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Practice Lab Goals

Step-by-step guided learning

Create an an Amazon EC2 Auto Scaling group. 0

→ Assign EC2 instances to the Auto Scaling group.

DIY

Build on what you have learned.

→ Configure an auto scaling policy to scale down to 0 resources at 01:00 AM every day.





In the Cloud Practitioner Edition, launching a lab for an assignment that has already been validated is disabled.

Lab Files

Steps

Auto-Healing and Scaling Applications

Step 2

1. In the top navigation bar search box, type:

ec2

- 2. In the search results, under Services, click EC2.
- 3. Go to the next step.

Concept

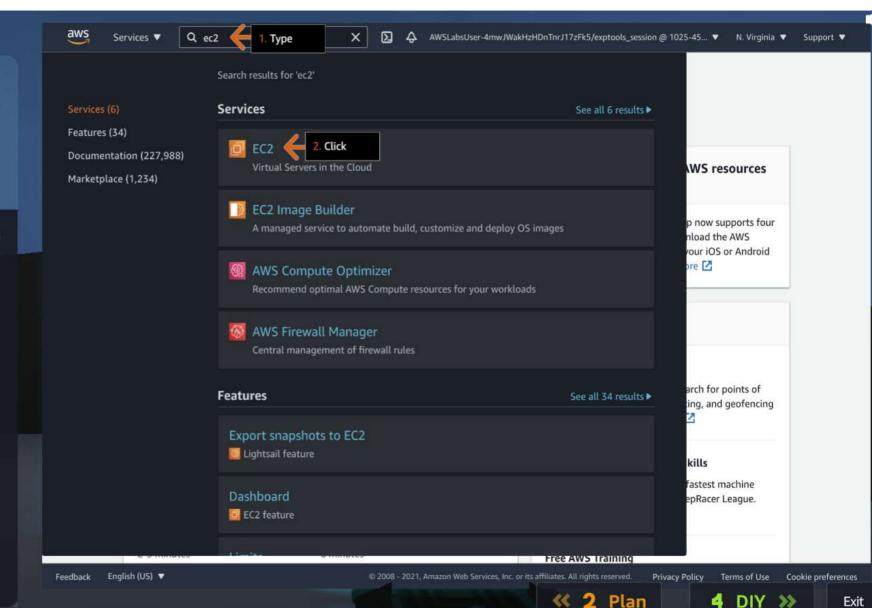
AWS Auto Scaling monitors your applications and automatically adjusts capacity to maintain steady, predictable performance at the lowest possible cost.

