

# Deploy Identity Services Engine (ISE) Version 3.4 on AWS

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## Introduction

This document describes how to configure Cisco ISE on AWS using CloudFormation template (CFT) and Amazon Machine Image (AMI).

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics before proceeding with this deployment:

- Cisco Identity Services Engine (ISE)
- AWS EC2 instance management and networking
- SSH key pair generation and usage
- Basic understanding of VPCs, security groups, and DNS/NTP configuration in AWS

### Components Used

The information in this document is based on these software and hardware versions:

- Identity Services Engine (ISE)

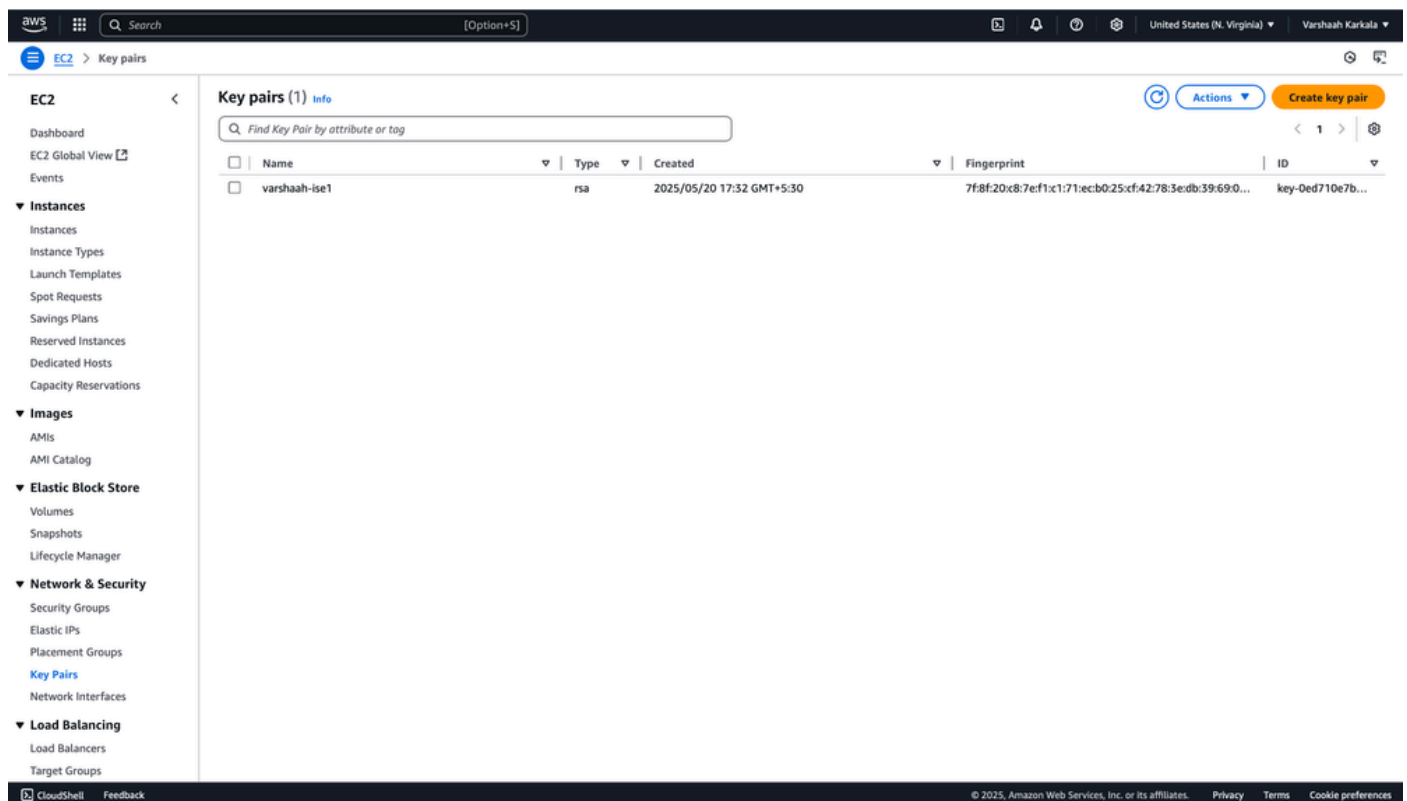
- Amazon Web Services (AWS) Cloud Console

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

# Configure

## Part 1: Generating an SSH Key Pair

1. For this deployment, you can either use a pre-existing key pair or create a new one.
2. To create a new pair, navigate to **EC2 > Network and Security > Key Pairs** and click **Create key pair**.



3. Enter the **key pair name** and click **Create key pair**.

**Create key pair** [info](#)

**Key pair**  
A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

**Name**  
varshaah-ise1  
The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

**Key pair type** [info](#)  
☒ RSA
 ☐ ED25519

**Private key file format**  
☒ .pem For use with OpenSSH  
☐ .ppk For use with PuTTY

**Tags - optional**  
No tags associated with the resource.  
[Add new tag](#)  
You can add up to 50 more tags.

[Cancel](#) [Create key pair](#)

The key pair file (.pem) is downloaded on your local machine. Ensure that you keep this file safe as this is the only way in which you can access your EC2 instance once it is launched.

## Part 2: Configuring ISE Using a CloudFormation Template (CFT)

1. Log in to the [AWS Management Console](#) and search for **AWS Marketplace Subscriptions**.
2. In the search bar, type **cisco ise** and click **Cisco Identity Services Engine (ISE)** from the results. Click **Subscribe**.

**AWS Marketplace** [Discover products](#)

**Search AWS Marketplace products**

Q cisco ise

cisco ise (5 results) showing 1 - 5  
Did you mean [cisco isv](#), [cisco iso](#)?

**Sort By: Relevance**

**Refine results**

**Categories**  
[Infrastructure Software \(5\)](#)  
[Professional Services \(4\)](#)  
[IoT \(2\)](#)

**Delivery methods**  
☐ Professional Services (4)  
☐ Amazon Machine Image (1)  
☐ CloudFormation Template (1)

**Publisher**  
☐ Aqueduct Technologies (1)  
☐ Aspire Technology Partners, LLC. (1)  
☐ Digitalstates Inc. (1)  
☐ Cisco Systems, Inc. (1)

**Cisco Identity Services Engine (ISE)** [\[Link\]](#)  
 By [Cisco Systems, Inc.](#) | Ver 3.4.0  
[96 external reviews](#)

Cisco Identity Services Engine (ISE) on AWS enables Network Access Control (NAC) service workloads to be deployed and managed from the cloud while ensuring the flexibility required to meet each organizations unique cloud strategy. With Cisco ISE on AWS, you can unify the policy management of your...

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[AWS Marketplace](#) > [Cisco Identity Services Engine \(ISE\)](#) > [Subscribe to Cisco Identity Services Engine \(ISE\)](#)

### Subscribe to Cisco Identity Services Engine (ISE) info

To create a subscription, review the pricing information and accept the terms for this software.

**Offer details** info

<b>Offer ID</b> basttrzv6xwc4yn2uup6bh730	<b>Offered by</b> Cisco Systems, Inc.	<b>Offer type</b> Public	<b>Deployed on AWS</b> Yes
--	--	-----------------------------	-------------------------------

**Pricing details**

Pricing and entitlements for this product are managed through an external billing relationship between you and the vendor. You activate the product by supplying a license purchased outside of AWS Marketplace, while AWS provides the infrastructure required to launch the product. AWS Subscriptions have no end date and may be canceled any time. However, the cancellation won't affect the status of the external license. Additional AWS infrastructure costs apply. To estimate your infrastructure costs, use the [AWS Pricing Calculator](#).

**Total amount**

<b>Total cost</b> <b>\$0.00</b>	<b>Additional costs</b> AWS infrastructure costs apply	<b>Tax details</b> Additional taxes may apply
------------------------------------	---	--

**Terms and conditions**

By subscribing to this software, you agree to the pricing terms and the seller's [End User License Agreement \(EULA\)](#). You also agree and acknowledge that AWS may, on your behalf, share information about this transaction (including your payment terms) with the respective seller, reseller or underlying provider, as applicable, in accordance with the [AWS Privacy Notice](#). AWS will issue invoices and collect payments from you on behalf of the seller through your AWS account. Your use of AWS services is subject to the [AWS Customer Agreement](#) or other agreement with AWS governing your use of such services. If you are receiving a private offer from a channel partner, you may click [here](#) (for CPPO transaction) or [here](#) (for SPPO transaction) for more information on the channel partner.

[Download EULA\(s\)](#)

**Purchase details** info

<b>Offer ID</b> basttrzv6xwc4yn2uup6bh730	<b>Offered by</b> Cisco Systems, Inc.	<b>Total cost</b> \$0.00	<b>Additional costs</b> AWS infrastructure costs apply
--	--	-----------------------------	---

**Tax details**  
Additional taxes may apply

[Back](#) [Subscribe](#)

3. After subscription, click **Launch Your Software**.

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[AWS Marketplace](#) > [Cisco Identity Services Engine \(ISE\)](#) > [Subscribe to Cisco Identity Services Engine \(ISE\)](#)

### Subscribe to Cisco Identity Services Engine (ISE) info

To create a subscription, review the pricing information and accept the terms for this software.

✓ You successfully purchased Cisco Identity Services Engine (ISE)  
Your AWS Marketplace agreement was created. You can launch your software or [Manage subscriptions](#).

[Launch your software](#)

**Offer details** info

<b>Offer ID</b> basttrzv6xwc4yn2uup6bh730	<b>Offered by</b> Cisco Systems, Inc.	<b>Offer type</b> Public	<b>Deployed on AWS</b> Yes
--	--	-----------------------------	-------------------------------

4. Under **Fulfilment Option**, choose **CloudFormation Template**. Choose the **Software version (ISE version)**, and **Region** where you want to deploy the instance. Click **Continue to Launch**.

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Cisco Identity Services Engine (ISE)

Continue to Launch

< Product Detail Subscribe **Configure**

### Configure this software

Choose a fulfillment option and software version to launch this software.

**Fulfillment option**

CloudFormation Template

**CloudFormation Template**  
Deploy a complete solution configuration using a CloudFormation template

Cisco Identity Services Engine (ISE)

**Software version**

3.4.0 (Aug 07, 2024)

**Whats in This Version**  
Cisco Identity Services Engine (ISE)  
running on c5.4xlarge  
[Learn more](#)

**Region**

US East (N. Virginia)

**Pricing Information**

This is an estimate of typical software and infrastructure costs based on your configuration. Your actual charges for each statement period may differ from this estimate.

