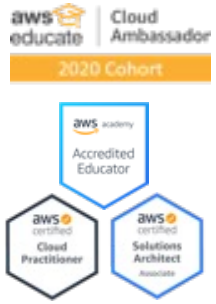
aws academy

雲端運算基礎入門
Introduction to Cloud Computing

NTPU 國立臺北大學 National Taipei University

AWS Relational Database Service (RDS): Lab 10
Creating an Amazon RDS Database Instance

Time: 2022/5/20 (Friday) 18:30-20:30
Place: 電資406室, 國立臺北大學 (NTPU)
https://meet.google.com/efw-mxft-jav



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2022-05-20

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Publications Co-Chairs, IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2013-)

Program Co-Chair, IEEE International Workshop on Empirical Methods for Recognizing Inference in TExt (IEEE EM-RITE 2012-)

Publications Chair, The IEEE International Conference on Information Reuse and Integration for Data Science (IEEE IRI)

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Outline

- **AWS RDS: Lab 10**
  Creating an Amazon RDS Database Instance
  - **AWS Academy Introduction to Cloud: Semester 1**
  - **Module 10: Databases**
  - **Lab 10 - RDS**
    - Module 10 Lab: Creating an Amazon RDS Database Instance

AWS Products and Services


Analytics


Application Integration


AR & VR


AWS Cost Management


Blockchain


Business Applications


Compute


Customer Engagement


Database


Developer Tools


End User Computing


Game Tech


Internet of Things


Machine Learning


Management & Governance


Media Services


Migration & Transfer


Mobile


Networking & Content Delivery


Quantum Technologies


Robotics


Satellite


Security, Identity & Compliance


Storage

Source: https://aws.amazon.com/

AWS Database

Amazon Aurora
High Performance Managed Relational Database

Amazon DynamoDB
Managed NoSQL Database

Amazon DocumentDB (with MongoDB compatibility)
Fully managed document database

Amazon ElastiCache
In-memory Caching System

Amazon Managed Apache Cassandra Service
Managed Cassandra-compatible database

Amazon Neptune
Fully Managed Graph Database Service

Amazon Quantum Ledger Database (QLDB)
Fully managed ledger database

Amazon RDS
Managed Relational Database Service for MySQL, PostgreSQL, Oracle, SQL Server, and MariaDB

Amazon RDS on VMware
Automate on-premises database management

Amazon Redshift
Fast, Simple, Cost-effective Data Warehousing

Amazon Timestream
Fully managed time series database

AWS Database Migration Service
Migrate Databases with Minimal Downtime

Source: https://aws.amazon.com/

AWS RDS: Lab 10
Creating an Amazon RDS Database Instance

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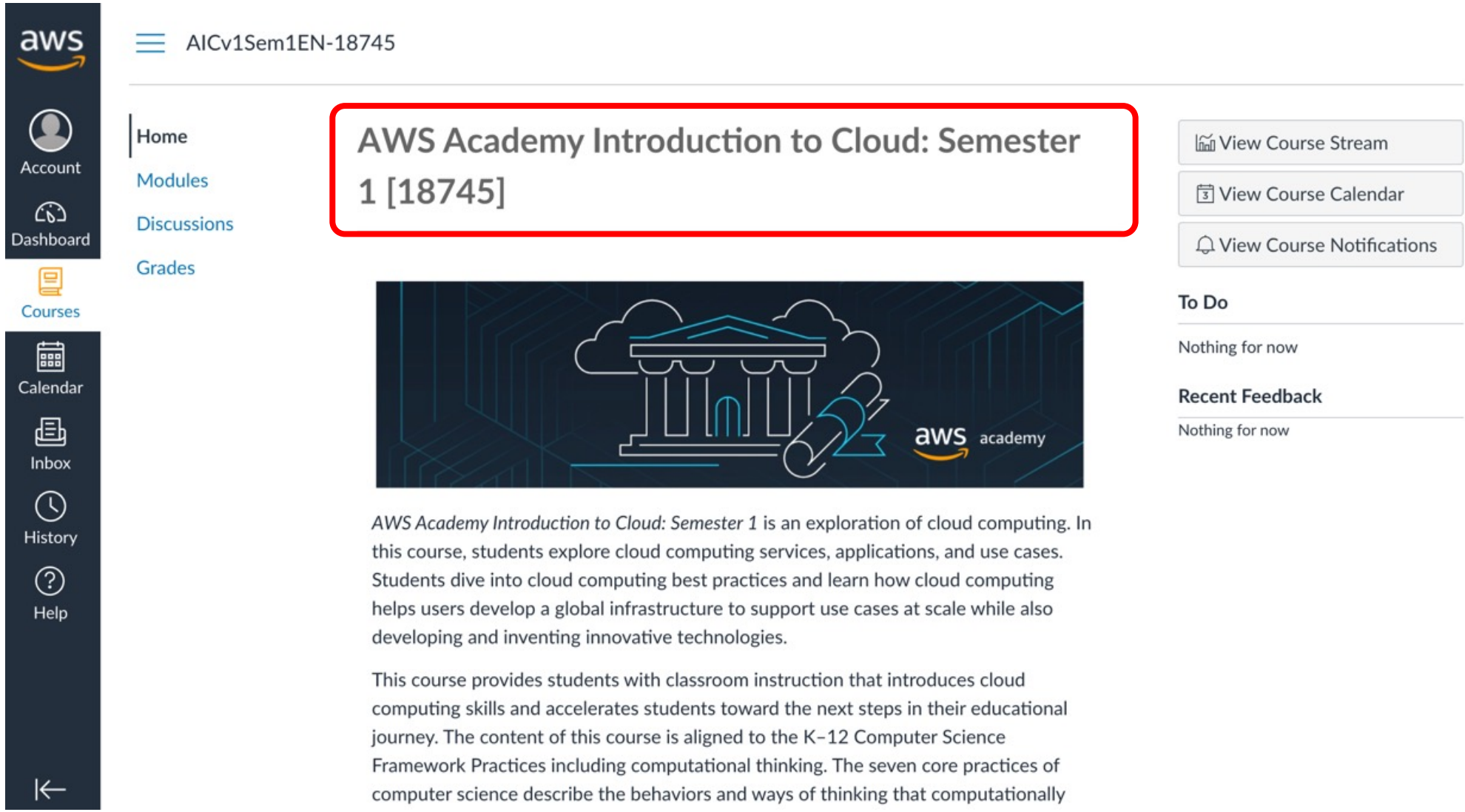
https://awsacademy.instructure.com/courses/18745



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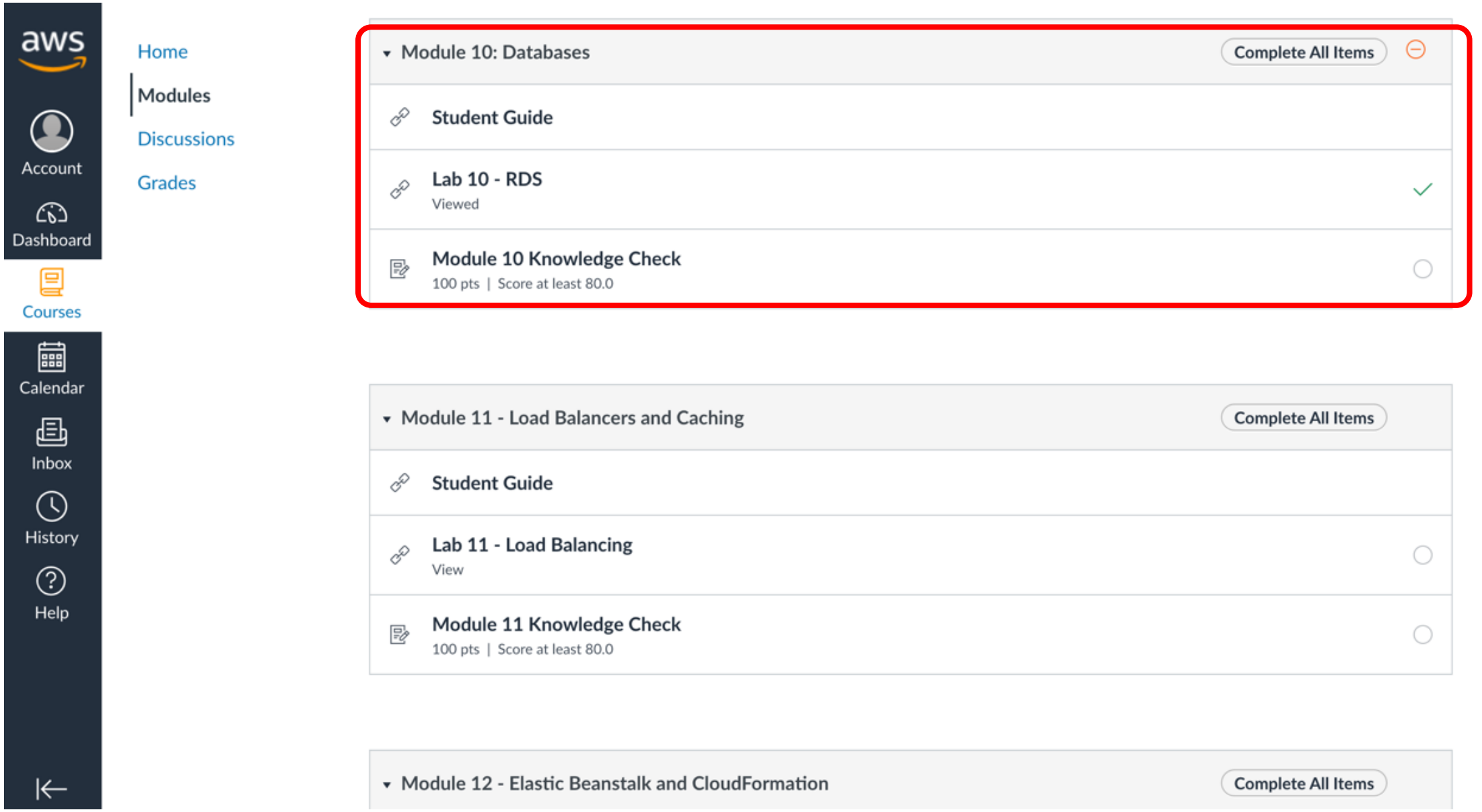
AWS Academy Introduction to Cloud: Semester 1 [18745]
Module 10 Databases: Lab 10 - RDS



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Amazon Databases

aws

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AWS Databases | Overview | Database Services | Why AWS for Databases | Learn | Migrations | Customers

Amazon Aurora Serverless v2 is Now Available | Scale instantly to hundreds of thousands of transactions in seconds »

AWS Cloud Databases

Modernize your data infrastructure with fully managed, purpose-built databases

Choose the right purpose-built engine

Build use case-driven, highly scalable, distributed applications suited to your specific needs. AWS offers 15+ purpose-built engines to support diverse data models, including relational, key-value, document, in-memory, graph, time series, wide column, and ledger databases.

Achieve performance at scale

Start small and scale as your applications grow with relational databases that are 3-5X faster than popular alternatives, or non-relational databases that give you microsecond to sub-millisecond latency. Match your

Run fully managed databases

Free your teams from time-consuming database tasks like server provisioning, patching, and backups. AWS fully managed database services provide continuous monitoring, self-healing storage, and automated scaling to help you focus on application development.

Rely on high availability and security

Support multi-region, multi-primary replication, and provide full data oversight with multiple levels of security, including network isolation and end-to-end encryption. AWS databases deliver the high availability, reliability, and

AWS Databases: Break Free to Save, Grow, and Innovate Faster (2:02)

https://aws.amazon.com/products/databases/

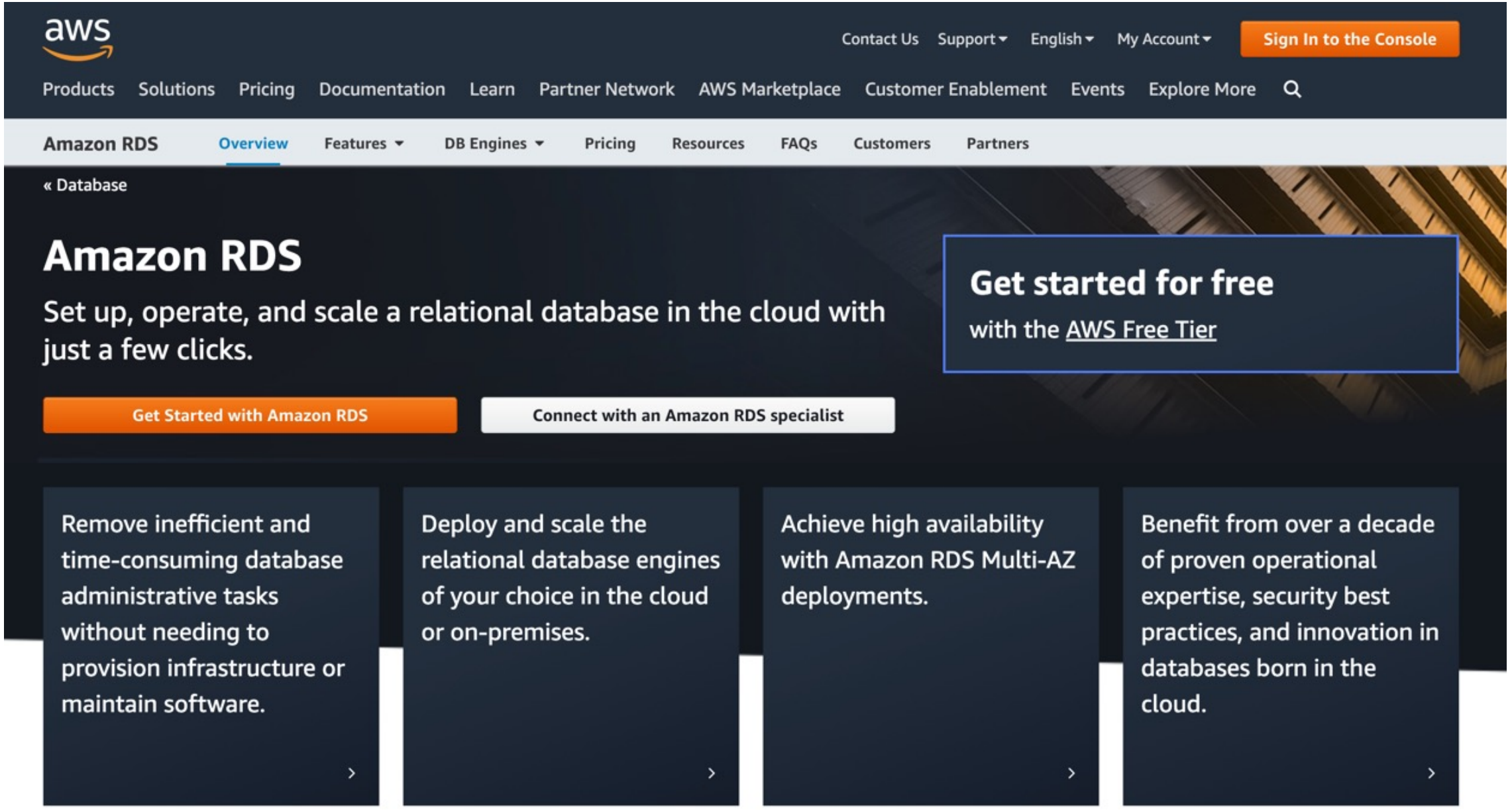
Amazon Databases

Database services

Database type	Use cases	AWS service
Relational	Traditional applications, enterprise resource planning (ERP), customer relationship management (CRM), ecommerce	Amazon Aurora, Amazon RDS, Amazon Redshift
Key-value	High-traffic web applications, ecommerce systems, gaming applications	Amazon DynamoDB
In-memory	Caching, session management, gaming leaderboards, geospatial applications	Amazon ElastiCache, Amazon MemoryDB for Redis
Document	Content management, catalogs, user profiles	Amazon DocumentDB (with MongoDB compatibility)
Wide column	High-scale industrial apps for equipment maintenance, fleet management, and route optimization	Amazon Keyspaces
Graph	Fraud detection, social networking, recommendation engines	Amazon Neptune
Time series	Internet of Things (IoT) applications, DevOps, industrial telemetry	Amazon Timestream
Ledger	Systems of record, supply chain, registrations, banking transactions	Amazon Ledger Database Services (QLDB)

https://aws.amazon.com/products/databases/

Amazon Relational Database Service (RDS)



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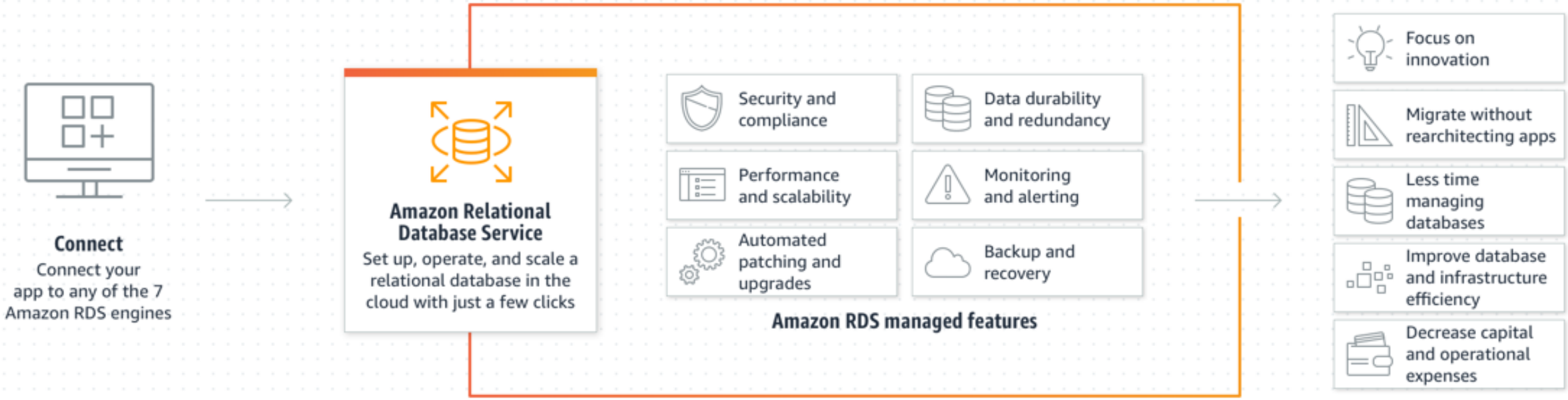
Amazon Relational Database Service (RDS)



https://aws.amazon.com/rds/

Module 10: Databases

- In this module, you will learn about the Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, and data warehousing with Amazon Redshift.
- You will also compare relational and nonrelational databases and online transaction processing (OLTP) and online analytic processing (OLAP).

Module 10: Databases
Module description

- In this module, you will recommend a relational or nonrelational database depending on a given scenario.
- You will create an RDS DB instance.
- You will also learn about and discuss appropriate usage of relational and nonrelational database systems.

OLTP and OLAP

- **Many different types of databases are available.**
- **To decide which type of database you need, it is important to know how the data will be processed.**
- **There are two types of data processing: online transaction processing (OLTP) and online analytic processing (OLAP).**

Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

AWS database services

- **Amazon RDS is the classic relational database that uses SQL, Oracle, Aurora, or other similar database systems.**
  - **Think of this as a gradebook in which each student is a row and all students are attached to the same number of assignments (columns).**
  - **Businesses can use code to search for specific data based on the information in the rows and columns.**
  - **Amazon RDS is useful for companies that are storing a moderate amount of data that is uniform in structure, meaning each unique ID (such as student name) is attached to the same number of data points (grades).**

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Amazon Relational Database Service (Amazon RDS)

- **Amazon RDS is primarily used for OLTP because it has better methods for maintaining the integrity and consistency of the database when processing data.**

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DynamoDB

- **DynamoDB is a nonrelational database, meaning that you can't use traditional systems such as SQL or Aurora.**
- **Each item in the database is stored as a key-value pair or a JavaScript Object Notation (JSON) file.**
- **This means that each row can have a different number of columns.**
- **The entries do not all have to be matched in the same way.**
- **This permits flexibility in processing that works well for blogging, gaming, and advertising.**

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Aurora

- **Aurora is a relational database engine that is specifically made to work with the AWS Cloud.**
- **Aurora is up to five times faster than standard MySQL databases and three times faster than standard PostgreSQL databases.**
- **It is designed to provide the security, availability, and reliability of commercial databases at one-tenth the cost.**
- **Aurora is fully managed by Amazon RDS, which automates time-consuming administrative tasks such as hardware provisioning, database setup, patching, and backups.**

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Amazon Redshift

- **Amazon Redshift is a fast, fully managed data warehouse that makes it efficient and cost effective to analyze all your data using standard SQL and your existing BI tools.**

AWS Academy Introduction to Cloud: Semester 1 [18745]
Module 10 Databases: Lab 10 - RDS

Module 10 Lab: Creating an Amazon RDS Database Instance

Lab overview

Follow these steps to create an Amazon Relational Database Service (Amazon RDS) database (DB) instance that maintains data used by a web application.

Duration

This lab requires approximately **20 minutes** to complete.

Module 10 Lab:
Creating an Amazon RDS Database Instance

- Access the AWS Management Console
- Task 1. Set up an RDS DB instance
- Task 2. Download and install SQL Server Management Studio
- Task 3. Make your database publicly accessible
- Task 4. Update your VPC security group
- Task 5. Connect to your DB instance
- Task 6. Explore the structure of the relational database
- Lab complete

AWS Academy Introduction to Cloud: Semester 1 [18745]

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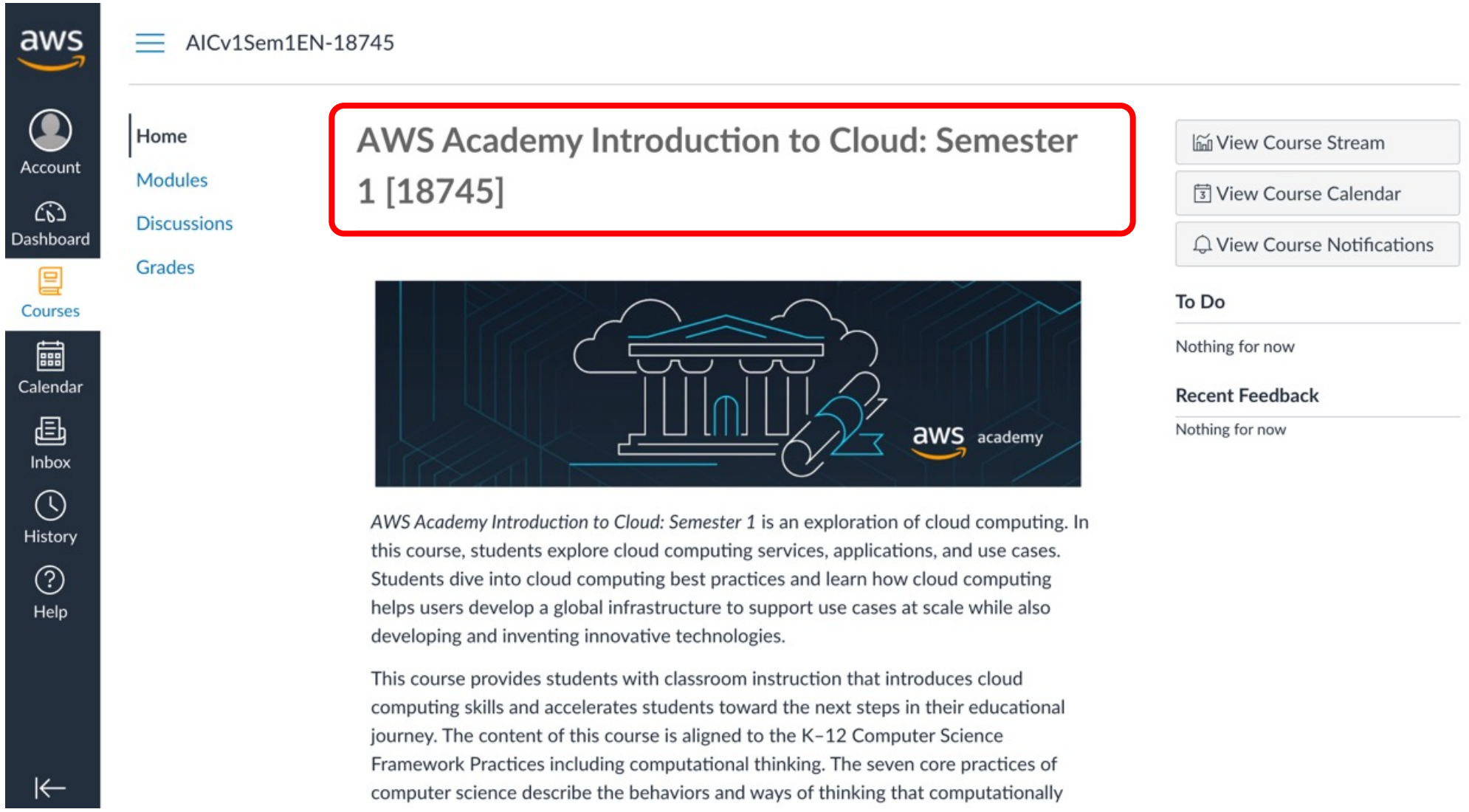

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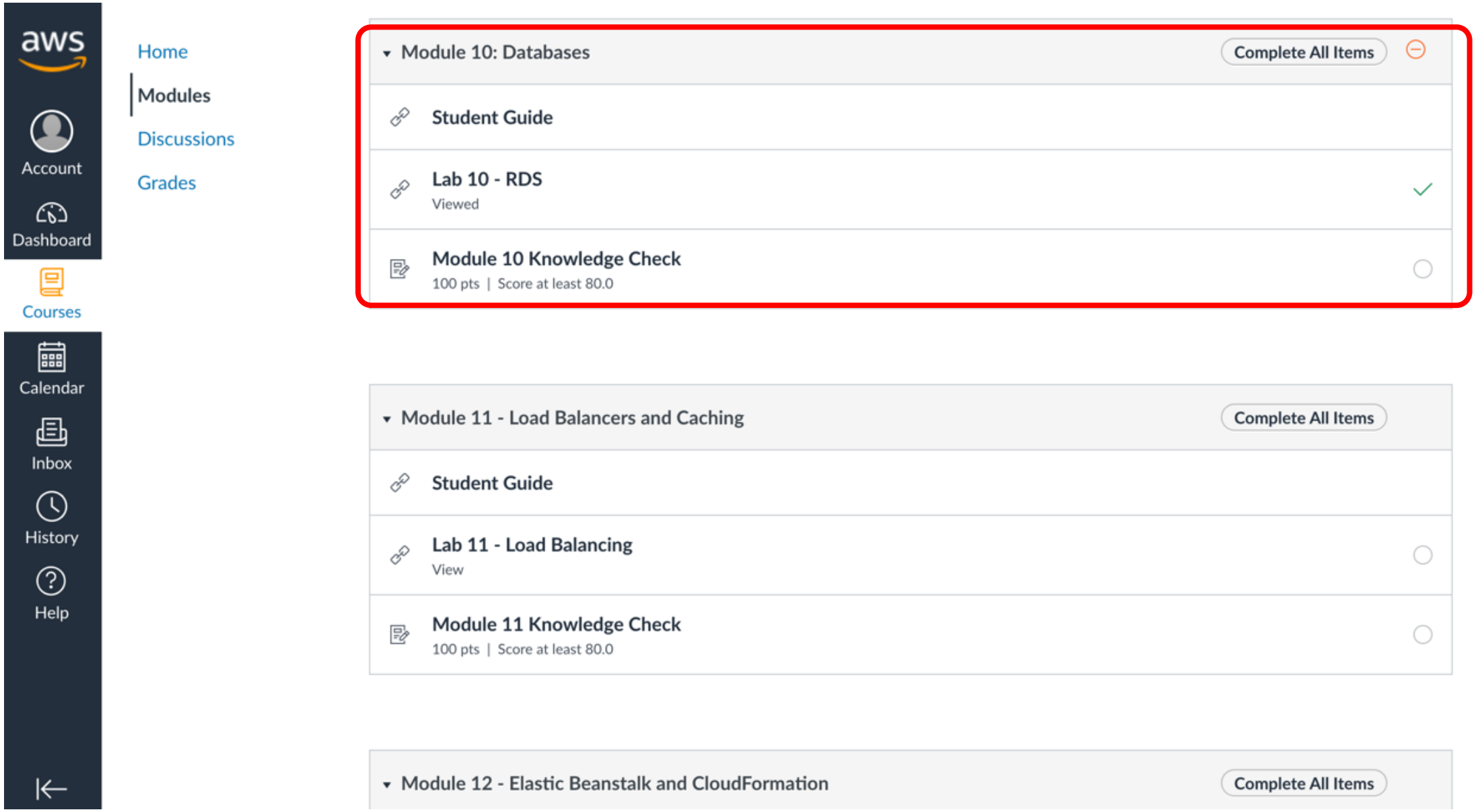
AWS Academy Introduction to Cloud: Semester 1 [18745]
Module 10 Databases: Lab 10 - RDS



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Module 10 Databases: Lab 10 - RDS

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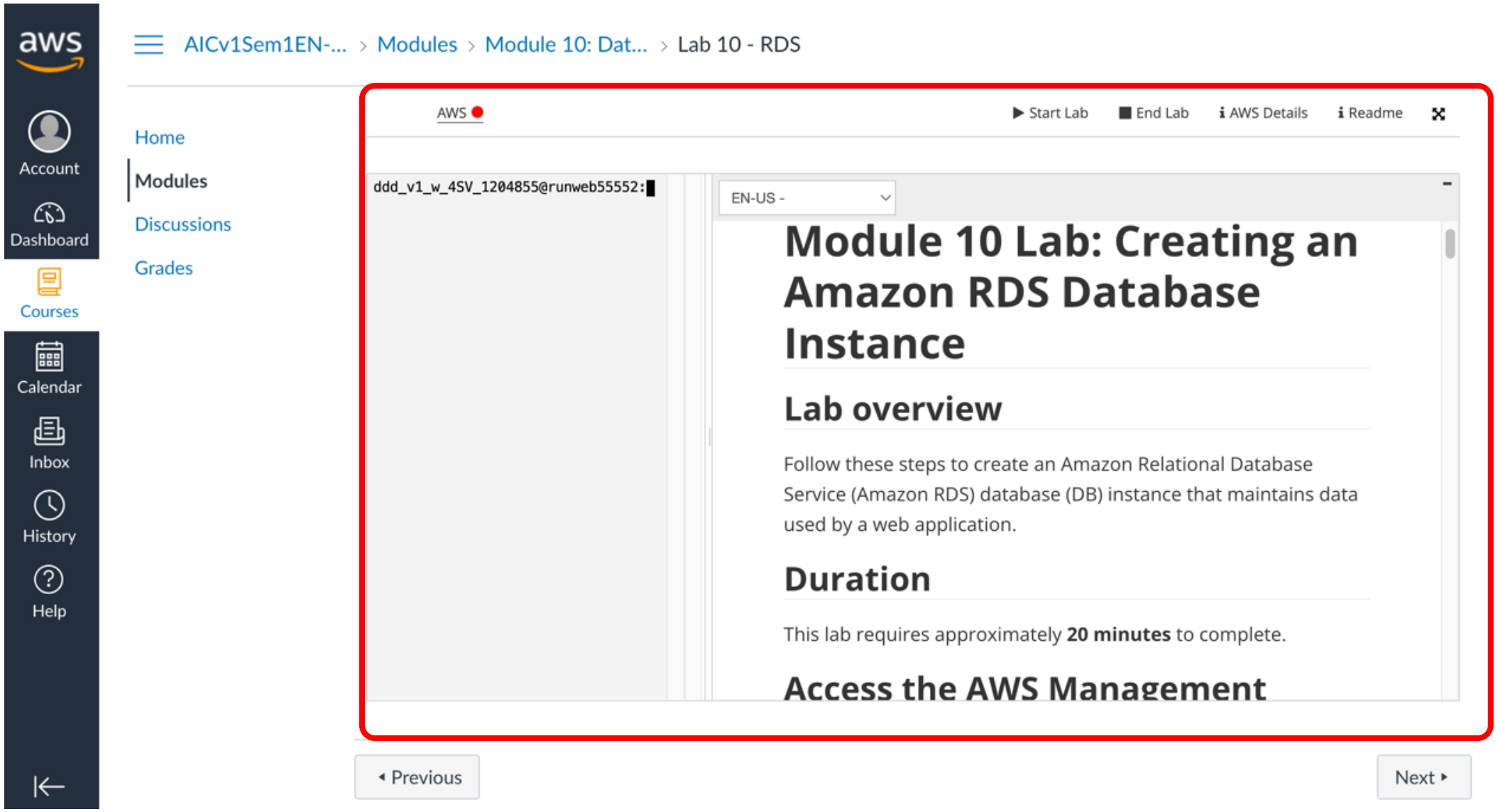

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Module 10 Databases: Lab 10 - RDS

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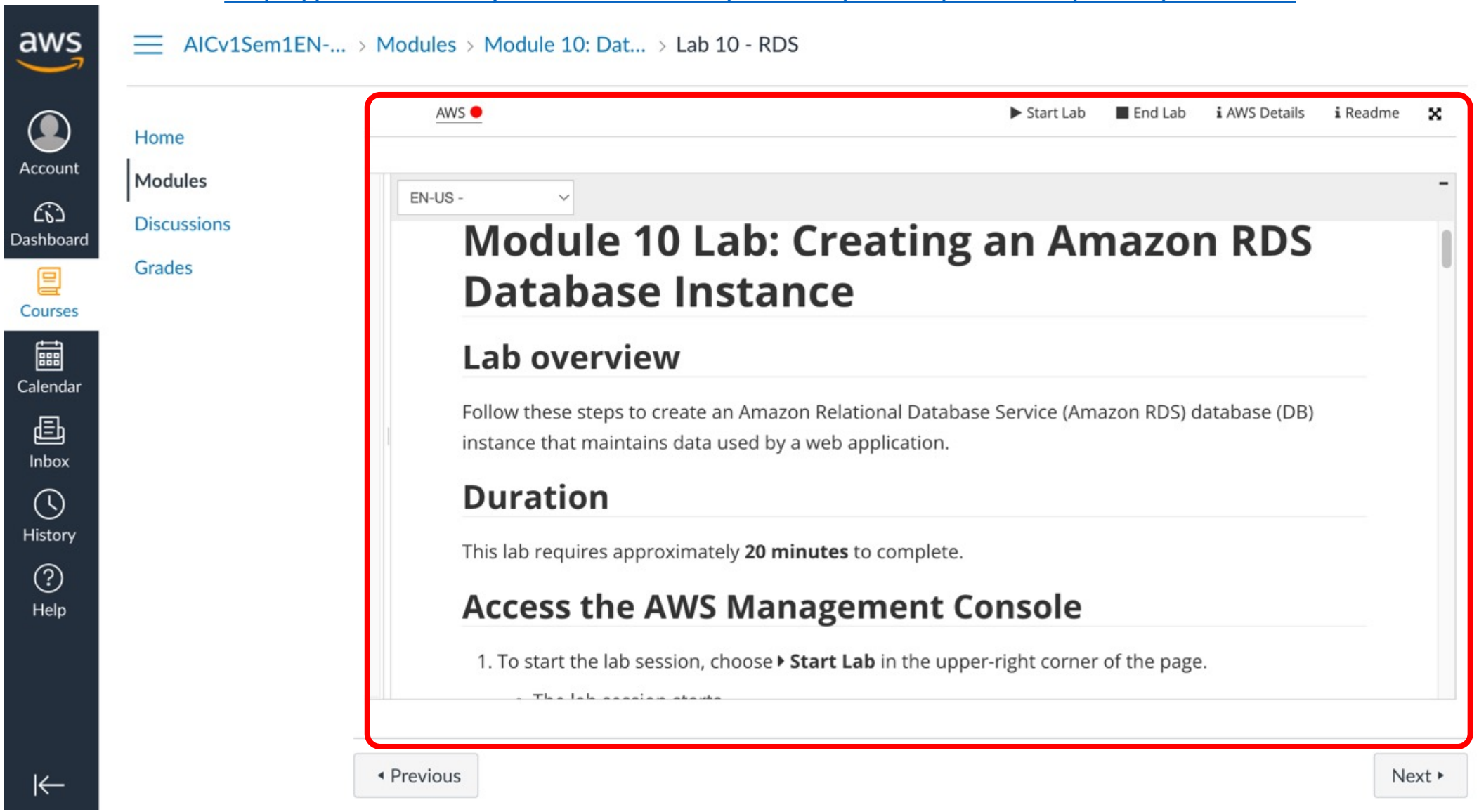


Access the AWS Management Console

1.To start the lab session, choose **Start Lab** in the upper-right corner of the page.

