item

People

Build History

Manage Jenkins

My Views

Lockable Resources

New View

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job →

Set up a distributed build

Set up an agent →

Configure a cloud →

Learn more about distributed builds ↗

search

Diego Bettega

log out

REST API Jenkins 2.269