

Amazon Web Services Data Engineering Immersion Day

Prelab2. Student Environment Setup July 2021

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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 <u>CloudFormation</u> 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 - <u>https://github.com/aws-samples/data-engineering-for-aws-immersion-day</u>

Create the Student Environment

Make sure you select the same region as where you have launched your instructor environment

1. Launch the student CloudFormation stack

https://console.aws.amazon.com/cloudformation/home#/stacks/create/review?stackName =dmslab-student&templateURL=https://s3.amazonaws.com/aws-dataengineeringday.workshop.aws/DMSlab_student_CFN.yaml

Quick create stack

| Template URL https://s3.amazonaws.com/aws-dataengineering-day.workshop.aws/DMSlab_student_CFN.yaml Stack description - | |
|--|---------|
| Stack name | |
| Stack name | |
| dmslab-student | |
| Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-). | |
| Parameters are defined in your template and allow you to input custom values when you create or update a stack. DMSCWRoleCreated dms-cloudwatch-logs-role already created in account? | |
| false | • |
| | |
| apabilities | |
| apabilities The following resource(s) require capabilities: [AWS::IAM::Role] | |
| The following resource(s) require capabilities: [AWS::IAM::Role] This template contains Identity and Access Management (IAM) resources. Check that you want to create each of these resources and that the the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. Learn more [2] | ey have |
| The following resource(s) require capabilities: [AWS::IAM::Role] This template contains Identity and Access Management (IAM) resources. Check that you want to create each of these resources and that the the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. Learn more 2 I acknowledge that AWS CloudFormation might create IAM resources with custom names. | ey have |

2. In <u>IAM Console</u>, check whether the role name **dms-cloudwatch-logs-role** exists. If it exists, select **true** for the **DMSCWRoleCreated** parameter, else select **false**.

- 3. Under Capabilities select the checkbox for "I acknowledge that AWS CloudFormation might create IAM resources" and select "Create stack".
- 4. 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) | dmslab-studen | t | Delete Update Stack |
| Q Filter by stack name | Stack info Events | Resources Outputs Parameters Templat | e Change sets |
| Active View nested | Outputs (8) | | |
| dmslab-student 2020-08-21 00:39:40 UTC+1000 ⊘ CREATE_COMPLETE | Q Search outputs | | |
| | Key 🔺 | Value \bigtriangledown | Description \bigtriangledown E |
| | 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 serivce 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 |
| | WorkgroupManagerUse r | 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.