The lab session starts.

A timer displays in the upper-right corner of the page and shows the time remaining in the session.

Tip: To refresh the session length at any time, choose **Start Lab** again before the timer reaches 0:00.

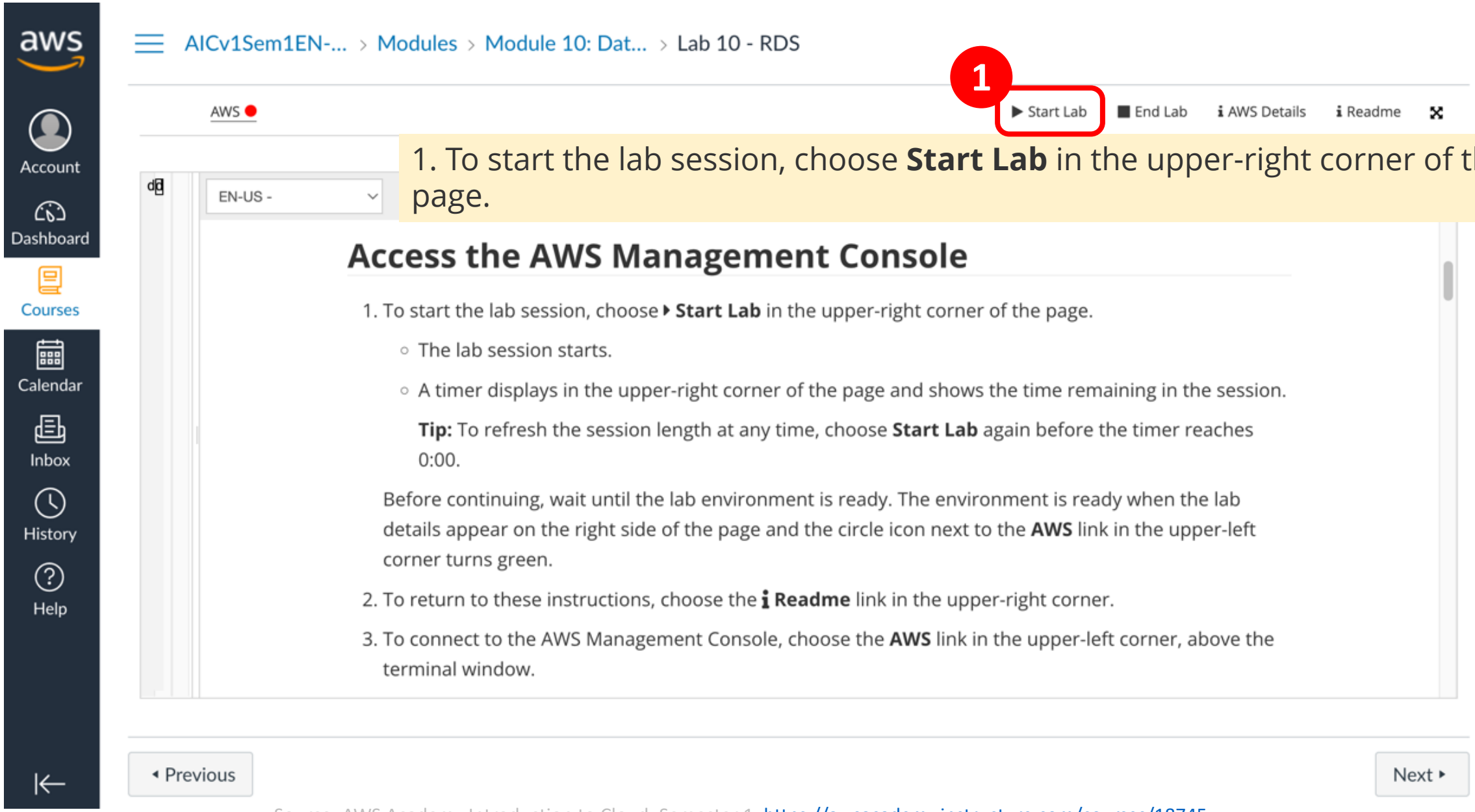
Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.

2.To return to these instructions, choose the **Readme** link in the upper-right corner.

3.To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

A new browser tab opens and connects you to the AWS Management Console.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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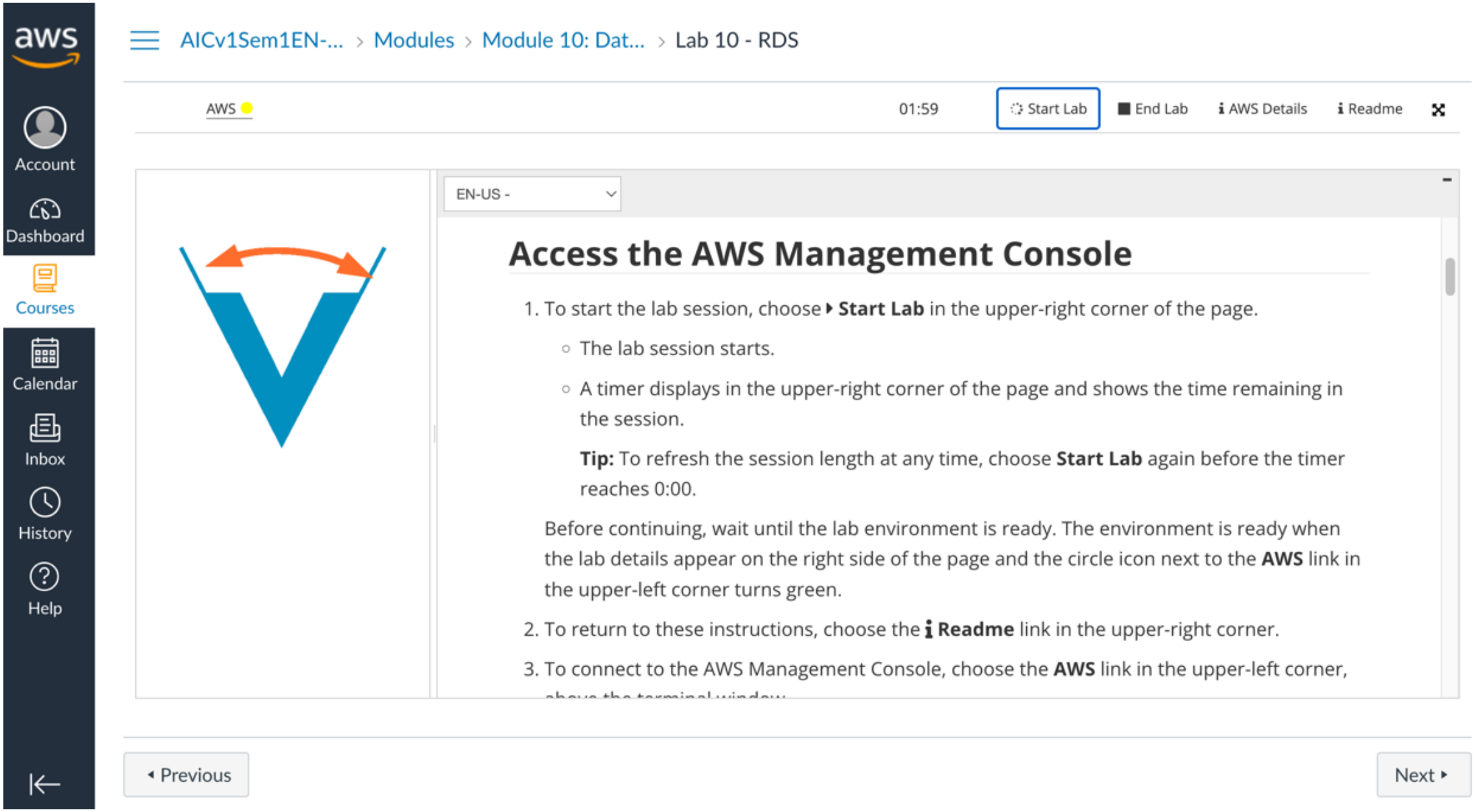
Module 10 Databases: Lab 10 - RDS



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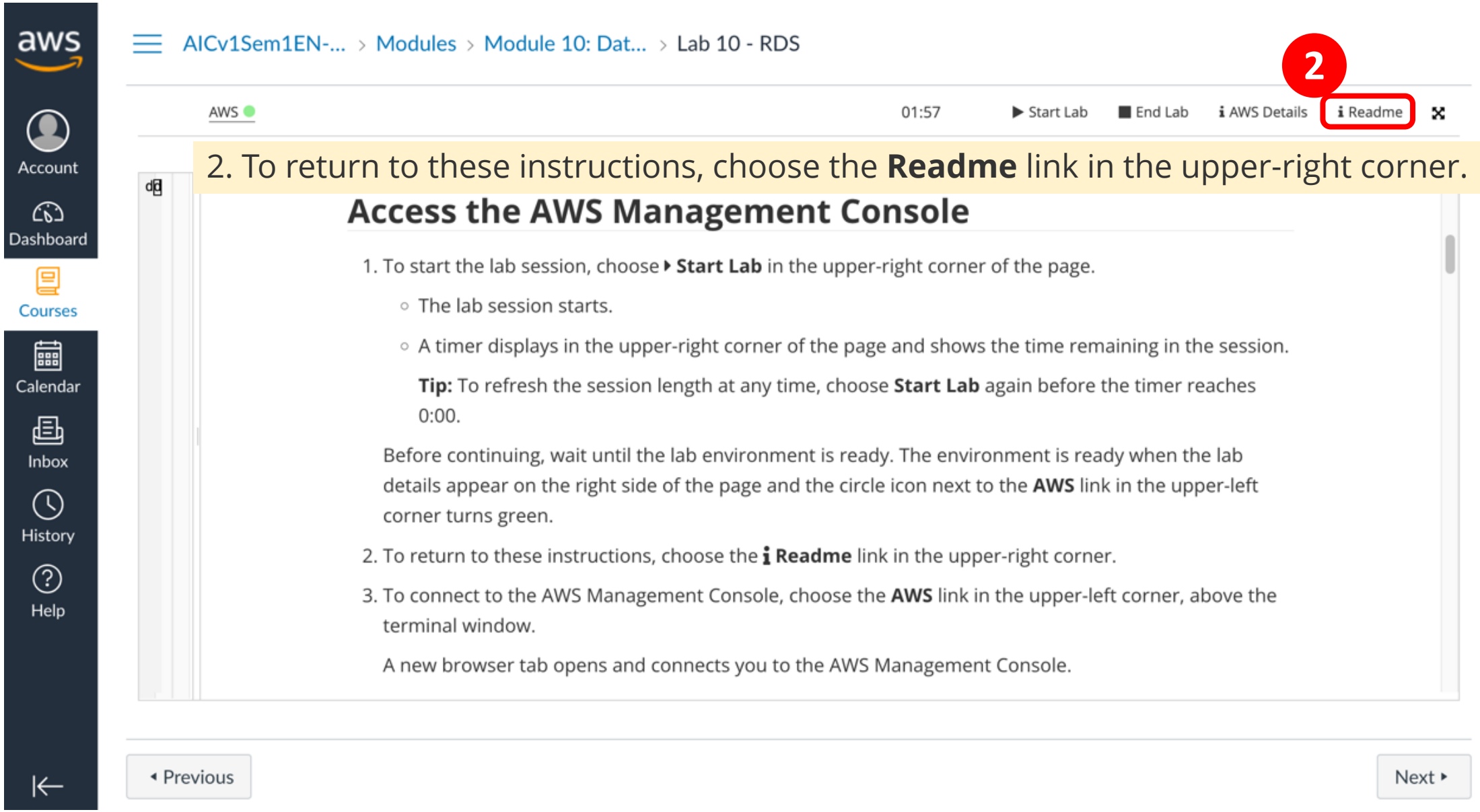
Module 10 Databases: Lab 10 - RDS



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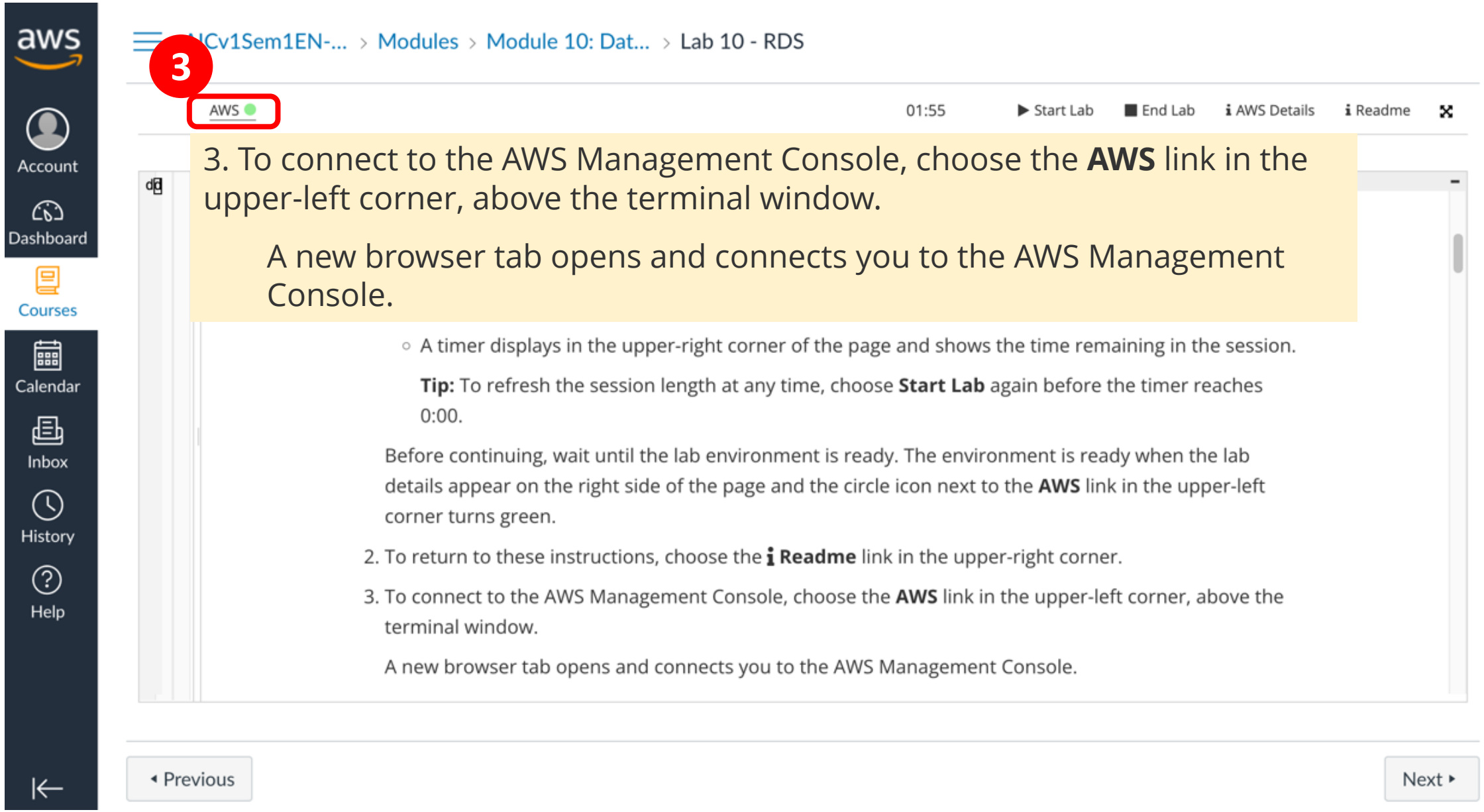
Module 10 Databases: Lab 10 - RDS



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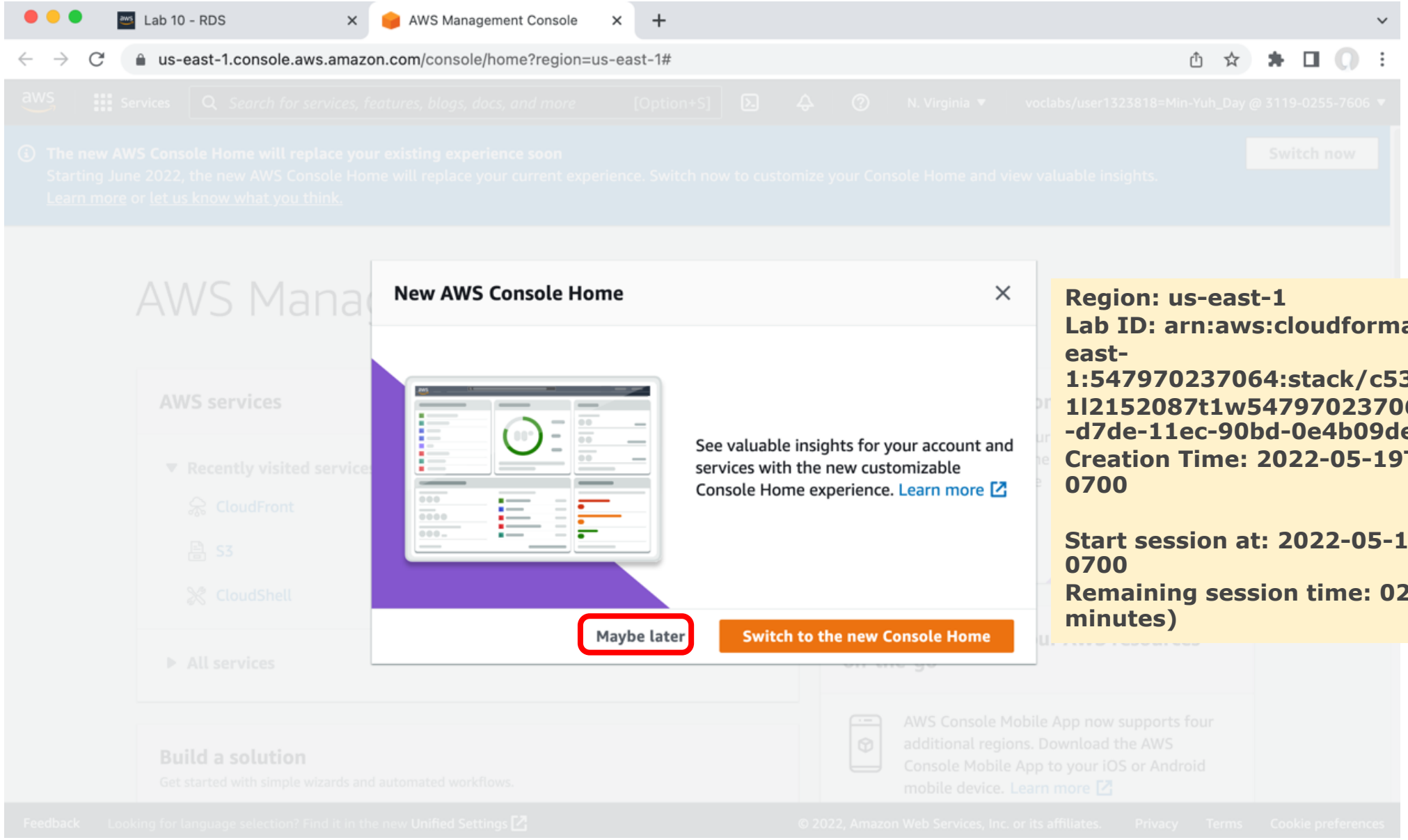
Module 10 Databases: Lab 10 - RDS



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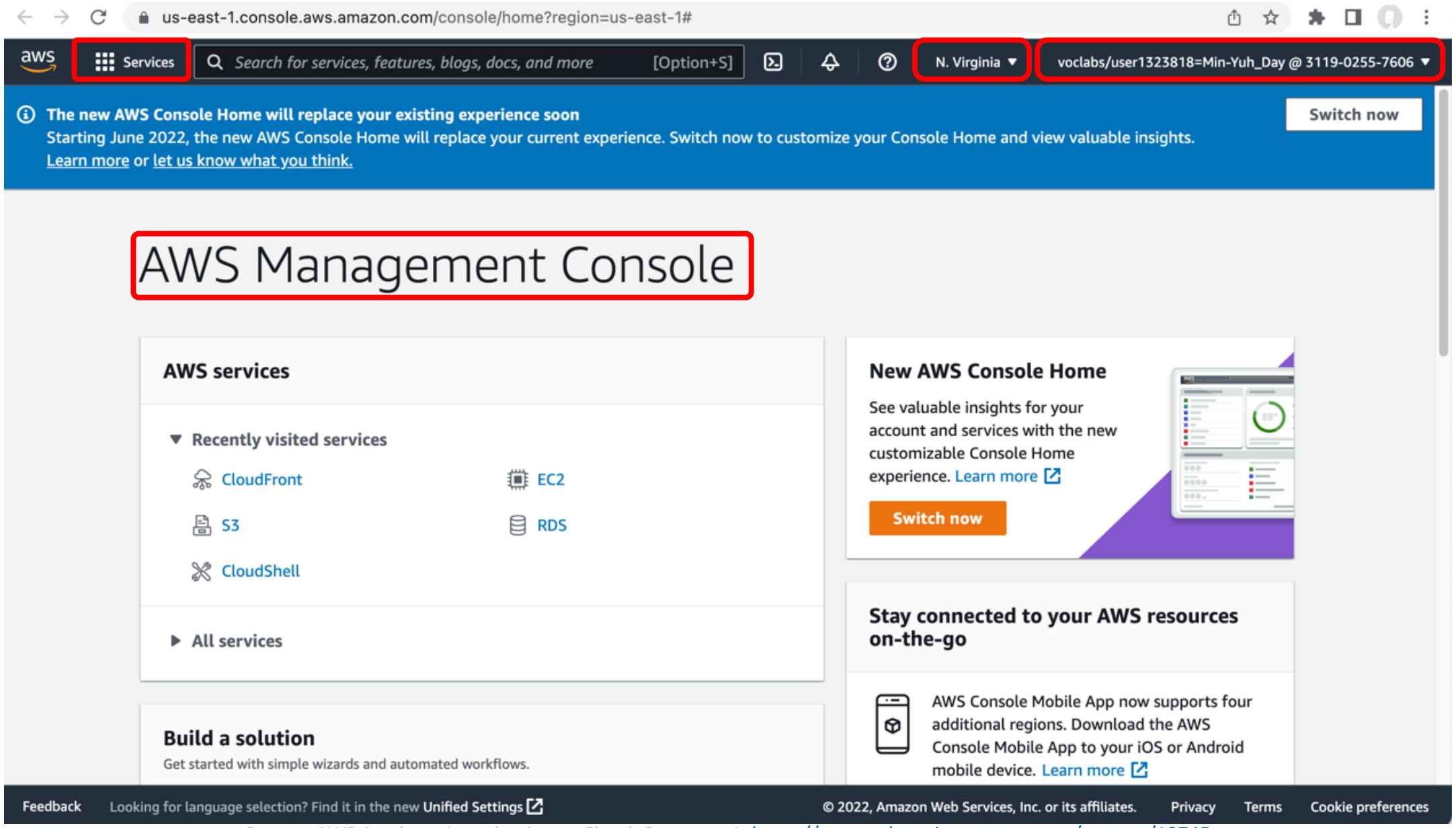
Module 10 Databases: Lab 10 - RDS



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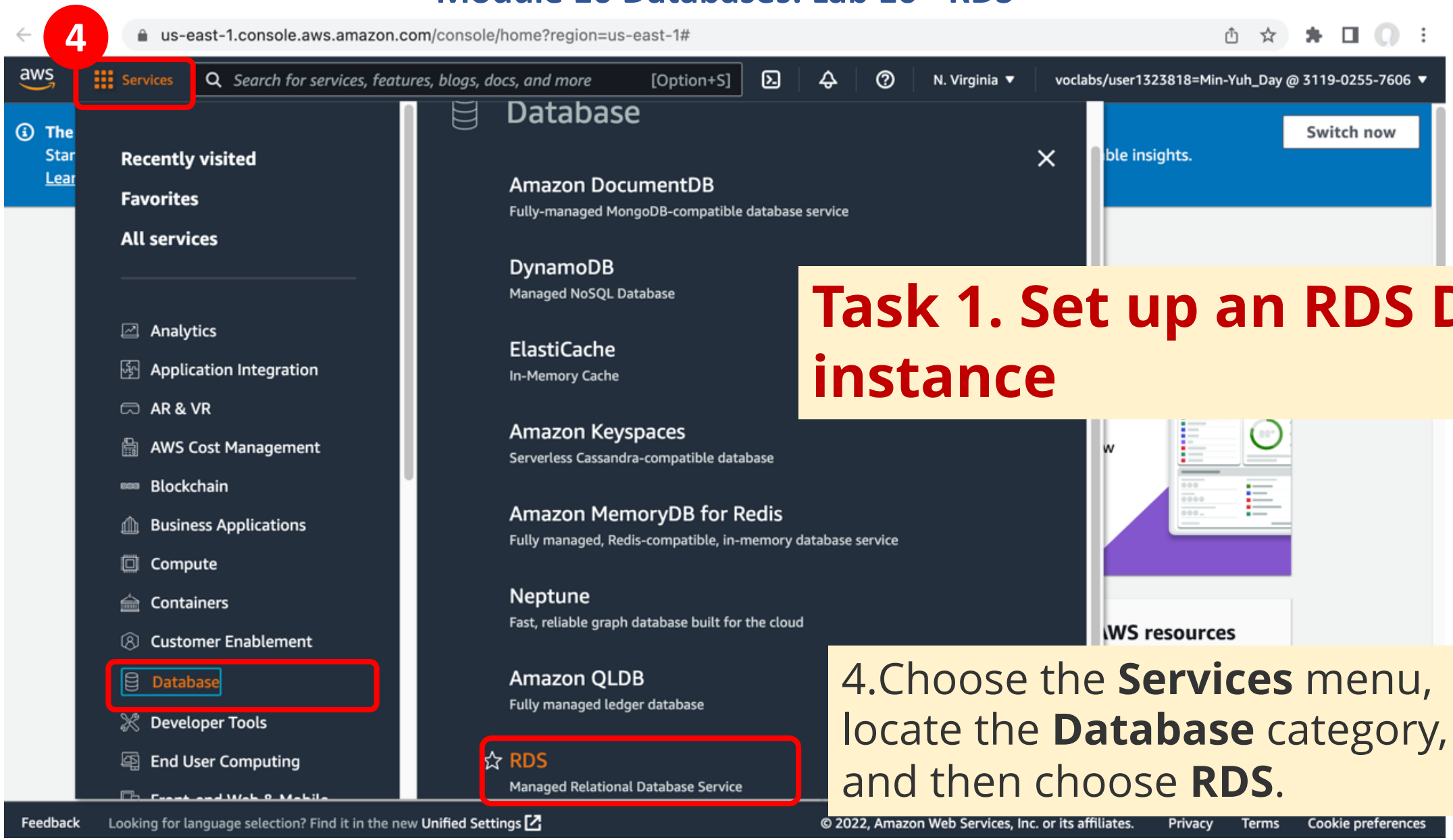
Task 1. Set up an RDS DB instance

4.Choose the **Services** menu, locate the **Database** category, and then choose **RDS**.
5.Choose **Create database**.
6.In the **Choose a database creation method** section, choose **Easy create**.
7.In the **Configuration** section, configure:
For **Engine type**, choose **Microsoft SQL Server**.
For **DB instance size**, choose **Free tier**.
Check the box next to **Auto generate a password**.
8.Choose **Create database**.
Your new database displays in the list of databases. The status is *Creating*.
9.In the banner at the top of the page, choose **View credential details**.
Your login credentials display.
10.Save the credential information to a text editor to user later in this lab.
11.To close the pop-up window, choose **Close**.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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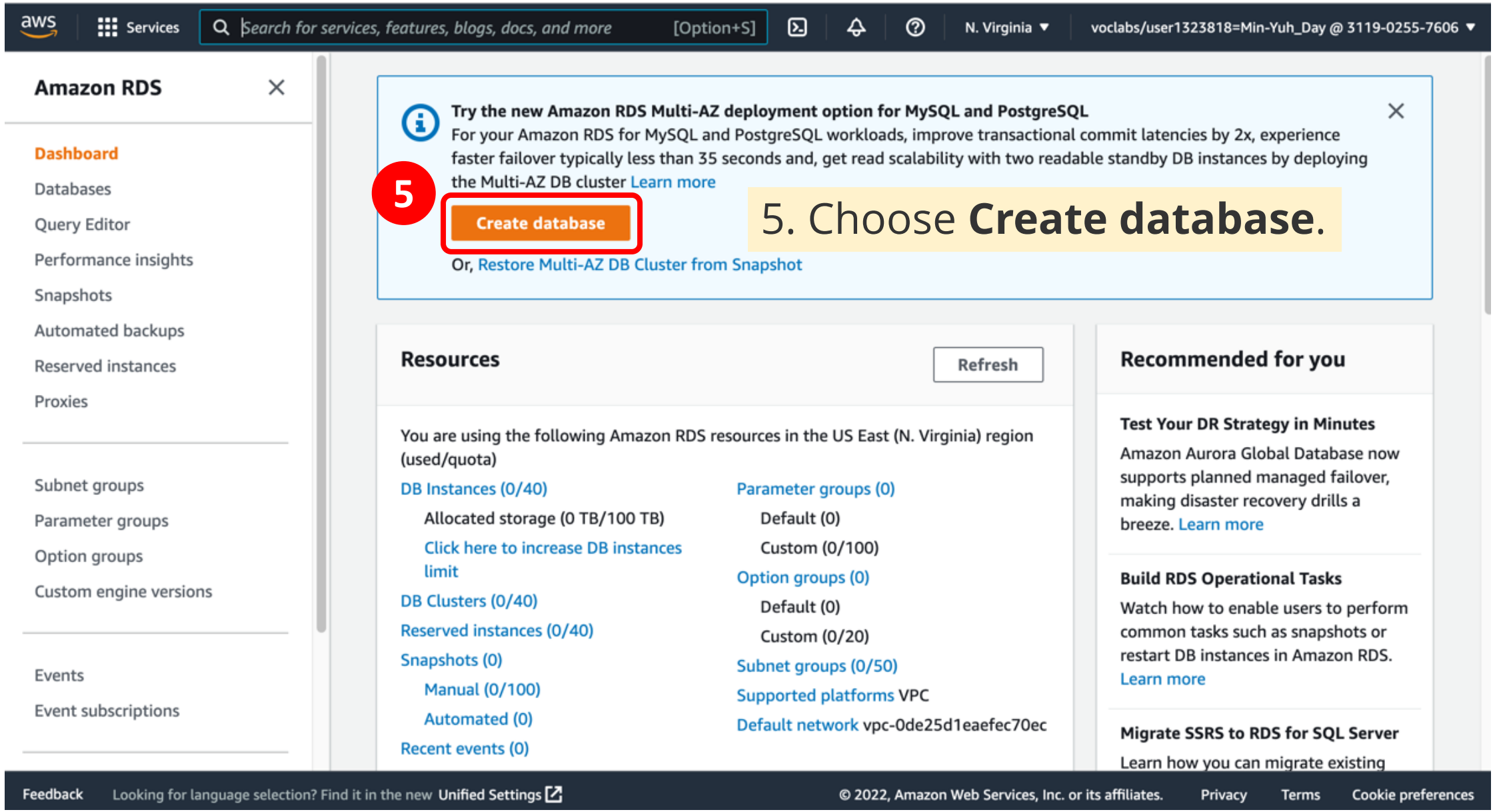

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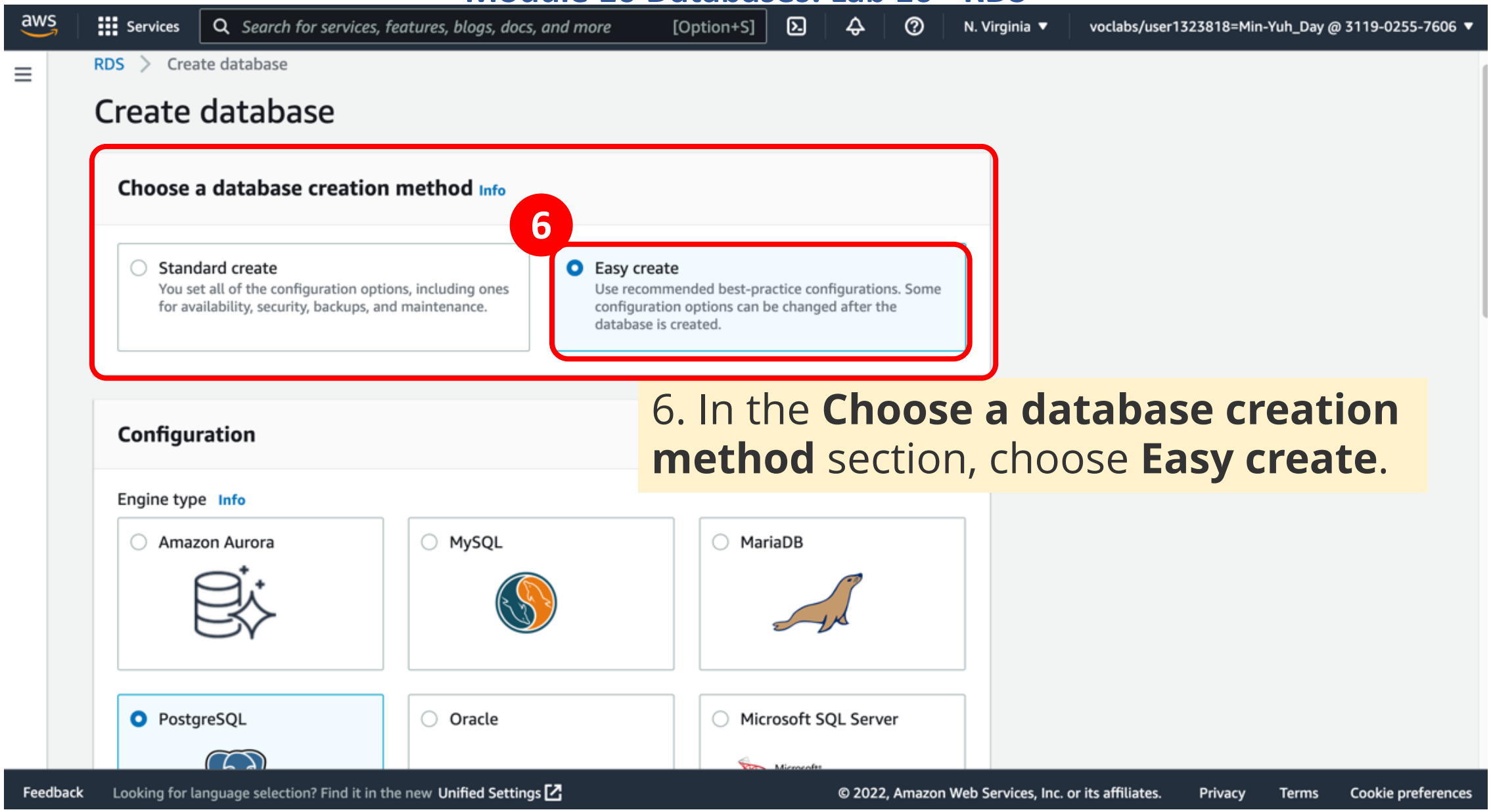
Module 10 Databases: Lab 10 - RDS



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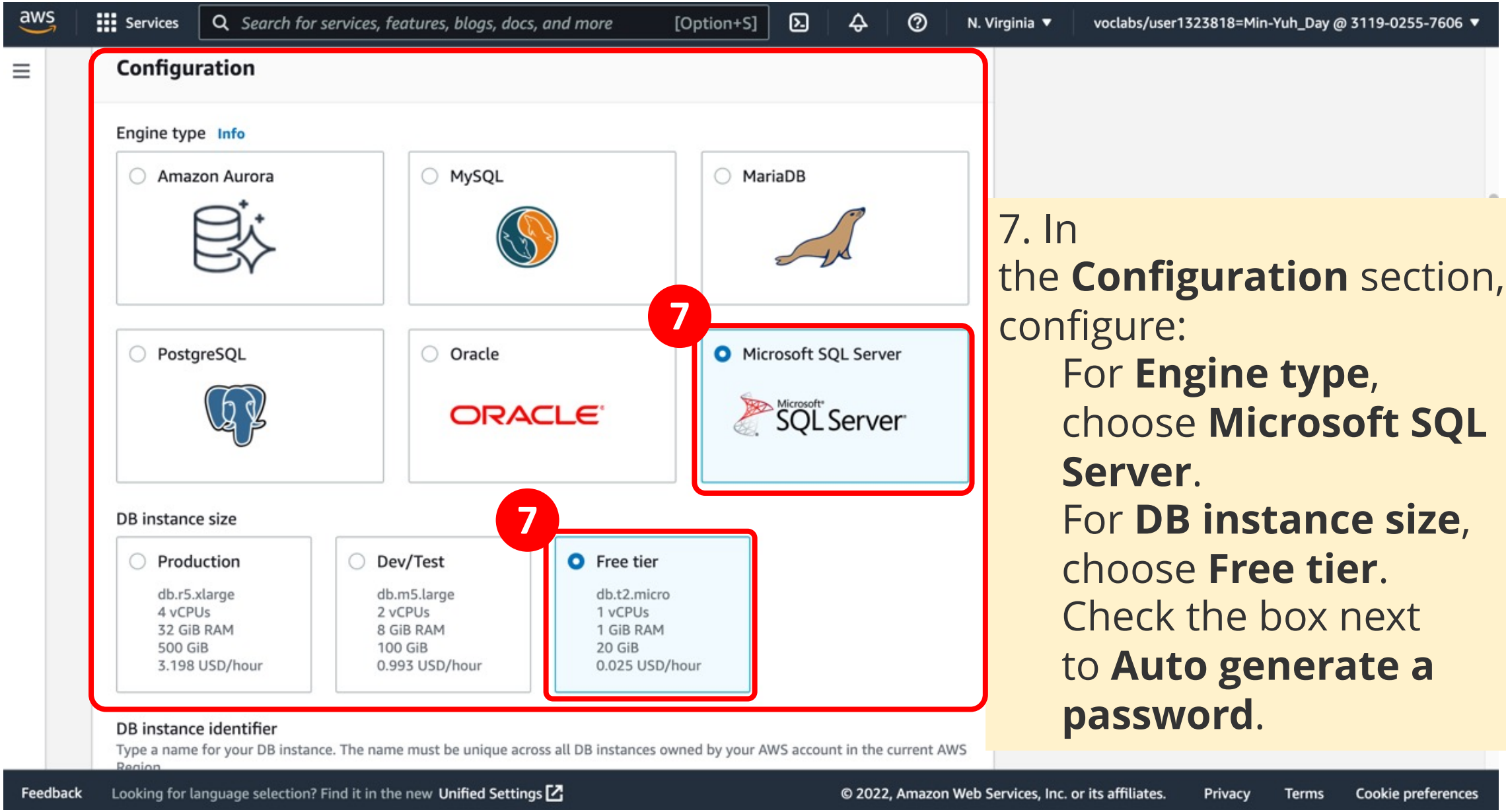
Module 10 Databases: Lab 10 - RDS



7. In the **Configuration** section, configure:

   For **Engine type**, choose **Microsoft SQL Server**.