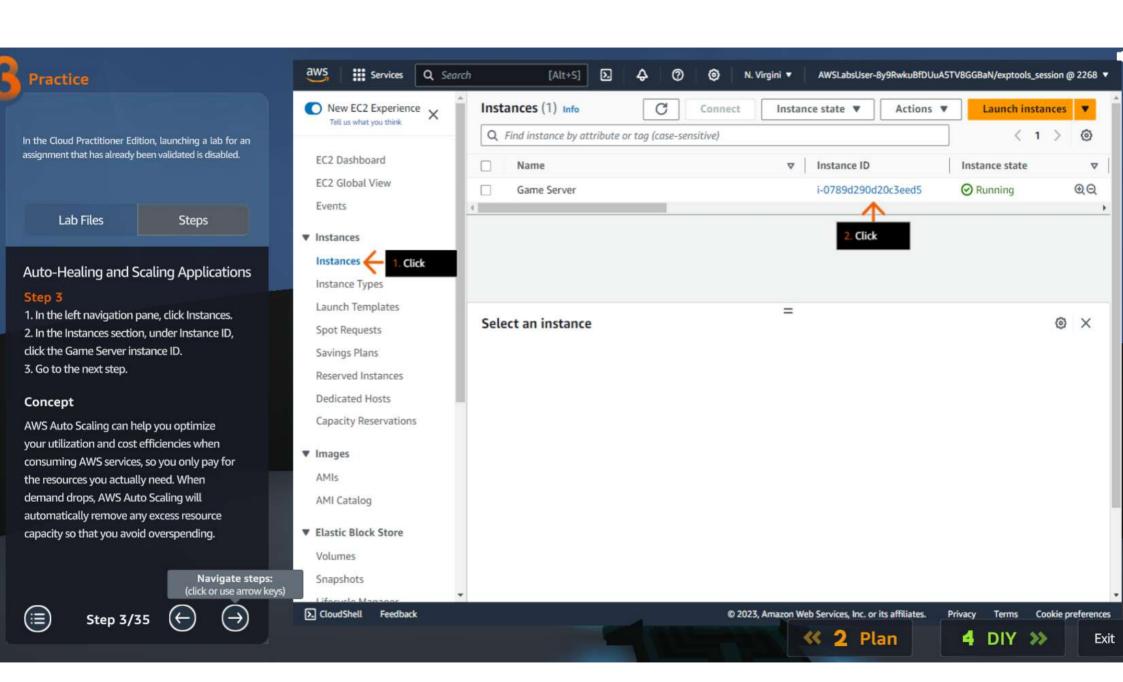


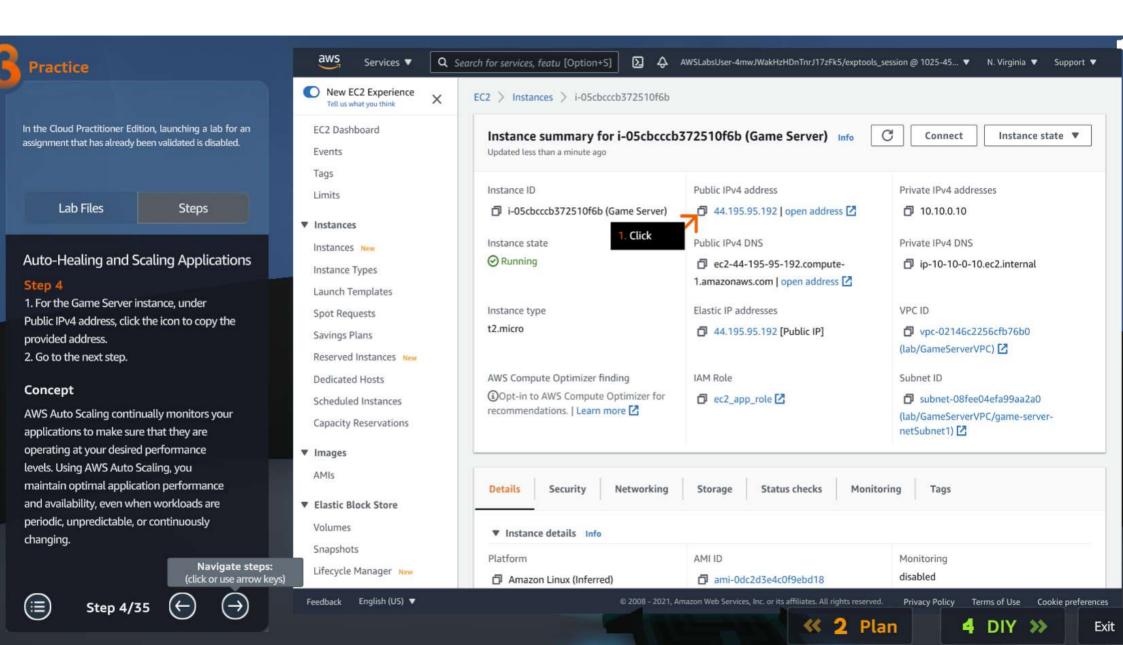
Step 2/35

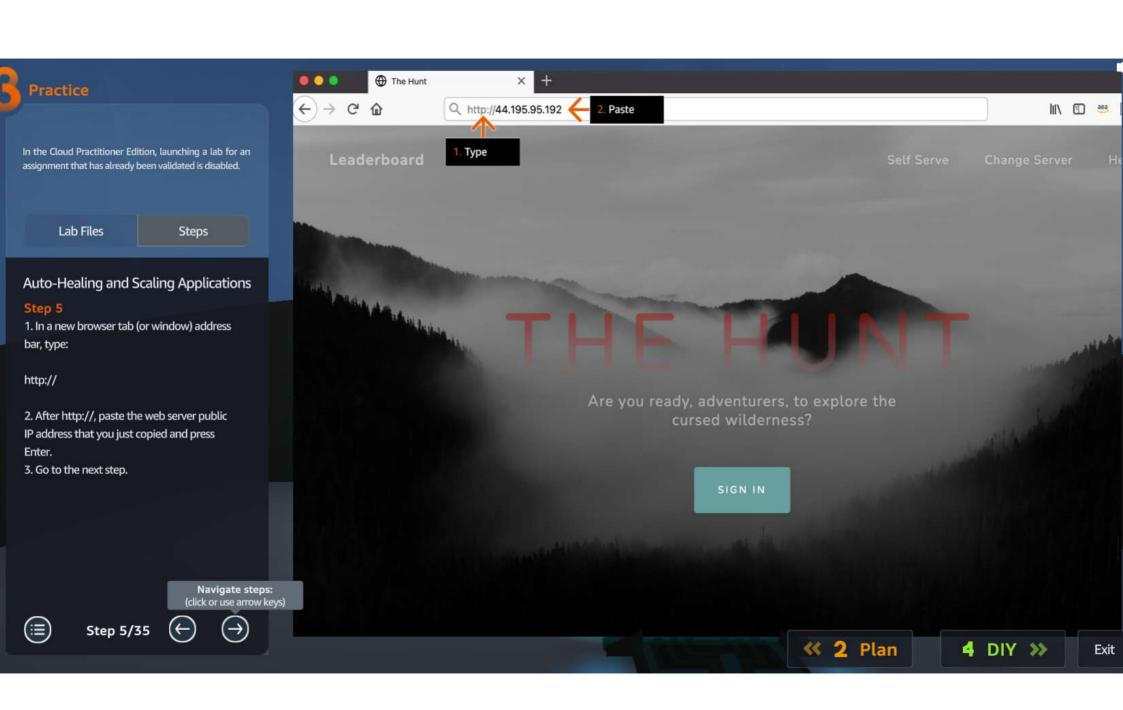


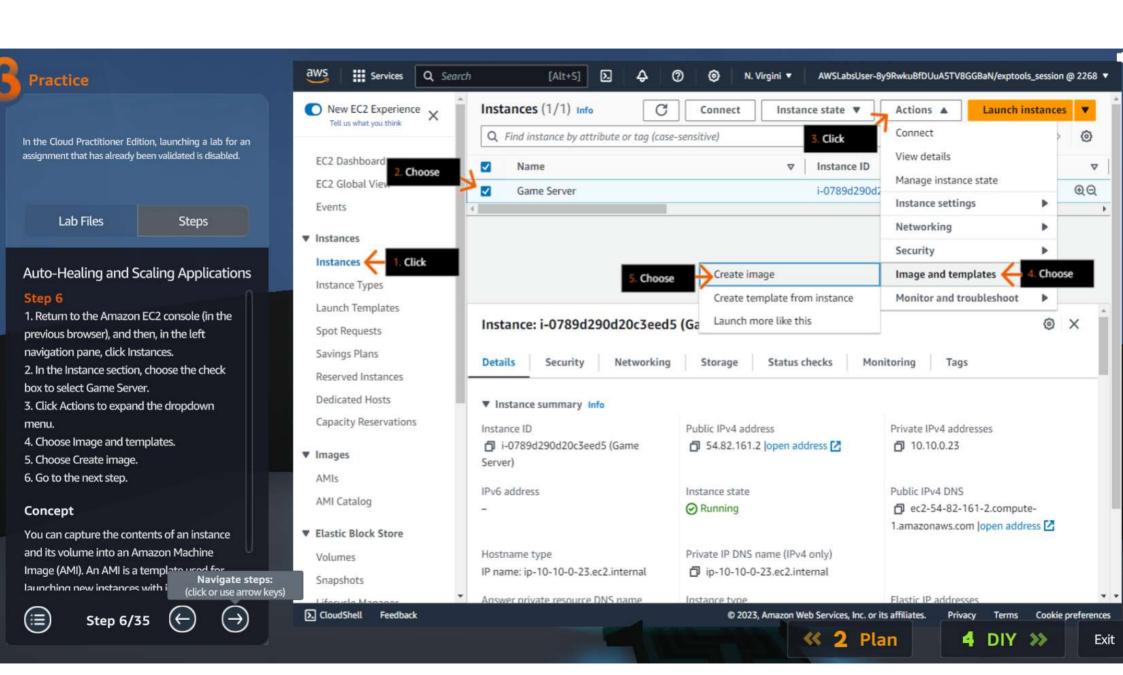


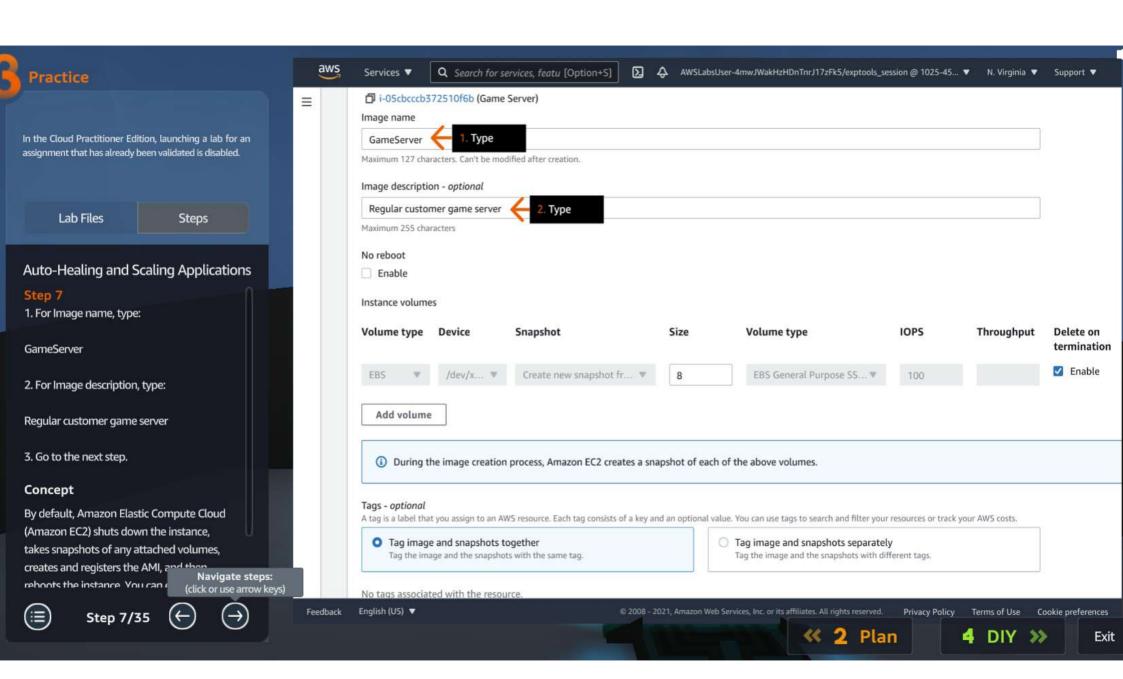


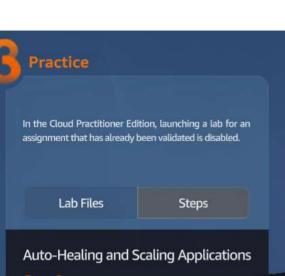












Step 8

- 1. Scroll down to Tags.
- 2. For Tags, choose Tag image and snapshots together.
- 3. Click Create image.
- 4. Go to the next step.

Concept

By default, an AMI that you create is available only within the AWS Region of creation. To use the same AMI in another Region, you must copy the AMI to that other Region.

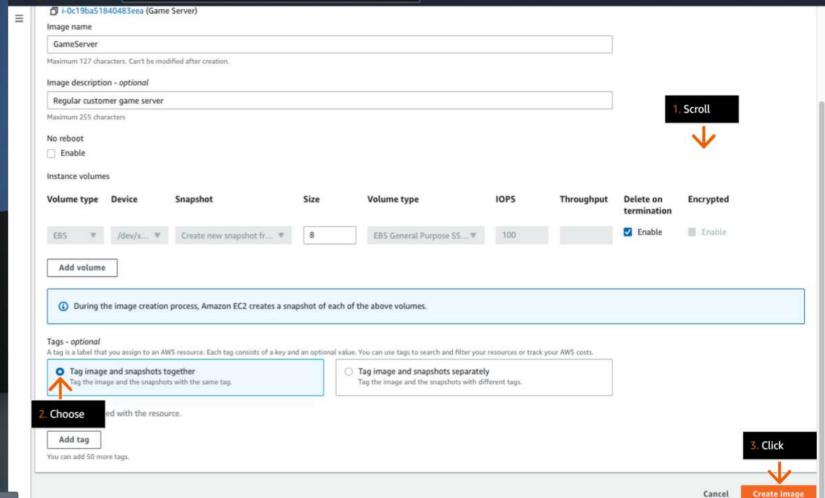
> Navigate steps: (click or use arrow keys)



