

Adding an Oracle Parameter Group

Overview:

This document provides details of how to create and add an Oracle Parameter Group to your RDS instance on AWS. This process is needed to enable Auditing used exclusively in the Lab 5 assignment.

Steps:

You will use the AWS Educate account to enter the AWS Console and then navigate to the RDS console to set-up a parameter group with specific audit_trail values. The parameter group will then be added to the existing RDS instance. Finally, the instance must be rebooted for the parameter settings to become available. The detailed steps include:


1. Login to your AWS Educate Account and Navigate to your SDEV 350 classroom. See figure 1.


Course Name ⓘ	Description	Educator ⓘ	Course End Date ⓘ	Credit Allocated Per Student ⓘ	Status
Database Security	This is a test set-up for our summer classroom. Please provide access asap.	James Robertson	05/06/2019	\$50	Accepted Go to classroom


Figure 1 Navigate to your AWS Educate Classroom

2. Click on the AWS Console button to continue. See Figure 2.

Your Classroom Account Status

**Active**
full access ()

**\$46.72**
remaining credits (estimated)

**1:28**
session time

[Account Details](#)[AWS Console](#)

Figure 2 Select the AWS Console

3. Once in the AWS Console, Navigate to the RDS Dashboard and click on the Parameter Groups link on the left menu. See figure 3.