**Software Pricing**

Cisco Identity Services Engine (ISE)  
**BYOL**  
running on c5.4xlarge  
\$0 /hr

5. On the next page, choose **Launch CloudFormation** as the action and click **Launch**.

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Search

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Cisco Identity Services Engine (ISE)

< Product Detail Subscribe Configure **Launch**

### Launch this software

Review the launch configuration details and follow the instructions to launch this software.

**Configuration details**

**Fulfillment option**  
Cisco Identity Services Engine (ISE)  
Cisco Identity Services Engine (ISE)  
running on c5.4xlarge

**Software version**  
3.4.0

**Region**  
US East (N. Virginia)

[Usage Instructions](#)

**Choose Action**

Launch CloudFormation

Choose this action to launch your configuration through the AWS CloudFormation console.

**Launch**

6. Under the stack settings, keep the default settings and click **Next**.

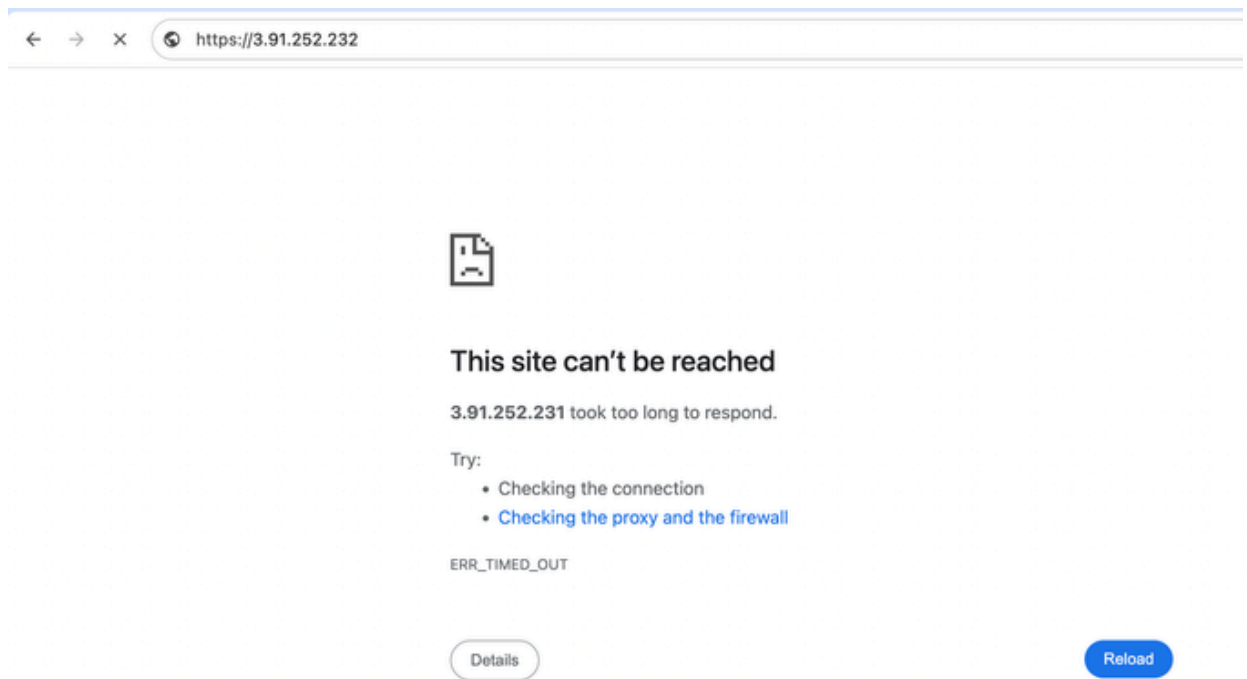
## 7. Enter required parameters:

- **Stack Name:** Provide a unique name for your stack.
- **Hostname:** Assign the hostname for the ISE node.
- **Key Pair:** Select the key pair generated or pre-existing to access the EC2 instance later.
- **Management Security Group:**
  - Either use the default security group (as shown) or create a custom one through the EC2 dashboard.
  - To create a new security group, navigate to the **EC2 Dashboard** and navigate to **Network and Security > Security Groups** to create a new security group.
  - Click **Create security group** and enter the required **details**.
  - Ensure the security group is configured to allow the required inbound and outbound traffic. For example, enable SSH (port 22) access from your IP address for CLI access.

- If **SSH access** is not properly configured, you may encounter an "Operation timed out" error when attempting to connect via SSH.

```
[redacted] -M-L63P Downloads % chmod 400 varshaah-ise1.pem  
[redacted] -M-L63P Downloads % ssh -i varshaah-ise1.pem admin@3.91.252.232  
  
ssh: connect to host 3.91.252.232 port 22: Operation timed out
```

- If HTTP/HTTPS access is not configured, you may see a "This site can't be reached" error when trying to access the GUI.



- Management Network: One of the pre-existing subnets is selected.

Step 1 Create stack  
Step 2 Specify stack details  
Step 3 Configure stack options  
Step 4 Review and create

### Specify stack details

**Provide a stack name**

Stack name

ise

Stack name must contain only letters (a-z, A-Z), numbers (0-9), and hyphens (-) and start with a letter. Max 128 characters. Character count: 3/128.

**Parameters**

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

**Instance Details**

**Hostname**

Enter the hostname. This field only supports alphanumeric characters and hyphen (-). The length of the hostname should not exceed 19 characters.

varshaah-ise

**Instance Key Pair**

To access the Cisco ISE instance via SSH, choose the PEM file that you created in AWS for the username "iseadmin". Create a PEM key pair in AWS now if you have not configured one already. Usage example: `ssh -i mykeypair.pem iseadmin@myhostname.compute-1.amazonaws.com`

varshaah-ise1

**Management Security Group**

Choose the Security Group to attach to the Cisco ISE interface. Create a Security Group in AWS now if you have not configured one already.

Select List<AWS::EC2::SecurityGroup::Id>

sg-0c5e29e8b248dd42e

**Management Network**

Choose the subnet to be used for the Cisco ISE interface. To enable IPv6 addresses, you must associate an IPv6 CIDR block with your VPC and subnets. Create a Subnet in AWS now if you have not configured one already.

subnet-017e2674fae7497ea

**Management Private IP**

(Optional) Enter the IPv4 address from the subnet that you chose earlier. If this field is left blank, the AWS DHCP will assign an IP address.

Enter String

If your design requires a distributed deployment with some nodes hosted in AWS and others on-premises, configure a **dedicated VPC** with a private subnet and establish a **VPN tunnel** to the **On-Prem VPN Headend Device** to enable connectivity between AWS-hosted and on-premises ISE nodes.

For detailed steps on configuring the VPN Headend Device, refer to [this guide](#).

## 8. EBS Encryption

- Scroll down to locate the EBS encryption settings.
- Set **EBS Encryption** to **False** unless you have specific encryption needs.

**EBS Encryption**

Choose true to enable EBS encryption.

false

**KMS key for encryption**

Enter the KMS Key Id/ARN/Alias for encryption (Applicable only if EBSEncryption is "true")

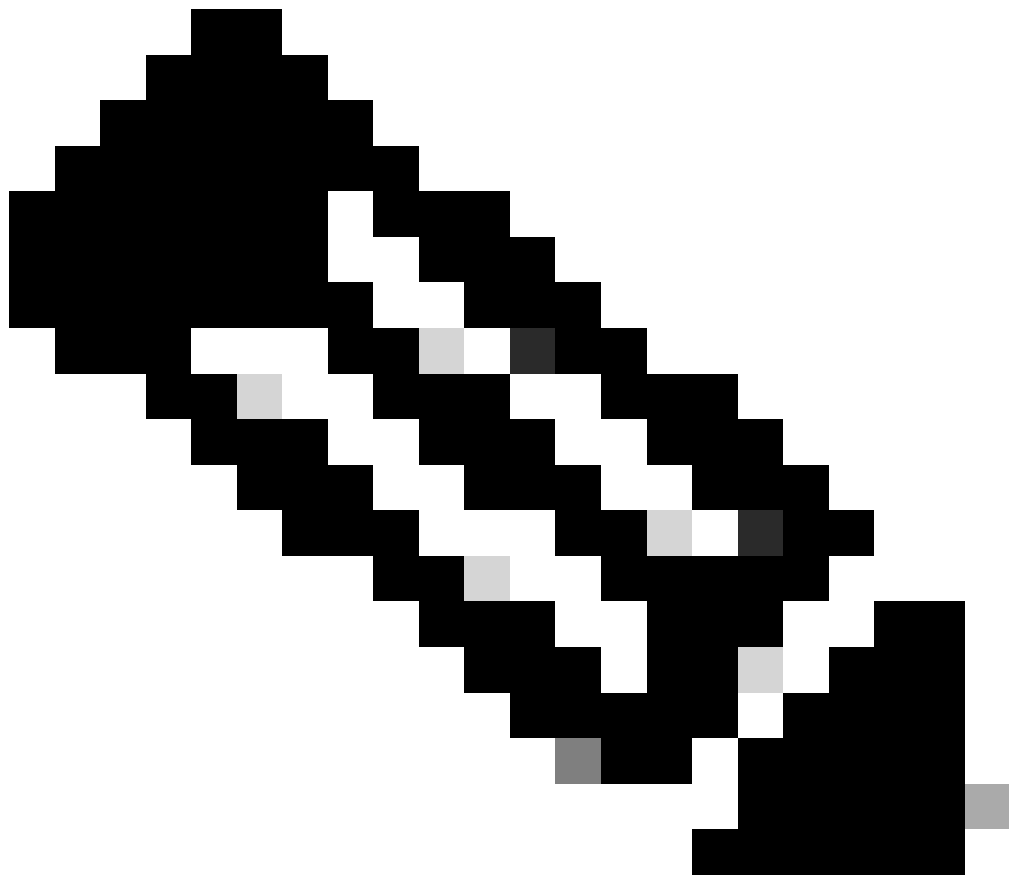
Enter String

## 9. Network Configuration:

- Scroll down to access options for configuring network settings, such as the **DNS domain**, **Primary Name Server**, and **Primary NTP Server**.

Ensure these values are entered accurately.