Step 8/35







Feedback English (US) ▼

Services ▼

Q Search for services, features, marketplace products, and docs

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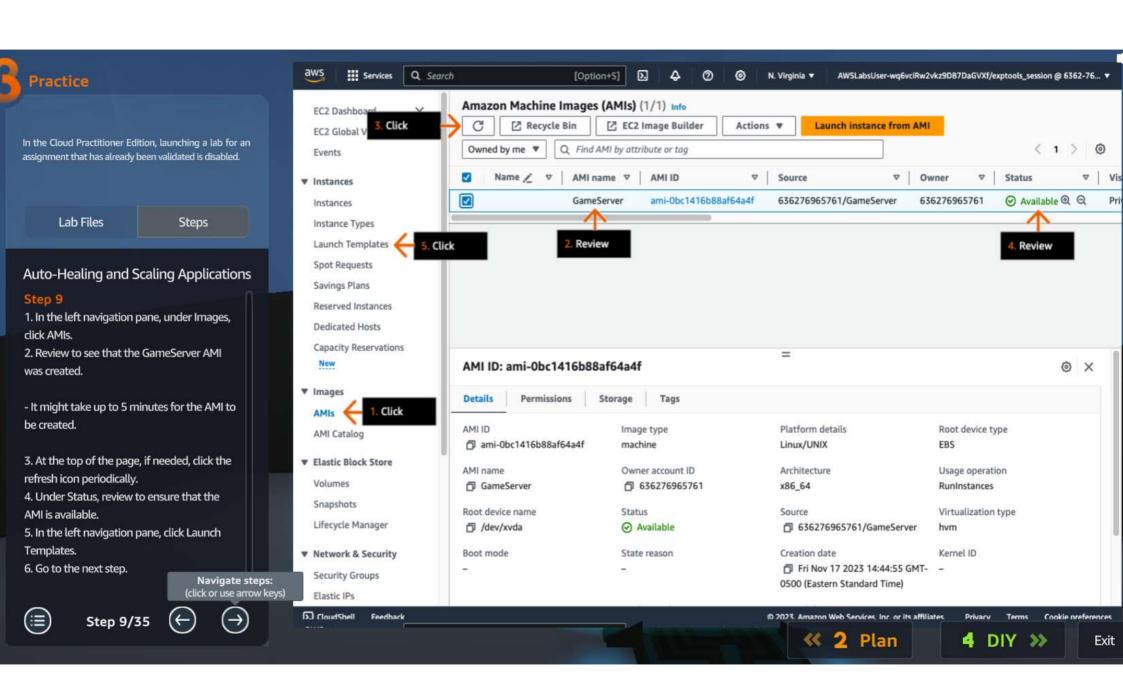
Plan

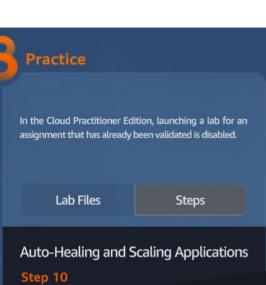
AWSLabsUser-eyihuFcq9ZHaL8XH6wU2T6/exptools_session @ 9868-86... ▼ N. Virginia ▼ Support ▼

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Exit





1. On the Launch Templates home page, click Create launch template.

2. Go to the next step.

Concept

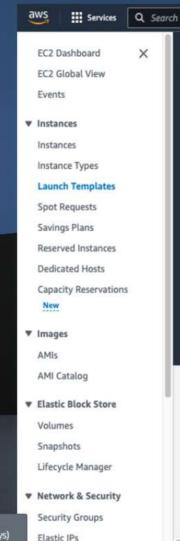
You can use launch templates to store launch parameters so that you do not have to specify them every time you launch an instance. For example, a launch template can contain the AMI ID, instance type, and network settings that you typically use to launch instances.

Navigate steps: (click or use arrow keys)









2 [Option+S] Compute EC2 launch templates Streamline, simplify and standardize instance launches Use launch templates to automate instance launches, simplify permission policies, and enforce best practices across your organization. Save launch parameters in a template that can be used for on-demand launches and with managed services, including EC2 Auto Scaling and EC2 Fleet. Easily update your launch parameters by creating a new launch template version.

Benefits and features

Streamline provisioning

Minimize steps to provision instances. With EC2 Auto Scaling, updates to a launch template can be automatically

Simplify permissions

Create shorter, easier to manage IAM policies. Learn more [2]

Documentation

New launch template

Create launch template

Documentation [2]

API reference

AWSLabsUser-wq6vciRw2vkz9DB7DaGVXf/exptools_session @ 6362-76... ▼

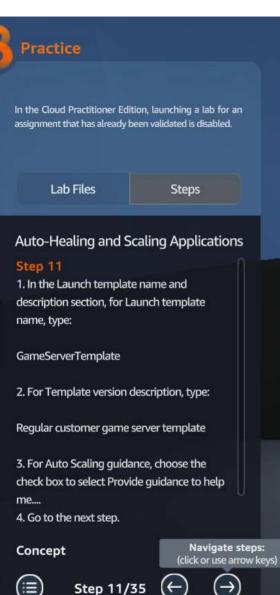




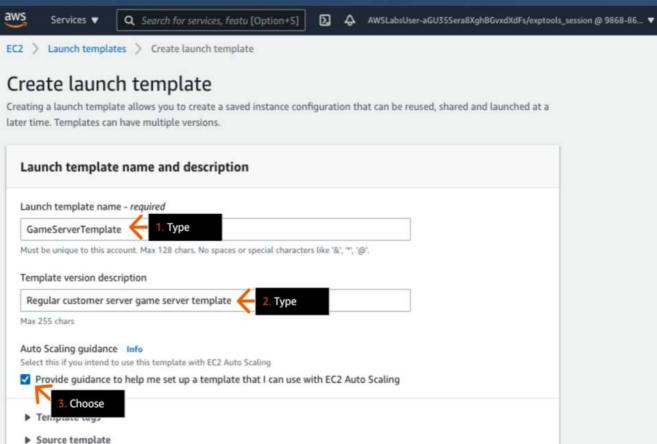


1. Click









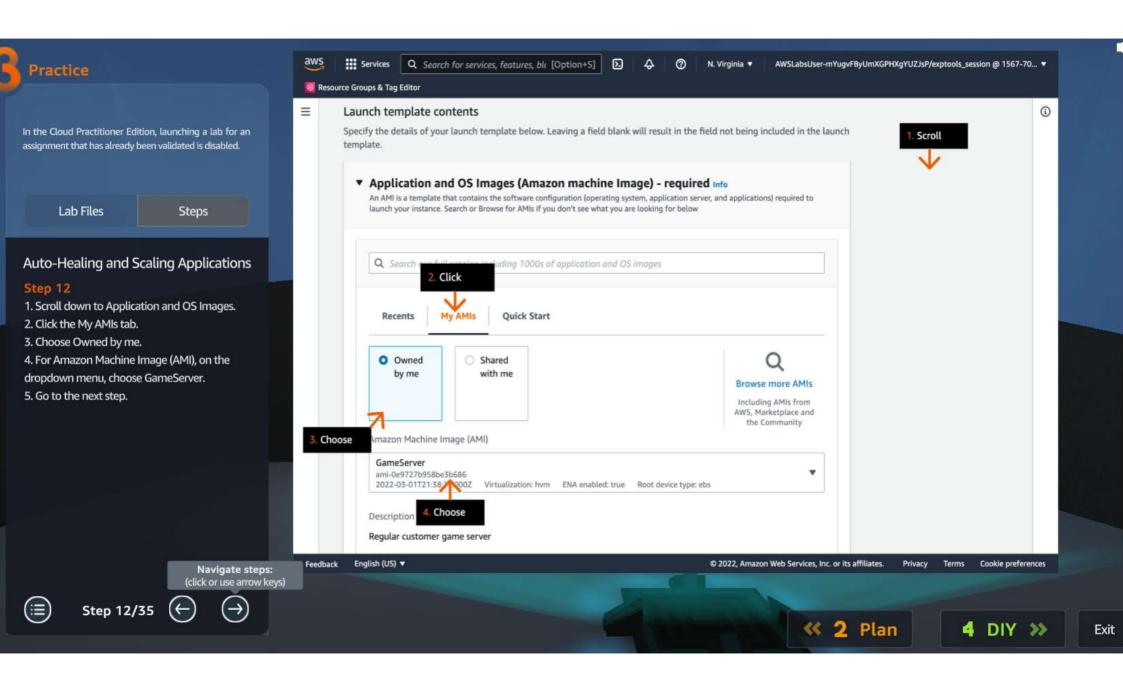
Launch template contents

Specify the details of your launch template below. Leaving a field blank will result in the field not being included in the launch template.