   For **DB instance size**, choose **Free tier**.

   Check the box next to **Auto generate a password**.

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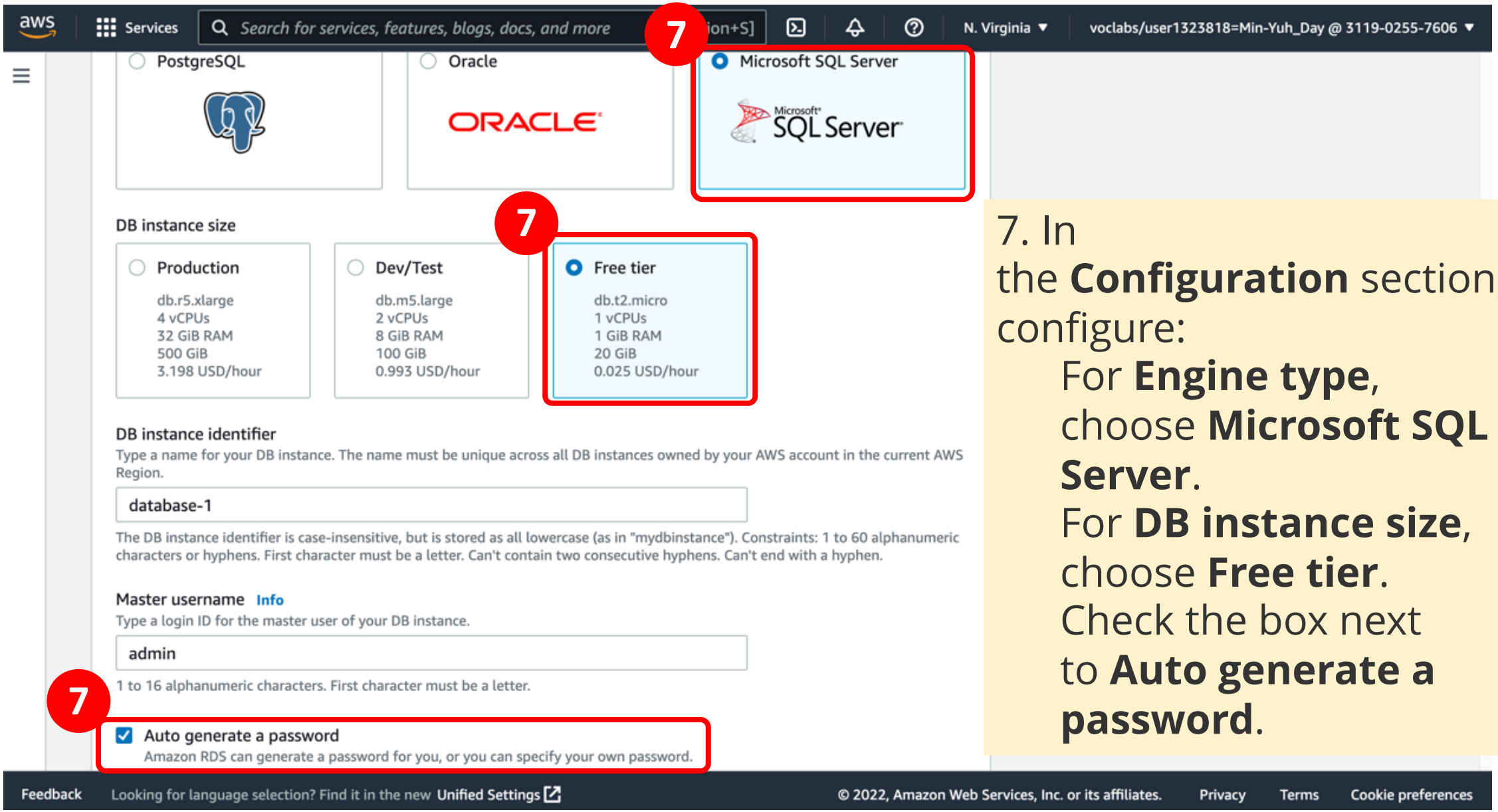
Module 10 Databases: Lab 10 - RDS



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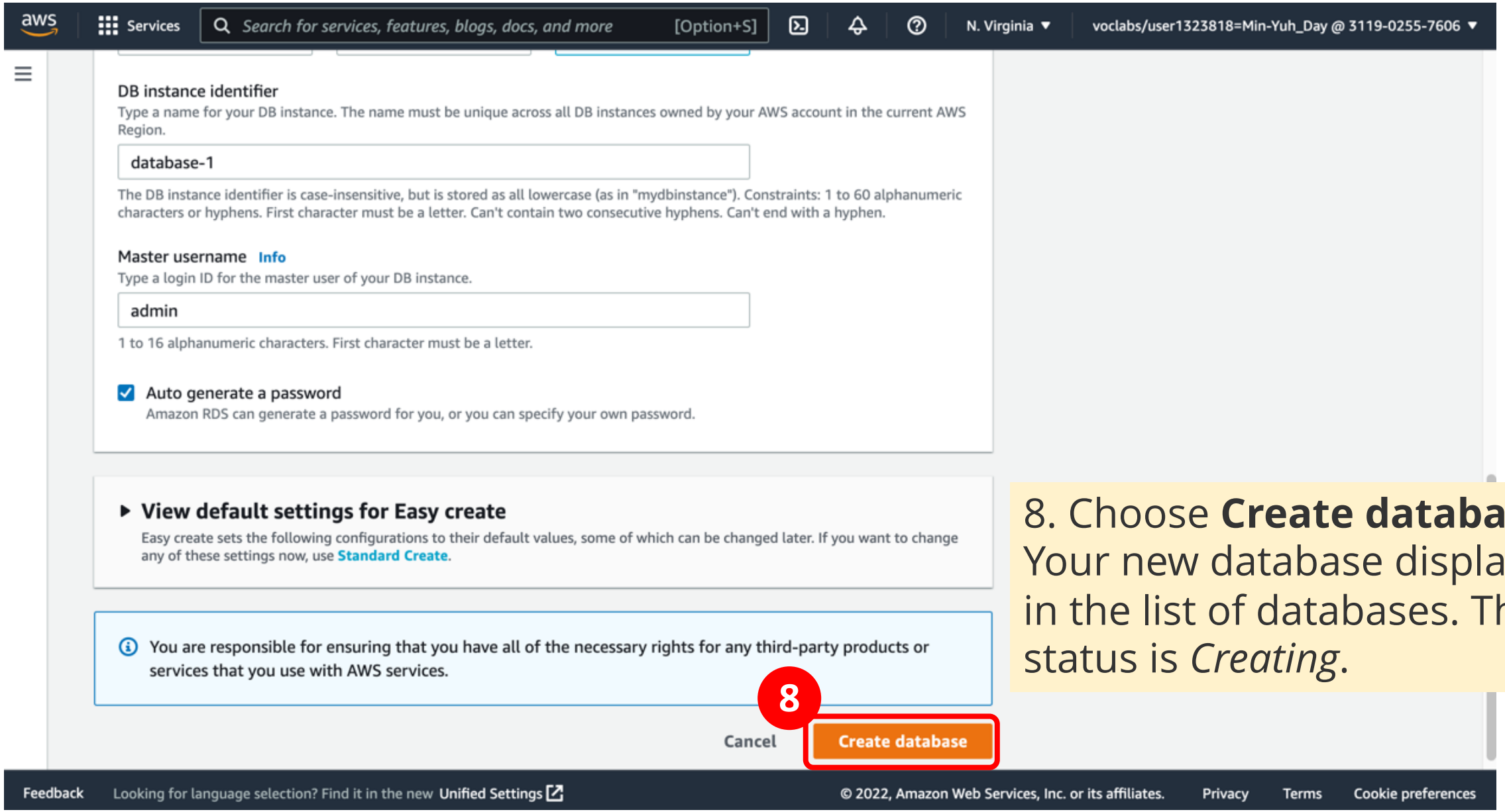
Module 10 Databases: Lab 10 - RDS



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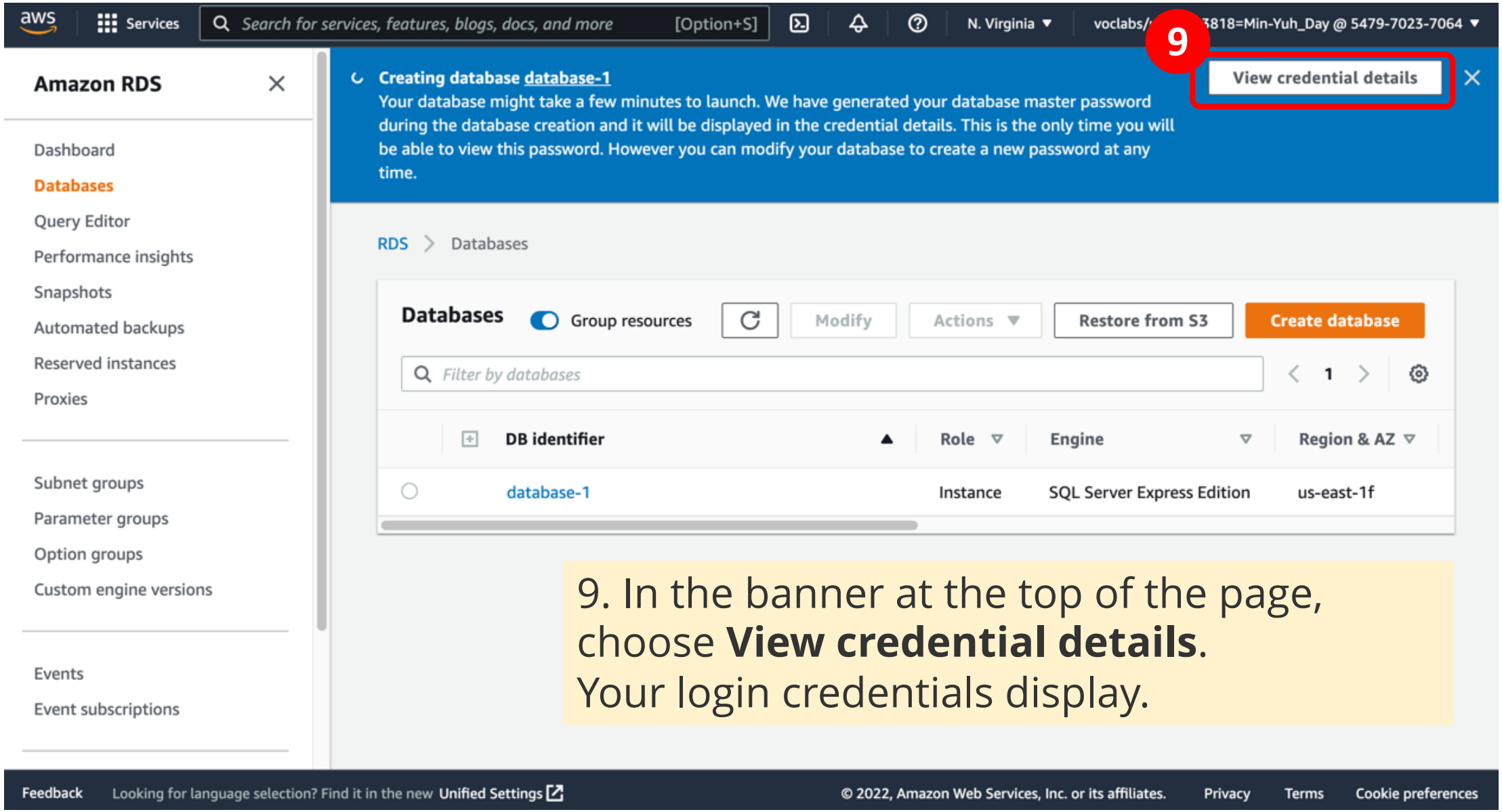
Module 10 Databases: Lab 10 - RDS



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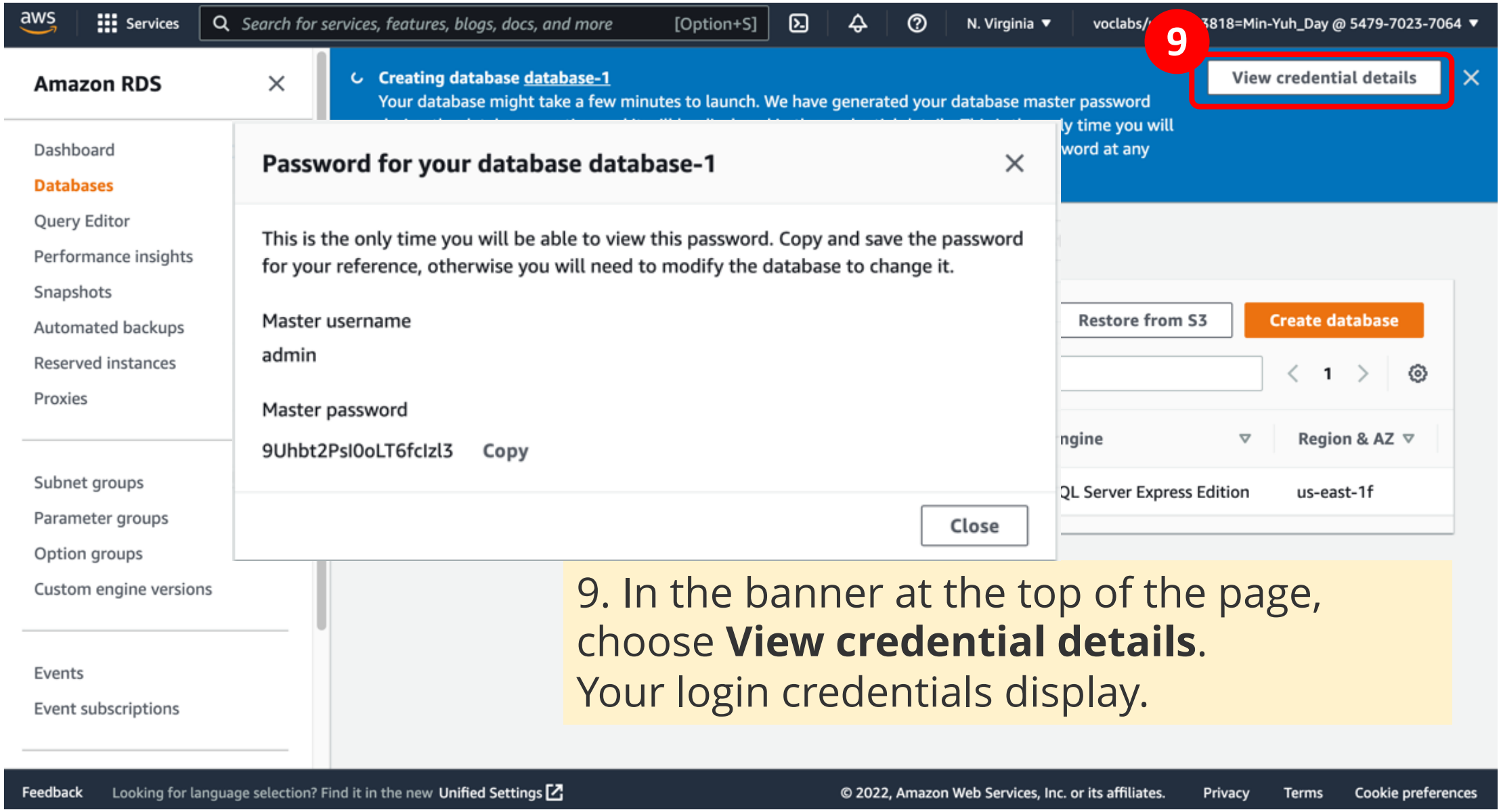

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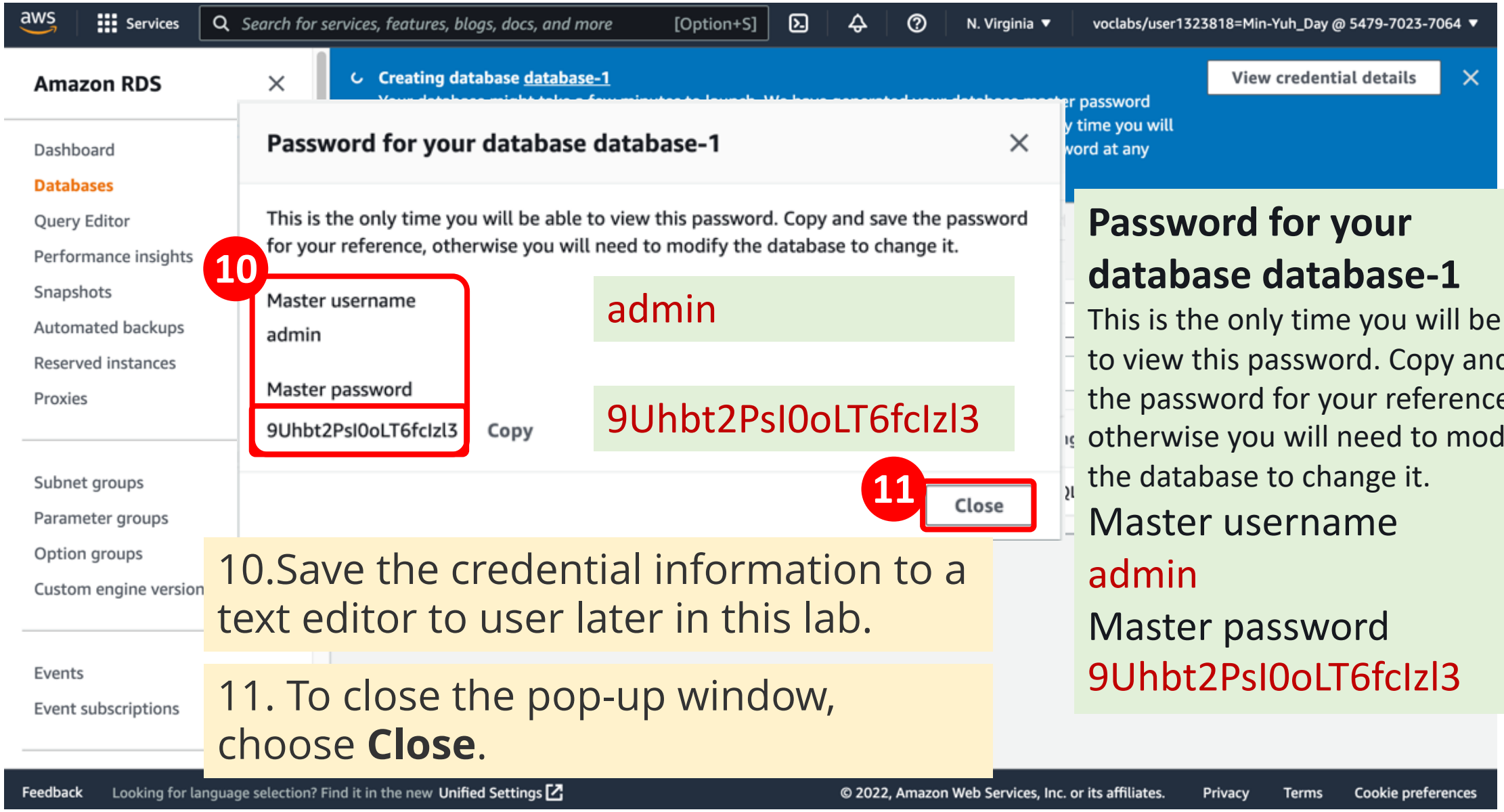

10.Save the credential information to a text editor to user later in this lab.

11. To close the pop-up window, choose **Close**.

Password for your database database-1

This is the only time you will be able to view this password. Copy and save the password for your reference, otherwise you will need to modify the database to change it.

Master username

admin

Master password

9Uhbt2PsI0oLT6fcIzl3

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12 13 14

Task 2. Download and install SQL Server Management Studio

To connect to your RDS DB instance, you will need to download and install SQL Server Management Studio.

12.In a new browser tab or window, go to https://aka.ms/ssmsfullsetup.

13.Download the installation package to your computer.

14.When the download completes, open and run the installation program.

Note: If you are unable to install new software on your local machine, follow the instructions to use the Amazon Elastic Compute Cloud (Amazon EC2) instance that was launched in this lab environment.

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Module 10 Databases: Lab 10 - RDS

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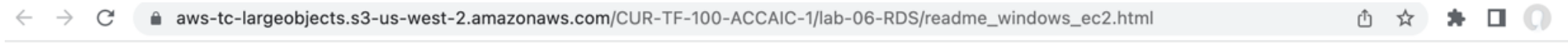
Module 10 Databases: Lab 10 - RDS

https://aws-tc-largeobjects.s3-us-west-2.amazonaws.com/CUR-TF-100-ACCAIC-1/lab-06-RDS/readme_windows_ec2.html



AWS Windows Workstation Configuration with SQL Server Management Studio

If you are not allowed to install software on your local machine, you can use the Windows workstation that has been deployed to your lab environment.

Before using this guide, follow the assignment instructions under **Accessing the AWS Management Console**.

Steps:

- Locate the IP address for your workstation
- Use Remote Desktop to connect to your workstation
- Configure the workstation browser to allow downloads
- Install the required software on your workstation
- Identify your workstation's Public IP address

Locate the IP address

1. Return to the window you used to start the lab.
2. At the top of the page, choose the AWS Details dropdown menu.
3. In the pop-up window, locate **WindowsWorkstation**.
4. Save the IP address for the workstation.

   Note: You will use this IP address in the lab when configuing your Security Group Rule.

AWS Windows Workstation Configuration with SQL Server Management Studio (SSMS)

If you are not allowed to install software on your local machine, you can use the Windows workstation that has been deployed to your lab environment.

Before using this guide, follow the assignment instructions under **Accessing the AWS Management Console**.

Steps:

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AWS Windows Workstation Configuration with SQL Server Management Studio (SSMS)

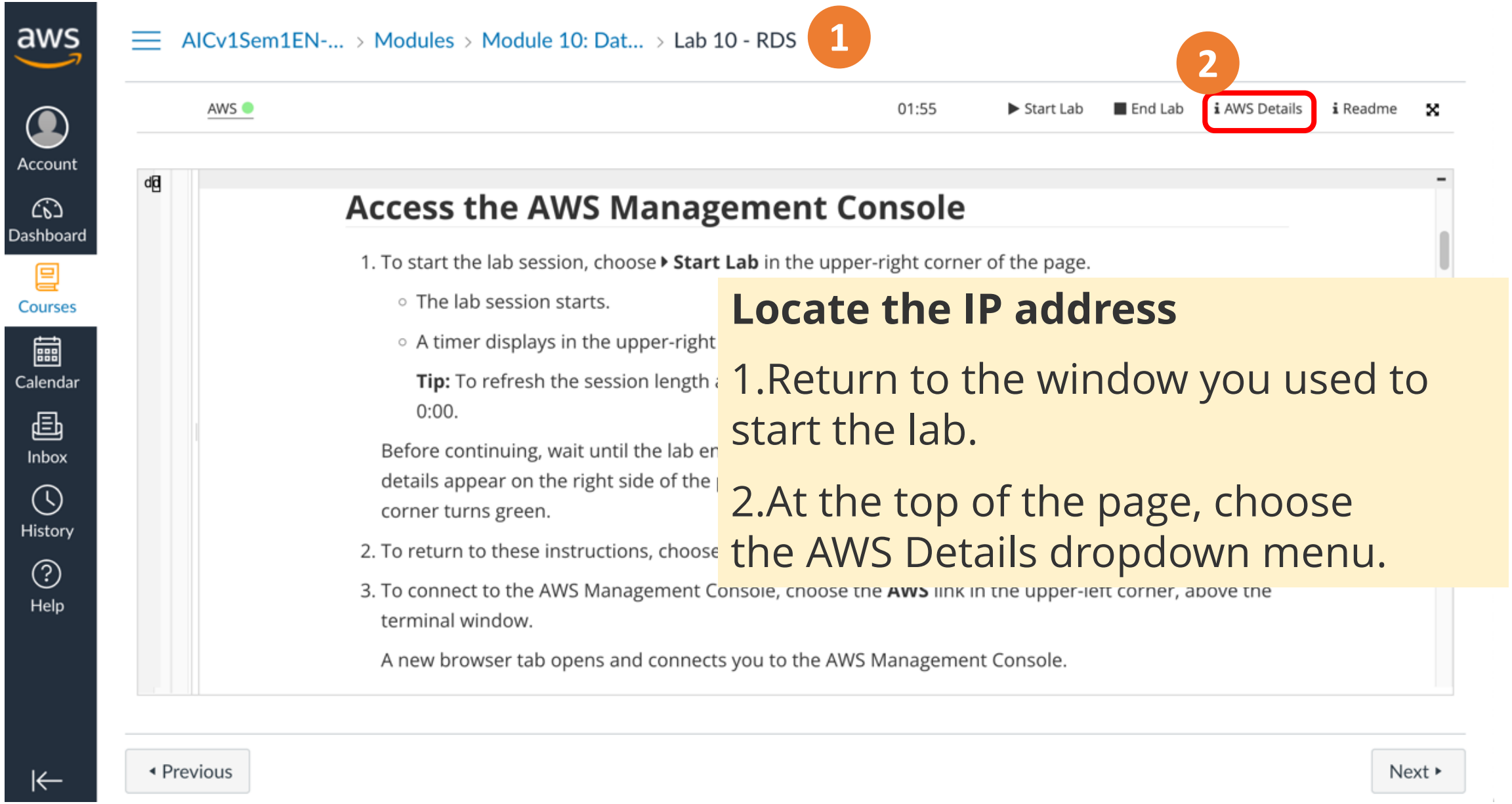
- **Step 1. Locate the IP address**
- **Step 2. Connect to the workstation**
- **Step 3. Configure the browser**
- **Step 4. Download SQL Server Management Studio**
- **Step 5. Install the software**
- **Step 6. Return to the instructions for the lab assignment.**

Locate the IP address

1. Return to the window you used to start the lab.
2. At the top of the page, choose the AWS Details dropdown menu.
3. In the pop-up window, locate **WindowsWorkstation**.
4. Save the IP address for the workstation.

Note: You will use this IP address in the lab when configuring your Security Group Rule.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



Locate the IP address

1. Return to the window you used to start the lab.
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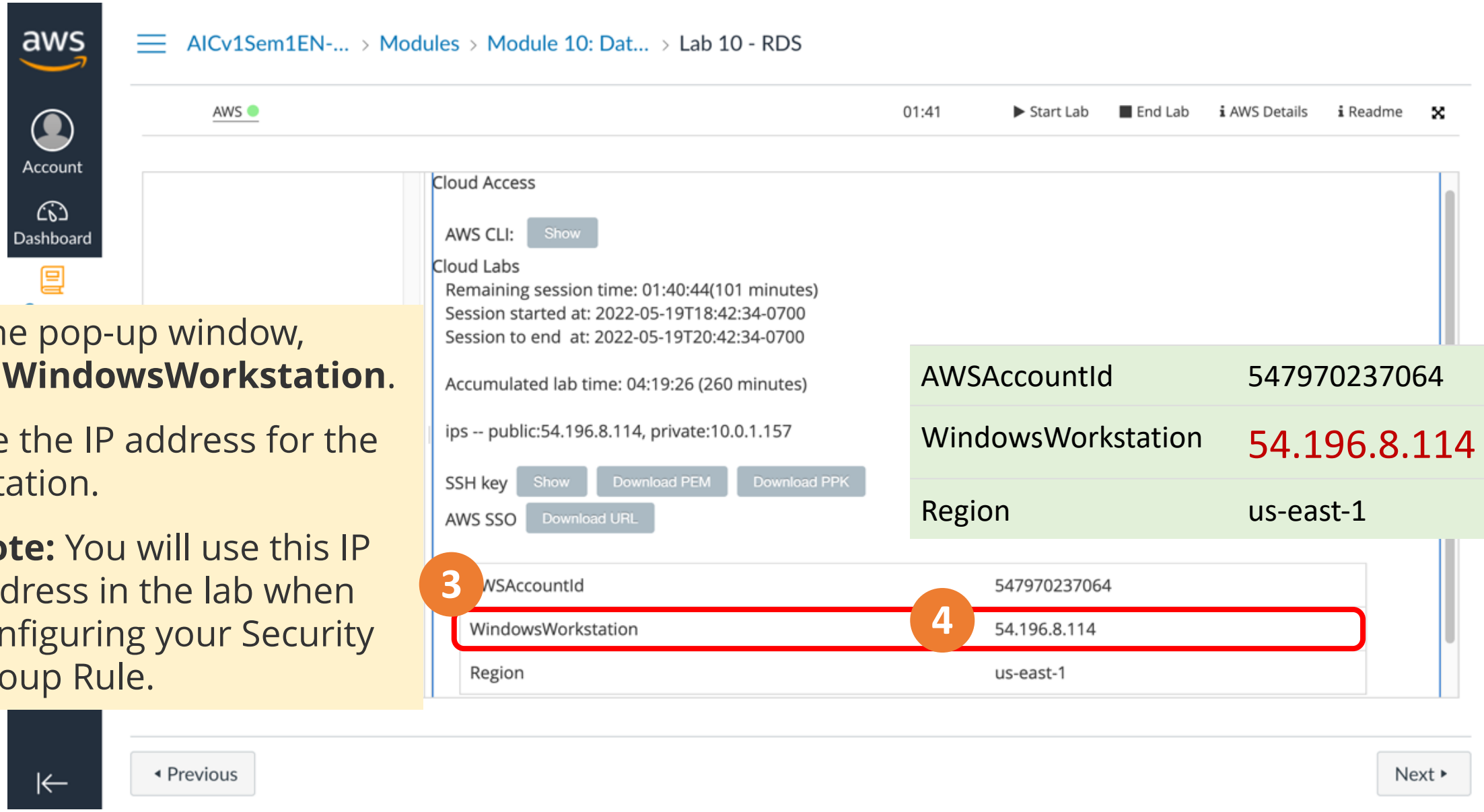
Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



3. In the pop-up window, locate **WindowsWorkstation**.

4. Save the IP address for the workstation.

Note: You will use this IP address in the lab when configuring your Security Group Rule.