**Note:** Incorrect syntax here can prevent ISE services from starting properly after deployment.

---

## Network Configuration

### DNS Domain

Enter a domain name in correct syntax (for example, cisco.com). The valid characters for this field are ASCII characters, numerals, hyphen (-), and period (.). If you use the wrong syntax, Cisco ISE services might not come up on launch.

varshaah.local

### Primary Name Server

Enter the IP address of the primary name server in correct syntax. If you use the wrong syntax, Cisco ISE services might not come up on launch.

72.163.128.140

### Secondary Name Server

(Optional) Enter the IP address of the secondary name server in correct syntax. If you use the wrong syntax, Cisco ISE services might not come up on launch.

Enter String

### Tertiary Name Server

(Optional) Enter the IP address of the tertiary name server in correct syntax. If you use the wrong syntax, Cisco ISE services might not come up on launch.

Enter String

### Primary NTP Server

Enter the IP address or hostname of the primary NTP server in correct syntax (for example, time.nist.gov). Your entry is not verified on submission. If you use the wrong syntax, Cisco ISE services might not come up on launch.

10.64.58.51

### Secondary NTP Server

(Optional) Enter the IP address or hostname of the secondary NTP server in correct syntax (for example, time.nist.gov). Your entry is not verified on submission. If you use the wrong syntax, Cisco ISE services might not come up on launch.

Enter String

### Tertiary NTP Server

(Optional) Enter the IP address or hostname of the tertiary NTP server in correct syntax (for example, time.nist.gov). Your entry is not verified on submission. If you use the wrong syntax, Cisco ISE services might not come up on launch.

Enter String

## 10. Service and User Details:

- Scroll down to locate the option for enabling ERS and pxGrid services
- Choose whether to enable **ERS** and **pxGrid** services by selecting **yes** or **no**.
- Under **User Details**, set the **password** for the default **admin** user.

## Services

### ERS

Do you wish to enable ERS?

no

### pxGrid

Do you wish to enable pxGrid?

no

### pxGrid Cloud

Do you wish to enable pxGrid Cloud?

no

## User Details

### Enter Password

Enter a password for the username "iseadmin". The password must be aligned with the Cisco ISE password policy. The configured password is used for Cisco ISE GUI access. Warning: The password is displayed in plaintext in the User Data section of the Instance settings window in the AWS Console.

\*\*\*\*\*

### Confirm Password

Retype Password

\*\*\*\*\*

- Click **Next**.

## 11. Configure **stack Options**:

- Leave all default options as they are and click **Next**.

Step 1

Create stack

Step 2

Specify stack details

Step 3

**Configure stack options**

Step 4

Review and create

### Configure stack options

**Tags - optional**

Tags (key-value pairs) are used to apply metadata to AWS resources, which can help in organizing, identifying, and categorizing those resources. You can add up to 50 unique tags for each stack.

No tags associated with the stack.

Add new tag

You can add 50 more tag(s)

**Permissions - optional**

Specify an existing AWS Identity and Access Management (IAM) service role that CloudFormation can assume.

**IAM role - optional**

Choose the IAM role for CloudFormation to use for all operations performed on the stack.

IAM role name

Sample-role-name

Remove

**Stack failure options****Behavior on provisioning failure**

Specify the roll back behavior for a stack failure. [Learn more](#)

☒ Roll back all stack resources

Roll back the stack to the last known stable state.

☐ Preserve successfully provisioned resources

Preserves the state of successfully provisioned resources, while rolling back failed resources to the last known stable state. Resources without a last known stable state will be deleted upon the next stack operation.

**Delete newly created resources during a rollback**

Specify whether resources that were created during a failed operation should be deleted regardless of their deletion policy. [Learn more](#)

☒ Use deletion policy

Retains or deletes created resources according to their attached deletion policy.

☐ Delete all newly created resources

Deletes created resources during a rollback regardless of their attached deletion policy.

**Additional settings**

You can set additional options for your stack, like notification options and a stack policy. [Learn more](#)

► Stack policy - optional

Defines the resources that you want to protect from unintentional updates during a stack update.

► Rollback configuration - optional

Specify alarms for CloudFormation to monitor when creating and updating the stack. If the operation breaches an alarm threshold, CloudFormation rolls it back.

► Notification options - optional

Specify a new or existing Amazon Simple Notification Service topic where notifications about stack events are sent.

► Stack creation options - optional

Specify the timeout and termination protection options for stack creation.

Cancel

Previous

Next

12. Review the template to ensure all configurations are correct, then click **Submit**. Once the template is built, it resembles the example shown below:

The screenshot shows the AWS CloudFormation console. On the left, the 'CloudFormation' sidebar is visible with options like 'Stacks', 'Stack details', 'StackSets', 'Exports', 'Infrastructure Composer', 'laC generator', 'Hooks overview', 'Hooks', 'Registry', 'Public extensions', 'Activated extensions', 'Publisher', 'Spotlight', and 'Feedback'. The main area displays the 'ise' stack. The 'Events' tab is selected, showing a list of five events. The stack is in a 'CREATE\_COMPLETE' state, indicated by a green checkmark and the text 'CREATE\_COMPLETE'.

Timestamp	Logical ID	Status	Detailed status	Status reason	Hook
2025-05-20 23:50:05 UTC+0530	<a href="#">ise</a>	CREATE_COMPLETE	-	-	-
2025-05-20 23:50:01 UTC+0530	<a href="#">IseEc2Instance</a>	CREATE_COMPLETE	-	-	-
2025-05-20 23:49:48 UTC+0530	<a href="#">IseEc2Instance</a>	CREATE_IN_PROGRESS	-	Resource creation initiated	-
2025-05-20 23:49:46 UTC+0530	<a href="#">IseEc2Instance</a>	CREATE_IN_PROGRESS	-	-	-
2025-05-20 23:49:43 UTC+0530	<a href="#">ise</a>	CREATE_IN_PROGRESS	-	User Initiated	-

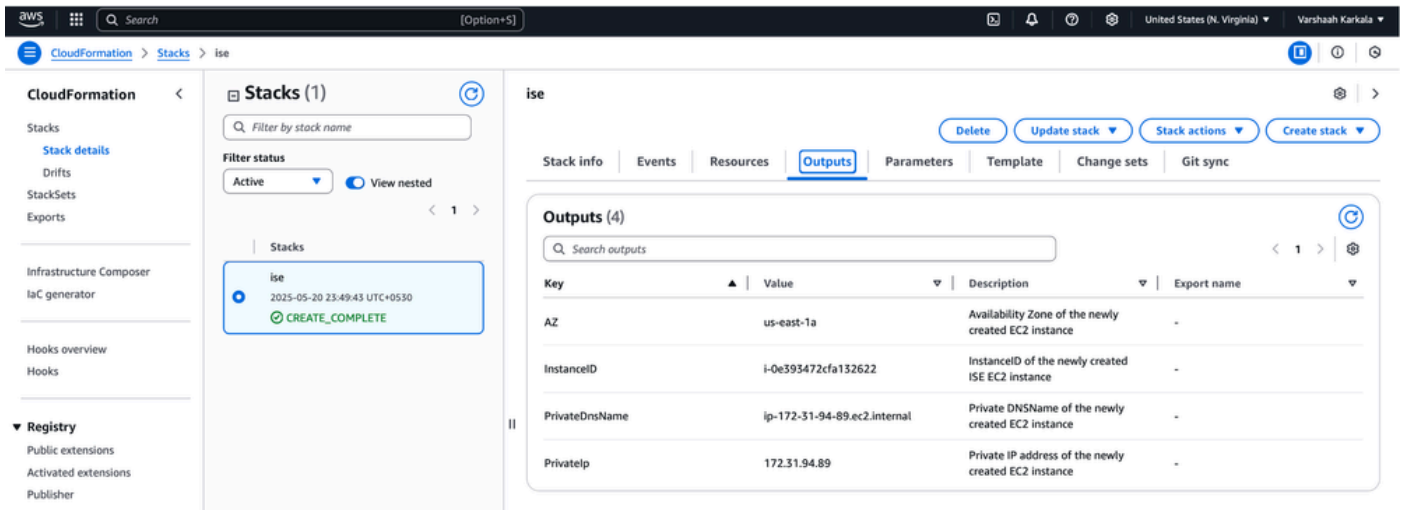
13. Access the stack details:  
 Navigate to **CloudFormation** > **Stacks** and locate your deployed stack.

14. View Outputs Tab:

Select your **stack** and open the **Outputs** tab. Here, you find important information generated during the deployment process, such as:

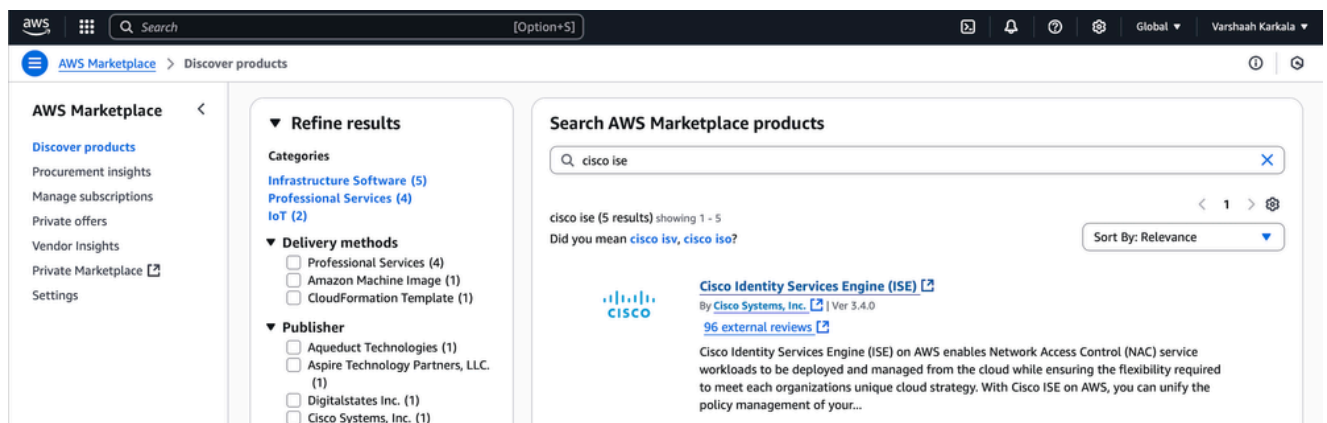
- **Availability Zone:** The region where the resources are deployed.
- **Instance ID:** The unique identifier of the deployed instance.
- **DNS Name:** The private DNS name of the instance, which can be used for remote access.
- **IP Address:** The public or private IP address of the instance, depending on your configuration.