▼ Amazon machine image (AMI) - required Info

« 2 Plan

(1)





In the Cloud Practitioner Edition, launching a lab for an assignment that has already been validated is disabled.

Lab Files

Steps

Auto-Healing and Scaling Applications

Step 13

- 1. Scroll down to Instance type.
- 2. For Instance type, choose t2.nano.
- 3. Click Create new key pair.
- 4. Go to the next step.

Concept

For each launch template, you can create one or more numbered launch template versions. The first version specifies the instance type, AMI ID, subnet, and key pair to use to launch the instance.

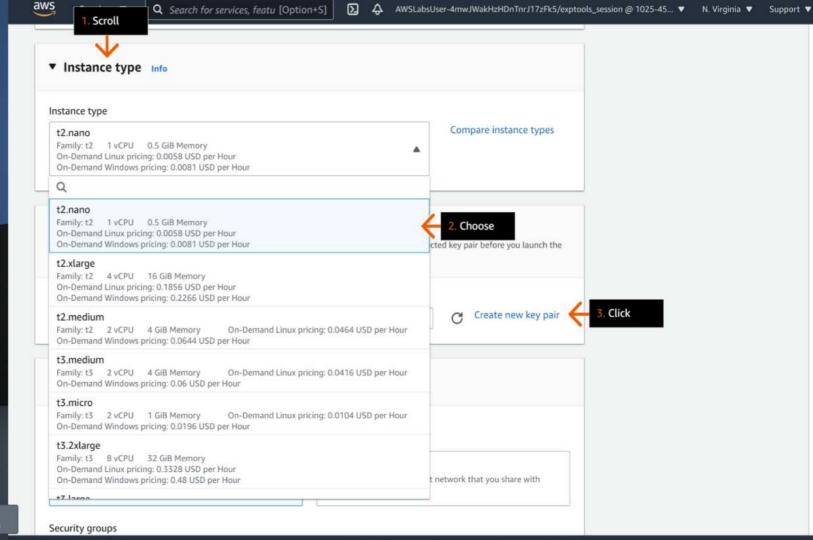
> Navigate steps: (click or use arrow keys)



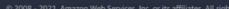
Step 13/35







Feedback English (US) ▼



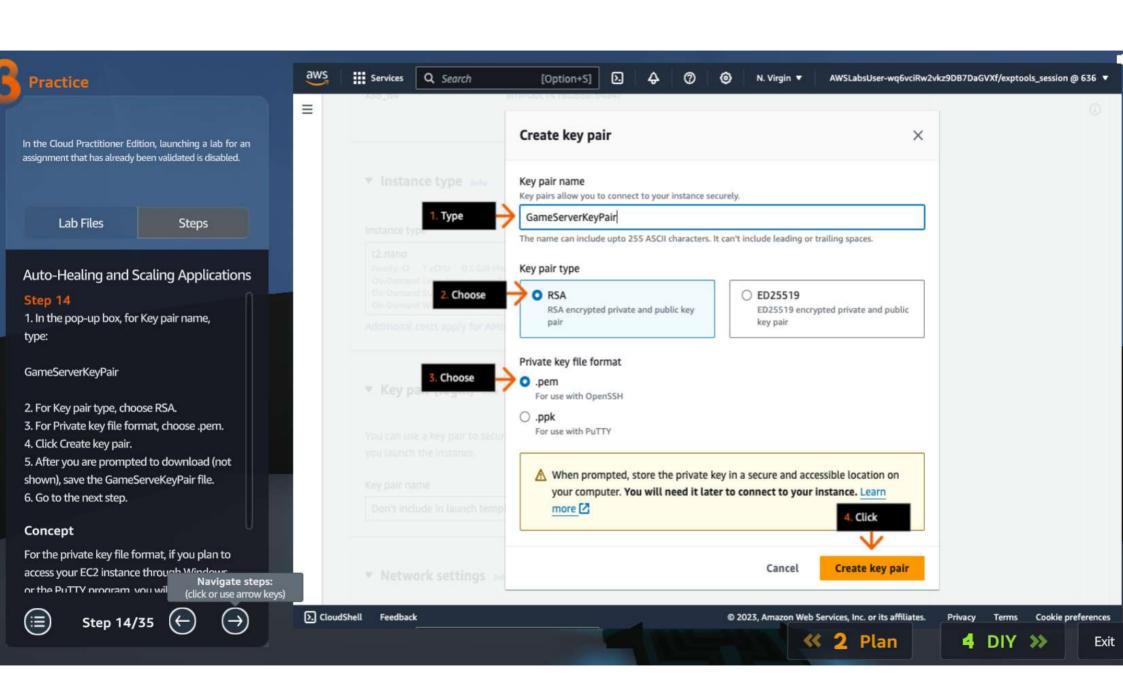
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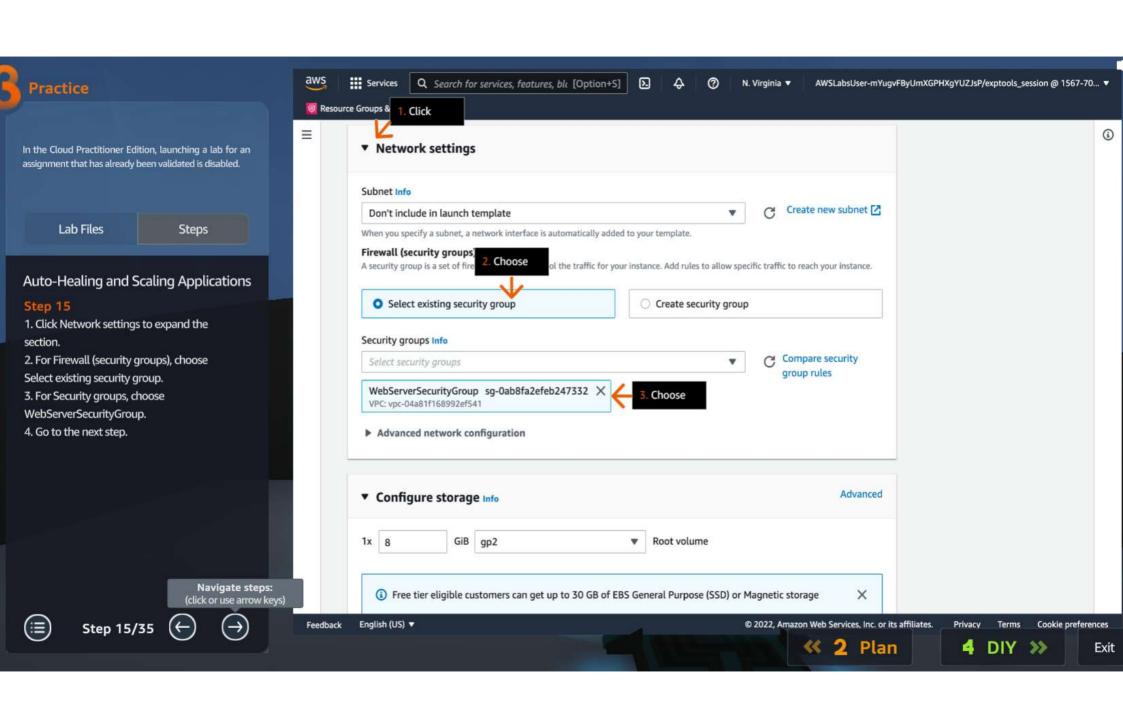