AWSAccountId	547970237064
WindowsWorkstation	54.196.8.114
Region	us-east-1

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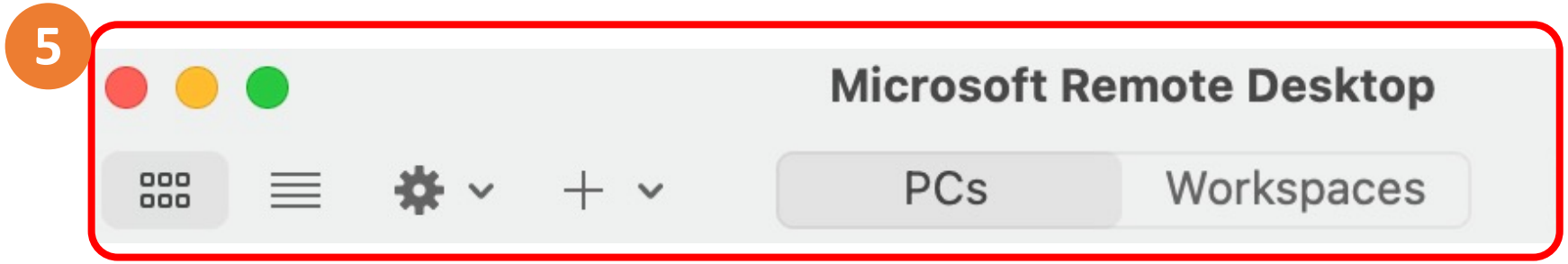
Connect to the workstation

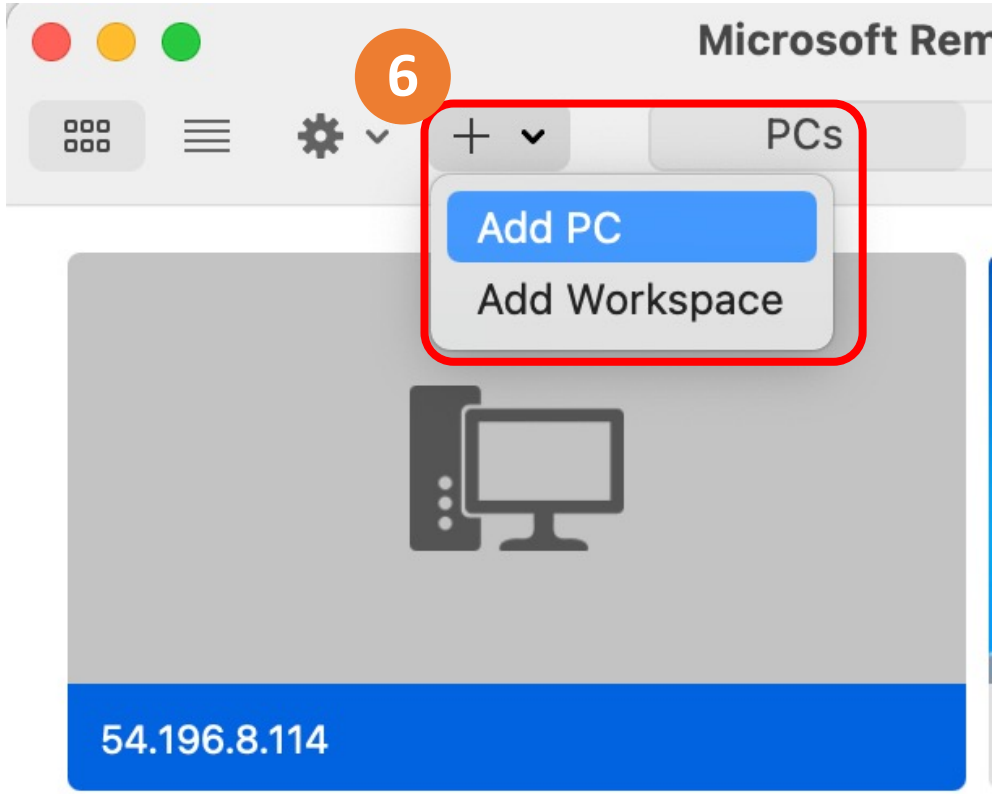
Depending on your Operating System, you will start one of the following applications:

Operating System	Application
Windows	Remote Desktop Connection
Chrome	Chrome Remote Desktop
Mac	Microsoft Remote Desktop

5.Start the remote desktop application.
6.Use the plus symbol to add a new connection.
    Note: Do not choose the Workspace option.
7.When prompted, enter the **WindowsWorkstation** IP address, and choose **Add**.
8.Doubleclick on the connection you just created.
9.When prompted, enter the following values:
    Username: Administrator
    Password: Welcome1
10.Choose **Continue**.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS





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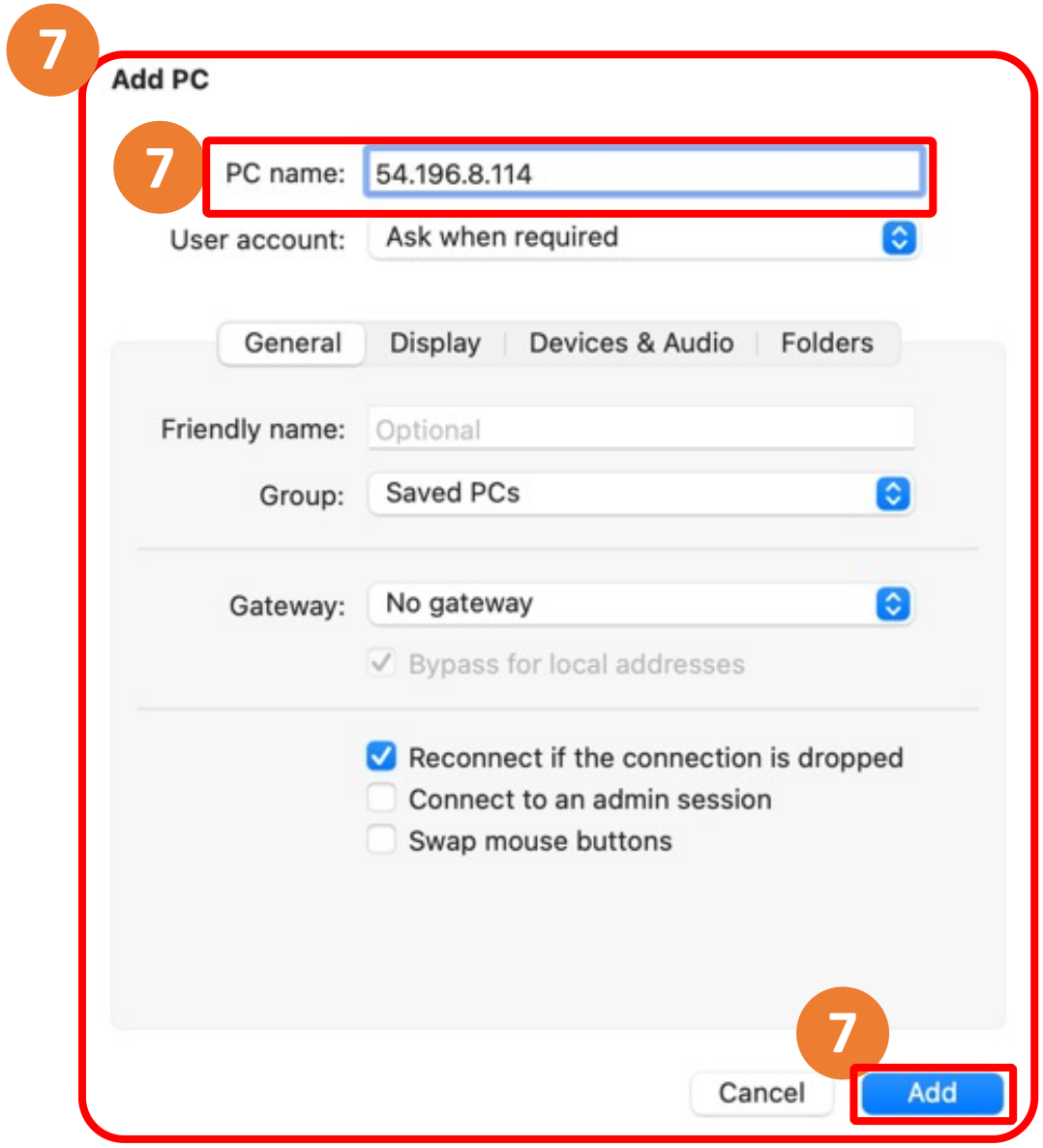
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



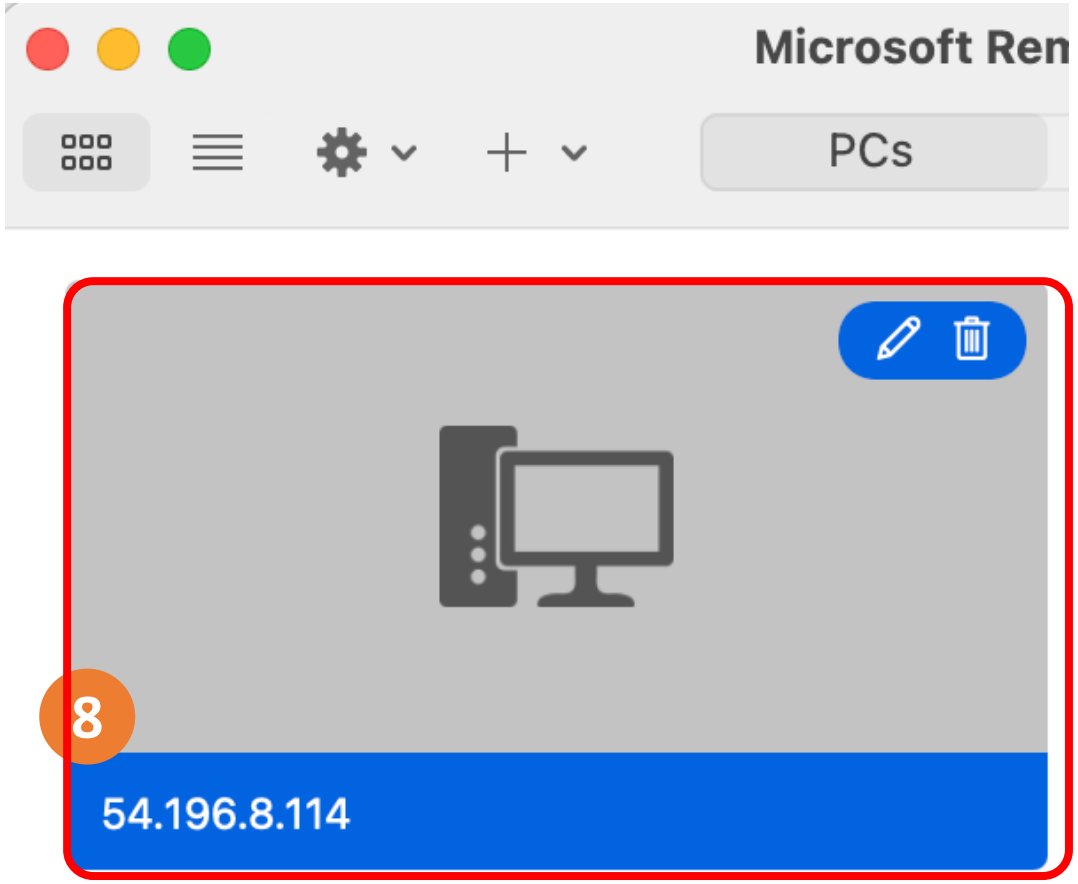
7. When prompted, enter the **WindowsWorkstation** IP address, and choose **Add**.

AWSAccountId	547970237064
WindowsWorkstation	54.196.8.114
Region	us-east-1

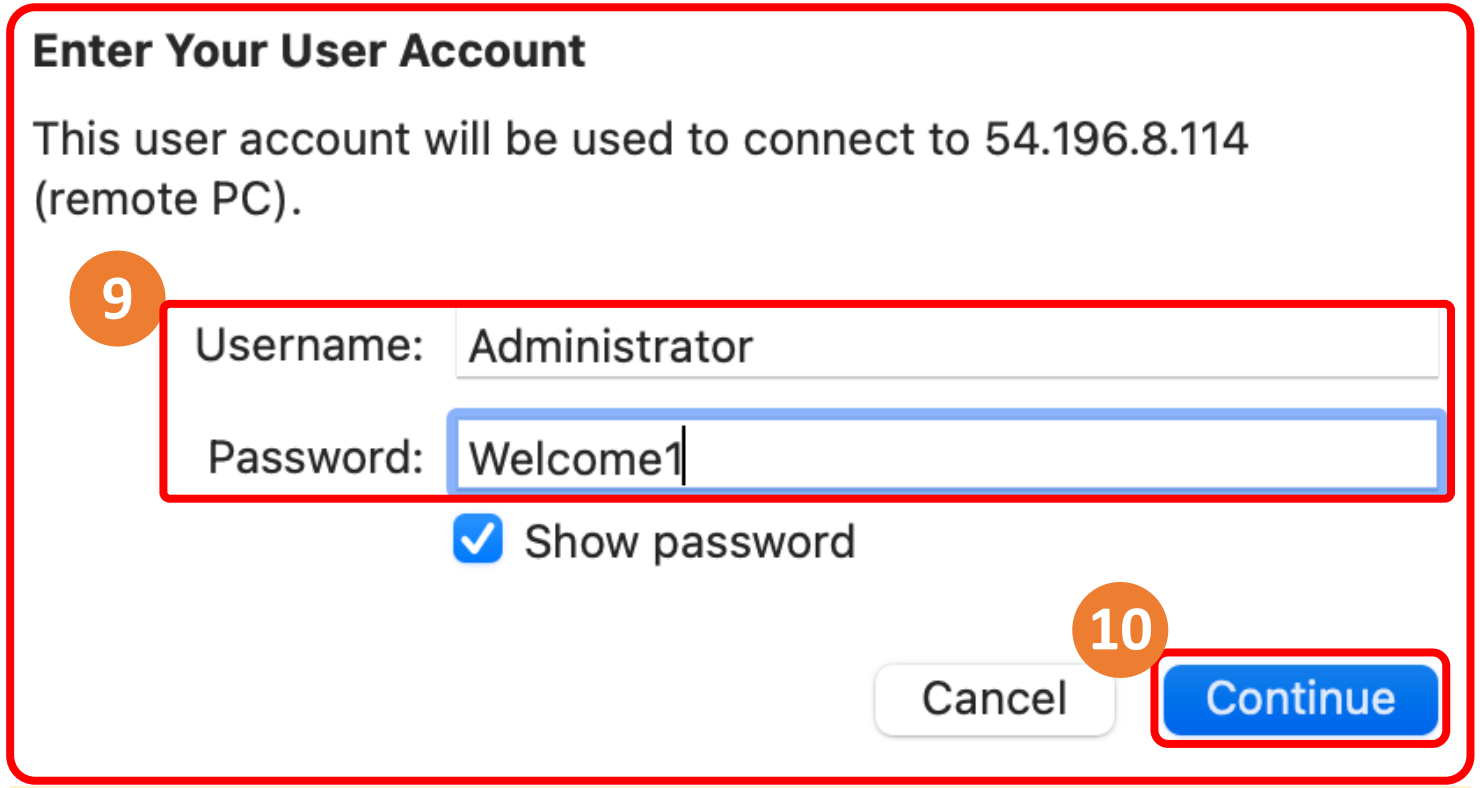
Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

8. Doubleclick on the connection you just created.



AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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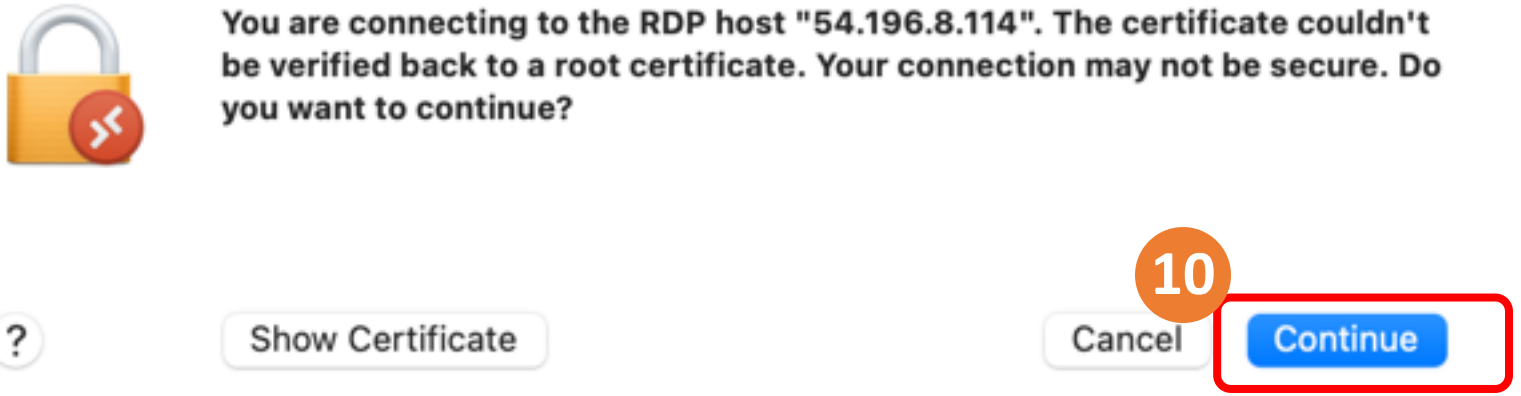
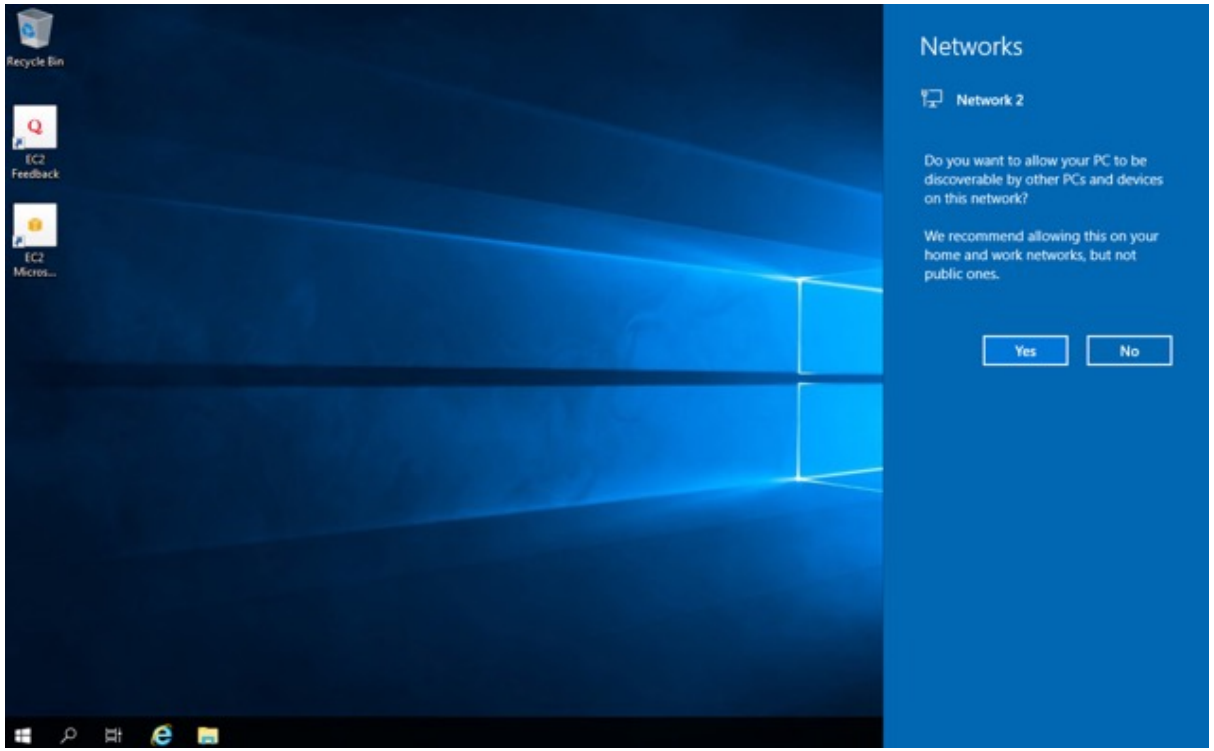
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS





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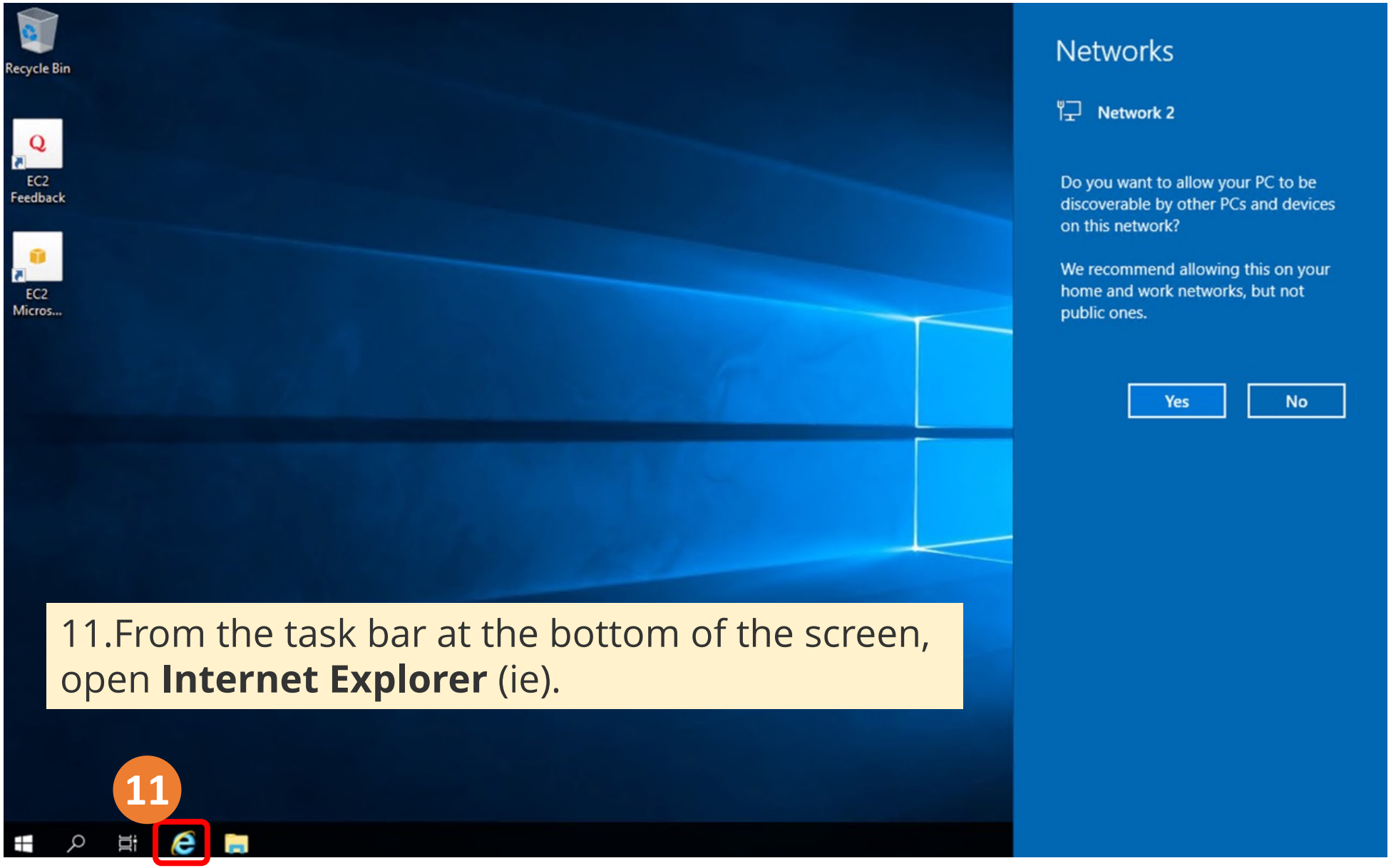
Configure the browser

11. From the task bar at the bottom of the screen, open **Internet Explorer** (ie).
12. In the **Setup Internet Explorer** pop-up window, choose **OK**.
13. In the top right corner of the ie window, choose the small gear-shaped icon.
14. From the drop down menu, select **Internet Options**.
15. Select the **Security** tab.
16. In the box labeled "Select a zone to view or change security settings", select **Trusted Sites** .
17. Choose the **Sites** button.
18. In the text box labeled, "Add this website to the zone", enter https://*.microsoft.com.
19. Choose **Add**.
20. In the same text box, enter https://*.azure.com.
21. Choose **Add**.
22. Choose **Close**
23. Choose **Ok**.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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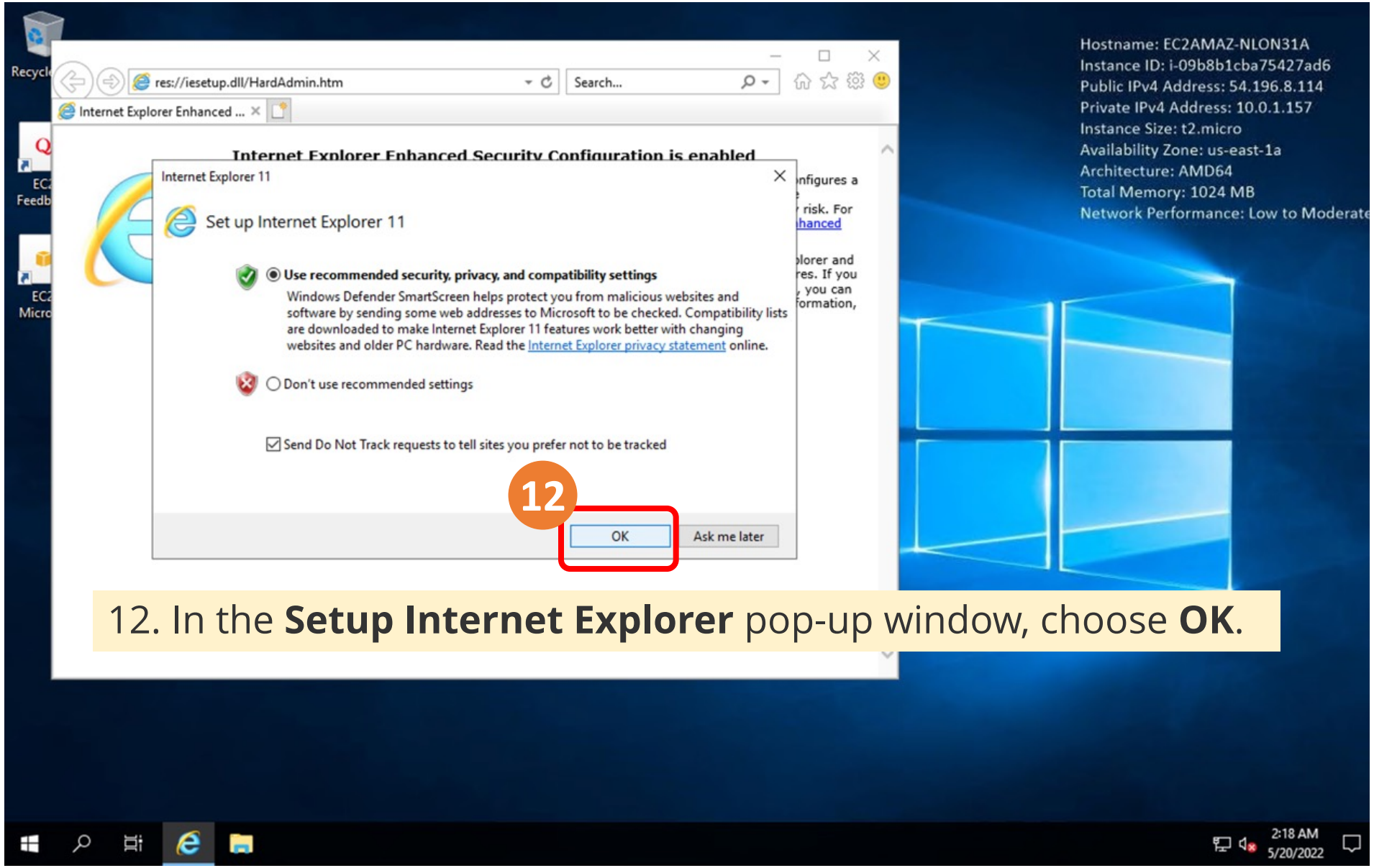
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



12. In the **Setup Internet Explorer** pop-up window, choose **OK**.

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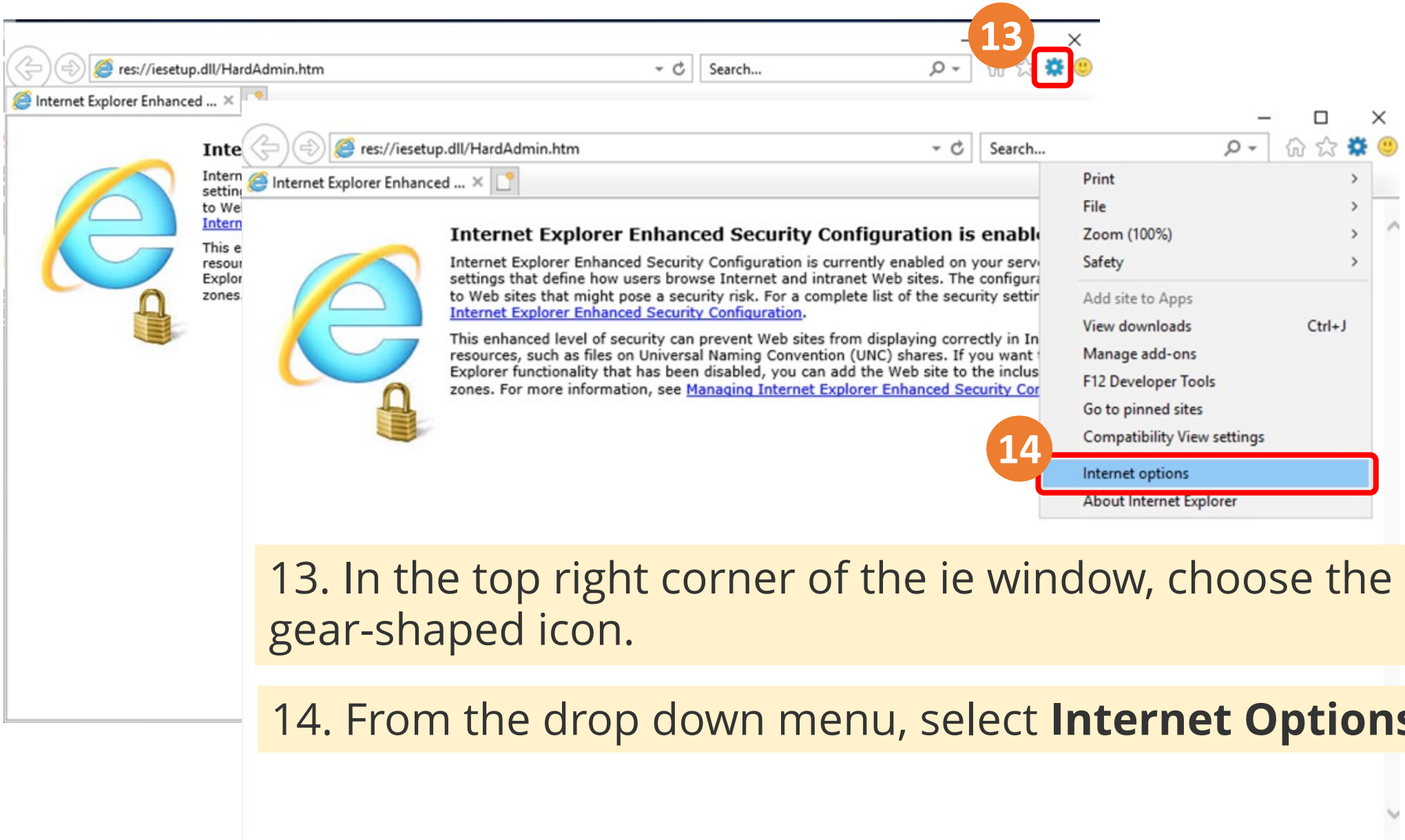
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



13. In the top right corner of the ie window, choose the small gear-shaped icon.

14. From the drop down menu, select **Internet Options**.

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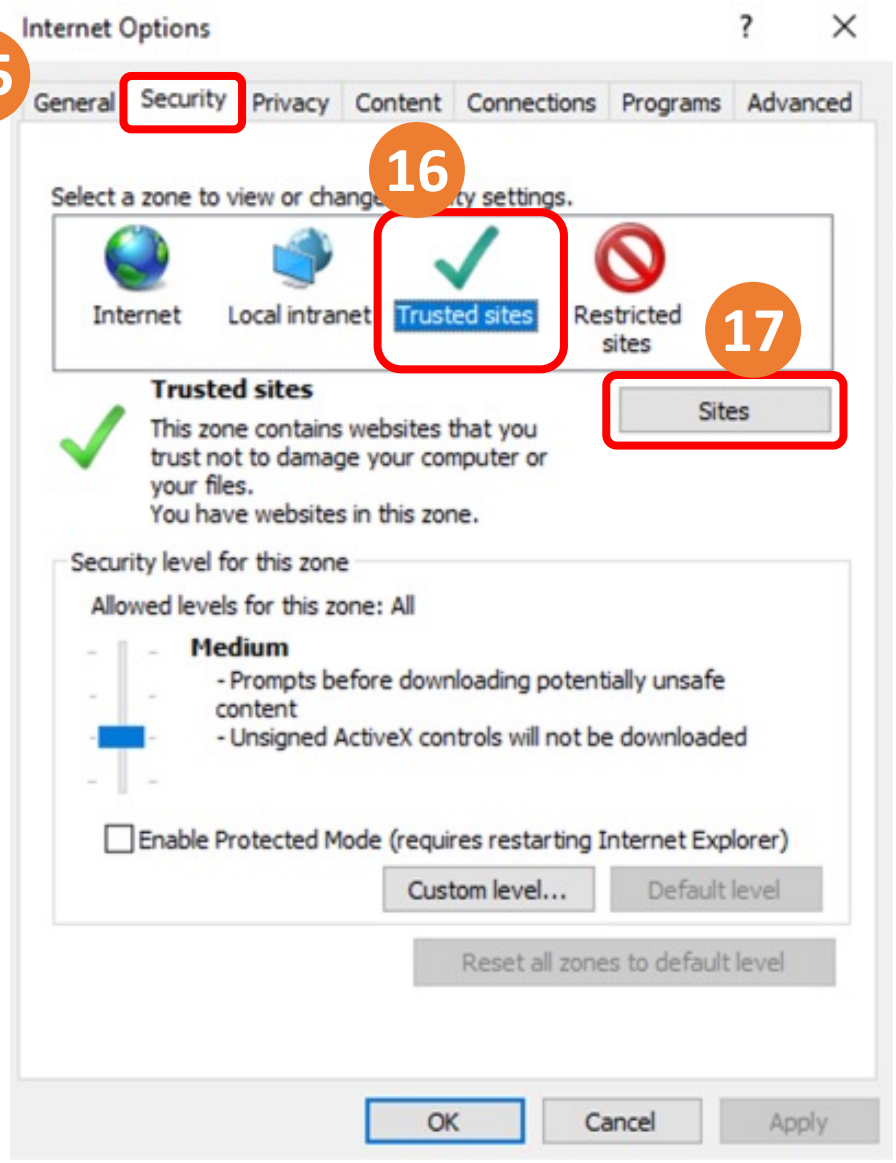
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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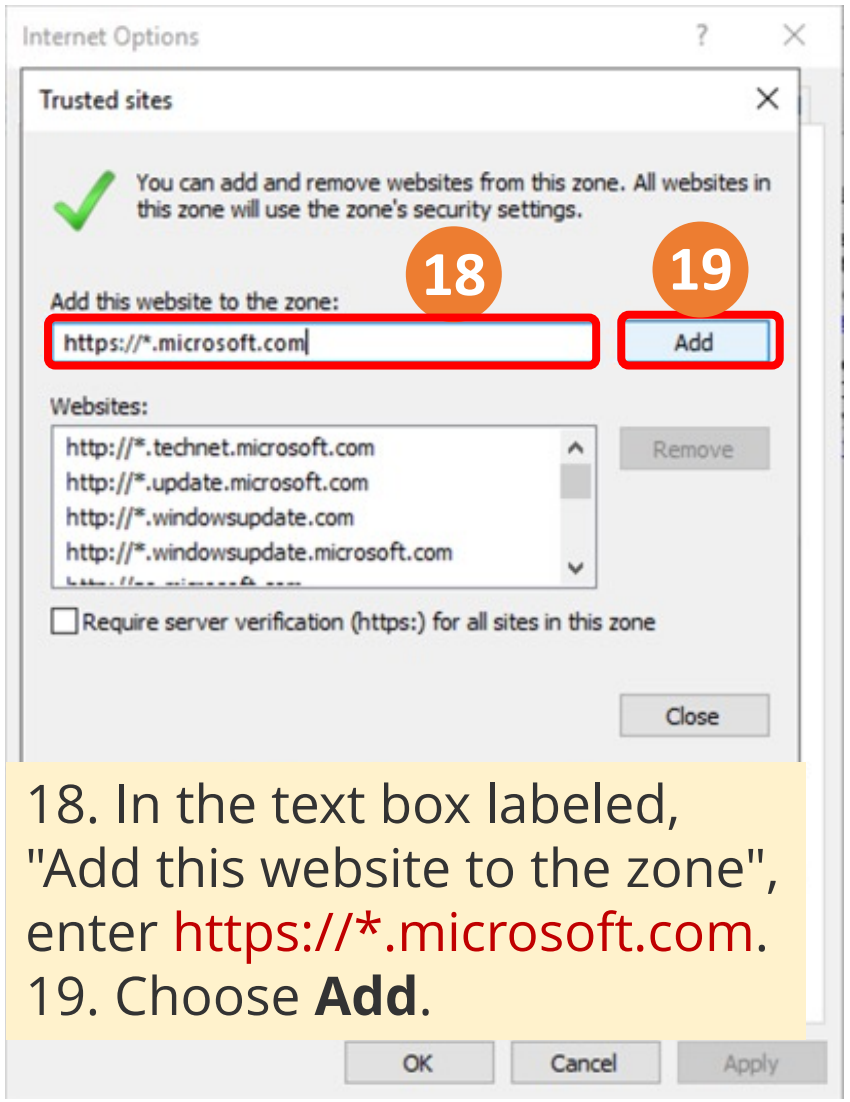
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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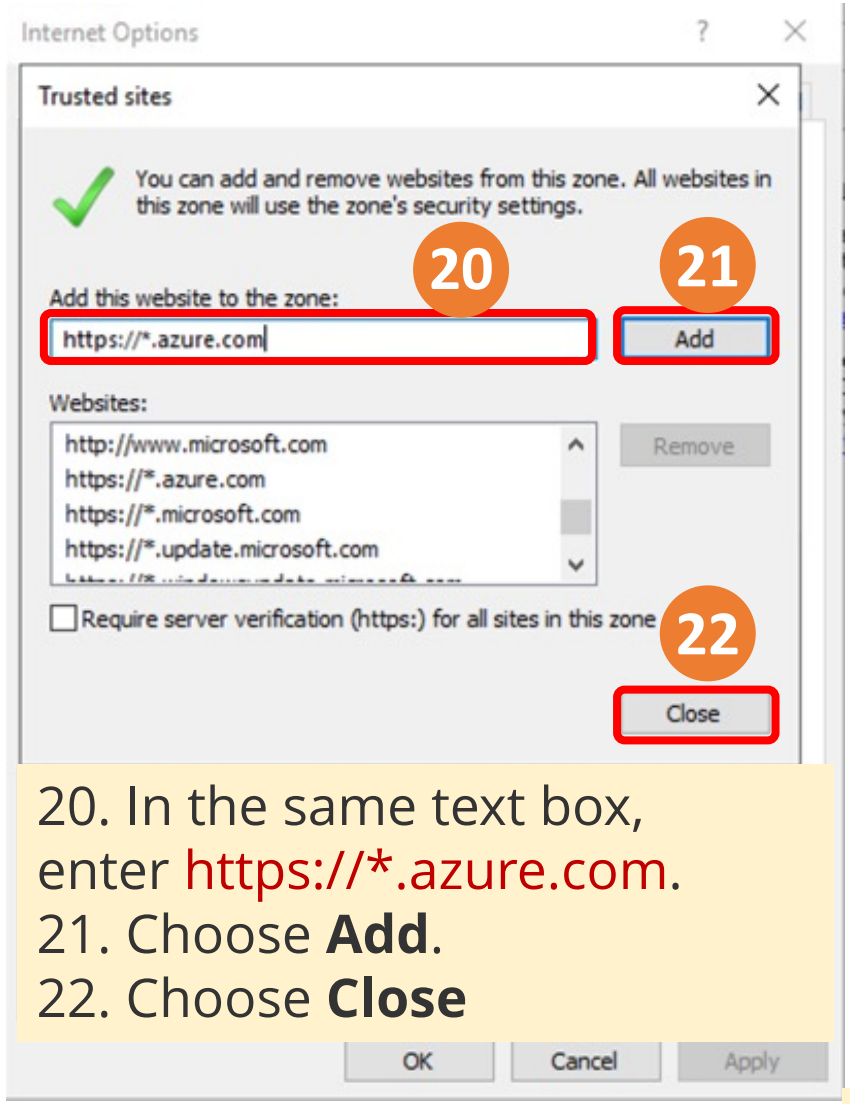

20. In the same text box, enter https://*.azure.com.
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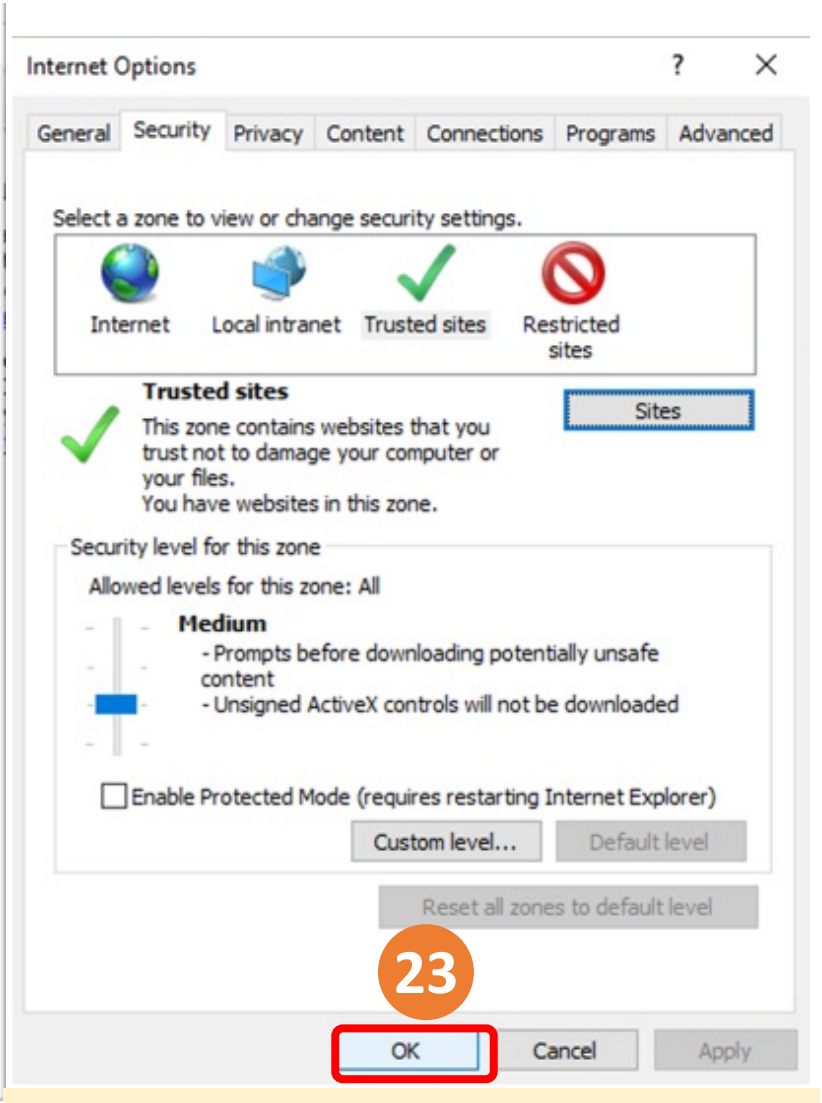

23. Choose **Ok**.

Download SQL Server Management Studio

24.In the ie window, enter the following URL: https://aka.ms/ssmsfullsetup and press enter.