This information helps you connect to the instance and verify its availability. The Outputs tab resembles this example:



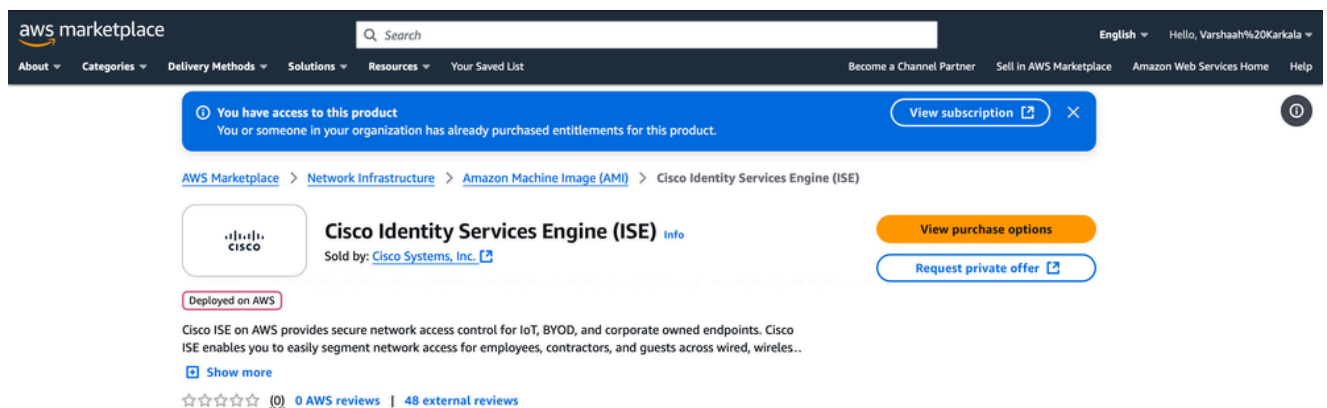
## Part 3: Configuring ISE Using an Amazon Machine Image (AMI)

1. Log in to the [AWS Management Console](#) and search for **AWS Marketplace Subscriptions**.
2. In the search bar, type **cisco ise** and click **Cisco Identity Services Engine (ISE)** from the results.



*ISE on AWS Marketplace*

3. Click **View purchase options**.



4. Click **Launch your software**.

The screenshot shows the AWS Marketplace page for Cisco Identity Services Engine (ISE). The header includes the AWS Marketplace logo, a search bar, and navigation links. The main content area displays the offer details for Cisco Identity Services Engine (ISE), including the Offer ID, Offered by (Cisco Systems, Inc.), Offer type (Public), and Deployed on AWS (Yes). A message states: "You've already accepted this offer. Your AWS Marketplace agreement was created. You can launch your software or [Manage subscriptions](#)." A button labeled "Launch your software" is visible.

5. Under the **Fulfillment Option**, choose **Amazon Machine Image**. Choose the desired **Software version** and **Region**. Click **Continue to Launch**.

The screenshot shows the AWS Marketplace page for Cisco Identity Services Engine (ISE) in the 'Configure this software' section. The page prompts the user to "Choose a fulfillment option and software version to launch this software." The configuration options are as follows:

- Fulfillment option:** Amazon Machine Image (selected). Below it, a dropdown shows "64-bit (x86) Amazon Machine Image (AMI)".
- Software version:** 3.4.0 (Aug 07, 2024) (selected).
- Region:** US East (N. Virginia) (selected).

Additional information includes:

- Use of Local Zones or WaveLength infrastructure deployment may alter your final pricing.
- Ami Id: ami-07946ba1cee1ca94a
- Ami Alias: /aws/service/marketplace/prod-7wsm5sh6ugdle/3.4.0 [Learn More](#) [New](#)
- Product Code: basttrzv6xwc4yn2uup6bh730
- Release notes (updated August 7, 2024)

**Pricing information:**


- This is an estimate of typical software and infrastructure costs based on your configuration. Your actual charges for each statement period may differ from this estimate.
- Software Pricing:** Cisco Identity Services Engine (ISE) running on c5.4xlarge. Price: \$0 /hr. A red "BYOL" badge is present.
- Infrastructure Pricing:** EC2: 1 \* c5.4xlarge. Monthly Estimate: \$490.00/month.

6. Under **Choose Action**, choose **Launch through EC2**. Click **Launch** to proceed.

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Launch this software

Review the launch configuration details and follow the instructions to launch this software.

Configuration details

Fulfillment option	64-bit (x86) Amazon Machine Image (AMI) Cisco Identity Services Engine (ISE) <i>running on c5.4xlarge</i>
Software version	3.4.0
Region	US East (N. Virginia)

Usage instructions

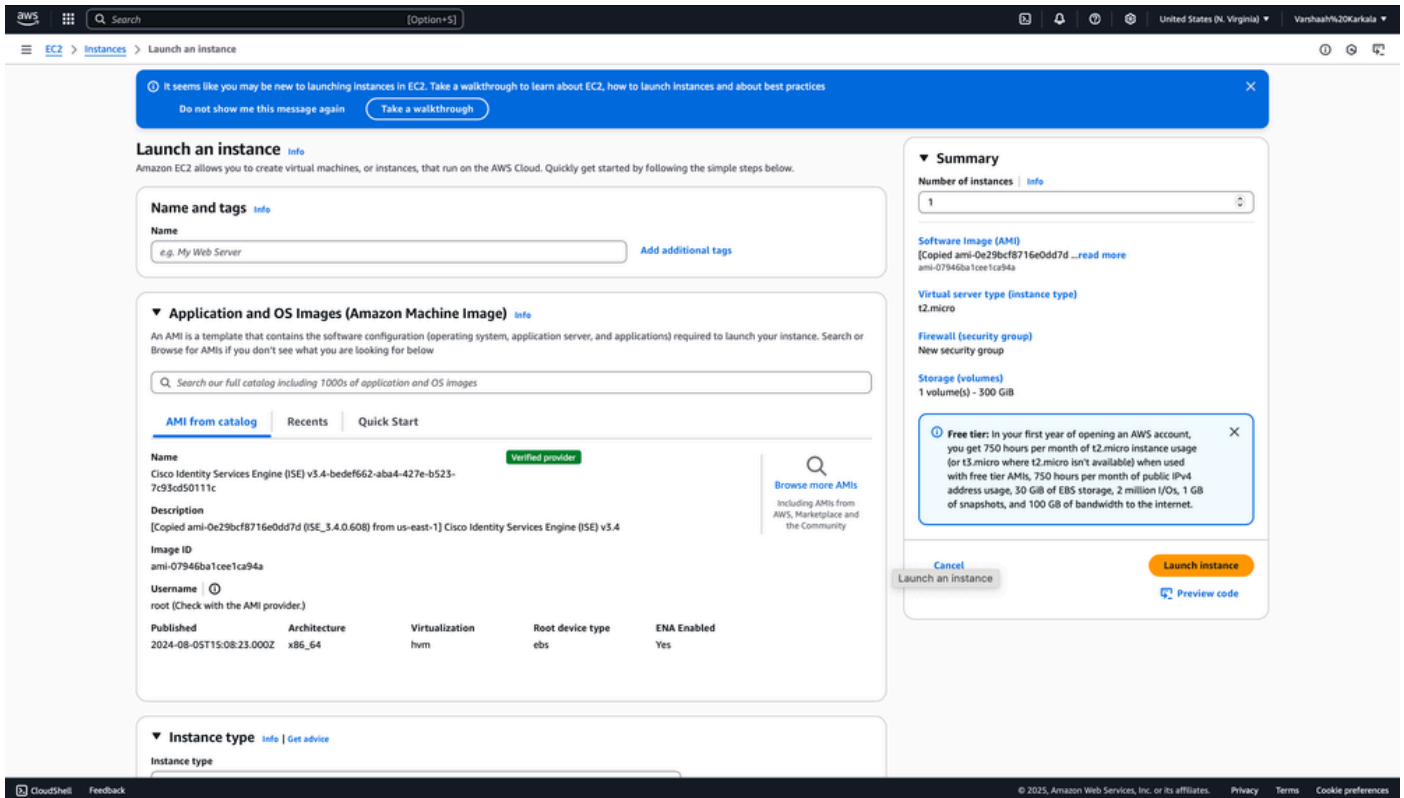
Choose Action

Launch through EC2

Choose this action to launch your configuration through the Amazon EC2 console.

Launch

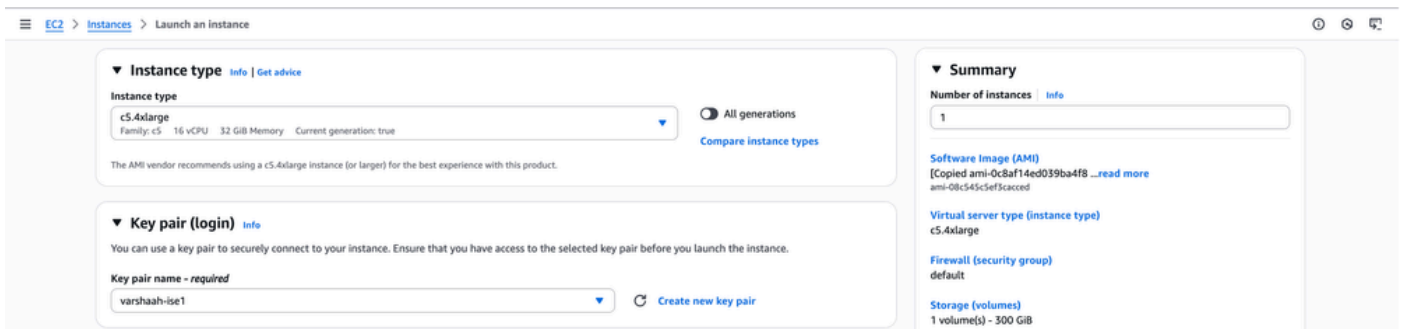
7. You are redirected to the **EC2 Launch an Instance** page to configure your instance settings.



8. Scroll down to the **Instance Type** section and choose an appropriate **instance type** based on your deployment requirements.

Under **Key pair (login)**, select the **key pair** that was generated earlier or create a **new one** (refer to the key pair creation steps provided previously).

Set the **Number of Instances** to **1**.



9. In the **Network settings** section:

- Configure your **VPC and subnet** as needed.
- For the **Security Group**, either select an **existing one** or create a **new group** (as shown in the example).