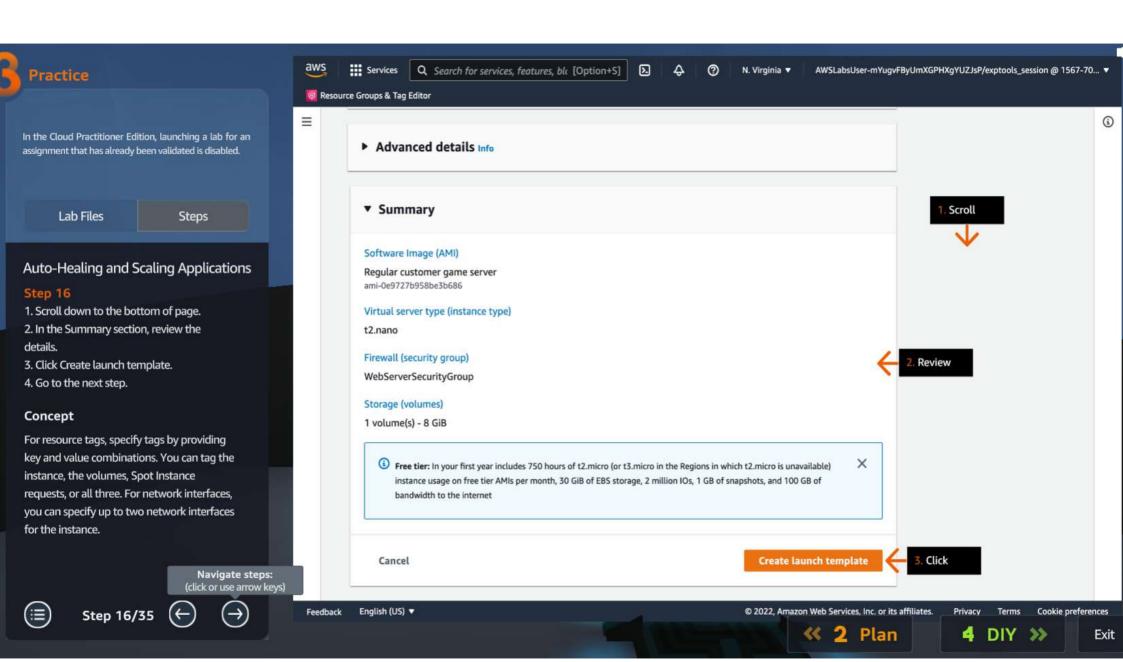




(i)









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Lab Files

Steps

Auto-Healing and Scaling Applications

Step 17

- 1. Scroll down to the bottom of the page.
- 2. Click View launch templates.
- 3. Go to the next step.

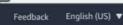
Concept

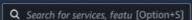
This launch template can be used to configure the auto scaling and healing properties of your system. When a server goes down, this information is used to create a new instance.

Navigate steps:

(click or use arrow keys)









AWSLabsUser-4mwJWakHzHDnTnrJ17zFk5/exptools_session @ 1025-45... ▼ N. Virginia ▼ Support ▼

Scroll

(i)

Next steps

aws

Launch an instance

Services ▼

With On-Demand Instances, you pay for compute capacity by the second (for Linux, with a minimum of 60 seconds) or by the hour (for all other operating systems) with no long-term commitments or upfront payments. Launch an On-Demand Instance from your launch template.

Launch instance from this template

Create an Auto Scaling group from your template

Amazon EC2 Auto Scaling helps you maintain application availability and allows you to scale your Amazon EC2 capacity up or down automatically according to conditions you define. You can use Auto Scaling to help ensure that you are running your desired number of Amazon EC2 instances during demand spikes to maintain performance and decrease capacity during lulls to reduce costs.

Create Auto Scaling group

Create Spot Fleet

A Spot Instance is an unused EC2 instance that is available for less than the On-Demand price. Because Spot Instances enable you to request unused EC2 instances at steep discounts, you can lower your Amazon EC2 costs significantly. The hourly price for a Spot Instance (of each instance type in each Availability Zone) is set by Amazon EC2, and adjusted gradually based on the long-term supply of and demand for Spot Instances. Spot instances are well-suited for dataanalysis, batch jobs, background processing, and optional tasks.

Create Spot Fleet

View launch templates



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Step 17/35

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Lah Files

Steps

Auto-Healing and Scaling Applications

Step 18

- 1. In the left navigation pane, click Auto Scaling Groups.
- 2. On the Auto Scaling Groups home page, click Create Auto Scaling group.
- 3. Go to the next step.

Concept

Using AWS Auto Scaling, you can build scaling plans that automate how groups of different resources respond to changes in demand. You can optimize for balance between availability and costs. AWS Auto Scaling automatically creates all of the scaling policies, and it sets targets for you based on your preference.

Navigate steps: (click or use arrow keys)

▼ IMAGES Amazon EC2 Auto AMIS Scaling **▼ ELASTIC BLOCK STORE**

Q Search for services, featu [Option+S]

helps maintain the availability of your applications

Auto Scaling groups are collections of Amazon EC2 instances that enable automatic scaling and fleet management features. These features help you maintain the health and availability of your applications.

Create Auto Scaling group

AWSLabsUser-4mwJWakHzHDnTnrJ17zFk5/exptools_session @ 1025-45... ▼

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

Create Auto Scaling group



How it works



Amazon EC2 Auto Scaling features have no additional fees beyond the service fees for Amazon EC2, CloudWatch (for scaling policies), and the other AWS resources that you use. Visit the pricing page of each service to learn more.



Step 18/35





English (US) V Feedback

aws

Volumes

Snapshots

Lifecycle Manager

▼ NFTWORK & SECURITY

Security Groups New

Placement Groups New

Elastic IPs New

Key Pairs New

Network Interfaces

▼ LOAD BALANCING

Load Balancers

▼ AUTO SCALING

Target Groups New

Launch Configurations

Auto Scaling Groups

Click

Services ▼

Capacity Reservations

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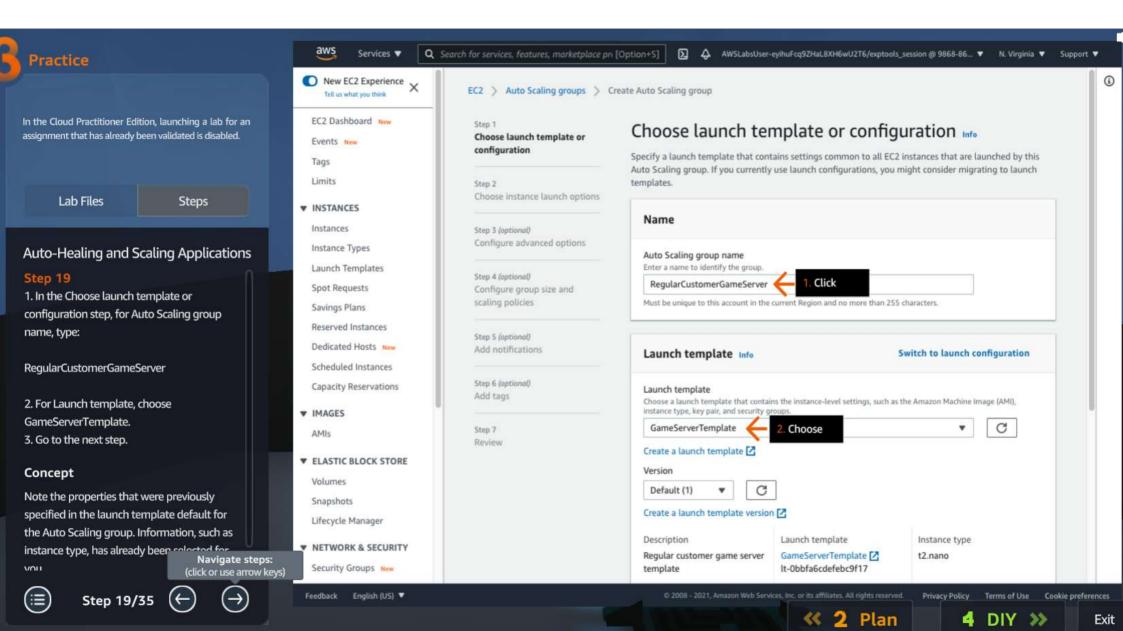


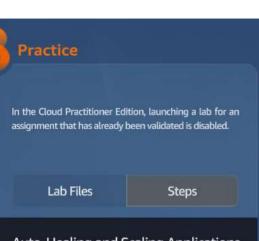


Plan

Pricing

Exit





Auto-Healing and Scaling Applications

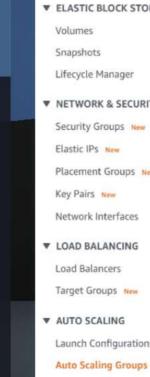
Step 20

- 1. Scroll down to the bottom of the page.
- 2. Click Next.
- 3. Go to the next step.

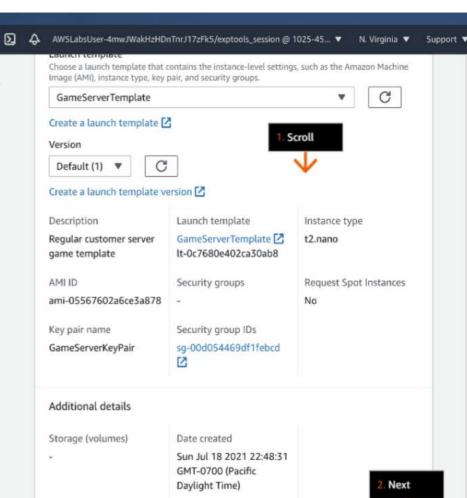
Concept

If you host an application on multiple EC2 instances, you can launch instances across multiple instance types and purchase options (Spot and On-Demand Instances) by choosing Combine purchase options and instance types. This is an advanced feature in which your team can optimize costs using different deployment strategies.

