



# **Amazon Web Services Data Engineering Immersion Day**

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Prelab2. Student Environment Setup  
*August 2020*

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## Introduction

This guide helps students set up the pre-environment for the AWS Database Migration Service (AWS DMS) lab.

AWS DMS required source and destination as shown below:



Your instructor will provide you the source database details. If you ran the instructor prelab to setup your own Postgres RDS database, use the output value `DMSInstanceEndpoint` from your dmslab-instructor [CloudFormation](#) deployment.

In this lab, you will complete the following pre-requisite using AWS CloudFormation template deployment:

1. Create required VPC setup for AWS DMS instance.
2. Create Amazon S3 bucket for destination end point configuration.
3. Create Amazon S3 buckets for Amazon Athena query result storage.
4. Create required Amazon S3 bucket policy to put data by AWS DMS service.
5. Create AWS Glue Service Role to use in later hands-on workshop.
6. Create Amazon Athena workgroup users to use in Athena workshop.
7. Create Amazon Lake formation users to use in Lake formation workshop.

Labs are also available in GitHub - <https://github.com/aws-samples/data-engineering-for-aws-immersion-day>

## Create the Student Environment

\*\*\*Make sure you select the us-east-1 (Virginia) region\*\*\*

1. Launch the student CloudFormation stack

[https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/stacks/new?stackName=dmslab-student&templateURL=https://s3.us-east-1.amazonaws.com/aws-dataengineering-day.workshop.aws/DMSlab\\_student\\_CFN.json](https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/stacks/new?stackName=dmslab-student&templateURL=https://s3.us-east-1.amazonaws.com/aws-dataengineering-day.workshop.aws/DMSlab_student_CFN.json)

**Create stack**

**Prerequisite - Prepare template**

Prepare template  
Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

☒ Template is ready ☐ Use a sample template ☐ Create template in Designer

**Specify template**  
A template is a JSON or YAML file that describes your stack's resources and properties.

Template source  
Selecting a template generates an Amazon S3 URL where it will be stored.

☒ Amazon S3 URL ☐ Upload a template file

Amazon S3 URL

Amazon S3 template URL  
S3 URL:

2. In Specify stack details, provide a name for “Stack Name” as “dmslab-student”.
3. Click on Next.

CloudFormation > Stacks > Create stack

Step 1  
Specify template

Step 2  
**Specify stack details**

Step 3  
Configure stack options

Step 4  
Review

**Specify stack details**

**Stack name**

Stack name  
  
Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

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

**No parameters**  
There are no parameters defined in your template

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4. In review page, review all the details, scroll down and check the box to acknowledge the policy and then click on **Create Stack**.

► Quick-create link

Capabilities

**The following resource(s) require capabilities: [AWS::IAM::Role]**

This template contains Identity and Access Management (IAM) resources that might provide entities access to make changes to your AWS account. Check that you want to create each of these resources and that they have the minimum required permissions. [Learn more](#)

☒ I acknowledge that AWS CloudFormation might create IAM resources.

Cancel Previous Create change set **Create stack**

5. Launch the stack. It may take 5 minutes for the stack to launch. Go to the **Outputs** tab and note down all resource information in a notepad as you are going to use them in future labs:

CloudFormation > Stacks > dmslab-student

**Stacks (1)**

Filter by stack name

Active View nested

dmslab-student  
2020-08-21 00:39:40 UTC+1000  
 CREATE\_COMPLETE

**dmslab-student**

Stack info Events Resources **Outputs** Parameters Template Change sets

**Outputs (8)**

Search outputs

| Key                  | Value  | Description  |
|----------------------|--|--|
| BucketName           | dmslab-student-dmslabs3bucket-2668wtlin31c                               | S3 Bucket that was created                                       |
| BusinessAnalystUser  | dmslab-student-BusinessAnalystUser-RLQI7YK68S6H                          | business_analyst_user for Workgroup A                            |
| DMSLabRoleS3         | arn:aws:iam::720560070661:role/dmslab-student-DMSLabRoleS3-1H0LB1WRUPUDA | The DMS service role   |
| GlueLabRole          | dmslab-student-GlueLabRole-2T9RZP0D67YI                                  | The Glue service role  |
| LakeFormationRole    | dmslab-student-LakeFormationWorkflowRole-8WRF0LOQ1CRR                    | Lake Formation IAM role  |
| S3BucketWorkgroupA   | dmslab-student-s3bucketworkgroupa-13uakjsyw43vg                          | S3 Bucket for storing workgroup A results                        |
| S3BucketWorkgroupB   | dmslab-student-s3bucketworkgroupb-1nkmnn9zyxiv0                          | S3 bucket for storing workgroup B results                        |
| WorkgroupManagerUser | dmslab-student-WorkgroupManagerUser-YLV3V9T449X4                         | workgroup_manager_user for access to Workgroup A and Workgroup B |

Congratulations!!! You have successfully completed student lab and setup all pre-requisite required to run rest of the workshop.

Please proceed to next lab Batch Data Ingestion with DMS.