25.If you are prompted with pop-up windows, choose accept and close the windows.

26.You will see a warning at the bottom of the browser window similar to - *This type of file could harm your computer*. Choose **Save** to download the file.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

Download SQL Server Management Studio

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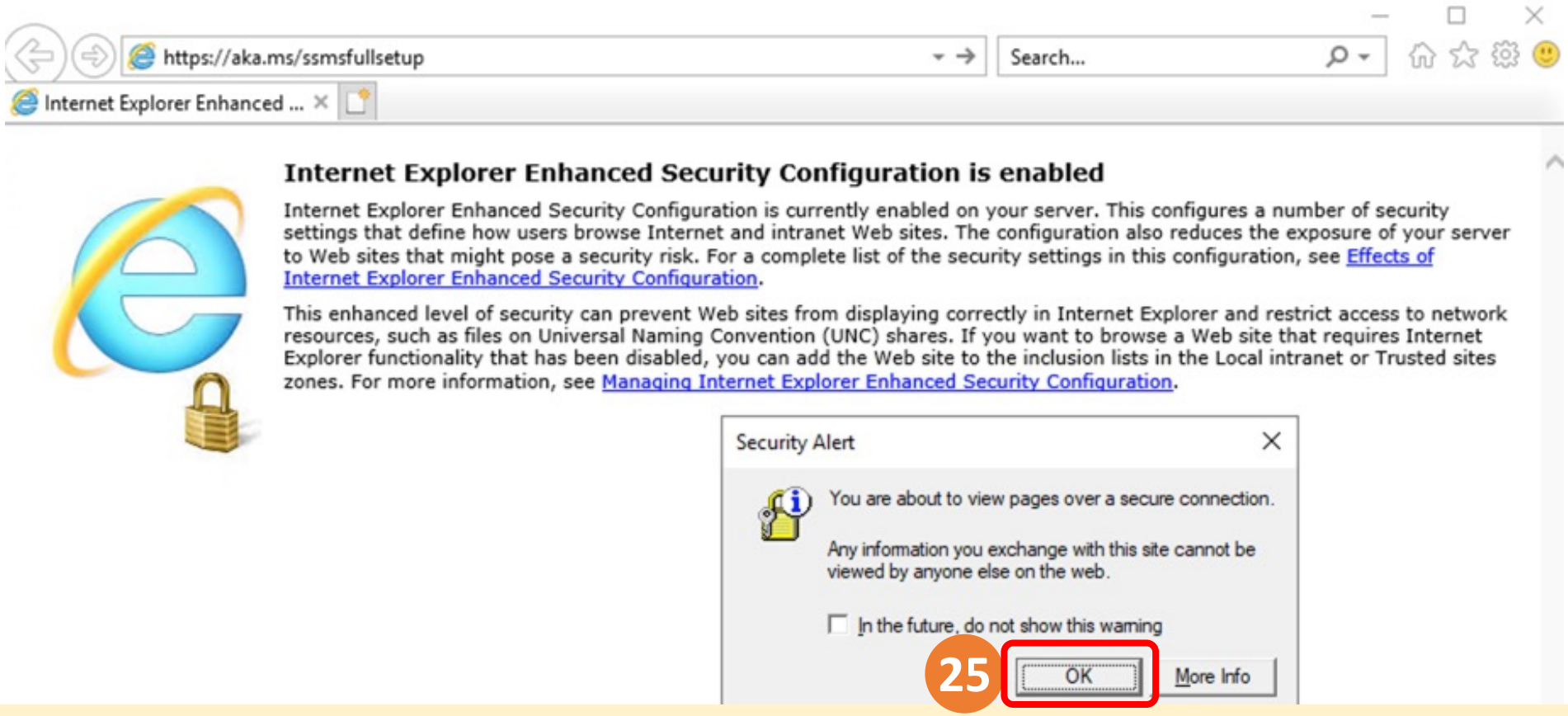
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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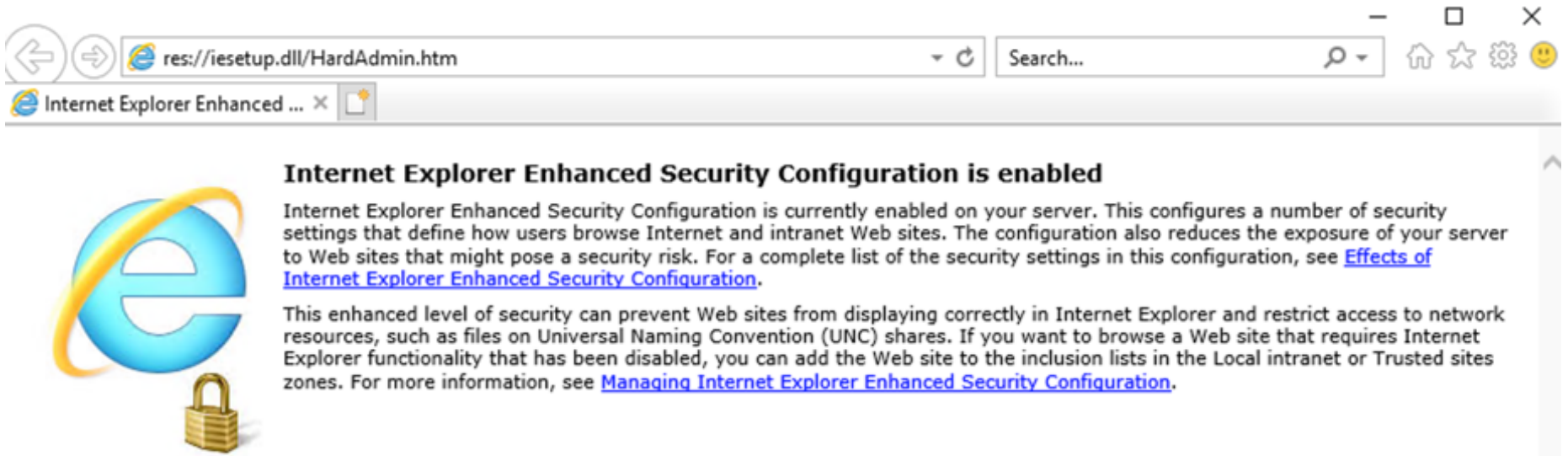
Module 10 Databases: Lab 10 - RDS



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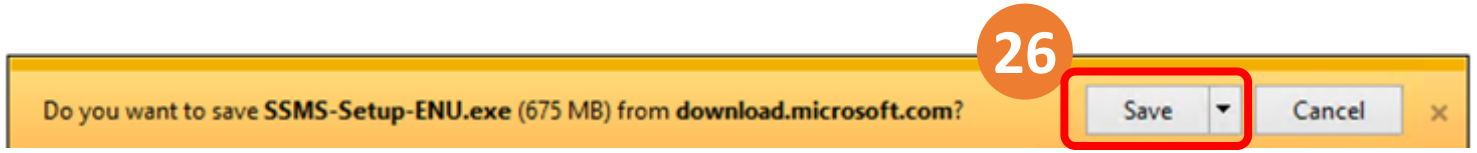

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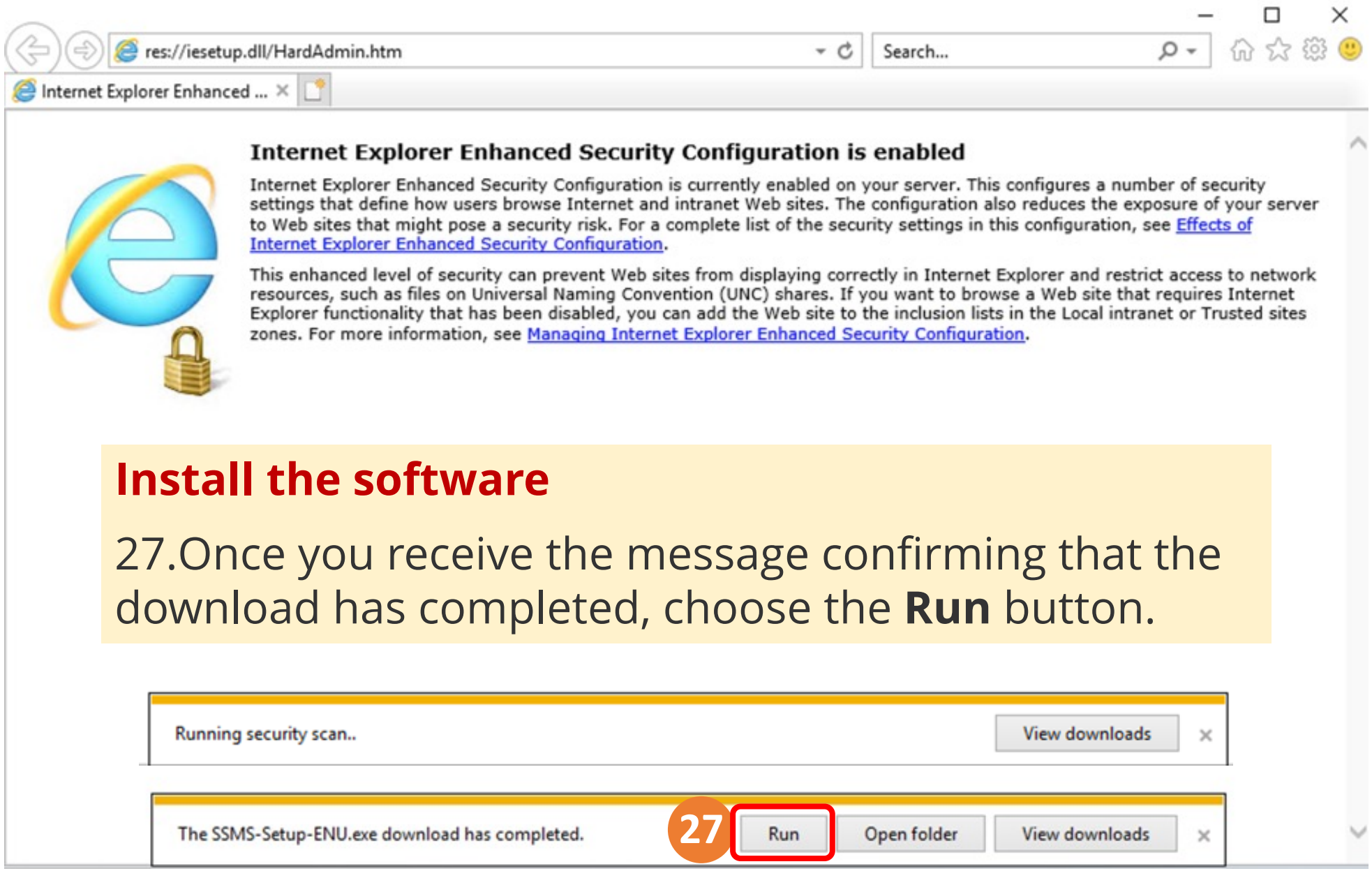
Install the software

27.Once you receive the message confirming that the download has completed, choose the **Run** button.

28.You will be promted to *Click "install" to begin*. Choose the **Install** button.

29.Once the installation has completed, choose **Close**.



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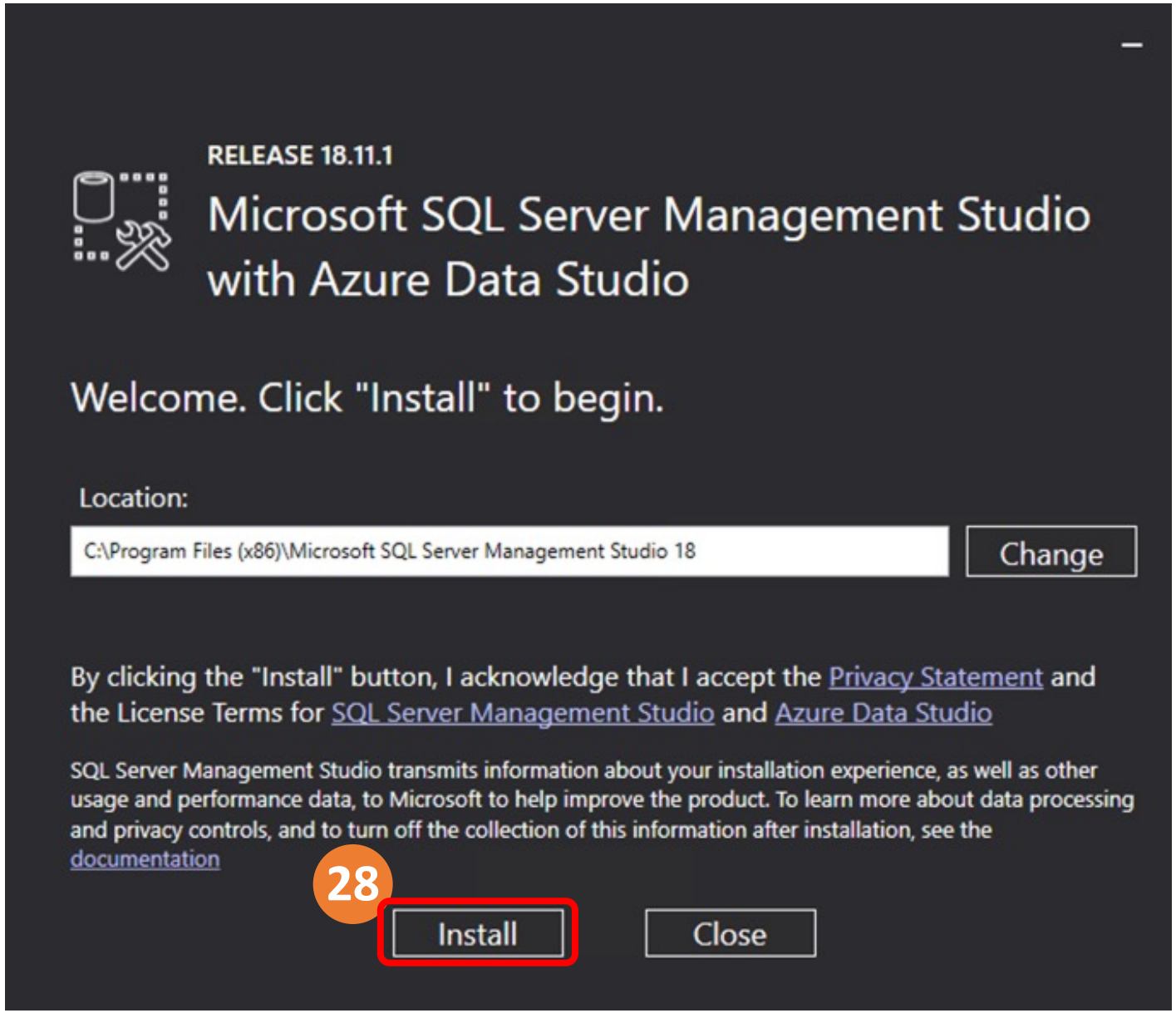
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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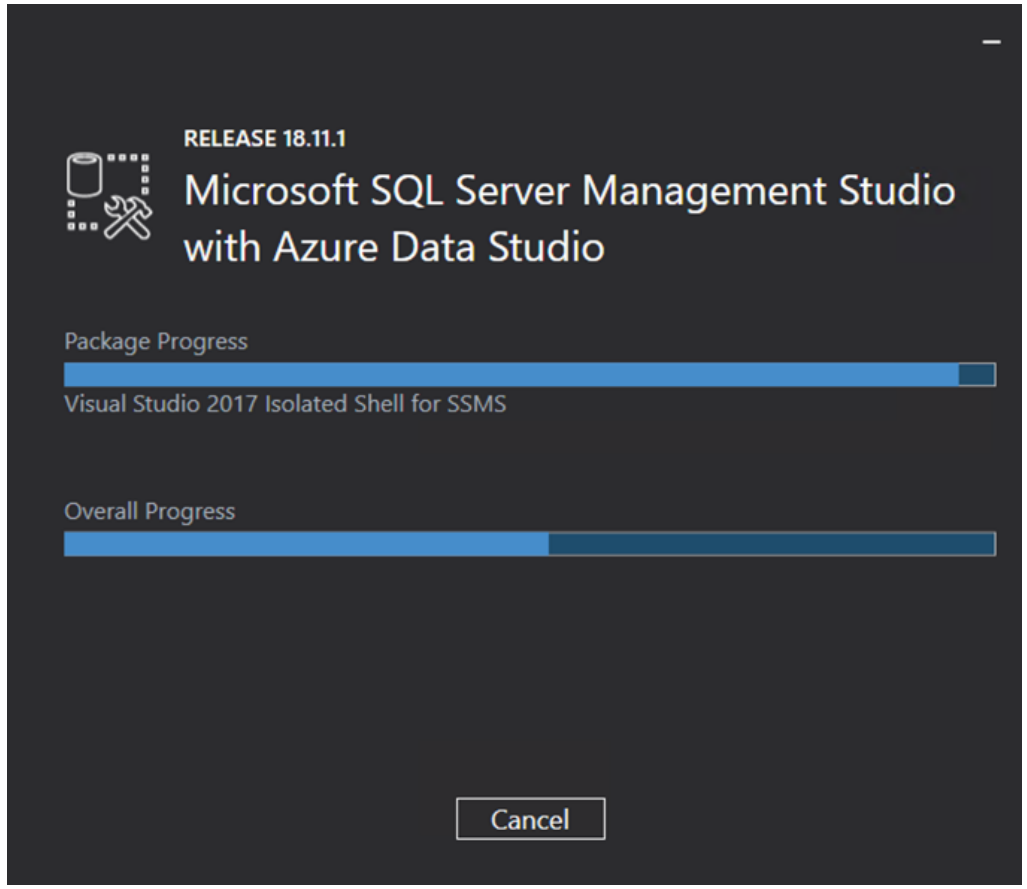
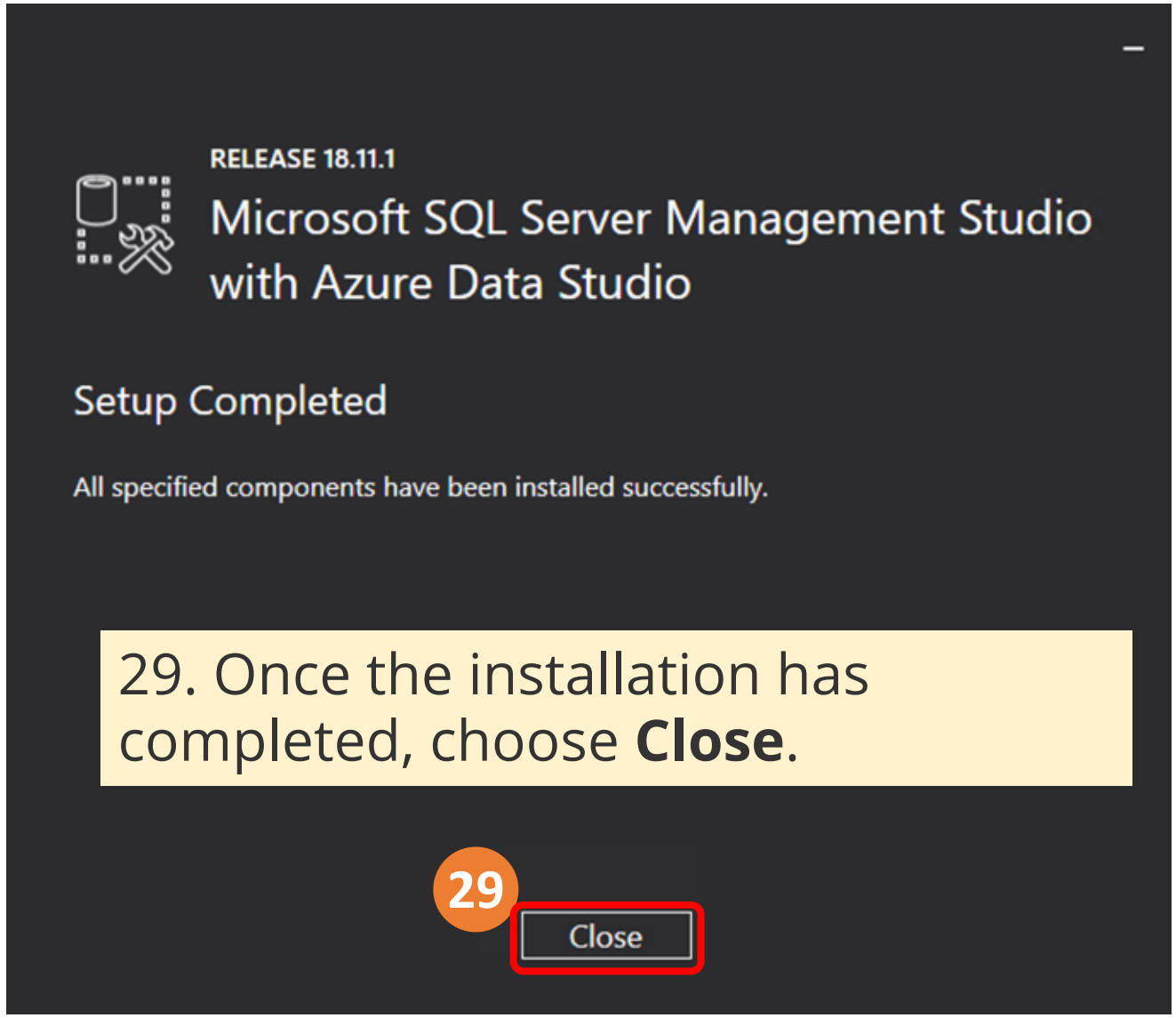
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS





Return to the instructions for the lab assignment.

When you are instructed to perform tasks on your local machine, you can now use the AWS workstation instead.

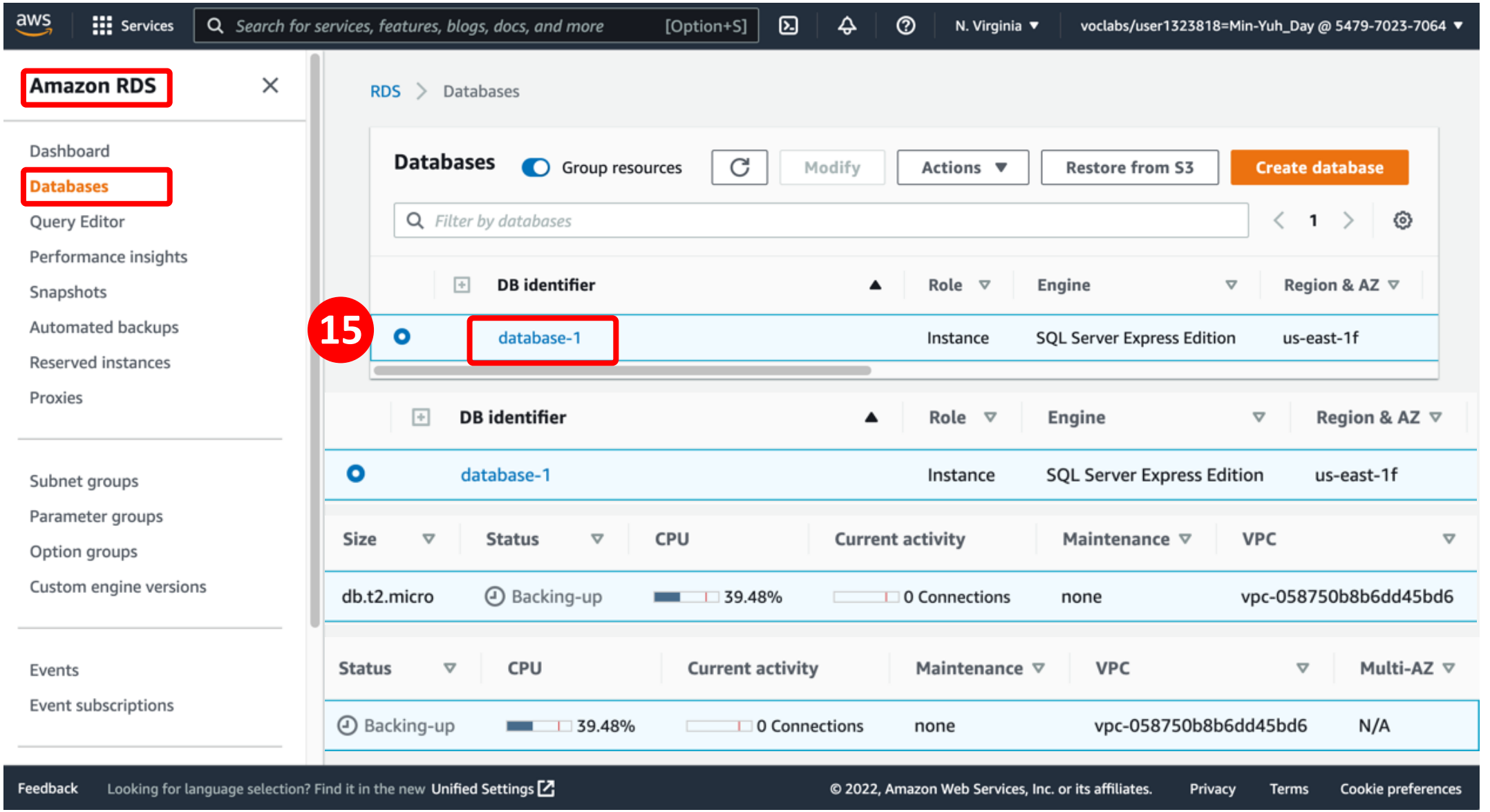
AWS Windows Workstation Configuration with SQL Server Management Studio (SSMS)

- **Step 1. Locate the IP address**
- **Step 2. Connect to the workstation**
- **Step 3. Configure the browser**
- **Step 4. Download SQL Server Management Studio**
- **Step 5. Install the software**
- **Step 6. Return to the instructions for the lab assignment.**

Task 3. Make your database publicly accessible

15. In the Amazon RDS console, choose the name of the SQL Server database that you created.
    In the **Connectivity & security** section, for **Security**, notice that **Public accessibility** is currently set to **No**.
16. To change this setting, choose **Modify** at the top of the page.
17. Scroll down to the **Connectivity** section, and expand **Additional configuration**.
18. For **Public access**, choose **Publicly accessible**.
19. Scroll to the bottom of the page, and choose **Continue**.
20. In the **Scheduling of modifications** section, for **When to apply modifications**, choose **Apply immediately**.
21. Choose **Modify DB Instance**.
    After about 30 seconds, the **Status** for the database changes to *Modifying*. Before continuing, wait until the status changes to *Available*.
    Tip: You might need to refresh the database information. To refresh, choose the refresh icon.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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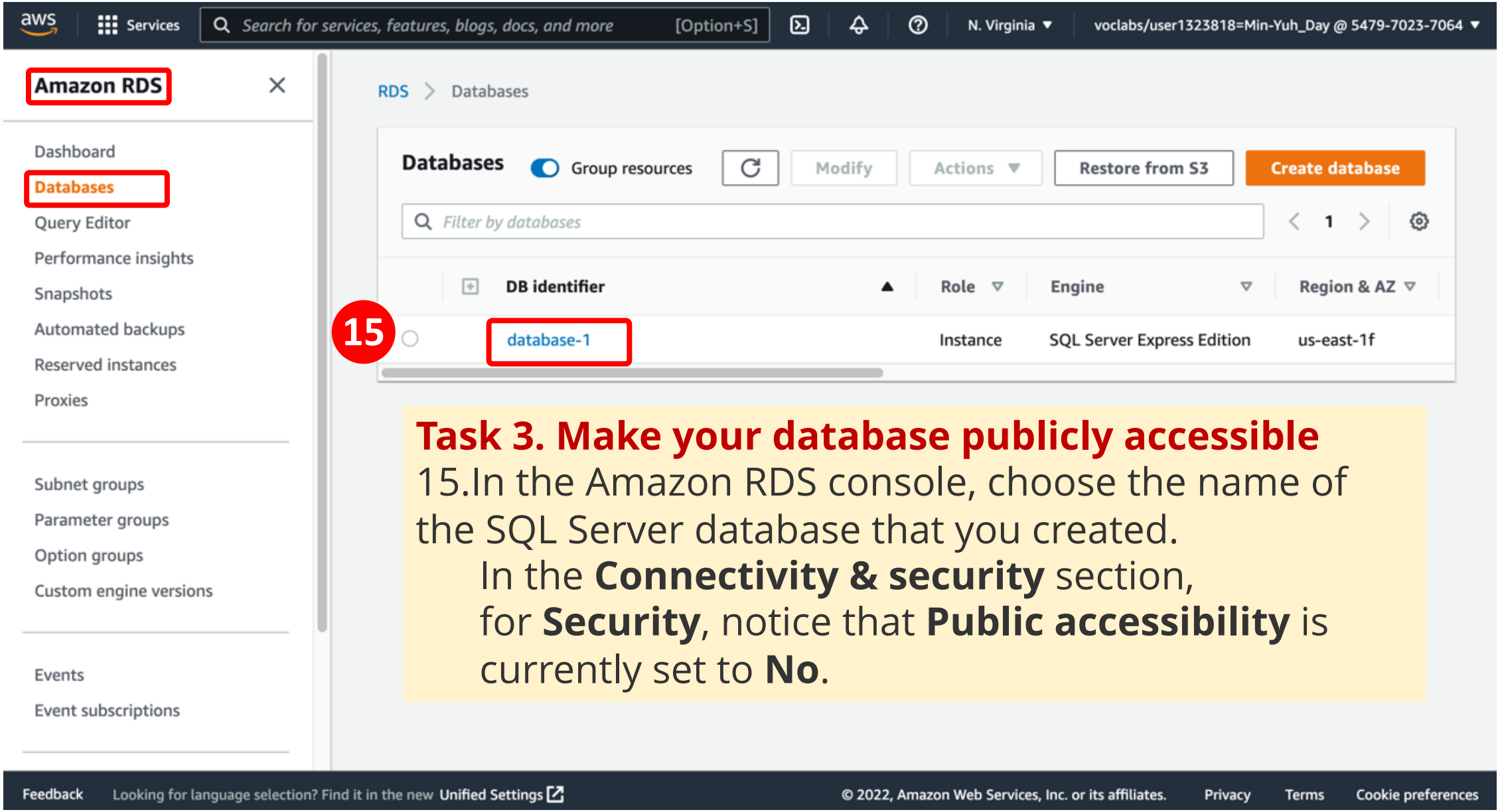
Module 10 Databases: Lab 10 - RDS



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AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