> Navigate steps: (click or use arrow keys)



aws Services ▼ Q Search for services, featu [Option+S] Capacity Reservations Add tags **▼ IMAGES** Step 7 AMIs Review **▼ ELASTIC BLOCK STORE** Volumes Snapshots Lifecycle Manager **▼ NETWORK & SECURITY** Security Groups New Elastic IPs New Placement Groups New Key Pairs New Network Interfaces **▼ LOAD BALANCING** Load Balancers Target Groups New ▼ AUTO SCALING Launch Configurations





Step 20/35





English (US) ▼ Feedback





Cancel



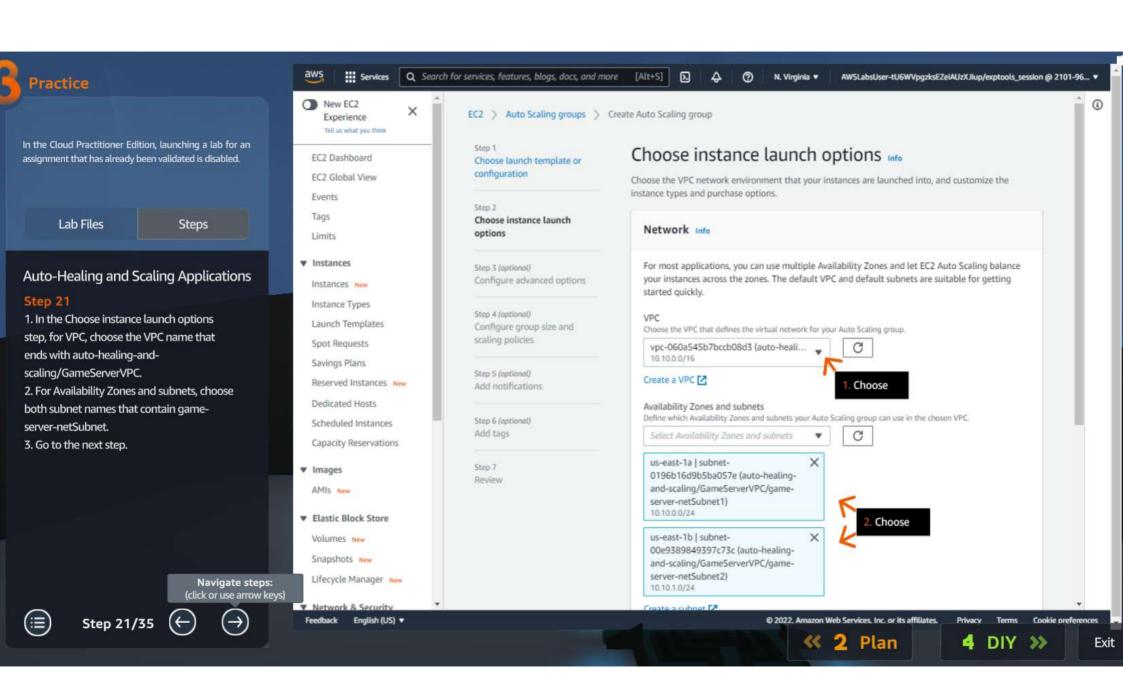


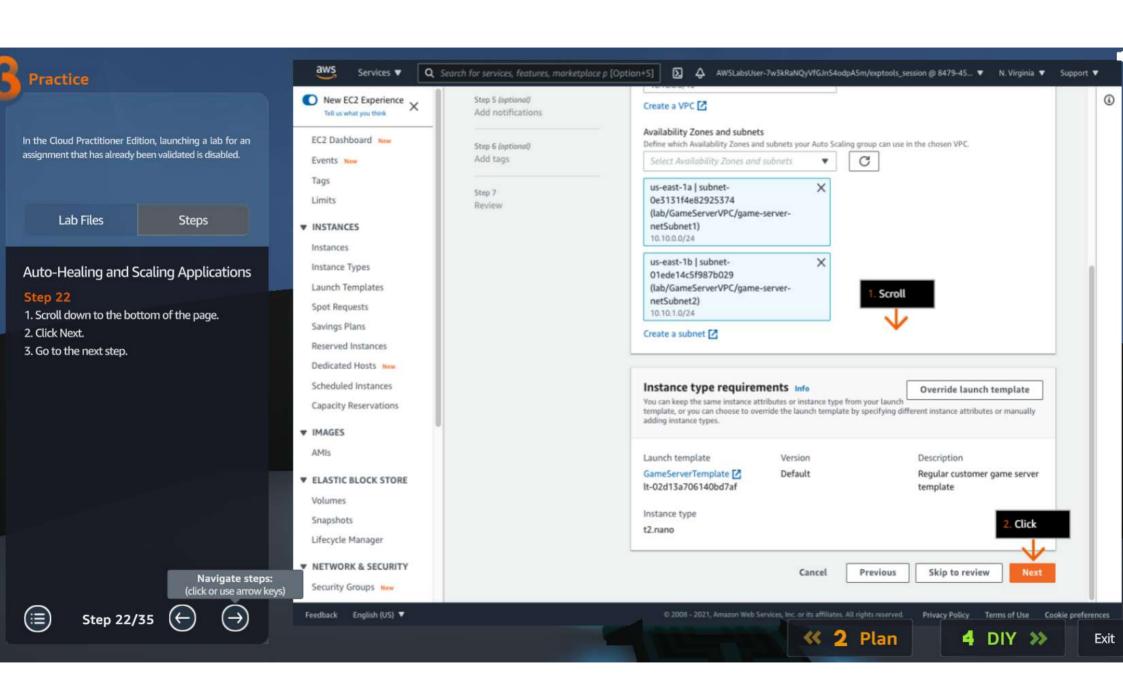


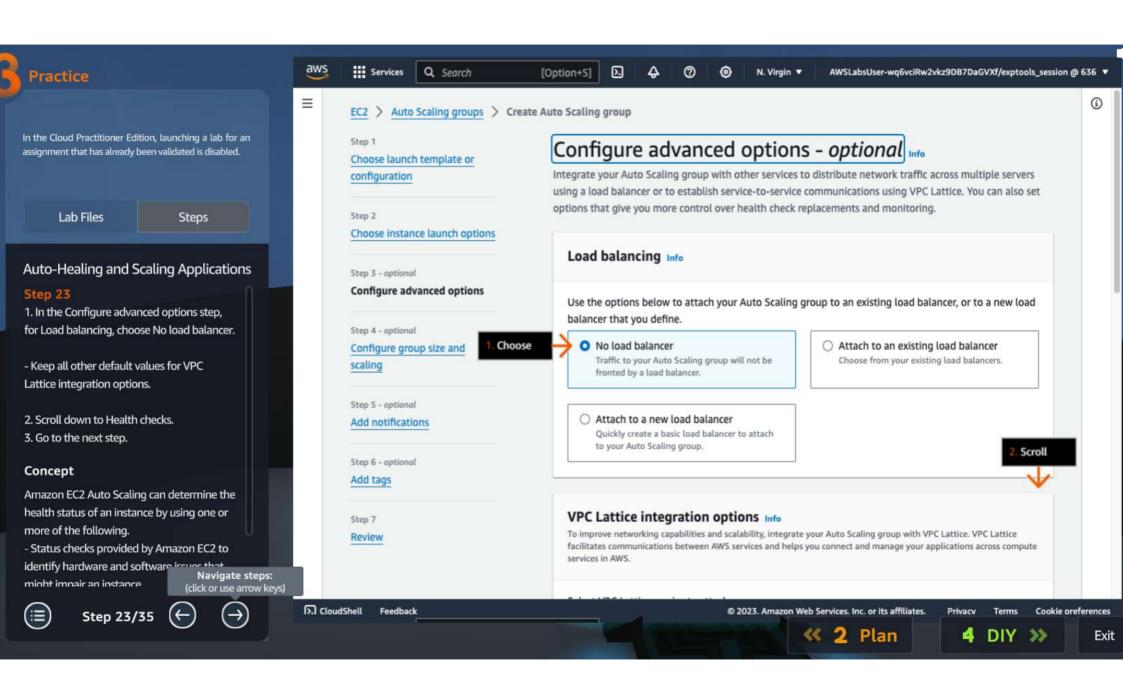


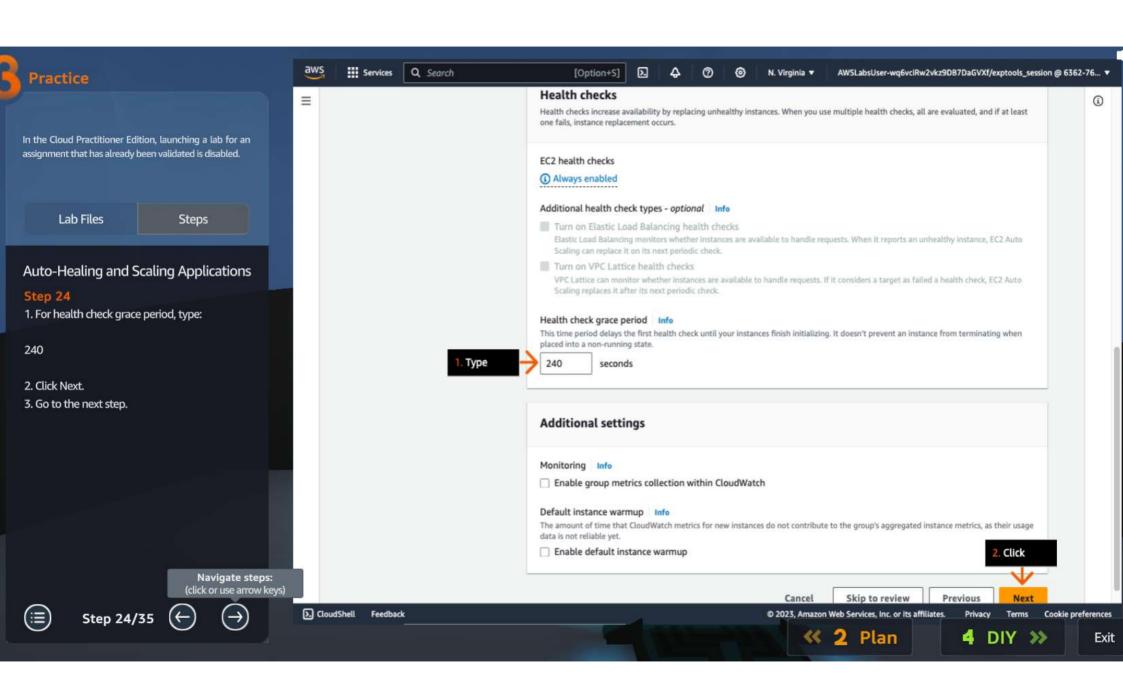
Exit

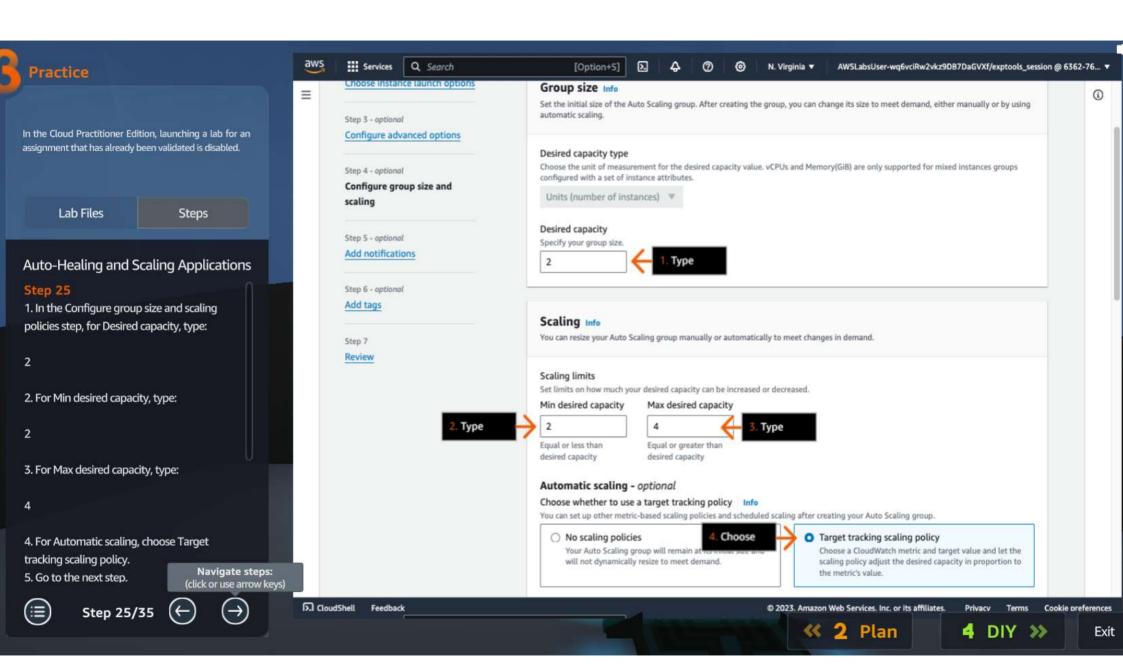
1

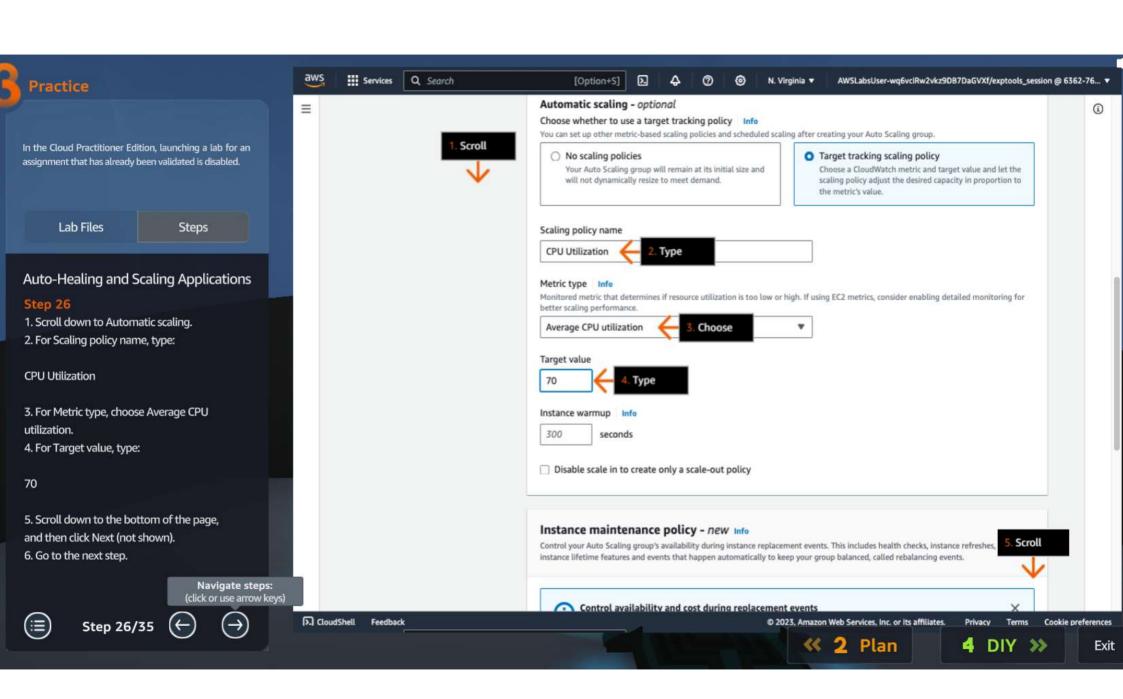


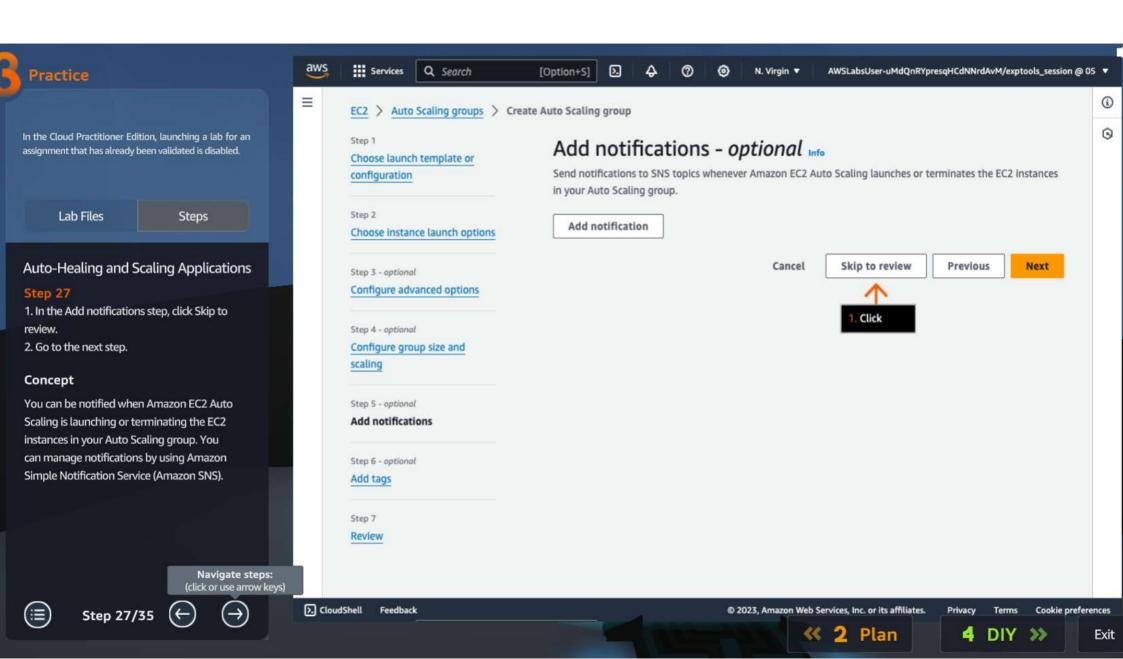