▼ Network settings

Info

Edit

Network

Info

vpc-062e0871c3312f6ad

Subnet

Info

No preference (Default subnet in any availability zone)

Auto-assign public IP

Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups)

Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

Common security groups

Info

Select security groups

default sg-0b902ad2c151f2773

VPC: vpc-062e0871c3312f6ad

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

10. In the **Configure Storage** section, configure the desired **volume size**.

Example: 600 GiB using gp2 volume type.

▼ Configure storage

Info

Advanced

1x

600

GiB

gp2

Root volume, Not encrypted

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems

Edit

11. In the **Advanced Details** section, configure any additional settings as required for your deployment, such as **IAM instance profile**, **user data**, or **shutdown behavior**.

▼ **Advanced details** [Info](#)

**Domain join directory** | [Info](#)

Select ▼

↻ [Create new directory](#)

**IAM instance profile** | [Info](#)

Select ▼

↻ [Create new IAM profile](#)

**Hostname type** | [Info](#)

IP name ▼

**DNS Hostname** | [Info](#)

- ☒ Enable IP name IPv4 (A record) DNS requests
- ☒ Enable resource-based IPv4 (A record) DNS requests
- ☐ Enable resource-based IPv6 (AAAA record) DNS requests

**Instance auto-recovery** | [Info](#)

Default ▼

**Shutdown behavior** | [Info](#)

Stop ▼

**Stop - Hibernate behavior** | [Info](#)

Disable ▼

**Termination protection** | [Info](#)

Disable ▼

**Stop protection** | [Info](#)

Select ▼

**Detailed CloudWatch monitoring** | [Info](#)

Disable ▼

**Credit specification** | [Info](#)

Standard ▼

**Placement group** | [Info](#)

Select ▼

↻ [Create new placement group](#)

**EBS-optimized instance** | [Info](#)

Disable ▼

**Instance bandwidth configuration** | [Info](#)

Default ▼

**Purchasing option** | [Info](#)

- ☒ None
- ☐ Capacity Blocks  
Launch instances for your active capacity blocks
- ☐ Spot instances  
Request Spot Instances at the Spot price, capped at the On-Demand price

**Capacity reservation** | [Info](#)

None ▼

**Tenancy** | [Info](#)

Dedicated - run a dedicated instance ▼

[Additional charges apply](#)

12. In the **Metadata version** section:

- For **ISE version 3.4 and above**, choose **V2 only (token required)** — this is the recommended option.
- For **ISE versions earlier than 3.4**, choose **V1 and V2 (token optional)** to ensure compatibility.

RAM disk ID | [Info](#)

Select ▼

Kernel ID | [Info](#)

Select ▼

Nitro Enclave | [Info](#)

Select ▼

License configurations | [Info](#)

Select ▼



CPU options | [Info](#)

Configure CPUs for your instance to optimize performance and save on licensing costs.

☒ Use default CPU options

☐ Specify CPU options

Default active vCPUs

16

Total vCPUs

16

Metadata accessible | [Info](#)

Enabled ▼

Metadata IPv6 endpoint | [Info](#)

Select ▼

Metadata version | [Info](#)

V2 only (token required) ▼

For V2 requests, you must include a session token in all instance metadata requests. Applications or agents that use V1 for instance metadata access will break.

Metadata response hop limit | [Info](#)

Select

Allow tags in metadata | [Info](#)

Select ▼

13. In the **User data** field, provide the initial **configuration parameters** for the ISE instance, including **hostname**, **DNS**, **NTP server**, **timezone**, **ERS**, and **admin credentials**.

Example:

hostname=varshaahise2

primarynameserver=x.x.x.x

dnsdomain=varshaah.local

ntpserver=x.x.x.x

timezone=Asia/Kolkata

username=admin

password=Ise@123

ersEnabled=true

**User data - optional** | [Info](#)

Upload a file with your user data or enter it in the field.

 **Choose file**

```
hostname=varshaahise2
primarynameserver=x.x.x.x
dnsdomain=varshaah.local
ntpserver=x.x.x.x
timezone=Asia/Kolkata
username=admin
password=Ise@123
ersEnabled=true
```

☐ User data has already been base64 encoded



**Note:** Ensure the password complies with Cisco ISE password policy.

---

After entering the user data and completing the configuration, click **Launch Instance**.

United States (N. Virginia)

Varshaah%20Karkala

▼ Summary

Number of instances | Info

1

Software Image (AMI)  
[Copied ami-0e29bcf8716e0dd7d ...read more  
ami-07946ba1cee1ca94a

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
default

Storage (volumes)  
1 volume(s) - 300 GiB

❗ Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

Preview code

14. After the instance is launched, a confirmation message appears stating: 'Successfully initiated launch of instance <instance\_name>'. This indicates that the launch process has started successfully.

EC2 > Instances > Launch an instance

Success

Successfully initiated launch of instance (i-0905e07a276b7f335)

Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

Create billing and free tier usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

Create billing alerts

Connect to your instance

Once your instance is running, log into it from your local computer.

Connect to instance

Learn more

Connect an RDS database

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

Connect an RDS database

Create a new RDS database

Learn more

Create EBS snapshot policy

Create a policy that automates the creation, retention, and deletion of EBS snapshots

Create EBS snapshot policy

Manage detailed monitoring

Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the Amazon EC2 console displays monitoring graphs with a 1-minute period.

Manage detailed monitoring

Create Load Balancer

Create an application, network gateway or classic Elastic Load Balancer

Create Load Balancer

Create AWS budget

AWS Budgets allows you to create budgets, forecast spend, and take action on your costs and usage from a single location.

Create AWS budget

Manage CloudWatch alarms

Create or update Amazon CloudWatch alarms for the instance.

Manage CloudWatch alarms

Disaster recovery for your instances

Recover the instances you just launched into a different Availability Zone or a different Region using AWS Elastic Disaster Recovery (DRS).

Disaster recovery for your instances

Monitor for suspicious runtime activities

Amazon GuardDuty enables you to continuously monitor for malicious runtime activity and unauthorized behavior, with near real-time visibility into on-host activities occurring across your Amazon EC2 workloads.

Monitor for suspicious runtime activities

Get instance screenshot

Capture a screenshot from the instance and view it as an image. This is useful for troubleshooting an unreachable instance.

Get instance screenshot

Get system log

View the instance's system log to troubleshoot issues.

Get system log

View all instances

CloudShell

Feedback

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# Verify

## Access the ISE Instance Built Using CFT

Navigate to the **Resources** tab in your **CloudFormation stack** and click the **Physical ID**. It redirects you to the EC2 dashboard where you are able to see the instance.

The screenshot shows the AWS CloudFormation console for a stack named 'ise'. The 'Resources' tab is selected, showing a table with one resource: 'IseEc2Instance'. The Physical ID is 'i-Oe393472cfa132622' and the Status is 'CREATE\_COMPLETE'. Below this, the AWS EC2 console 'Instances' page is shown. The instance 'i-Oe393472cfa132622' is listed with a status of 'Running' and '3/3 checks passed'.

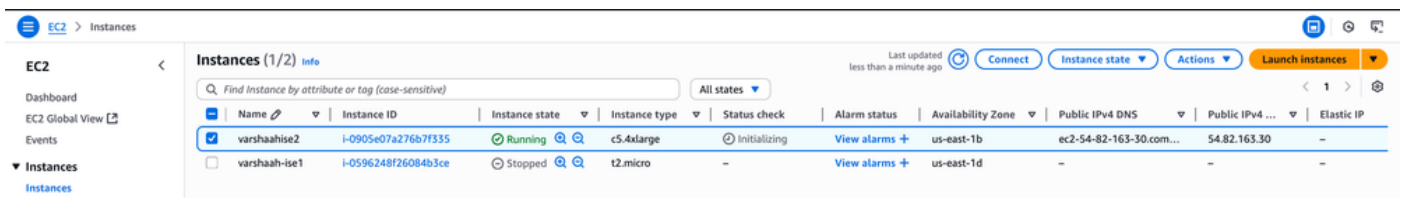
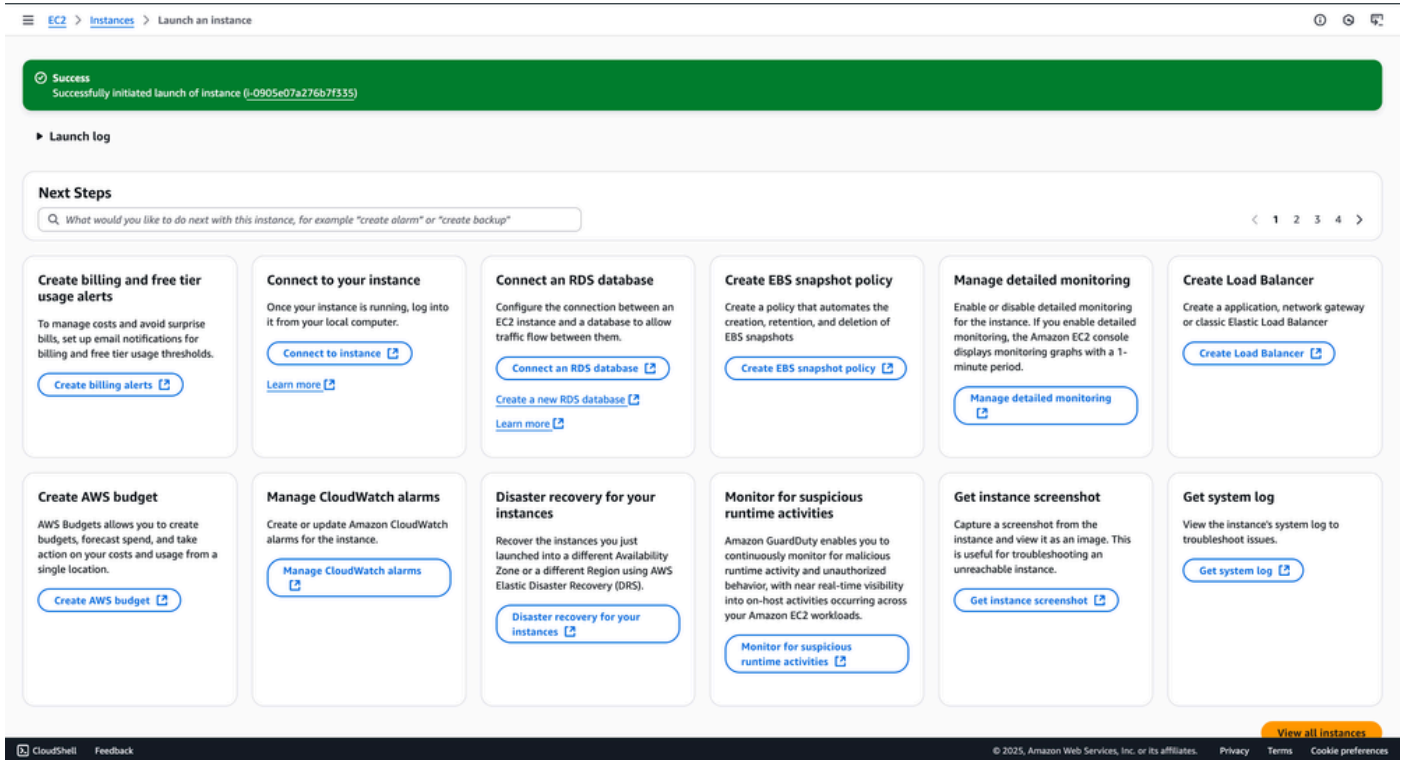
Logical ID	Physical ID	Type	Status	Module
IseEc2Instance	<a href="#">i-Oe393472cfa132622</a>	AWS::EC2::Instance	CREATE_COMPLETE	-