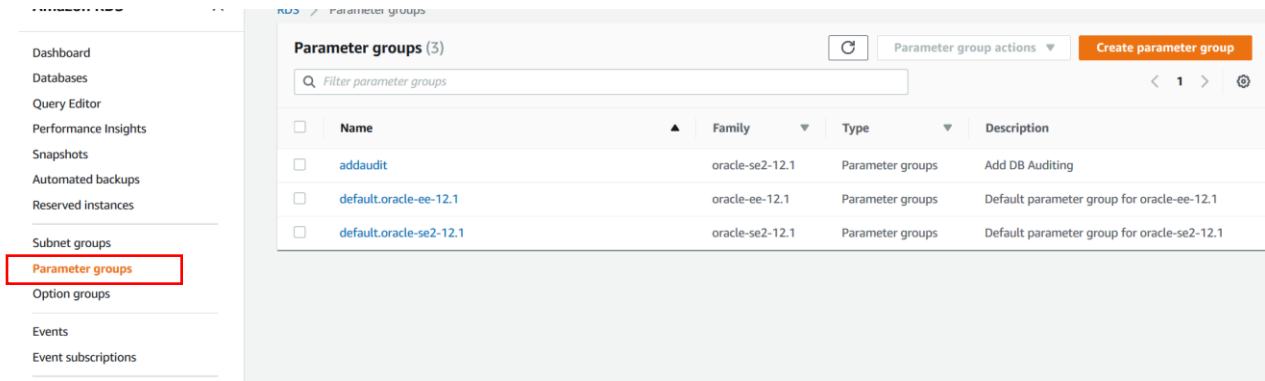


Figure 3 Select the Parameter Groups

4. Select the “Create Parameter Group” button on the upper left of the screen. See figure 4.

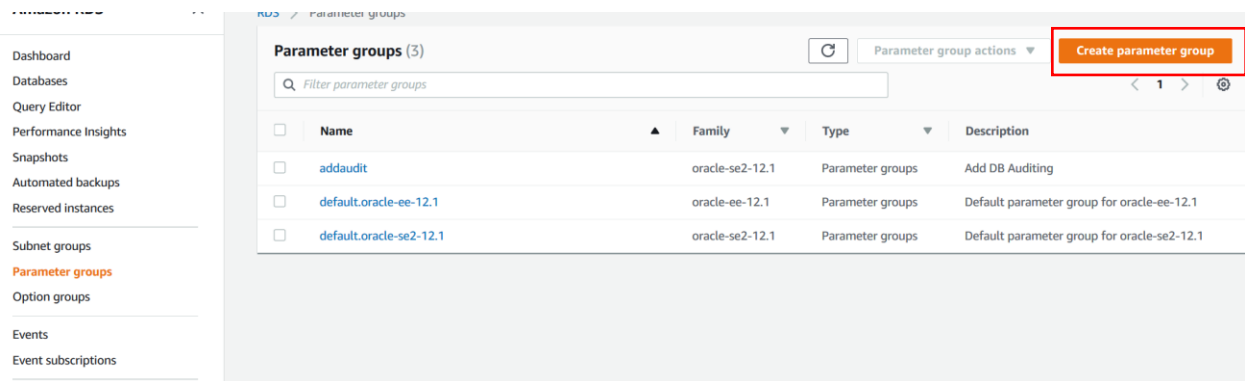


Figure 4 Creating a Parameter Group

5. Accept the default Parameter group family, and then provide a unique Group name and description. Click on “Create” as shown in figure 5.

Create parameter group

Parameter group details
To create a parameter group, choose a parameter group family, then name and describe your parameter group

Parameter group family
DB family that this DB parameter group will apply to

oracle-se2-12.1 ▼

Group name
Identifier for the DB parameter group

AddMyAudit

Description
Description for the DB parameter group

Adding Audit Trail Options

Cancel **Create**

Figure 5 Naming the Parameter Group

- Click on the parameter group you just created and filter for audit parameters as shown in figure 6.

RDS > Parameter groups > addmyaudit

addmyaudit

Parameters

Q audit X

<input type="checkbox"/>	Name ▼	Values ▼	Allowed values	Modifiable ▼
<input type="checkbox"/>	audit_file_dest	/rdsdbdata/admin/{dbName}/adump		false
<input type="checkbox"/>	audit_sys_operations		TRUE, FALSE	false
<input type="checkbox"/>	audit_syslog_level			false
<input type="checkbox"/>	audit_trail		DB, OS, NONE, XML, EXTENDED	true

Figure 6 Filtering Audit parameters

- Select the audit_trail parameter and select “edit parameters” as shown in figure 7.

Parameters

Q audit_trail X

[Edit parameters](#)

< 1 > ⚙

<input checked="" type="checkbox"/>	Name ▼	Values ▼	Allowed values	Modifiable ▼	Source ▼	Apply type ▼	Data type ▼	Description
<input checked="" type="checkbox"/>	audit_trail		DB, OS, NONE, XML, EXTENDED	true	engine-default	static	list	enable system auditing

Figure 7 Select Edit Parameters

- Select the audit_trail parameter record, enter DB, EXTENDED in the values and select “Save Changes” as shown in figure 8.

Parameters								
<input type="text" value="audit_trail"/>					<input type="button" value="Cancel editing"/>	<input type="button" value="Preview changes"/>	<input type="button" value="Reset"/>	<input type="button" value="Save changes"/>
<input type="text" value="audit_trail"/>								
<input checked="" type="checkbox"/>	Name	Values	Allowed values	Modifiable	Source	Apply type	Data type	Description
<input checked="" type="checkbox"/>	audit_trail	DB,EXTENDED	DB, OS, NONE, XML, EXTENDED	true	engine-default	static	list	enable system auditing

Figure 8 Add DB, EXTENDED as Audit_Trail parameters

- Return the Databases by clicking on the Databases link on the left. See figure 9.