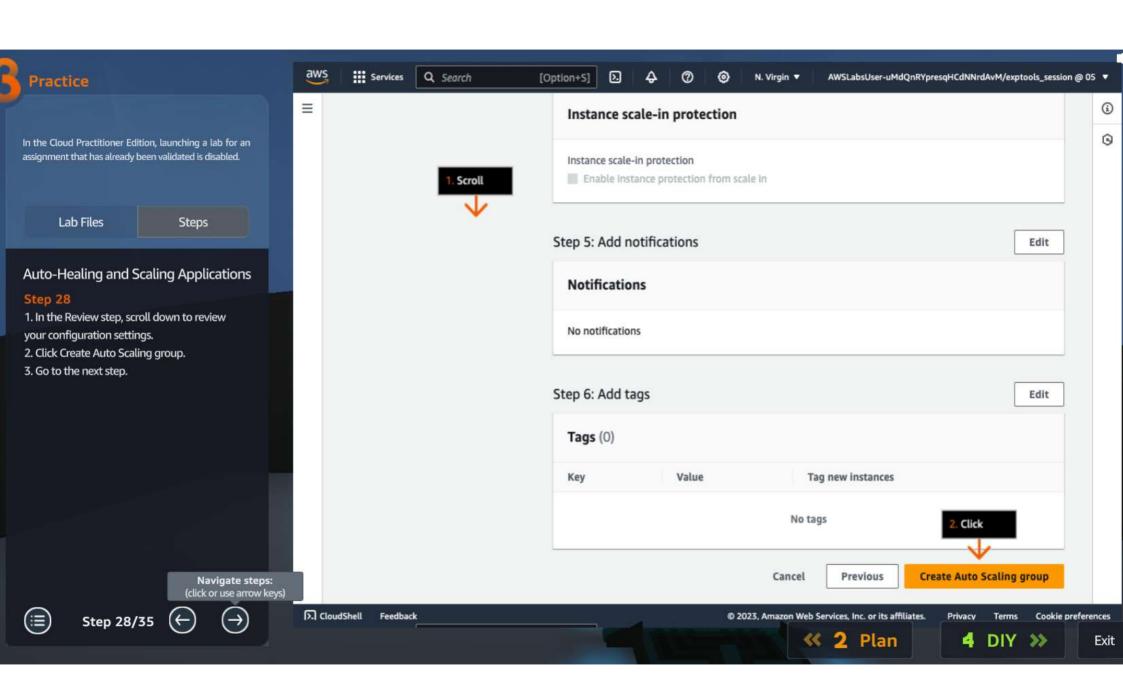


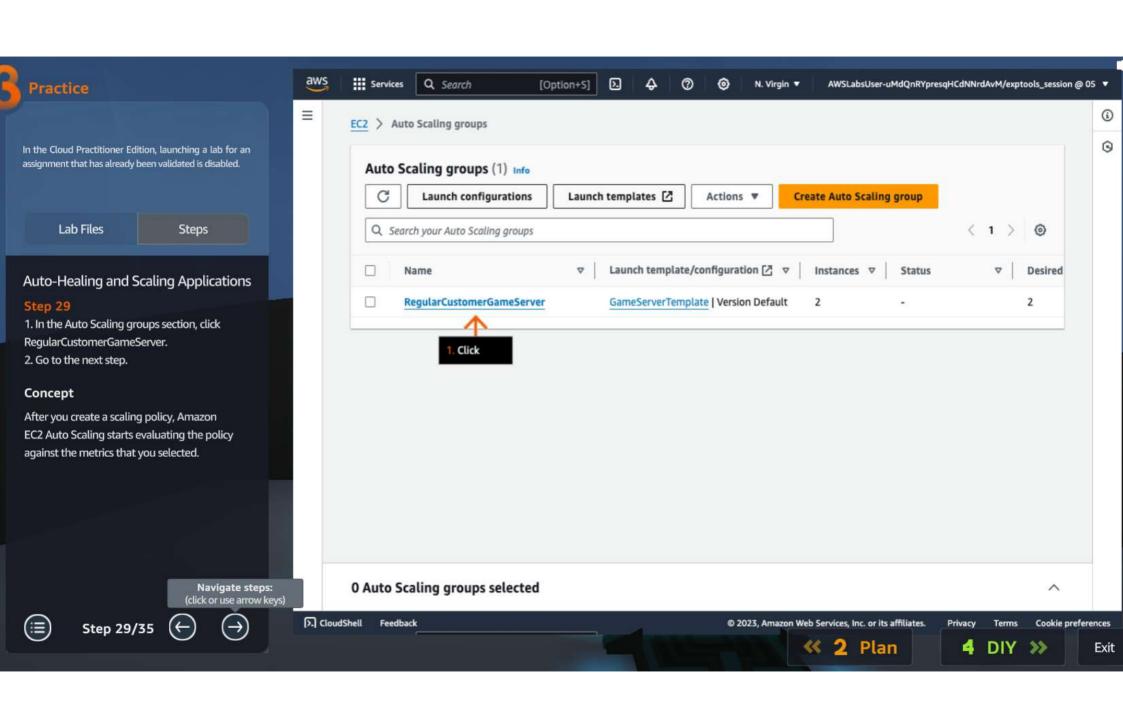


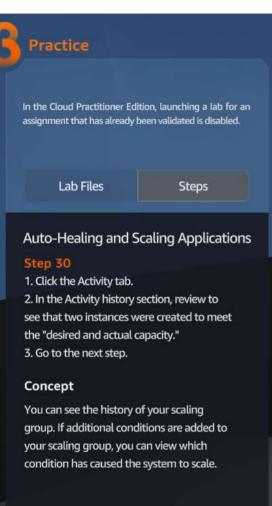












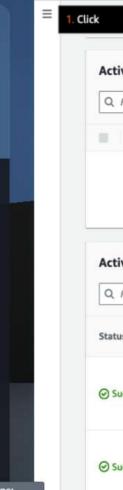
Navigate steps: (click or use arrow keys)



Step 30/35







aws Services Q Search 2 4 @ [Option+S] 0 N. Virginia ▼ AWSLabsUser-uMdQnRYpresqHCdNNrdAvM/exptools_session @ 0507-67... ▼ Automatic scaling Instance management Monitoring Instance refresh Activity C Activity notifications (0) Actions ♥ Create notification Q Filter notifications Send to On instance action No notifications are currently specified Create notification Activity history (2) C Q Filter activity history Start Status Description Cause time 2023 Launching a new EC2 At 2023-12-06T15:57:16Z a user request created an AutoScalingGroup changing the desired capacity December Successful
 Successful
instance: ifrom 0 to 2. At 2023-12-06T15:57:29Z an instance was started in response to a difference between 06, 10:57: 01588ba3fb205ad2d desired and actual capacity, increasing the capacity from 0 to 2. AM -05:00 Review 2023 Launching a new EC2 At 2023-12-06T15:57:16Z a user request created an AutoScalingGroup changing the desired capacity December Successful
 instance: ifrom 0 to 2. At 2023-12-06T15:57:29Z an instance was started in response to a difference between 06, 10:57: 0f4f413a3f77090e4 desired and actual capacity, increasing the capacity from 0 to 2. AM -05:00 2. CloudShell © 2023, Amazon Web Services, Inc. or its affiliates. Feedback

2 Plan



Exit

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