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...
<input type="checkbox"/>	<a href="#">i-Oe393472cfa132622</a>	Running	t3.xlarge	3/3 checks passed	<a href="#">View alarms</a>	us-east-1a	ec2-3-91-252-232.com...	3.91.252.232

## Access the ISE Instance Built Using AMI

Click **View all Instances** to navigate to the EC2 instances page. On this page, verify that the **Status Check** shows as **3/3 checks passed**, indicating that the instance is up and healthy.



# Access the ISE GUI

The ISE server is now successfully deployed.

To access the ISE GUI, you need to use the instance’s IP address in your browser. Since the default IP is private, it cannot be accessed directly from the internet.

Check if a public IP is associated with the instance:

- Navigate to **EC2 > Instances** and select your **instance**.
- Look for the **Public IPv4 address** field.

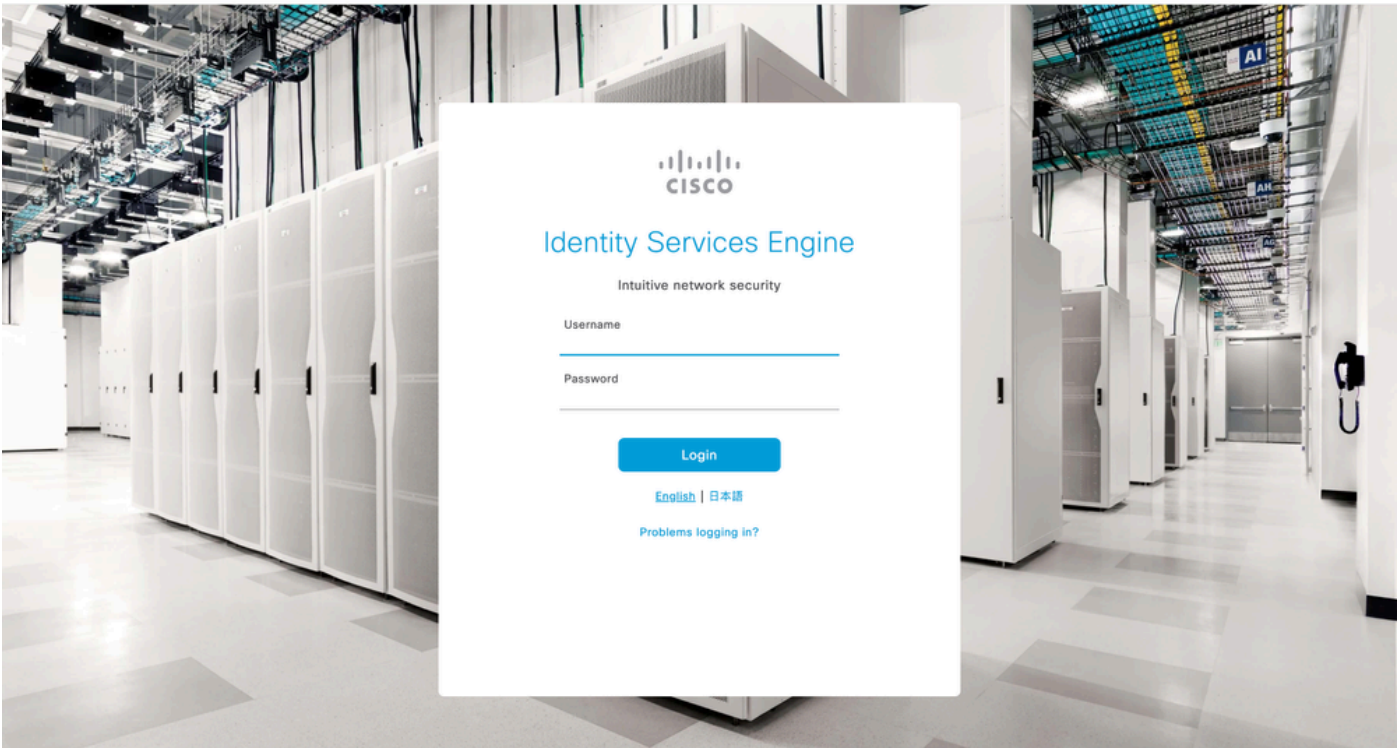
Here, you can see a public IP address which you can use to access the ISE GUI.



Open a supported **browser** (for example, Chrome or Firefox) and enter the public **IP address**.

The ISE GUI login page appears.







**Note:** After SSH access becomes available, it typically takes an additional 10–15 minutes for ISE services to fully transition to a running state.

---

## Access CLI via SSH from Terminal

In the EC2 console, select your **instance** and click **Connect**.

Under the **SSH client** tab, follow these steps:

- Navigate to the folder containing your downloaded **.pem** key file.
- Run these commands:
  - **cd <path-to-key-file>**
  - **chmod 400 <your-key-pair-name>.pem**
  - **ssh -i "<your-key-pair-name>.pem" admin@<public-ip-address>**