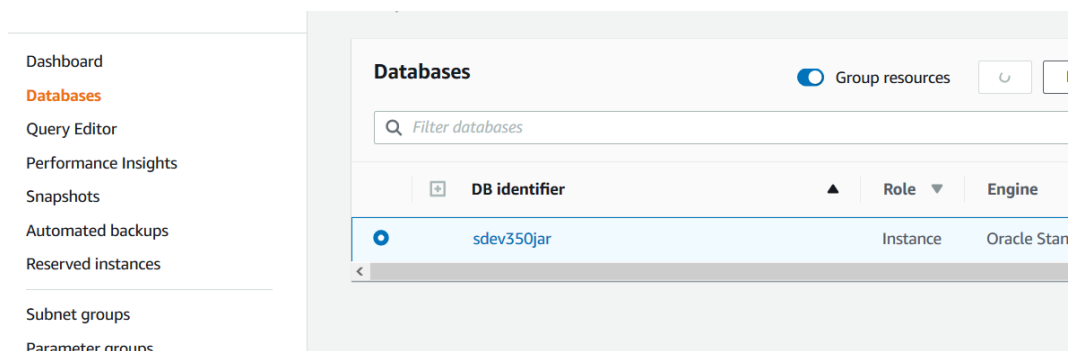


Figure 9 Selecting Databases

- Select the SDEV 350 instance created for the class and then select Modify. See results shown in figure 10.

RDS > Databases > Modify

Modify DB Instance: sdev350jar

Instance specifications

License model
License type associated with the database engine.

bring-your-own-license

DB engine version
Version number of the database engine to be used for this instance.

Oracle 12.1.0.2.v15 (default)

DB instance class
Contains the compute and memory capacity of the DB instance.

db.t2.micro — 1 vCPU, 1 GiB RAM

Multi-AZ deployment
Specifies if the DB instance should have a standby deployed in another availability zone.

☐ Yes

☒ No

Figure 10 Modify the SDEV 350 instance

11. Scroll down to the Database Options section and use the drop down menu to select the Parameter group you just created. See figure 11.

Database options

Database port
Specify the TCP/IP port that the DB instance will use for application connections. The connection string of any the DB instance must specify the port number of the DB instance. Both the security group applied to the DB in firewalls must allow connections to the port. [Learn More](#)

1521

DB parameter group
Database parameter group to associate with this DB instance

addmyaudit

Option group
Name of an option group that contains options (e.g. Memcached, Oracle Enterprise Manager) you want attach aren't any option groups compatible with the selected engine, a default option group will be created at launch

default:oracle-se2-12-1

Figure 11 Selecting the DB Parameter group

12. Scroll down and select Continue. See figure 12.

entally. While this option is enabled, you can't delete the database.

Cancel Continue

Figure 12 Select Continue

13. Select “Apply Immediately” and then select “Modify DB instance” as shown in figure 13.

Summary of modifications

You are about to submit the following modifications. Only values that will change are displayed. Carefully verify your changes and click Modify DB Instance.


Attribute	Current value	New value
DB parameter group	addaudit	addmyaudit

Scheduling of modifications

When to apply modifications

☐ Apply during the next scheduled maintenance window
Current maintenance window: thu:03:07-thu:03:37

☒ **Apply immediately**
The modifications in this request and any pending modifications will be asynchronously applied as soon as possible, regardless of the maintenance window setting for this database instance.



Potential unexpected downtime

If you choose to apply changes immediately, please note that any changes in the pending modifications queue are also applied. If any of the pending modifications require downtime, choosing this option can cause unexpected downtime.

Cancel
Back
Modify DB Instance

Figure 13 Apply Immediately

14. You will see the status of your DB instance change from available to “modifying”. The updates may take 15-30 minutes to complete. See figure 14.

DB identifier	Role	Engine	Region & AZ	Size	Status
sdev350jar	Instance	Oracle Standard Edition Two	us-east-1a	db.t2.micro	Modifying

Figure 14 DB instance modifying

15. Once the DB becomes available again you will be able to reconnect and see if the parameters change was effective. To test, run the following query from SQL Developer:

```
show parameter audit_trail;
```

A successful response will show an output similar to this:

```
NAME          TYPE          VALUE
-----
```

```
audit_trail string DB, EXTENDED
```

Congratulations. You have successfully modified your database to include Audit Trail features.

If for some reason you see “None” for the parameter values, double check the steps to see that there were no issues and the parameters were saved and you applied the parameter group to the SDEV 350 instance.