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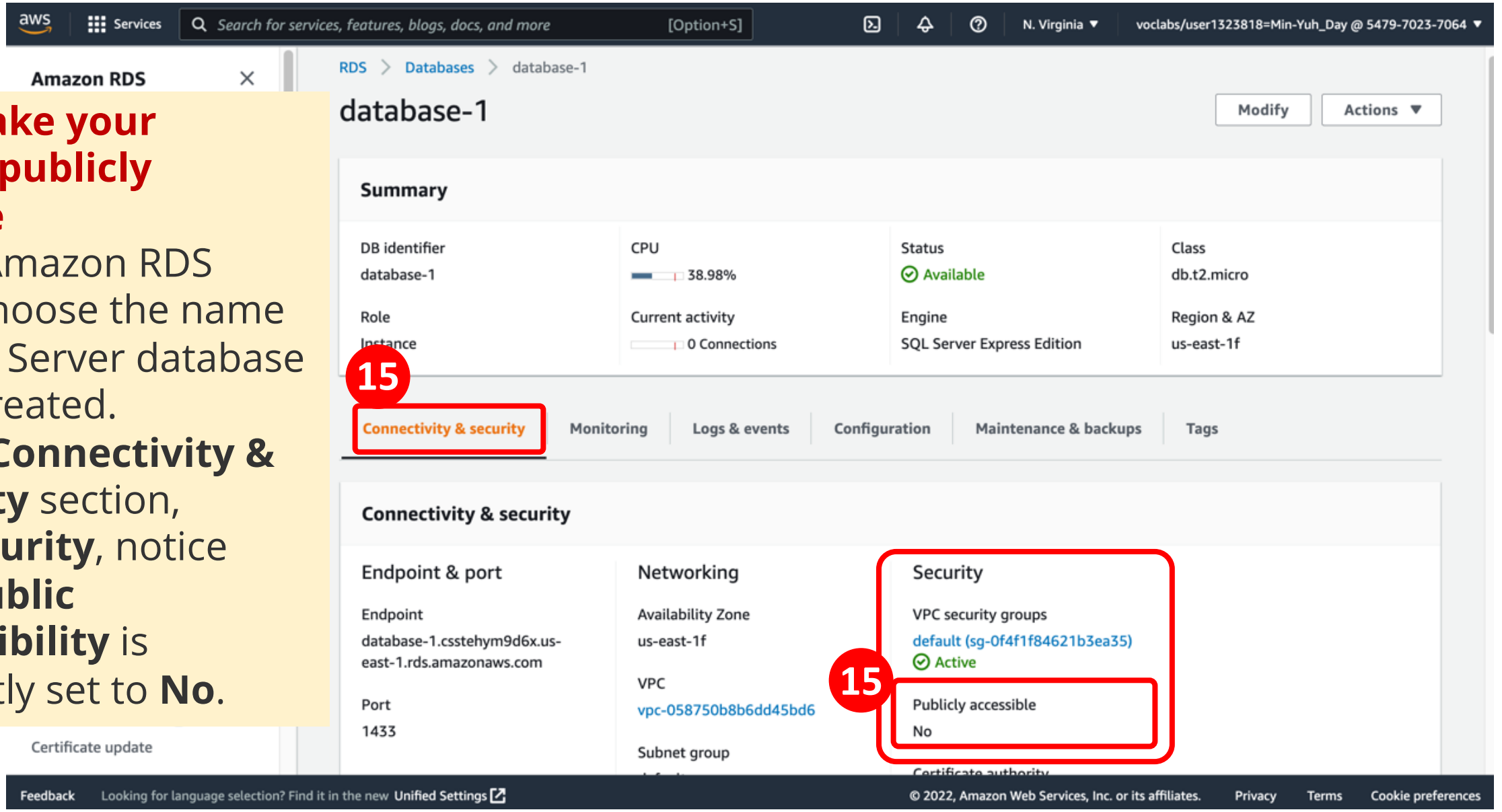

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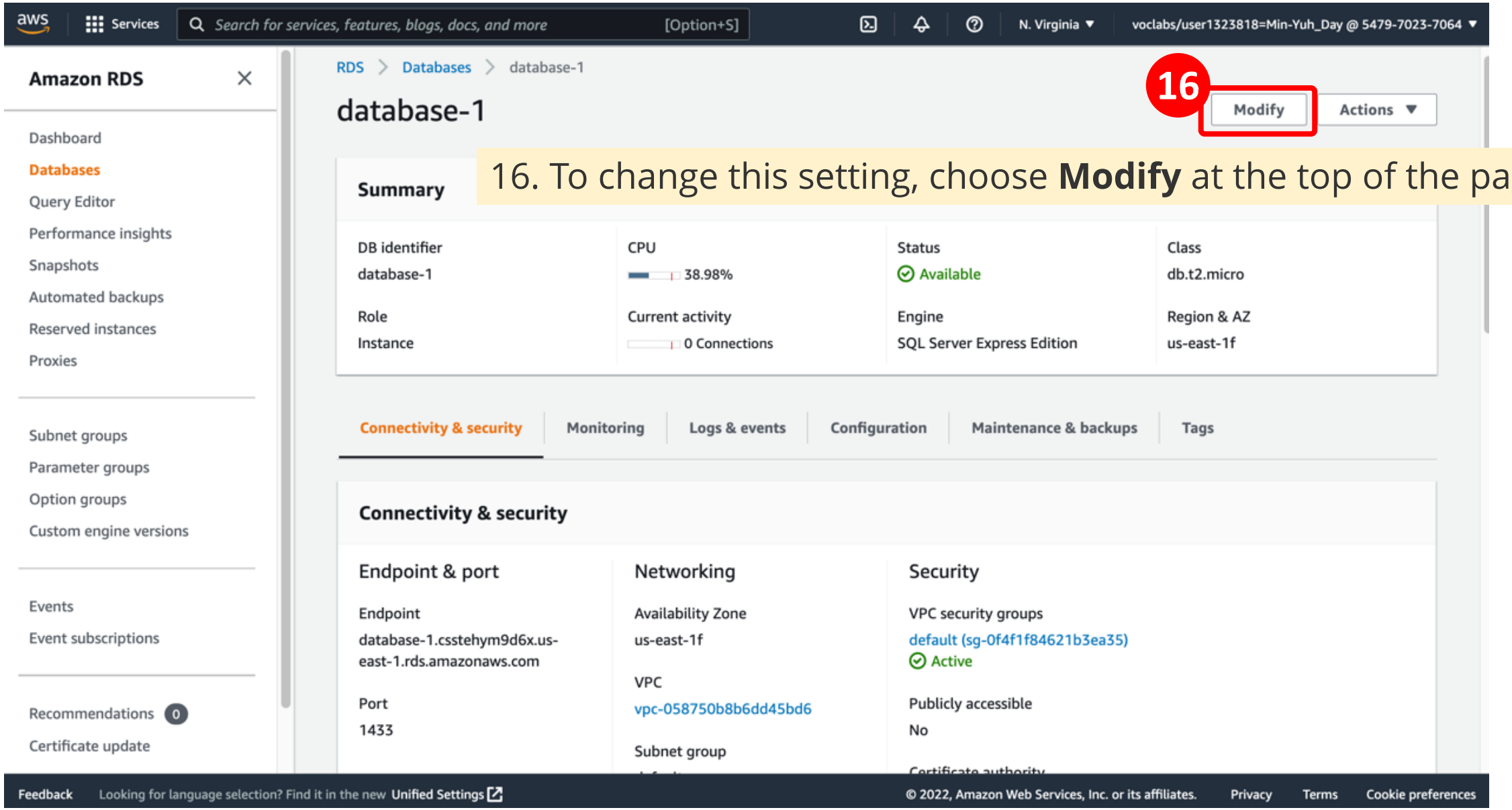
Module 10 Databases: Lab 10 - RDS



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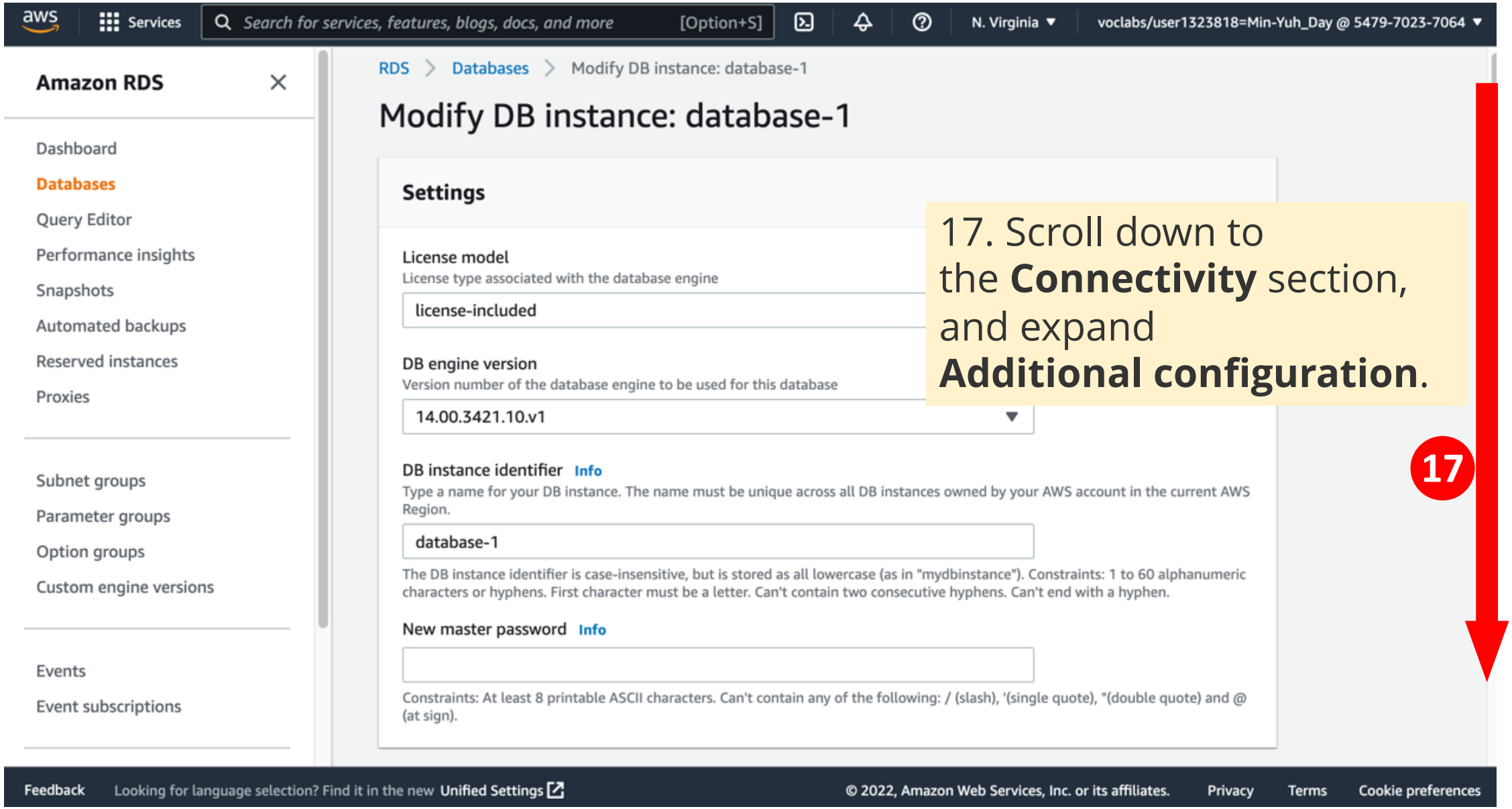
Module 10 Databases: Lab 10 - RDS



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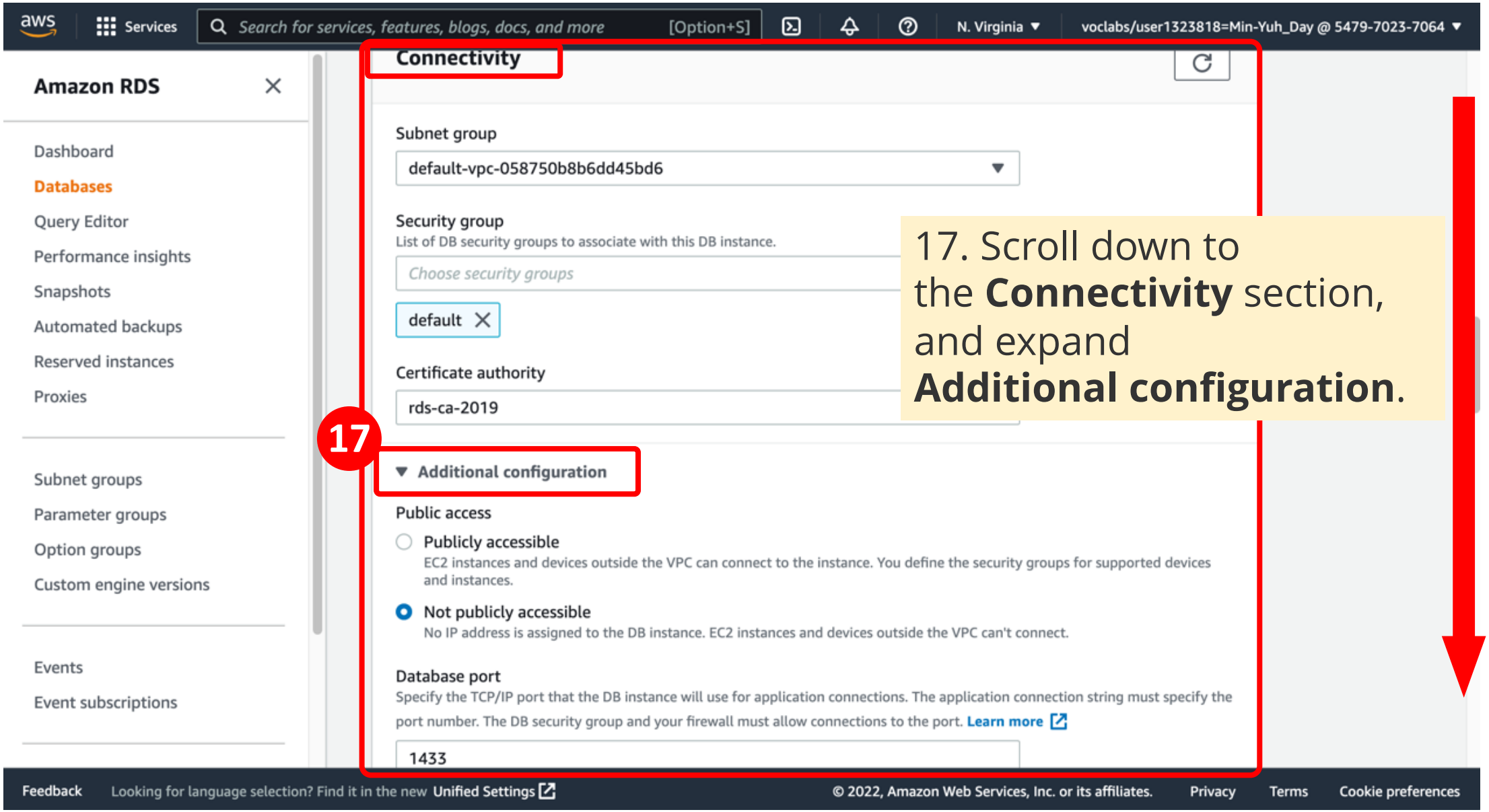
Module 10 Databases: Lab 10 - RDS



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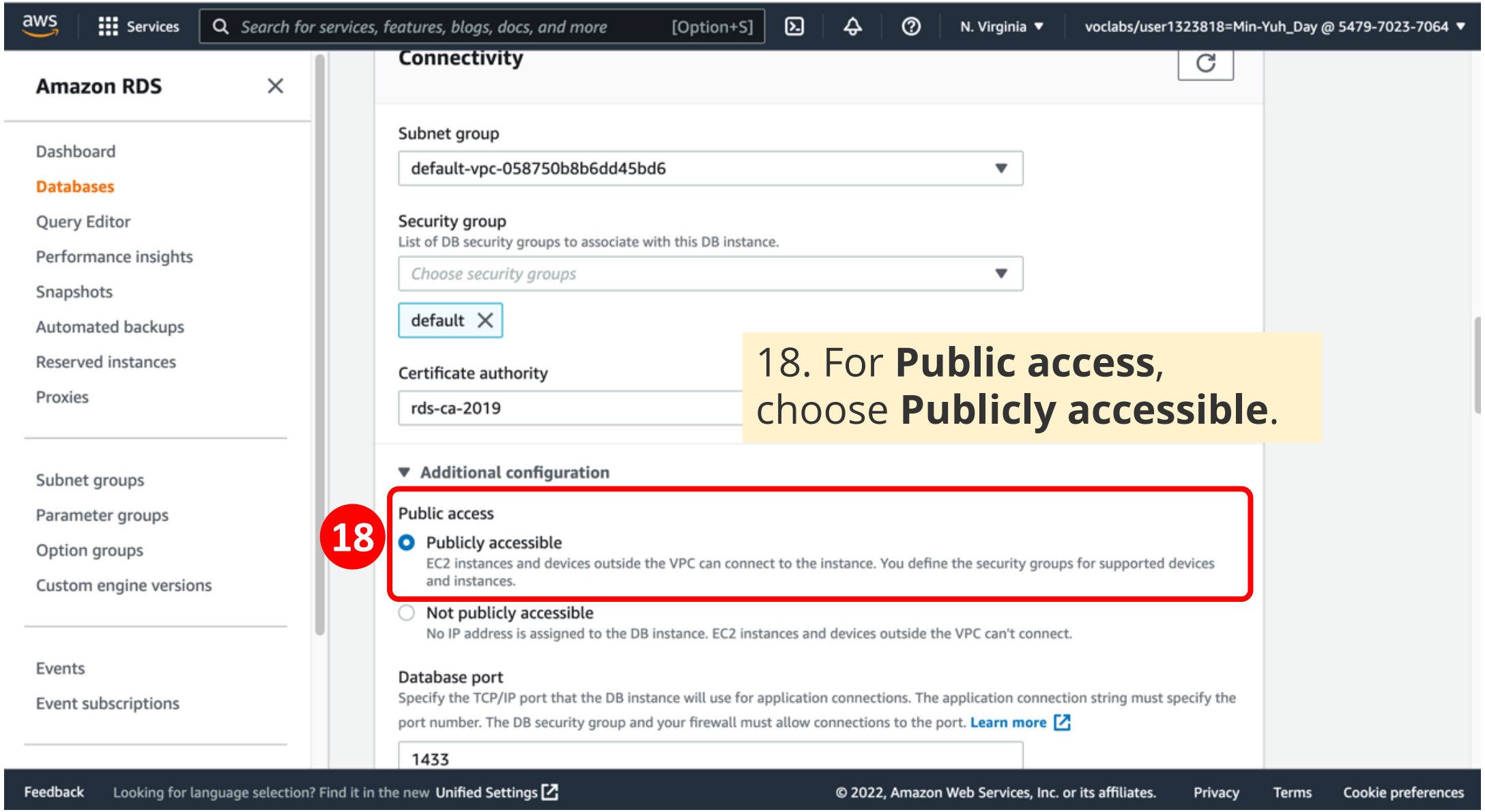
Module 10 Databases: Lab 10 - RDS



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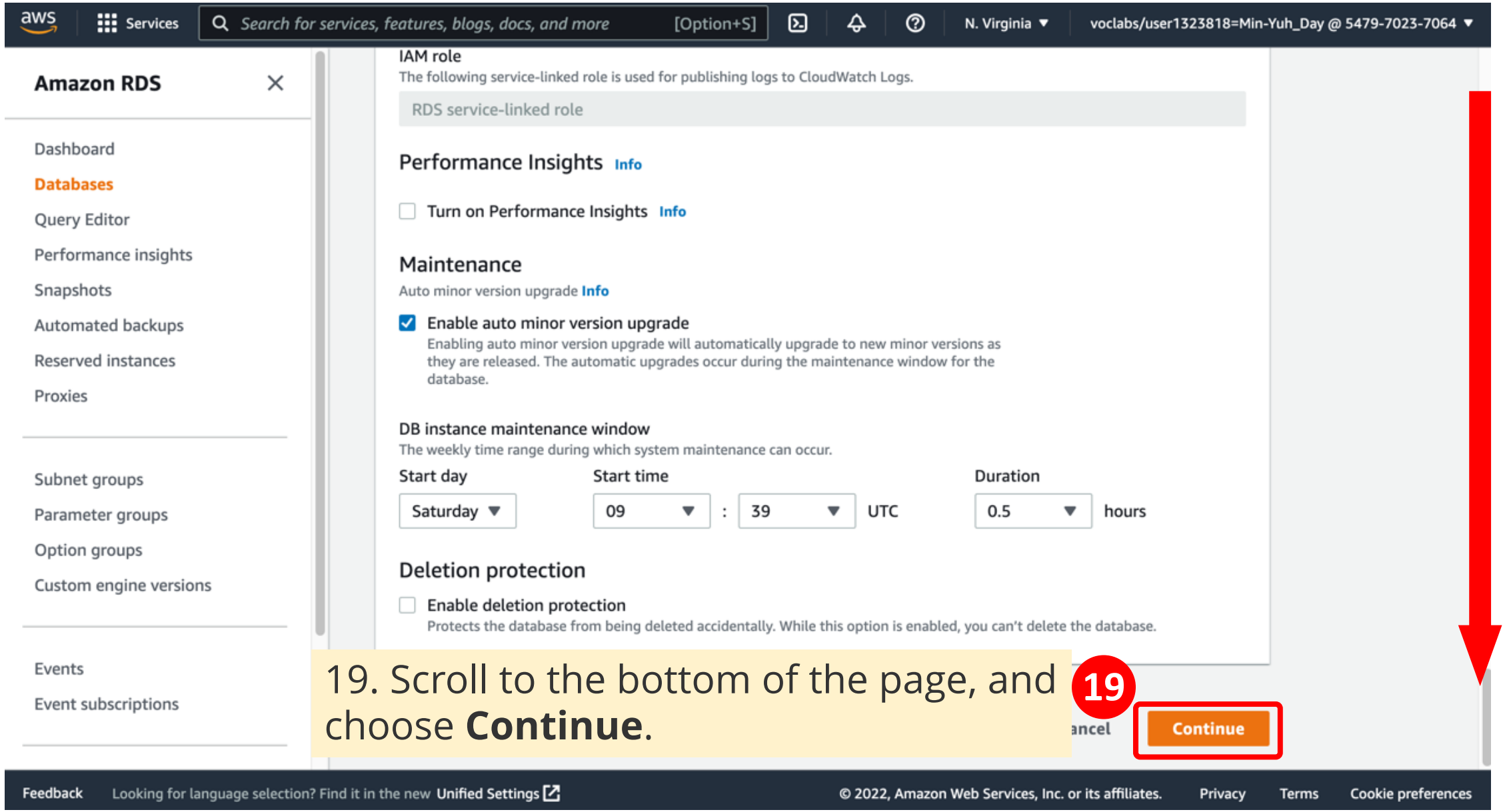
Module 10 Databases: Lab 10 - RDS



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AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

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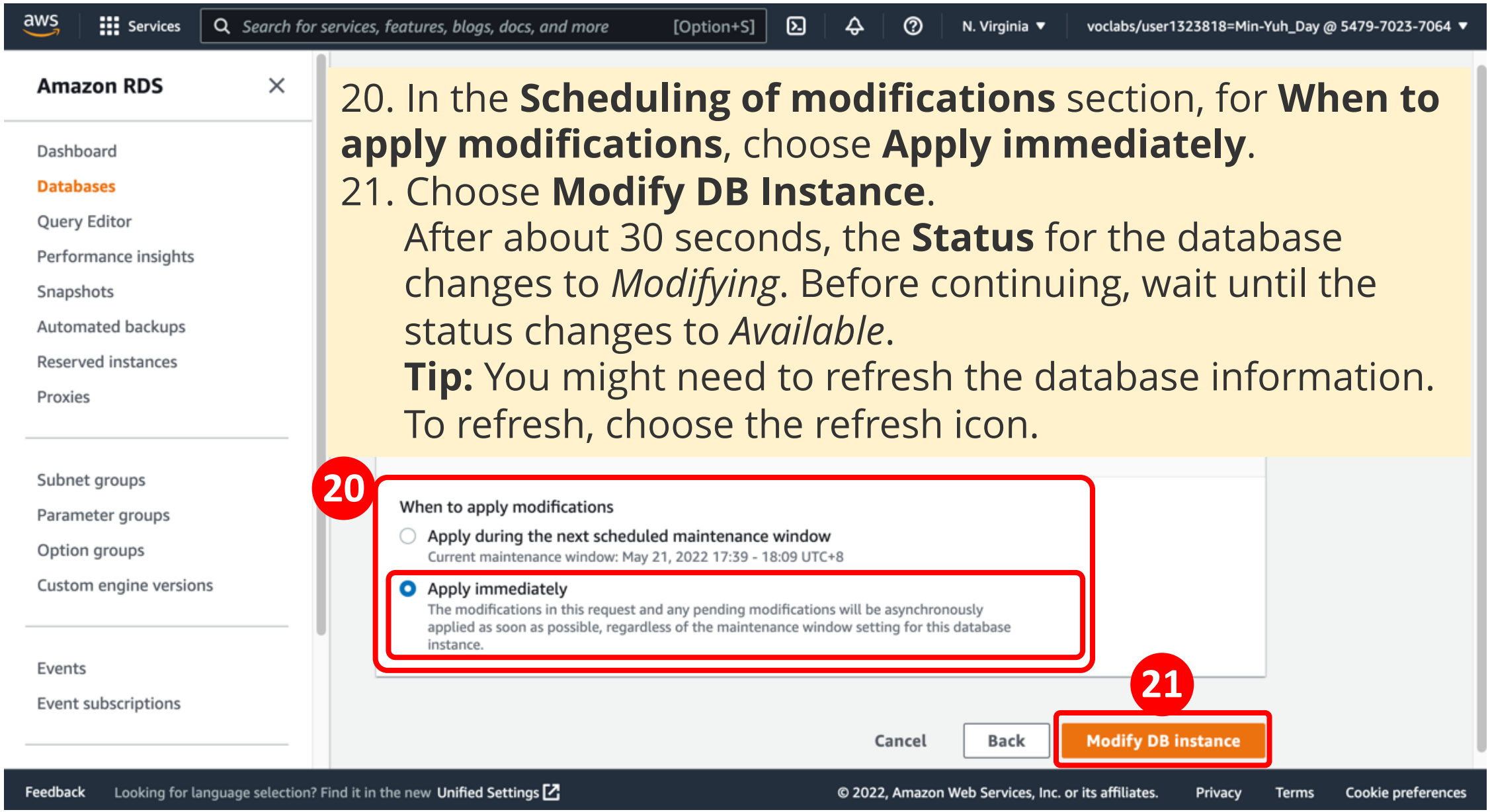

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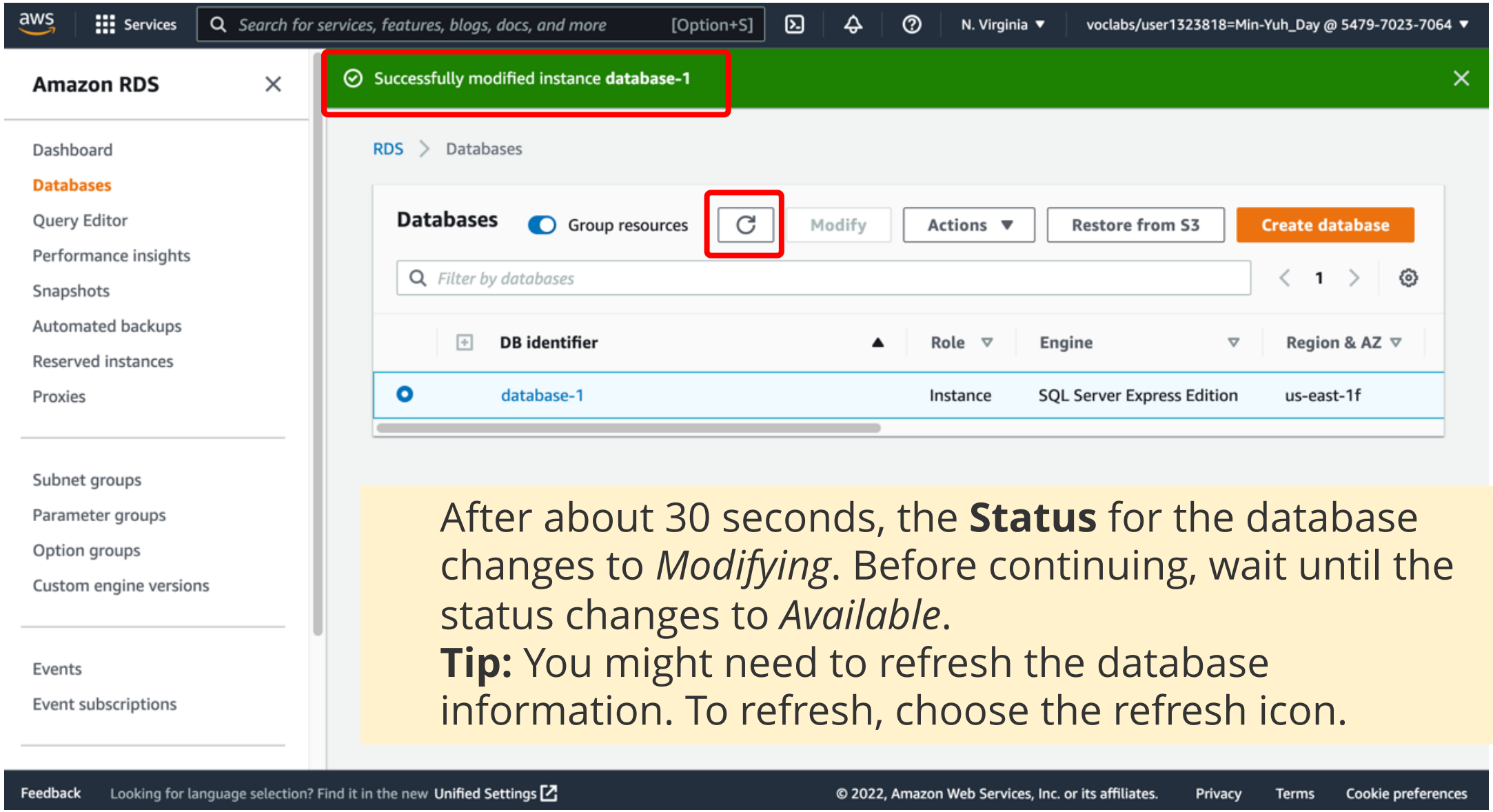
Module 10 Databases: Lab 10 - RDS



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Task 4. Update your VPC security group

By default, the virtual private cloud (VPC) default security group does not permit inbound SQL Server traffic from external sources. In this task, you will turn on inbound SQL Server connections from your IP address.

Note: If you are using the EC2 instance, you will use the **WindowsWorkstation** IP address that you saved earlier. In this case, skip the next few steps to get your IP address.

First, get your IP address.

22. In a new browser tab or window, go to https://whatismyipaddress.com/.

23. Copy the **IPv4** value to a text editor to use later in this lab.

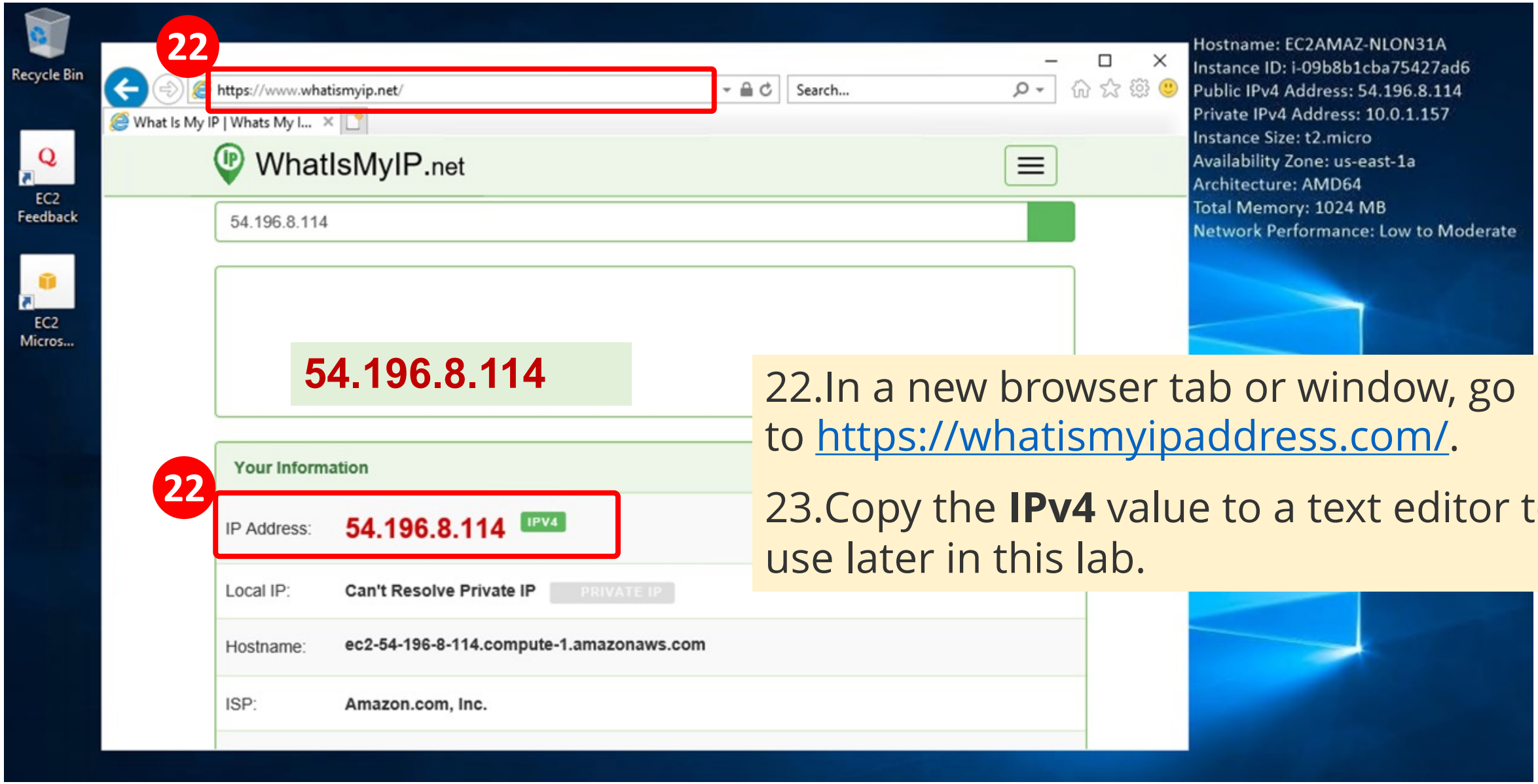
Now, modify the security group to permit inbound SQL Server connections from your computer or the WindowsWorkstation instance.

Task 4. Update your VPC security group

24. Return to the browser tab that is open to the AWS console. Ensure that you are on the **RDS > Databases** page.
25. Choose the name of the database you created.
26. In the **Connectivity & security** section, under **VPC security groups**, choose the name of the security group.

    The security group name looks similar to the following: **default (sg-a12345b6)**
27. On the **Security Groups** page, choose the **Inbound rules** tab.
28. Choose **Edit inbound rules**, and choose **Add rule**.
29. For **Type**, choose **MSSQL**.
30. For **Source**, choose **Custom**, and enter your IP address or the IP address of the WindowsWorkstation instance in the text box.
31. Add /32 at the end of the IP address. The full text should look similar to the following: **123.12.123.23/32**
32. Choose **Save rules**.