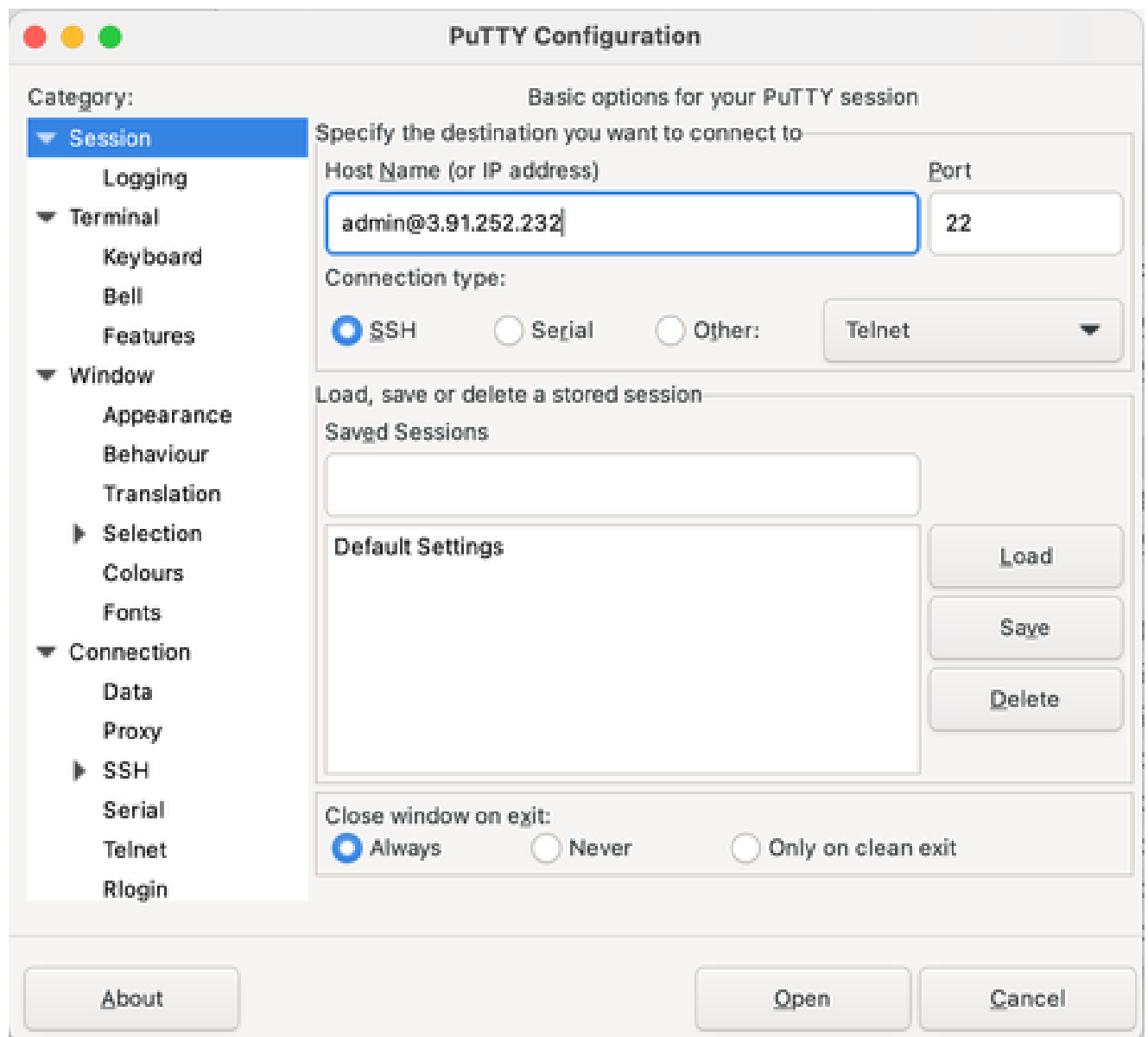


**Note:** Use admin as the SSH user, since Cisco ISE disables root log in via SSH.

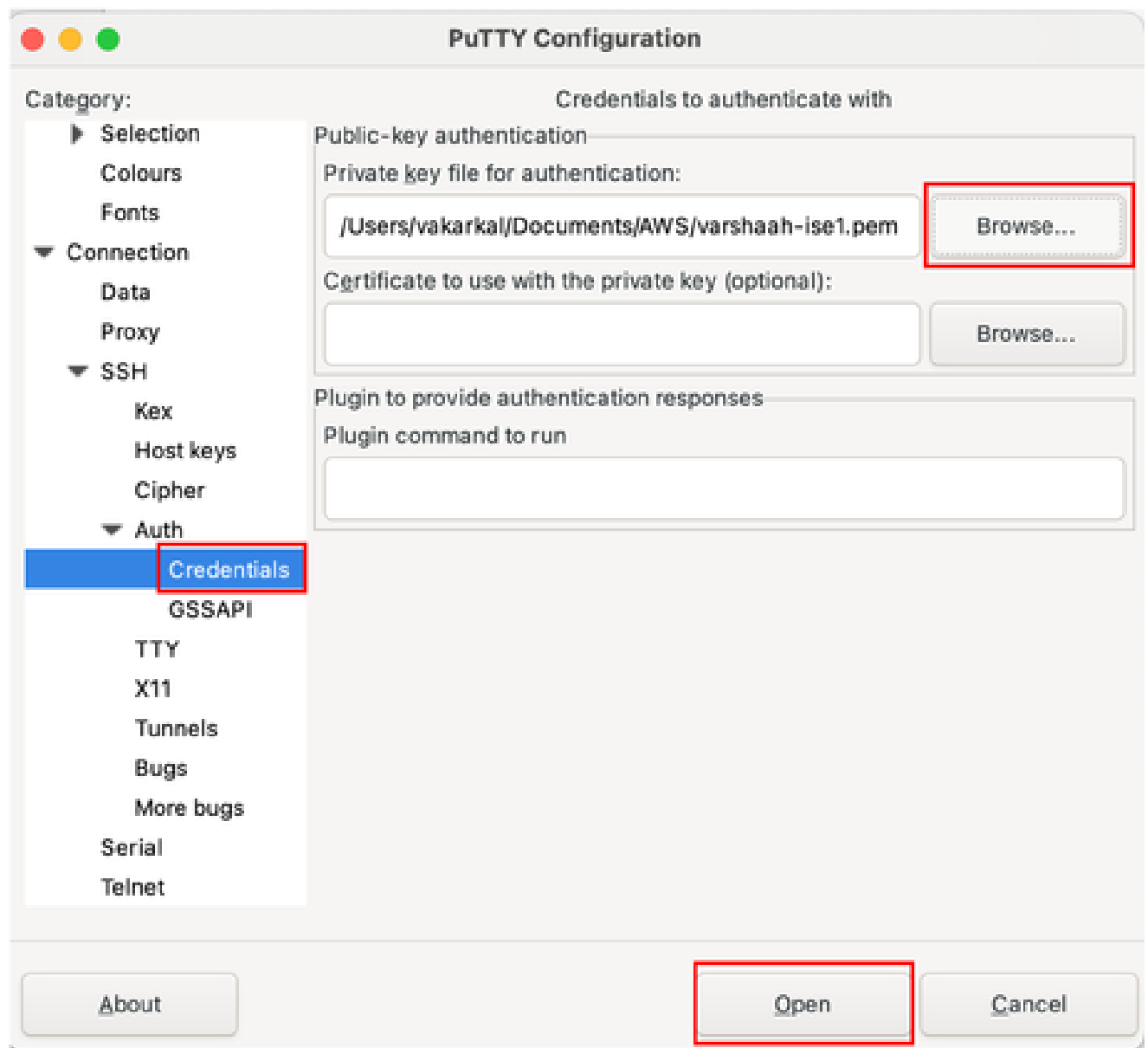
---

## Access CLI via SSH Using PuTTY

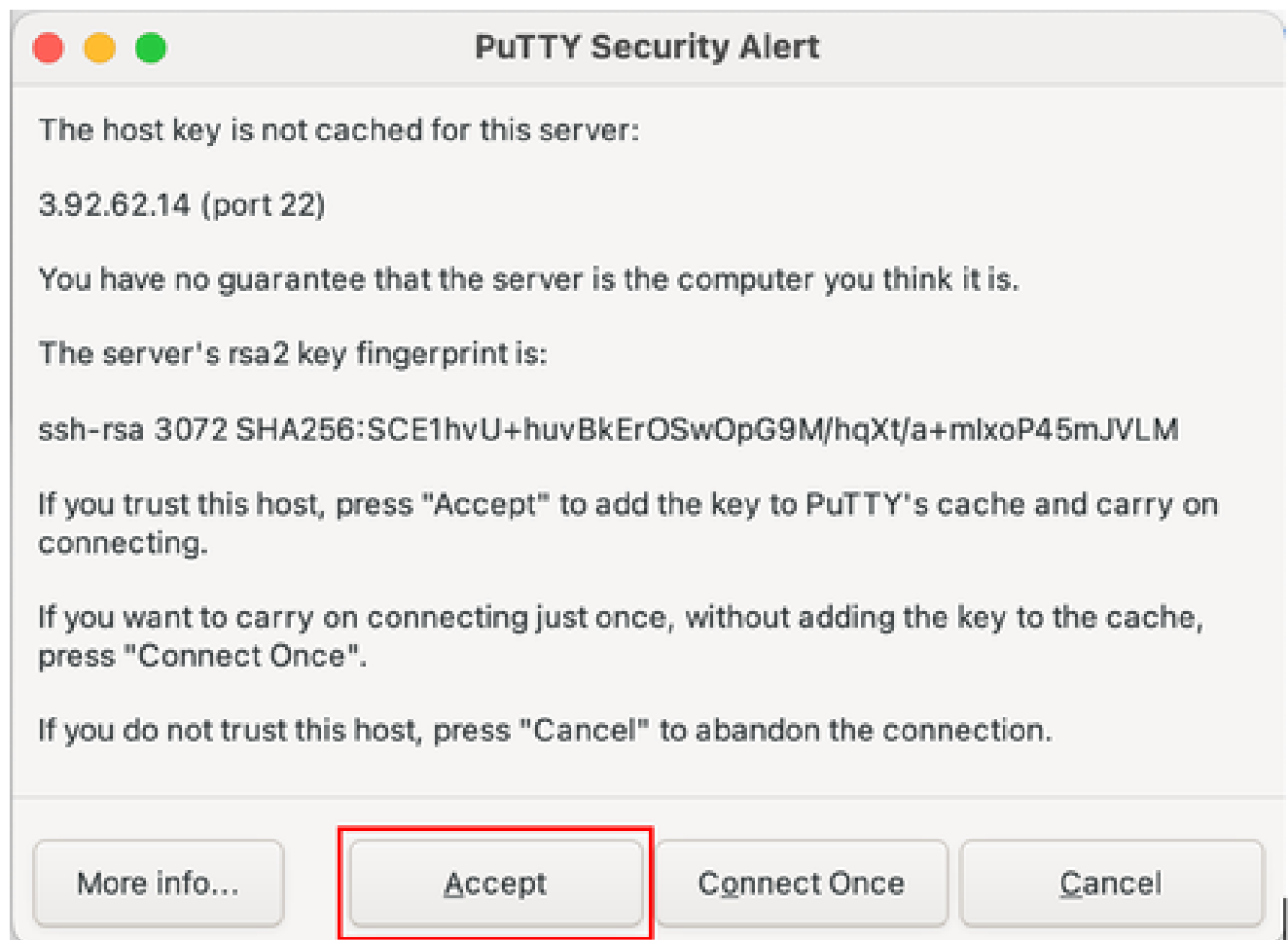
- Open **PuTTY**.
- In the **Host Name** field, enter: **admin@<public-ip-address>**



- In the left pane, navigate to **Connection > SSH > Auth > Credentials**.
- Click **Browse** next to **Private key file for authentication**, and select your SSH **private key file**.
- Click **Open** to initiate the session.



- When prompted, click **Accept** to confirm the SSH key.



- Your PuTTY session now connects to the ISE CLI.



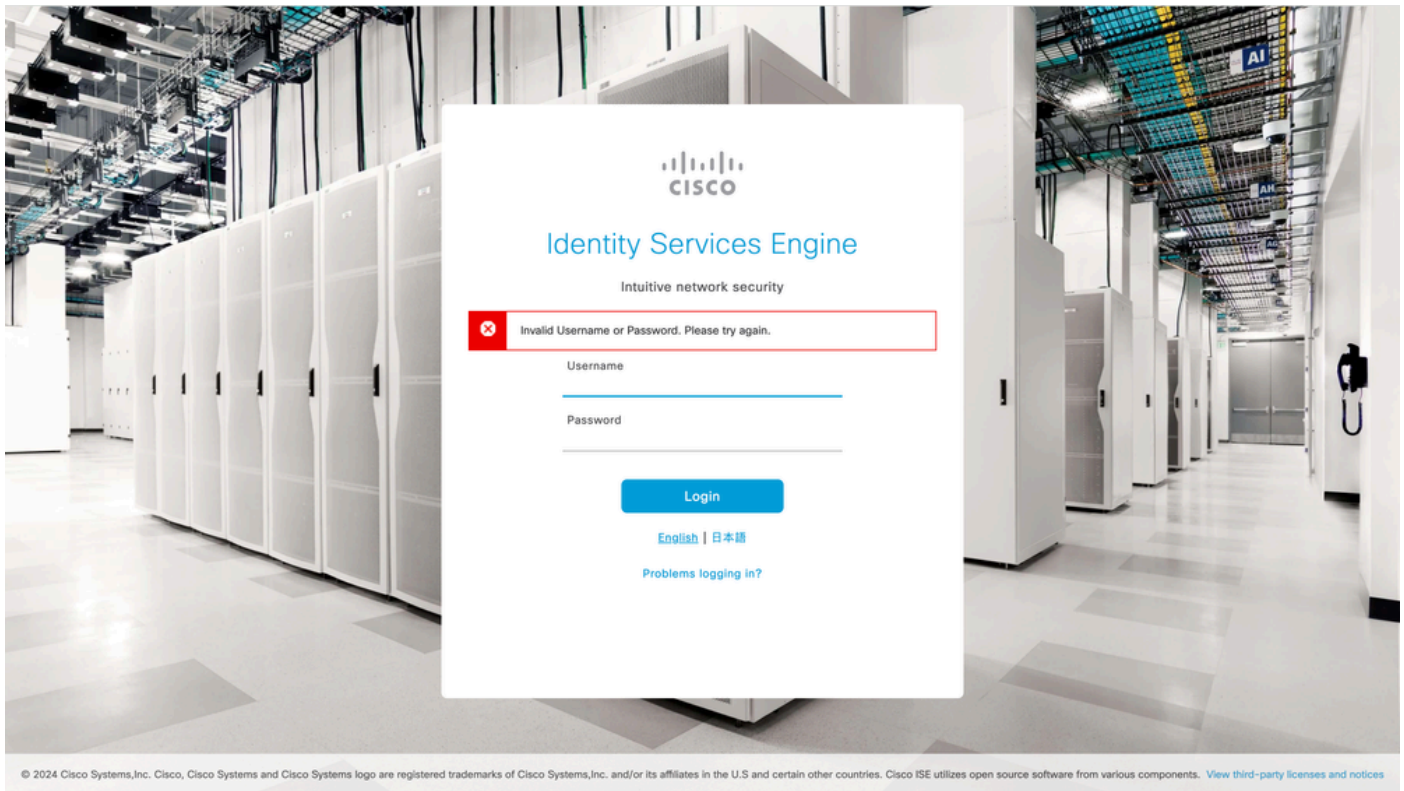
**Note:** It may take up to 20 minutes for ISE to become accessible via SSH. During this time, connection attempts may fail with the error: "Permission denied (publickey)."

---

## Troubleshoot

### Invalid Username or Password

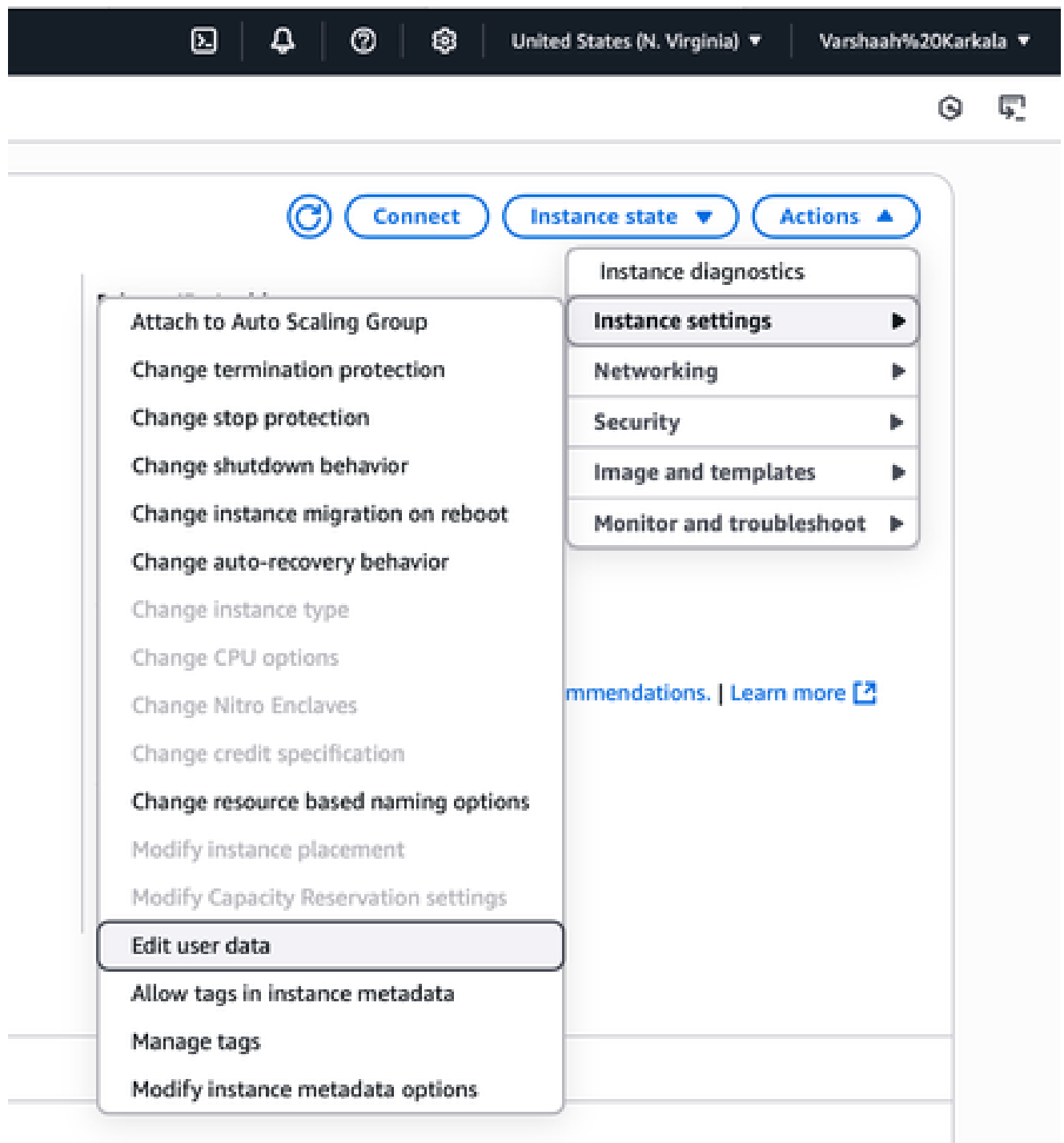
Authentication issues are often caused by incorrect user input during instance creation. This produces an error message as "Invalid Username or Password. Please try again." error when trying to log in to the GUI.



## Solution

- In the **AWS EC2 Console**, navigate to **EC2 > Instances > your\_instance\_id**.
- Click **Actions** and choose **Instance settings > Edit user data**.





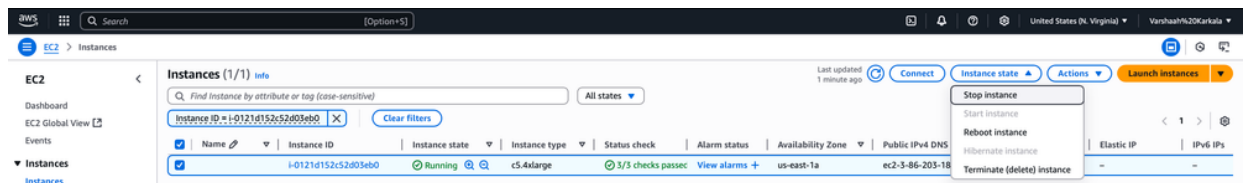
- You can find the specific username and password that were set during the instance launch here. These credentials can be used to log in to the ISE GUI.

The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, a search bar, and a keyboard shortcut [Option+S]. Below the navigation bar, the breadcrumb trail reads: EC2 > Instances > i-0121d152c52d03eb0 > Edit user data. The main heading is 'Edit user data' with an 'Info' link. The content area shows the 'Instance ID' as i-0121d152c52d03eb0. Under 'Current user data', it states 'User data currently associated with this instance' and displays a block of user data in a light gray box: hostname=varshaah-ise, dnsdomain=varshaah.local, primarynameserver=72.163.128.140, secondarynameserver=, tertiarynameserver=, primaryntpserver=10.64.58.51, secondaryntpserver=, tertiaryntpserver=, username=admin, password=Test@123, timezone=Etc/UTC, ersapi=no, pxGrid=no, and pxgrid\_cloud=no. Below this is a 'Copy user data' button. At the bottom, a light blue box with an information icon contains the message: 'To edit your instance's user data you first need to stop your instance.'

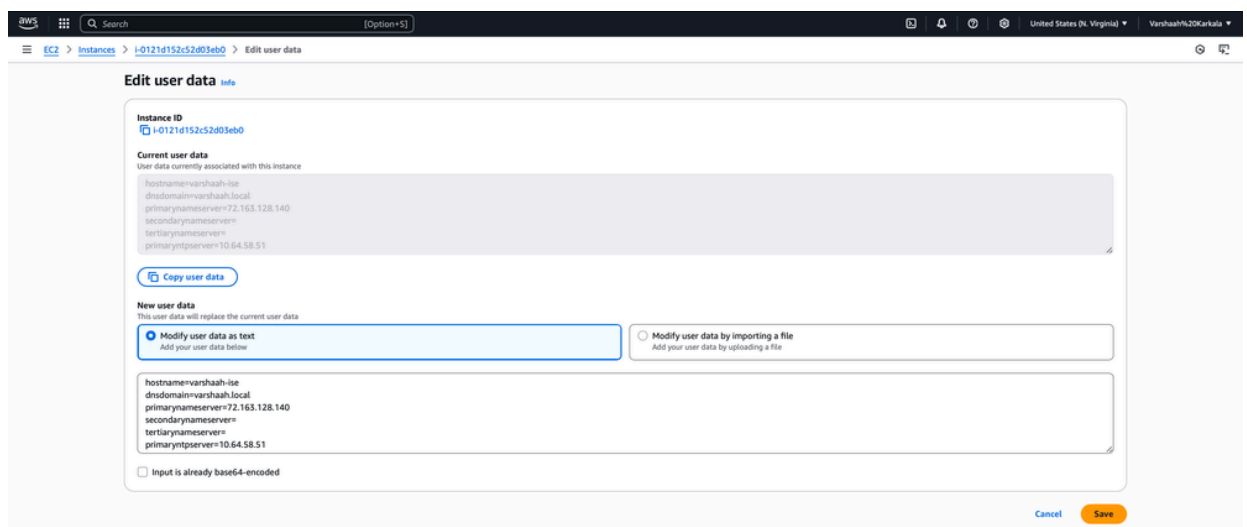
- Verify Hostname and Password when setting up the hostname and password:
  - Hostname
    - Only alphanumeric characters and hyphens (-) are allowed.
    - Must not exceed 19 characters in length.
  - Password
    - Must comply with Cisco ISE password policy.
    - Refer to the official ISE Admin Guide: [ISE 3.4 Password Policy – Cisco Admin Guide](#)
- If the configured password does not meet the ISE password policy, log in attempts fail; even with the correct credentials.

- If you suspect the password was misconfigured, follow these steps to update it:

1. In the **EC2 Console**, navigate to **EC2 > Instances > your\_instance\_id**
2. Click **Instance state > Stop instance**.



3. After the instance is stopped, click **Actions > Instance settings > Edit user data**.



4. Modify the **user data script** to update the password accordingly.
5. Click **Save** to save your changes. Click **Instance state > Start instance** to restart the instance.

## Known Defects

Bug ID	Description
<a href="#">Cisco Bug ID 41693</a>	ISE on AWS fails to retrieve user data if the metadata version is set to V2 only. Only IMDSv1 is supported in versions prior to ISE 3.4.