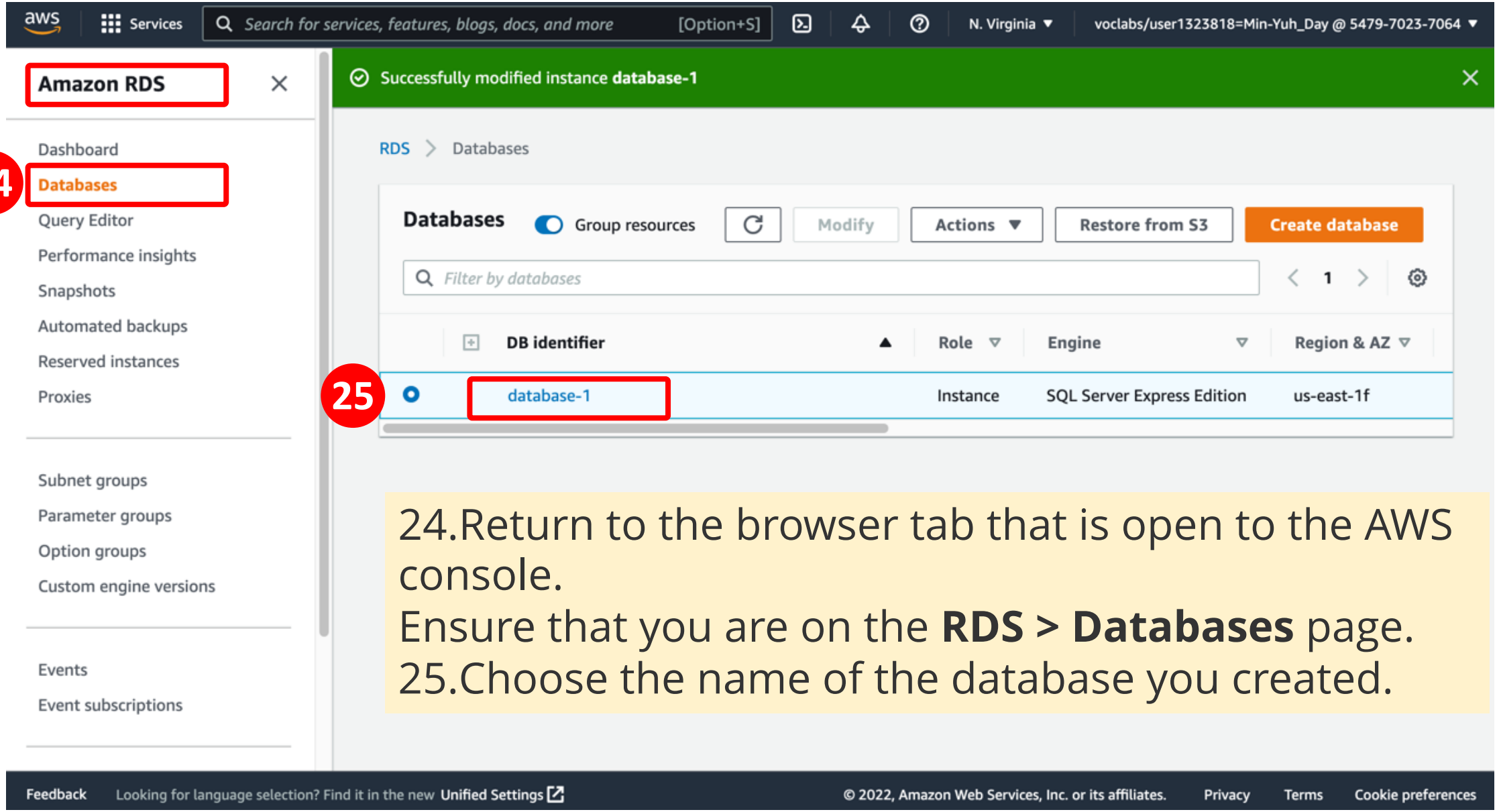
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



22. In a new browser tab or window, go to https://whatismyipaddress.com/.

23. Copy the **IPv4** value to a text editor to use later in this lab.

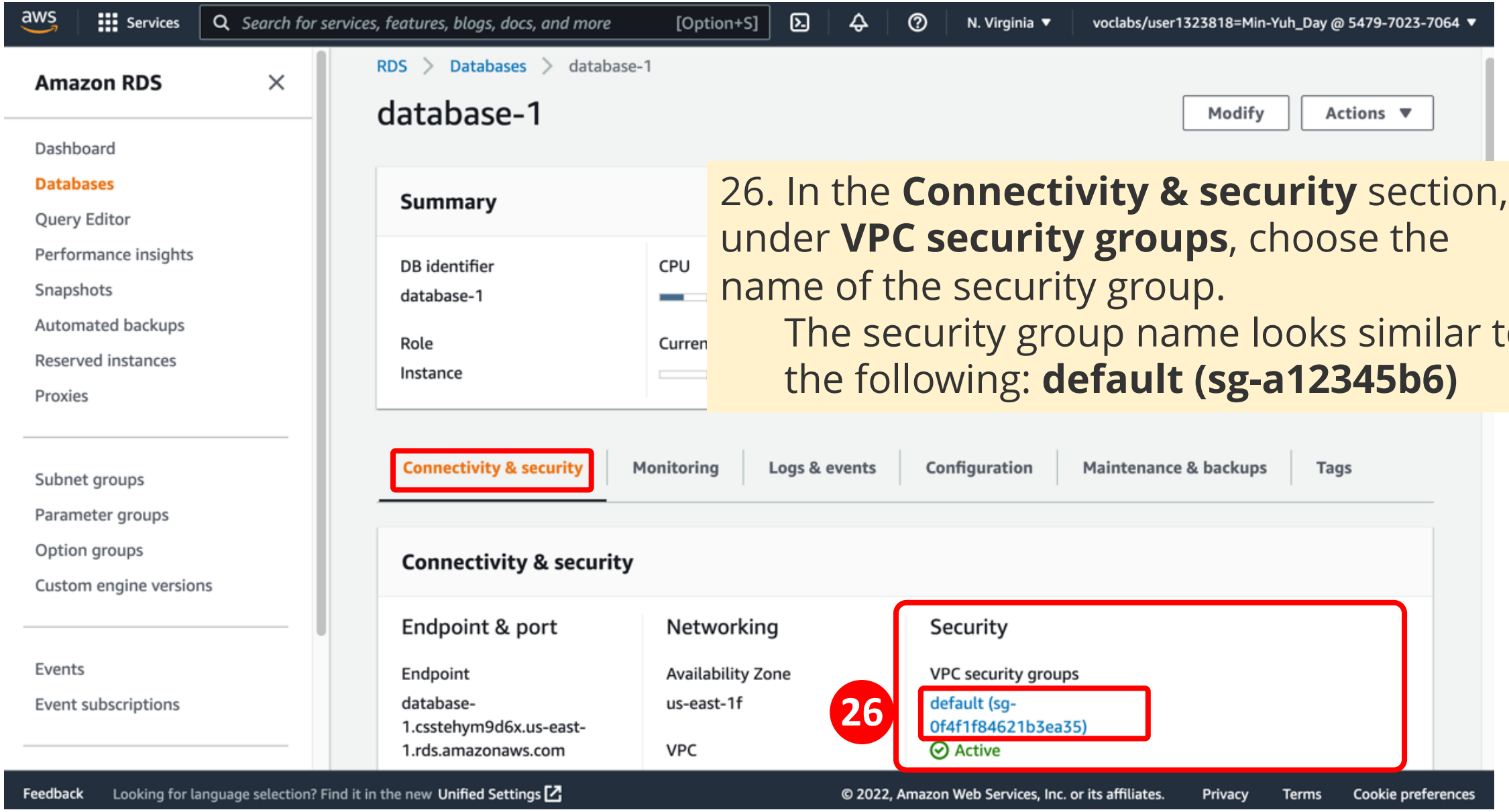
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



24.Return to the browser tab that is open to the AWS console.
Ensure that you are on the **RDS > Databases** page.
25.Choose the name of the database you created.

Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



26. In the **Connectivity & security** section, under **VPC security groups**, choose the name of the security group.

The security group name looks similar to the following: **default (sg-a12345b6)**

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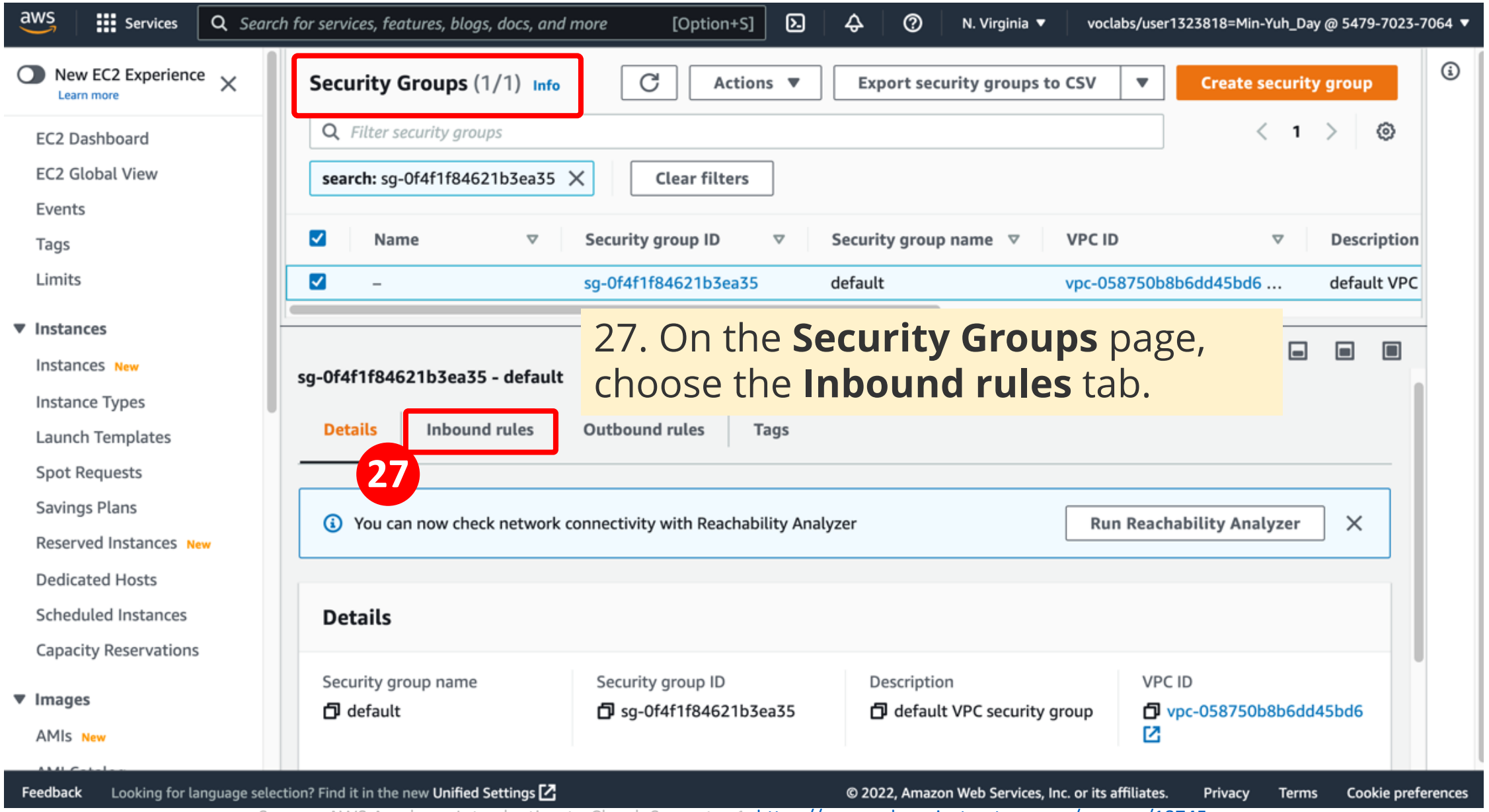
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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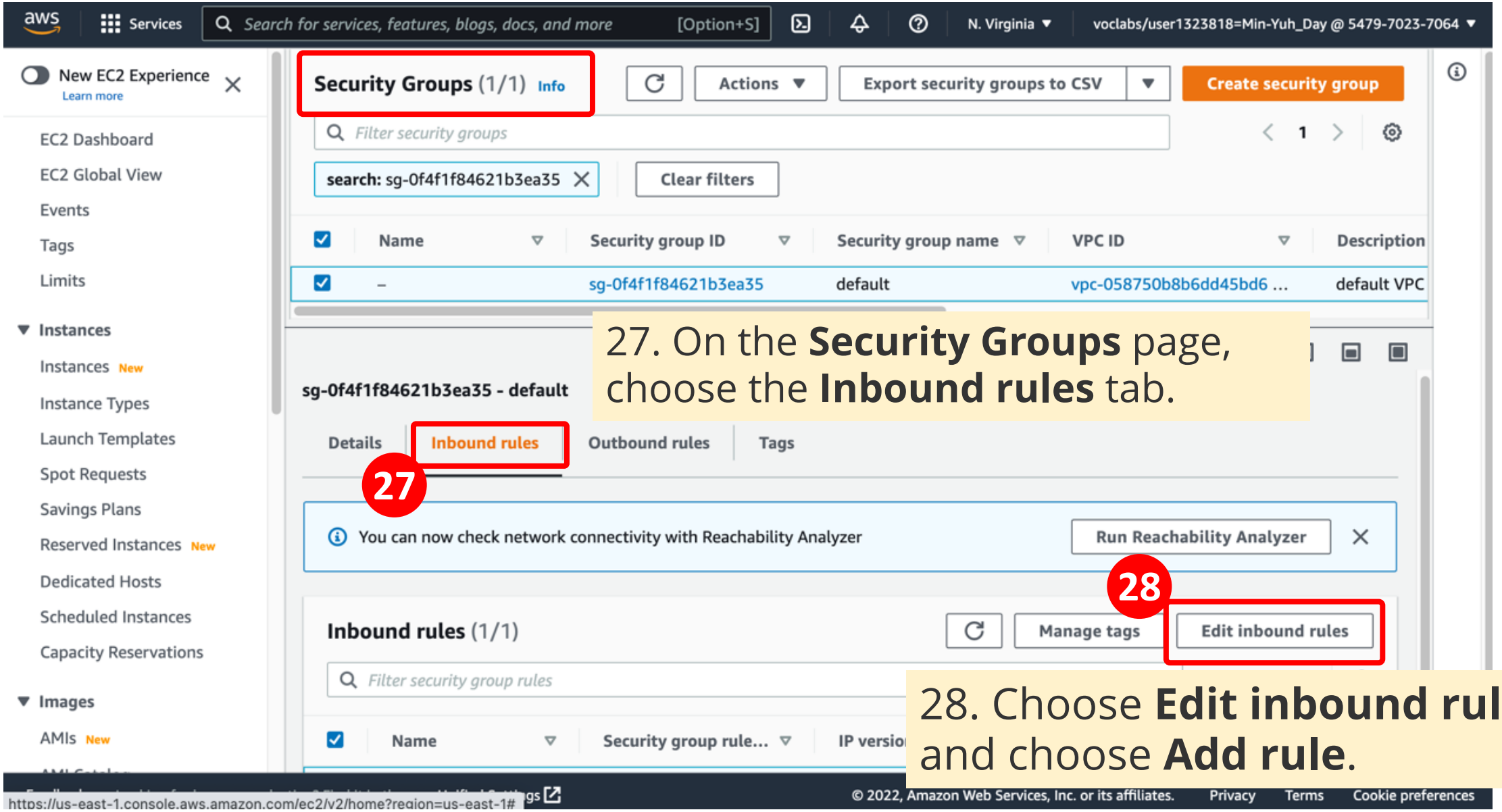
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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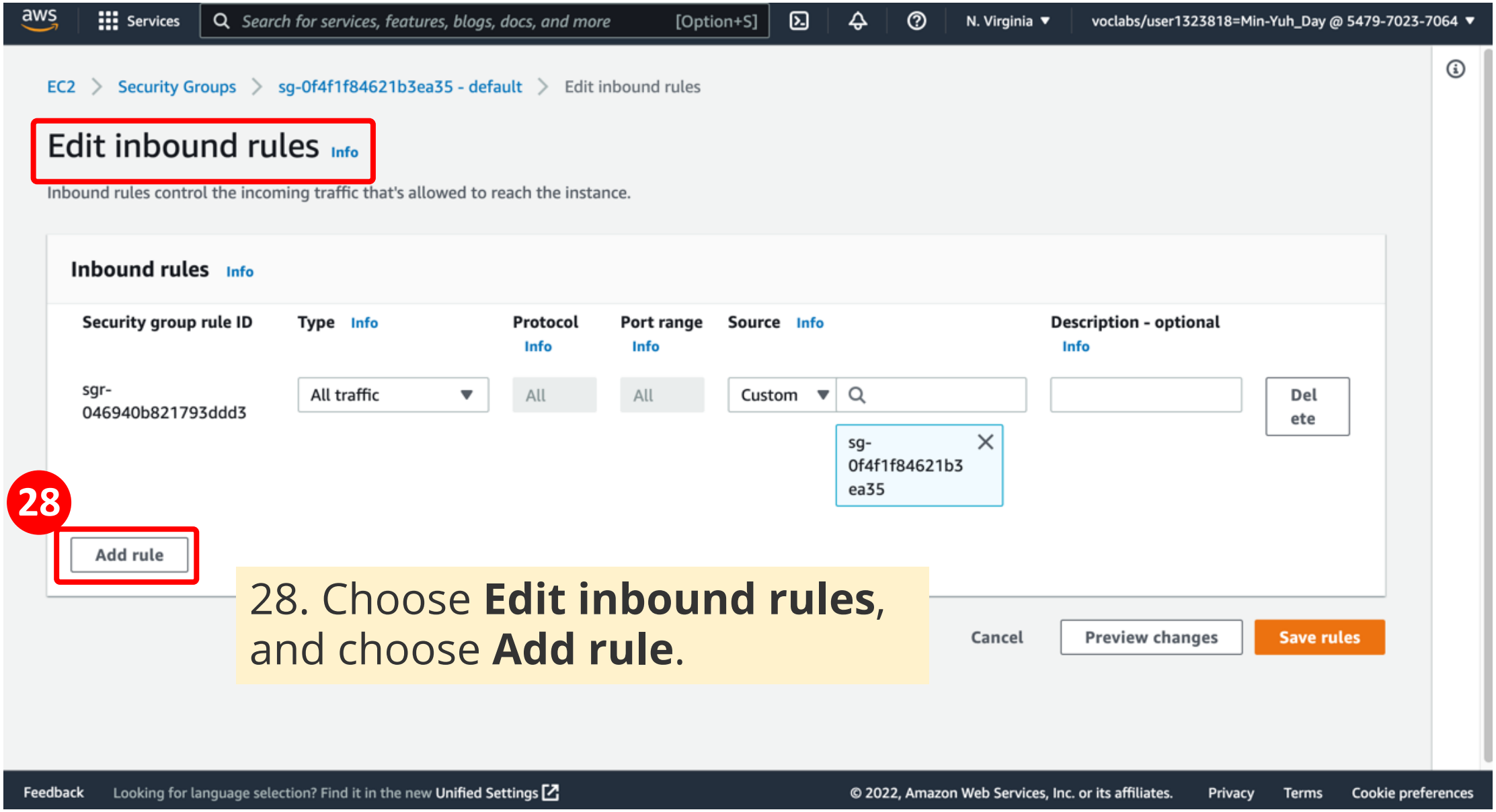
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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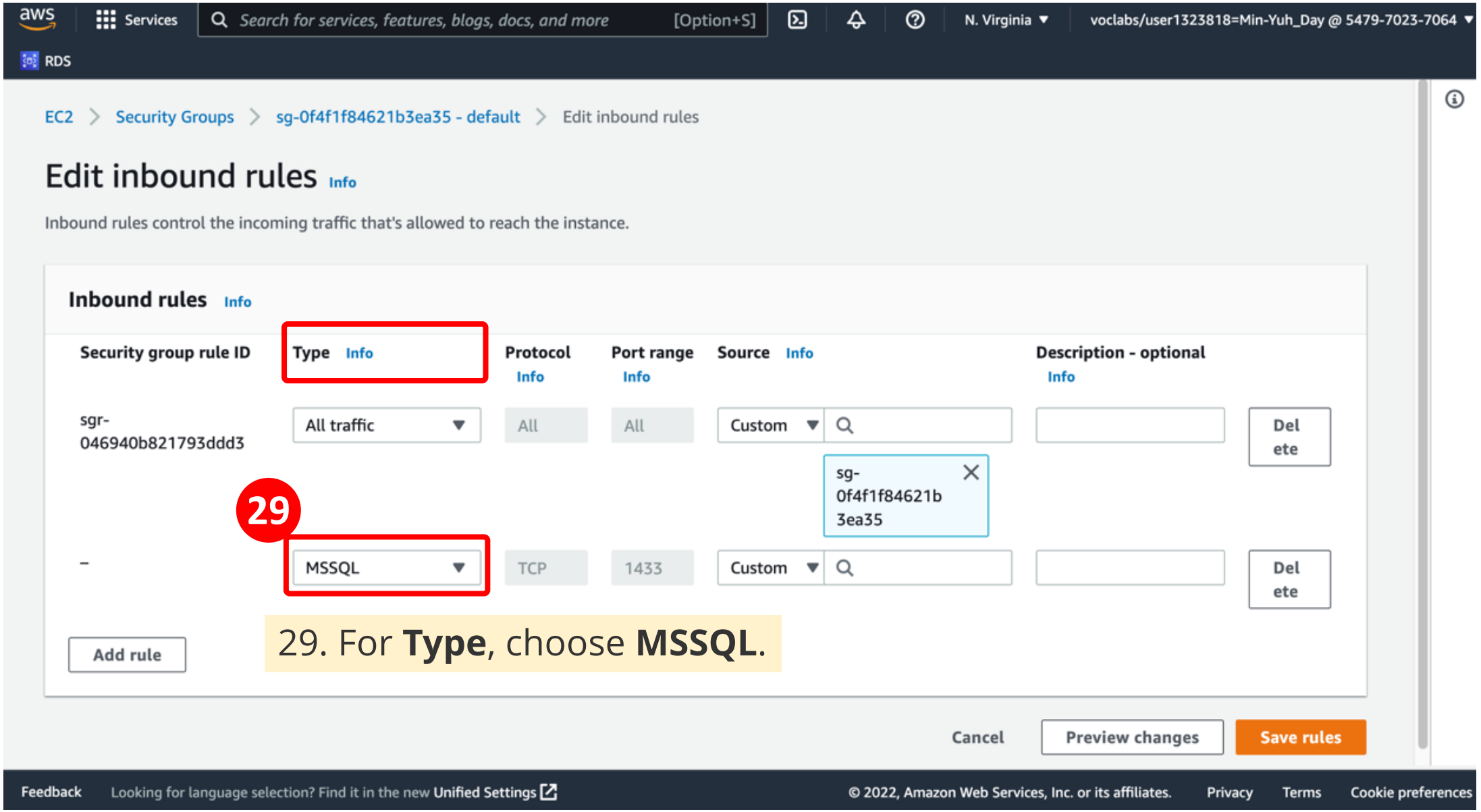
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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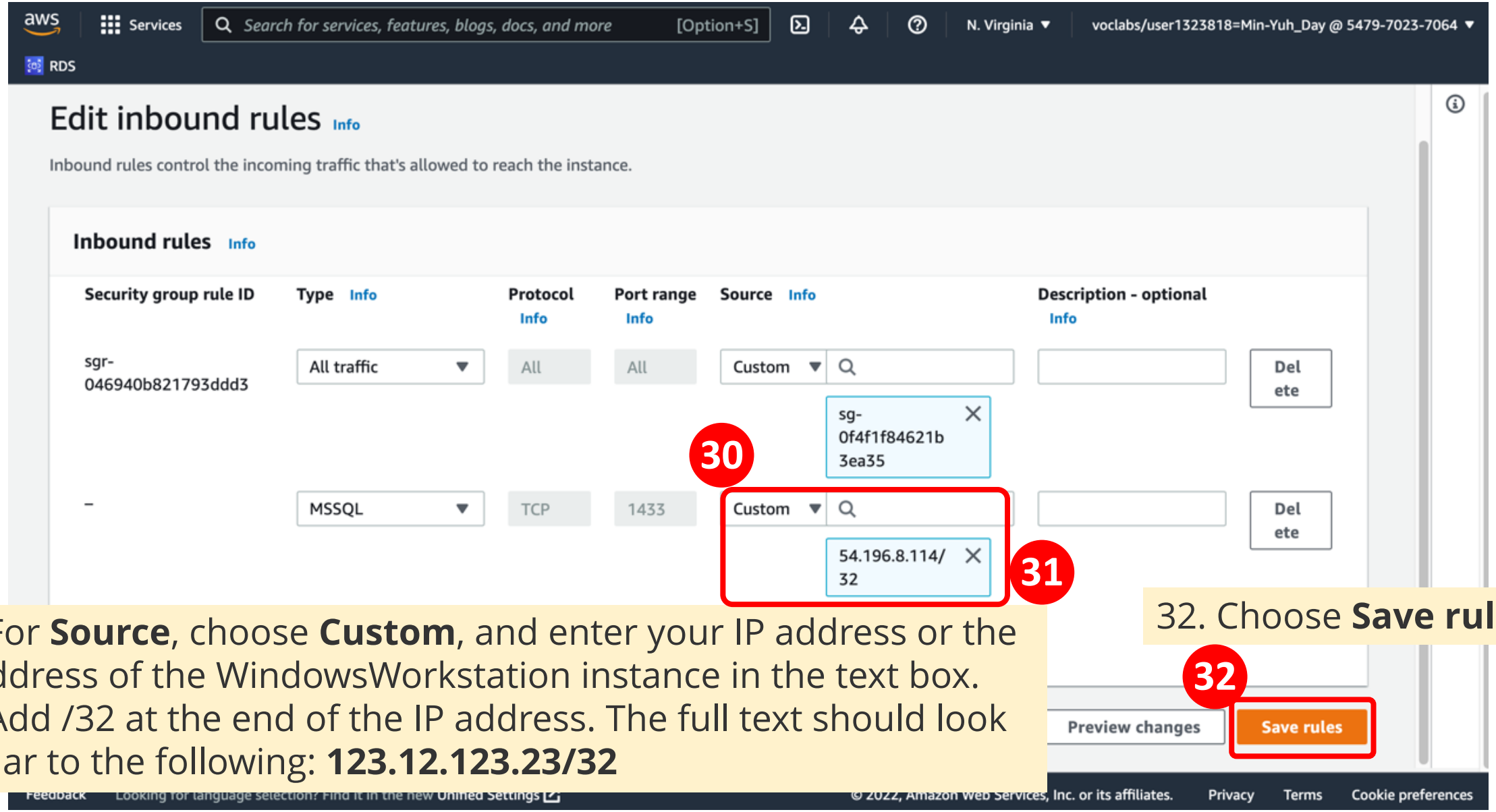
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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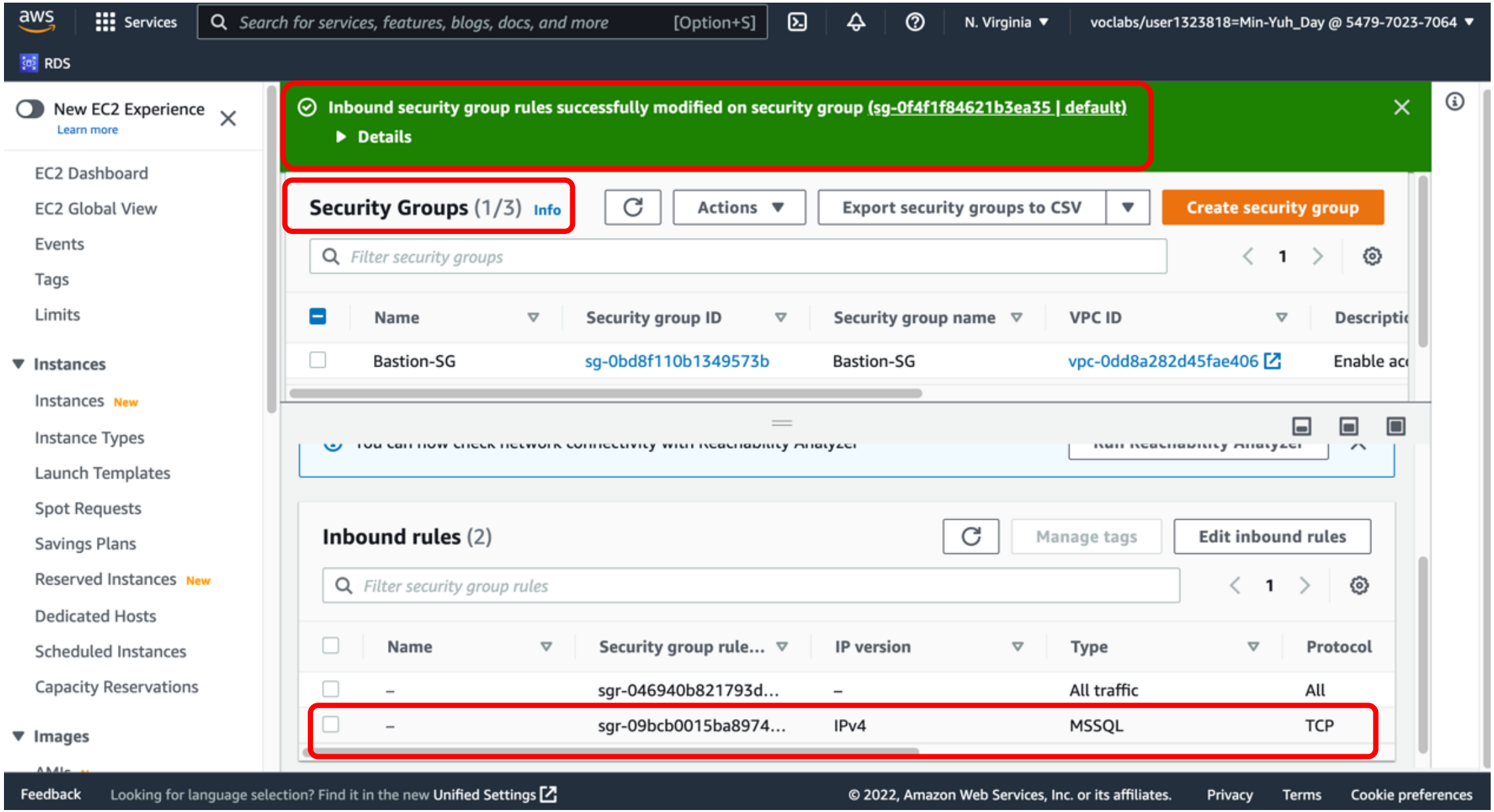
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

Task 5. Connect to your DB instance

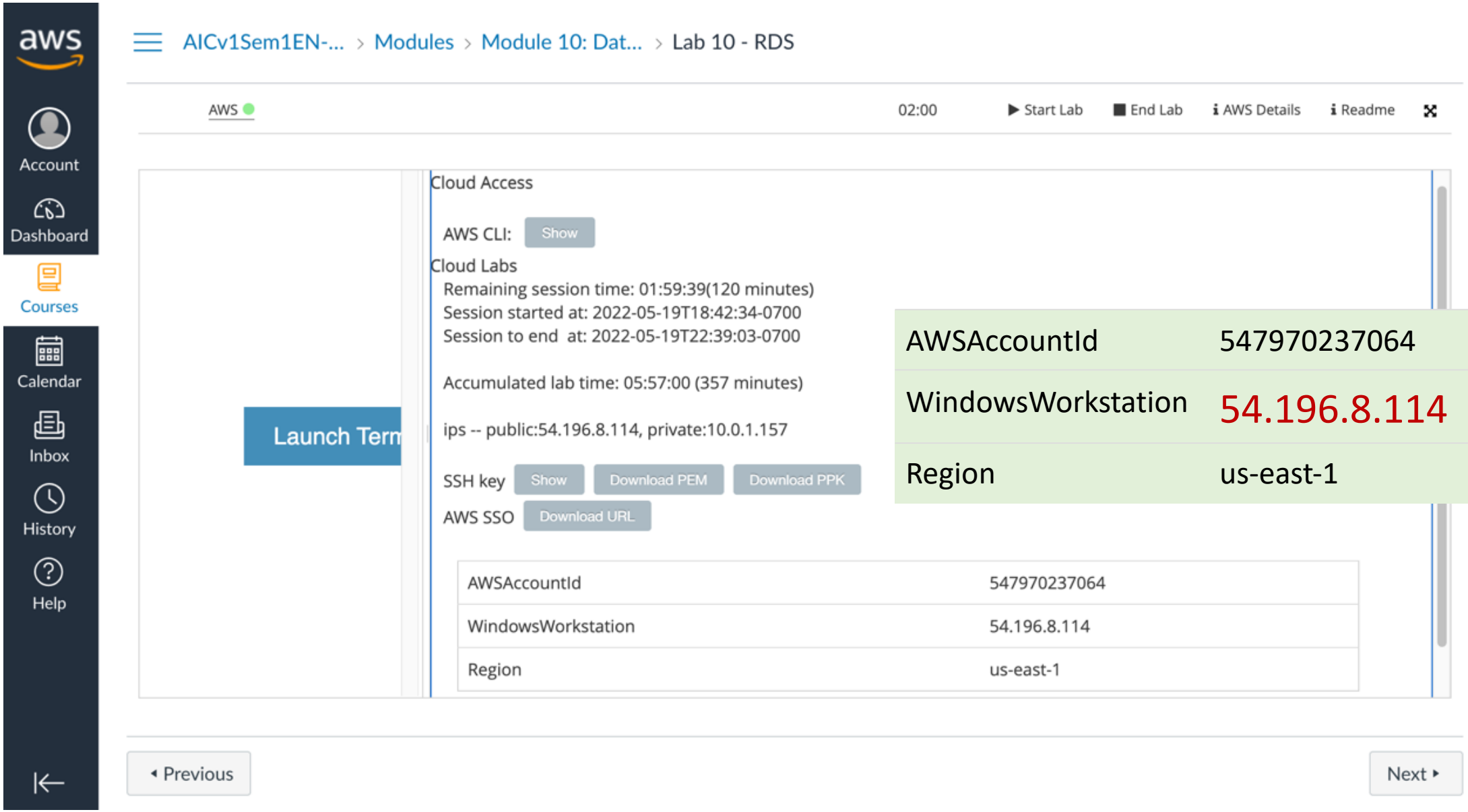
First, you will need to find the Domain Name System (DNS) endpoint and port number for your DB instance.

33. Return to the **RDS > Databases** page.
34. Choose the name of the database you created.
35. On the **Connectivity & security** tab, copy the **Endpoint** value to a text editor.
    The endpoint looks similar to the following: **sample-instance.abc2defghije.us-west-2.rds.amazonaws.com**
36. Notice the **Port** number.
    The default port for SQL Server is 1433.
    If your port number is different, copy that value to your text editor.
37. Open the Microsoft SQL Server Management Studio application.
    Note: If you are using the EC2 instance, start the Microsoft SQL Server Management Studio application in your remote desktop window.
    The **Connect to Server** dialog box appears.
38. For **Server type**, choose **Database Engine**.

Task 5. Connect to your DB instance

39. For **Server name**, enter the database endpoint value that you copied.
40. At the end of the endpoint value, add a comma (,) and the port number (the default port number is **1433**).
    For example, your server name should look similar to the following: **database.abc2defghije.us-west-2.rds.amazonaws.com,1433**
41. For **Authentication**, choose **SQL Server Authentication**.
42. For **Login**, enter the username for your DB instance.
    This is also known as the administrator username. The default is **admin**.
43. For **Password**, enter the password that you copied for your DB instance.
    This is also known as the administrator user password.
44. Choose **Connect**.
    After a few moments, you are connected to your database.
    If the connection does not succeed, repeat Task 4 to update the default security group.
    When you add the inbound rule, for **Source**, choose **Anywhere** instead of **My IP**.
    (**Note:** Only select **Anywhere** for the purpose of this lab. This selection presents a security risk in the real world.)

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



AWSAccountId	547970237064
WindowsWorkstation	54.196.8.114
Region	us-east-1

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AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

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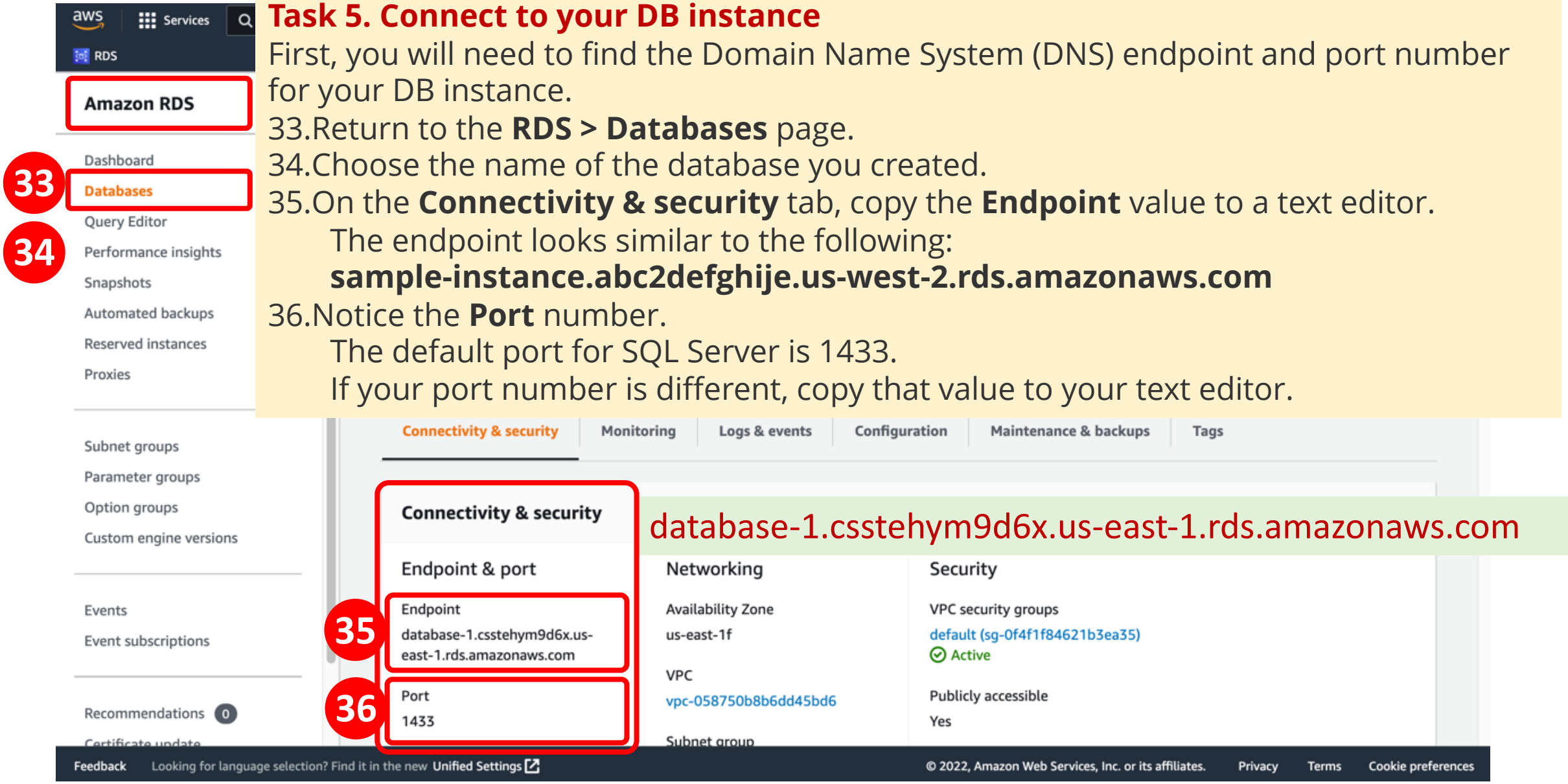


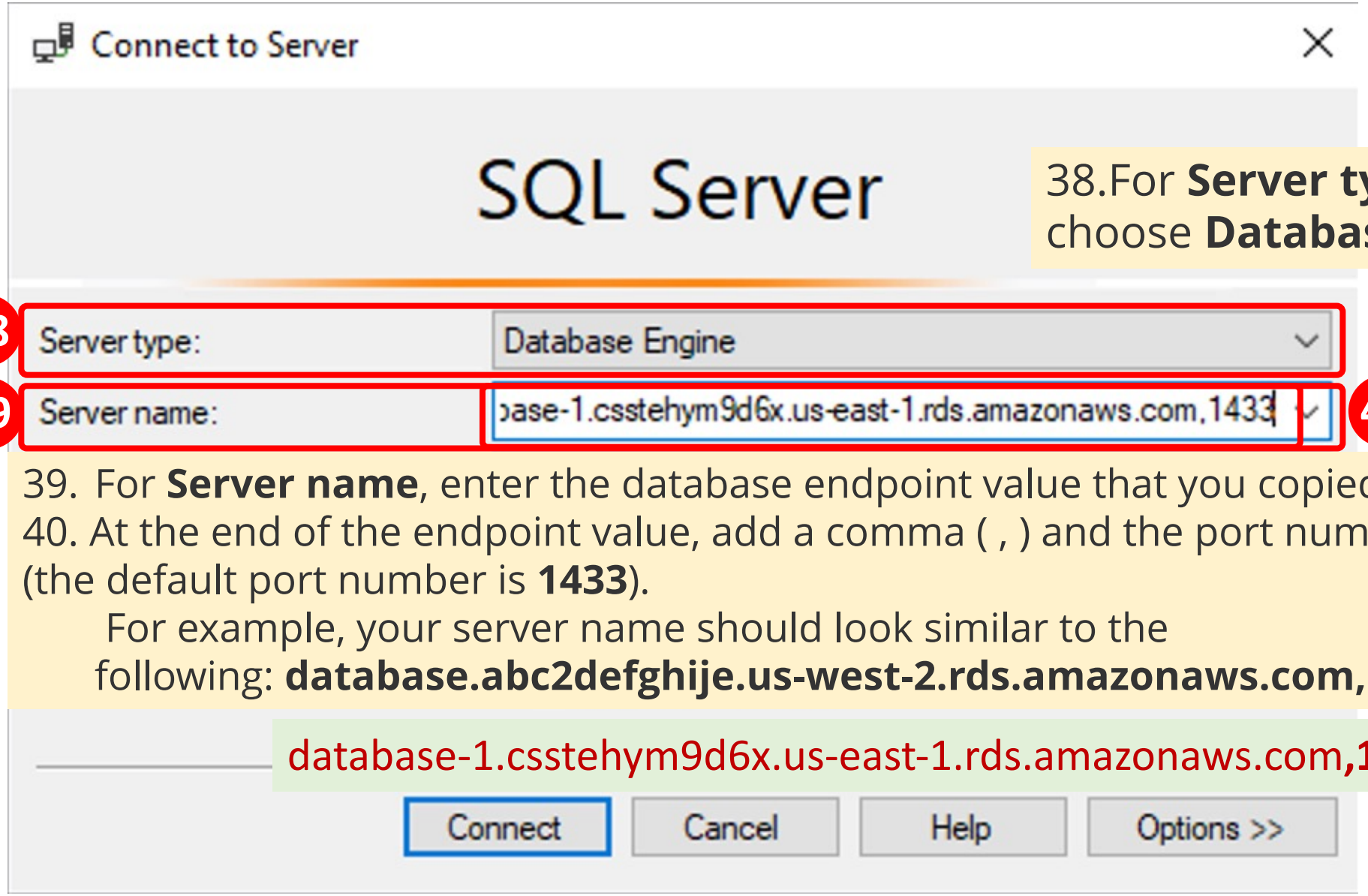
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

37. Open the Microsoft SQL Server Management Studio application.

Note: If you are using the EC2 instance, start the Microsoft SQL Server Management Studio application in your remote desktop window.

The **Connect to Server** dialog box appears.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

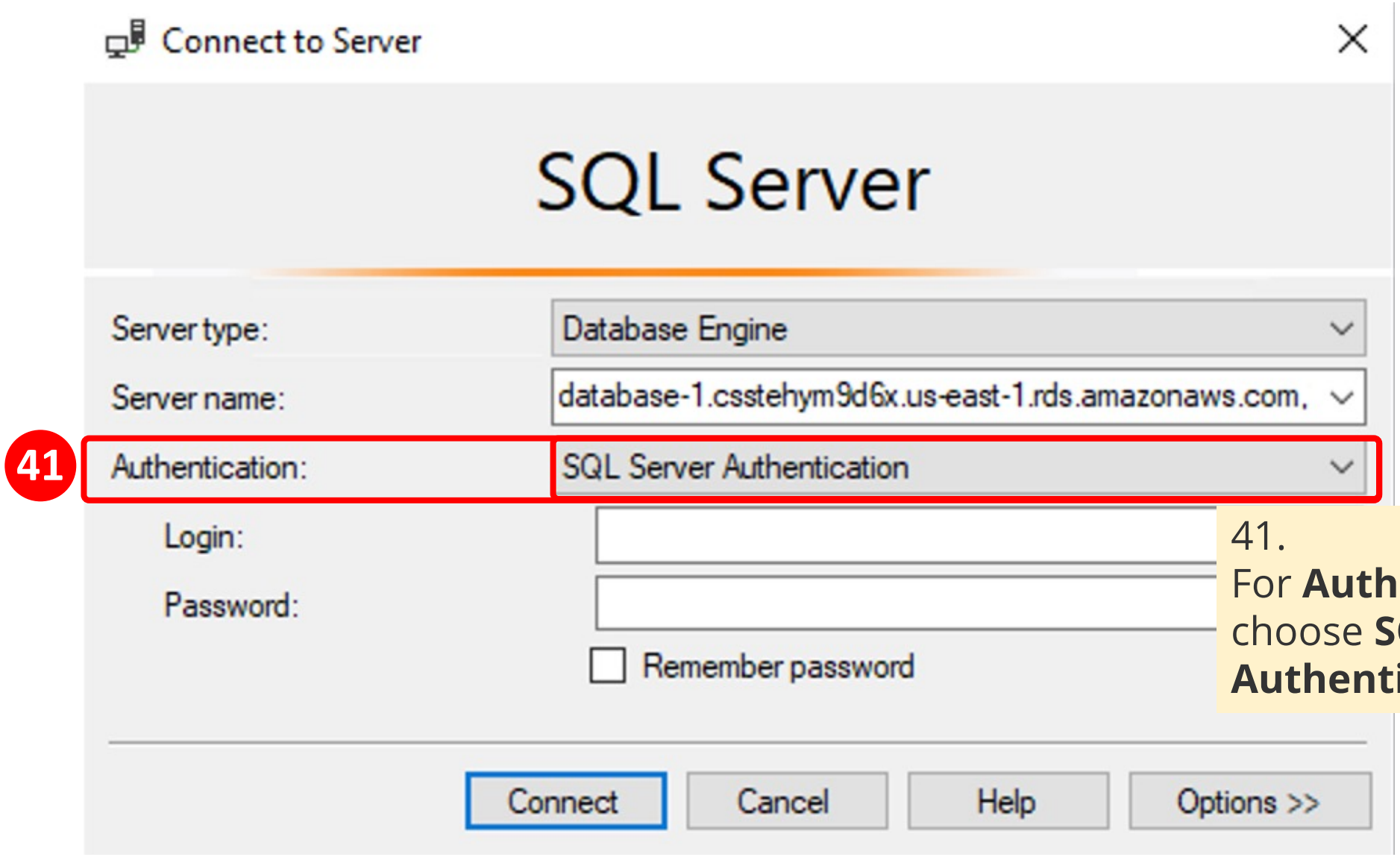


38.For **Server type**, choose **Database Engine**.

39. For **Server name**, enter the database endpoint value that you copied.
40. At the end of the endpoint value, add a comma (,) and the port number (the default port number is **1433**).
For example, your server name should look similar to the following: **database.abc2defghije.us-west-2.rds.amazonaws.com,1433**

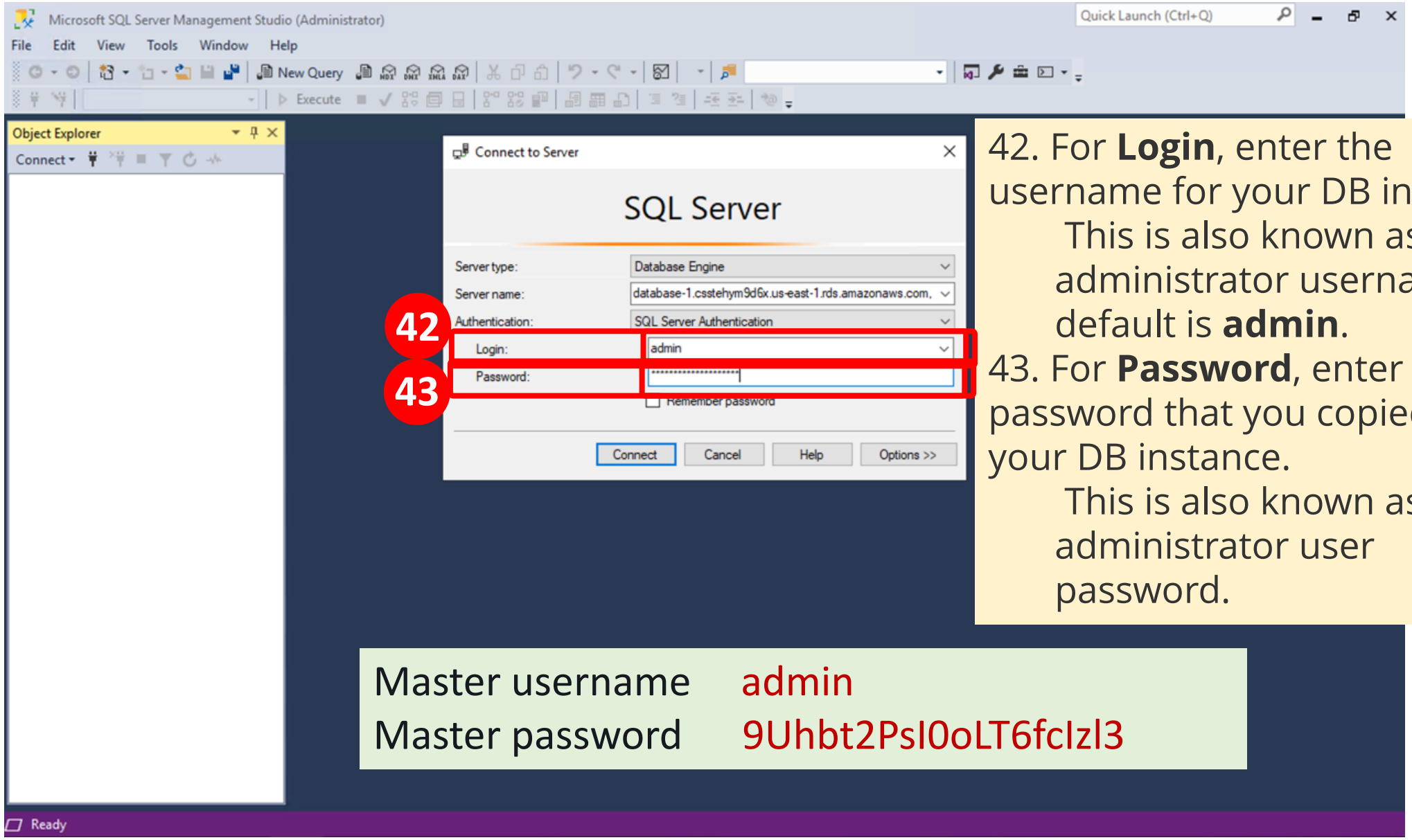
database-1.csstehym9d6x.us-east-1.rds.amazonaws.com,**1433**

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



41.
For **Authentication**, choose **SQL Server Authentication**.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



42. For **Login**, enter the username for your DB instance.
    This is also known as the administrator username. The default is **admin**.
43. For **Password**, enter the password that you copied for your DB instance.
    This is also known as the administrator user password.

Master username	admin
Master password	9Uhbt2PsI0oLT6fcIzl3

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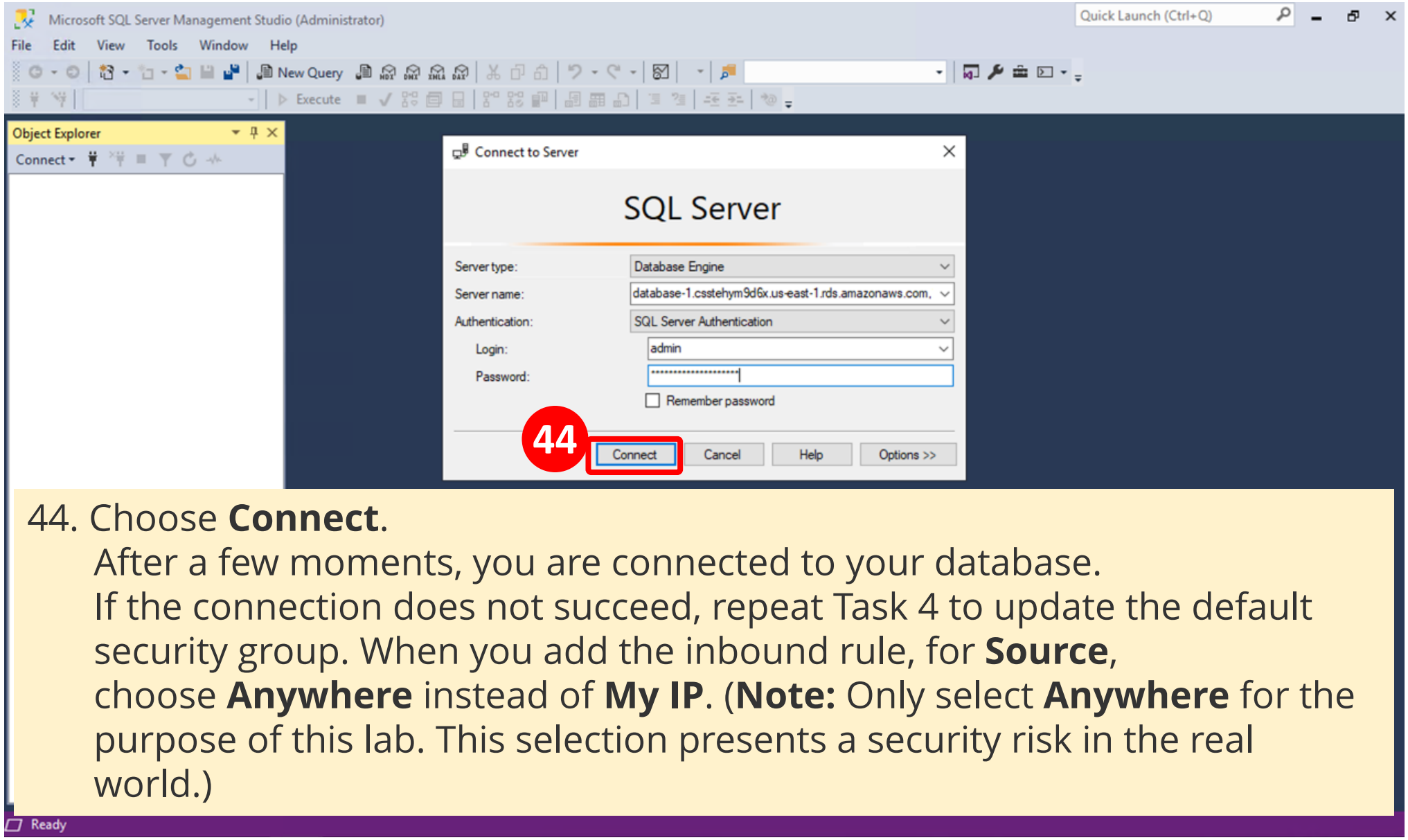
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



44. Choose **Connect**.
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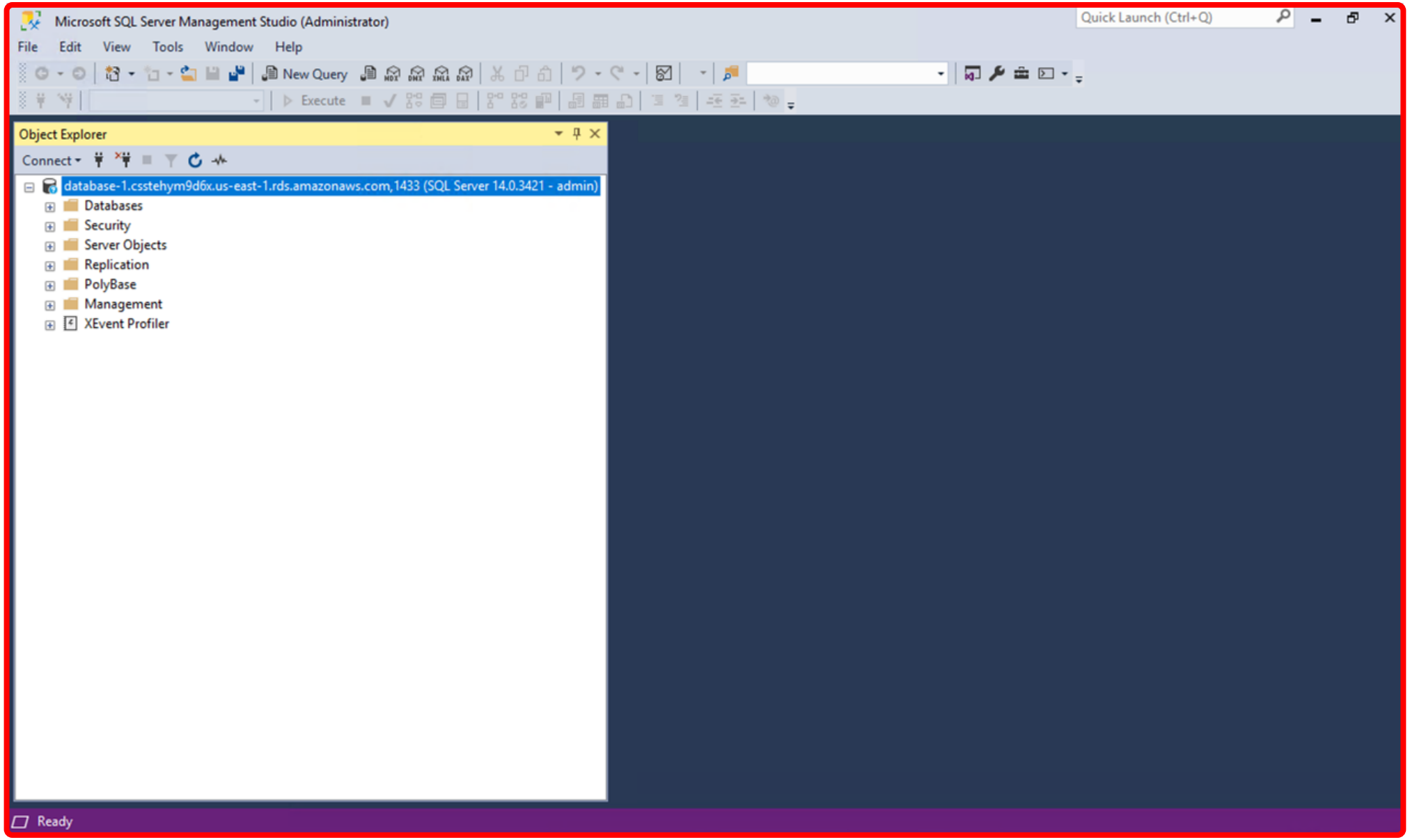
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS

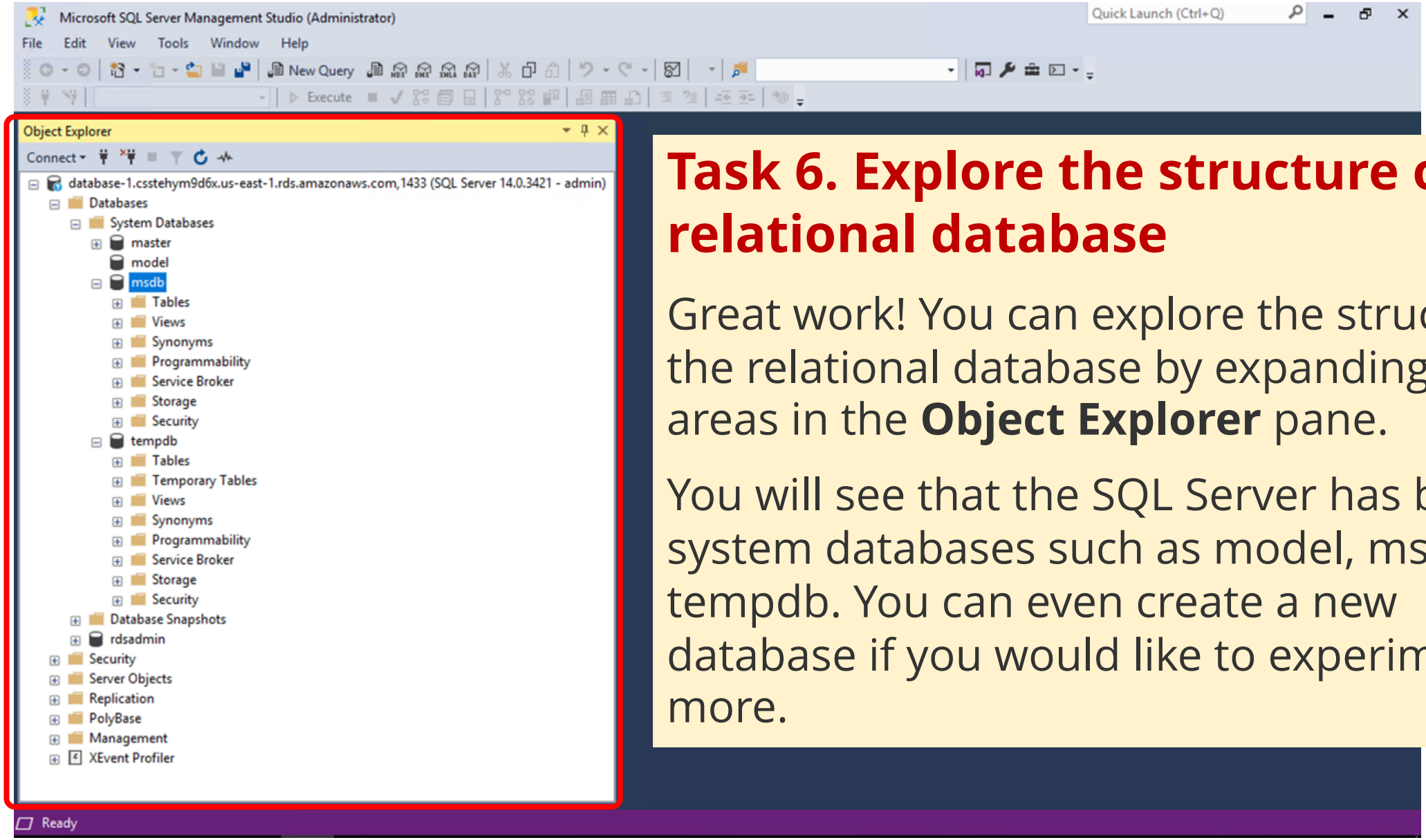


Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

Task 6. Explore the structure of the relational database

Great work! You can explore the structure of the relational database by expanding the areas in the **Object Explorer** pane.

You will see that the SQL Server has built-in system databases such as model, msdb, and tempdb. You can even create a new database if you would like to experiment more.



Task 6. Explore the structure of the relational database

Great work! You can explore the structure of the relational database by expanding the areas in the **Object Explorer** pane.

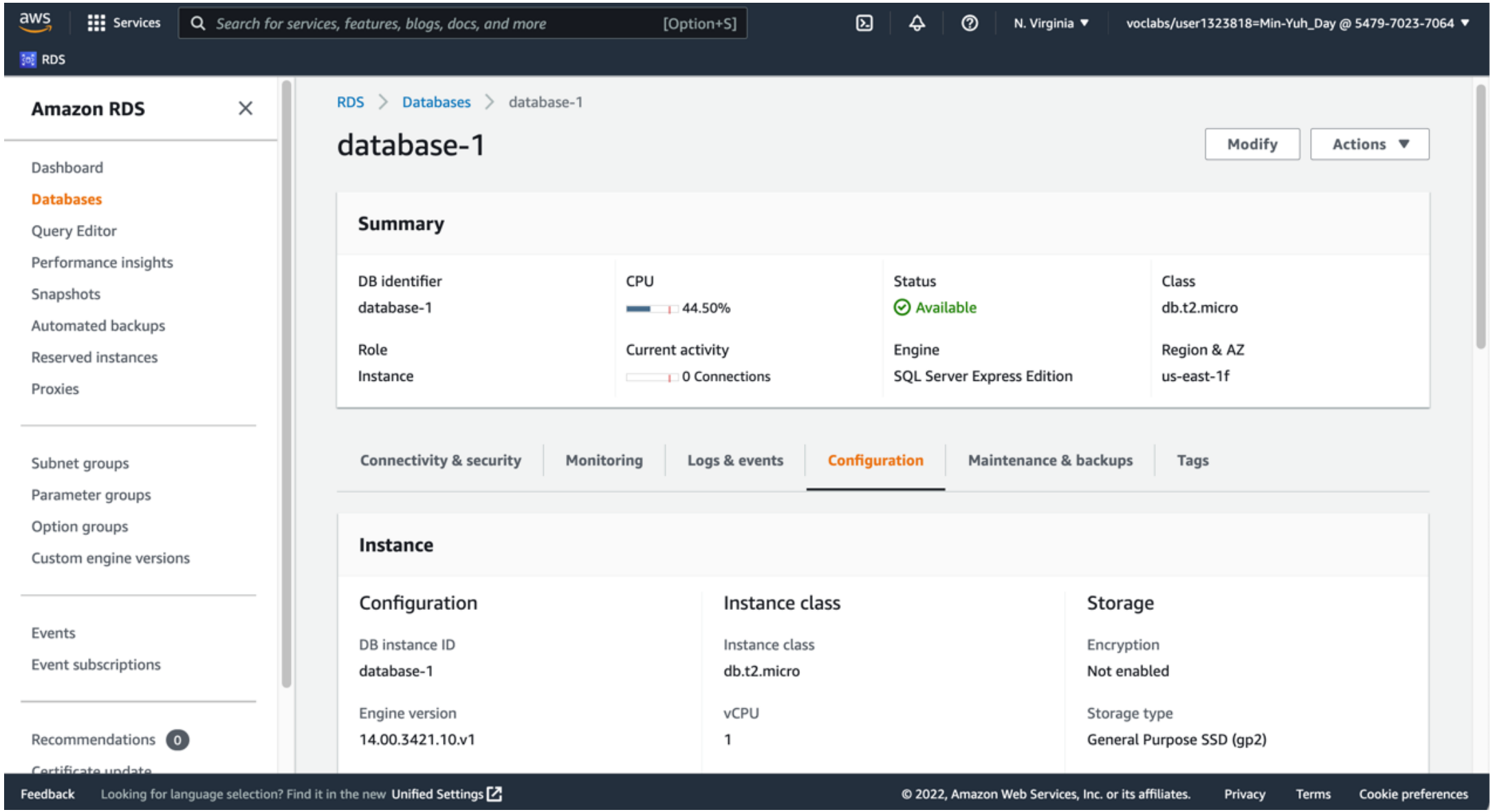
You will see that the SQL Server has built-in system databases such as model, msdb, and tempdb. You can even create a new database if you would like to experiment more.

Lab complete

Congratulations! You have completed the lab.

45. Log out of the AWS Management Console.
    In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.
    Choose **Sign Out**.
46. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



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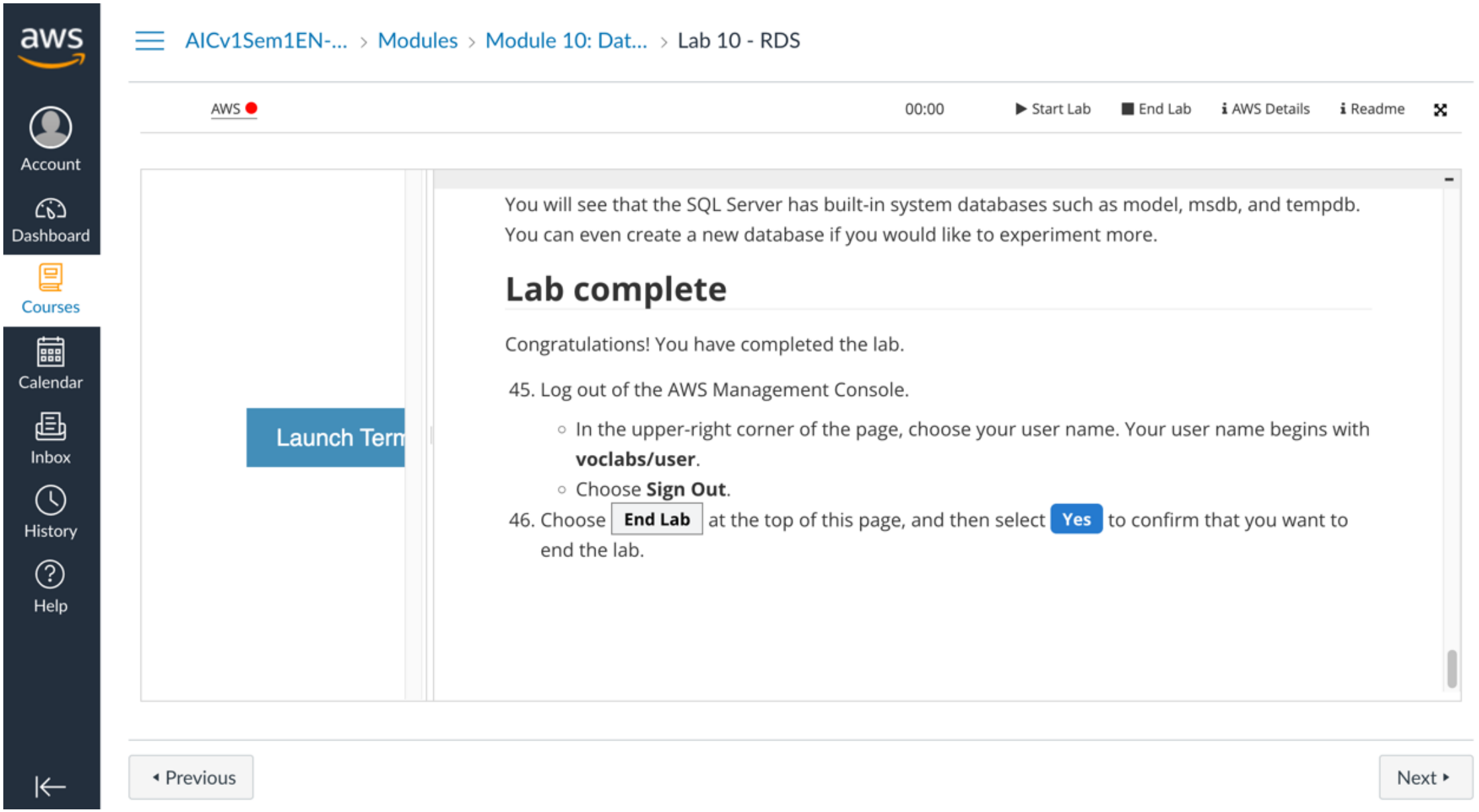
AWS Academy Introduction to Cloud: Semester 1
Module 10 Databases: Lab 10 - RDS



Source: AWS Academy Introduction to Cloud: Semester 1, https://awsacademy.instructure.com/courses/18745

Module 10 Lab:
Creating an Amazon RDS Database Instance

- Access the AWS Management Console
- Task 1. Set up an RDS DB instance
- Task 2. Download and install SQL Server Management Studio
- Task 3. Make your database publicly accessible
- Task 4. Update your VPC security group
- Task 5. Connect to your DB instance
- Task 6. Explore the structure of the relational database
- Lab complete

Summary

- **AWS RDS: Lab 10**
  Creating an Amazon RDS Database Instance
  - **AWS Academy Introduction to Cloud: Semester 1**
  - **Module 10: Databases**
  - **Lab 10 - RDS**
    - Module 10 Lab: Creating an Amazon RDS Database Instance

References

- https://aws.amazon.com/certification/
- https://www.aws.training/
- https://aws.amazon.com/training/awsacademy/
- https://aws.amazon.com/education/awseducate/
- **AWS Academy Introduction to Cloud: Semester 1**
  - https://awsacademy.instructure.com/courses/18745
- **AWS Certified Cloud Practitioner**
  - https://aws.amazon.com/certification/certified-cloud-practitioner/
- **AWS Certified Solutions Architect – Associate**
  - https://aws.amazon.com/certification/certified-solutions-architect-associate/
- **AWS Cloud Practitioner Essentials (Second Edition)**
  - https://aws.amazon.com/training/course-descriptions/cloud-practitioner-essentials/
- **Architecting on AWS**
  - https://aws.amazon.com/training/course-descriptions/architect/

雲端運算基礎入門

Introduction to Cloud Computing

Q & A

AWS Relational Database Service (RDS): Lab 10
Creating an Amazon RDS Database Instance

Time: 2022/5/20 (Friday) 18:30-20:30

Place: 電資406室, 國立臺北大學 (NTPU)

https://meet.google.com/efw-mxft-jav

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國立臺北大學 資訊管理研究所

Institute of Information Management, National Taipei University

https://web.ntpu.edu.tw/~myday

2022-05-20