aws

SAP Oracle Database Backup to S3 – Setup Guide

Pre-requisites:

- Create an AMI before installing the agent
- brtools should be already installed and working on source server
- The server should be able to connect to S3 service, preferably through VPC end-point
- Install and configure AWS CLI on source EC2 instance
- The SAP oracle system being used in this process should be an AWS EC2 instance
- The S3 bucket created in step 2 should be in the same region of oracle database(s) for performance reasons

Step 1

Download all the file from S3 bucket file sent to you via pre-signed S3 URL or zipfile into your local machine or jump box
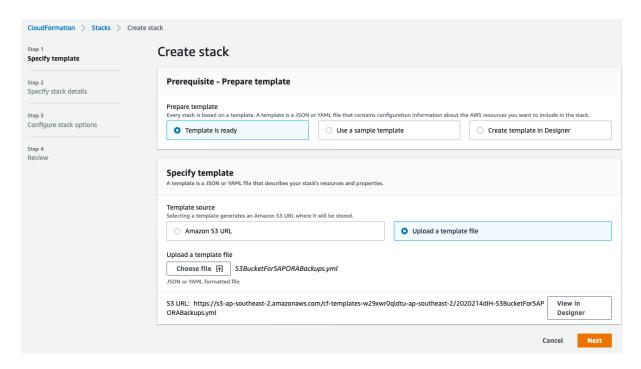
Step 2

Logon to the AWS console and create a S3 bucket using the cloud formation template (S3BucketForSAPORABackups.yml).
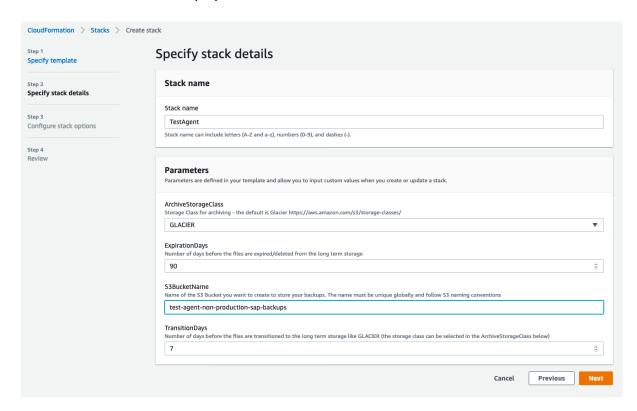
See below for step-by-step instructions:

Copy the S3BucketForSAPORABackups.yml to your PC or jump box.

Log on to the AWS console and go to Cloud Formation and click on "Create stack", "With new resources"

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CloudFormation > Stacks > Create stack

Step 1
Specify template

Step 2
Specify stack details

Step 3
Configure stack options

Step 4
Review

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

Upload a template file

Choose file ⇪ S3BucketForSAPORABackups.yml
JSON or YAML formatted file

S3 URL: https://s3-ap-southeast-2.amazonaws.com/cf-templates-w29xwr0qldtu-ap-southeast-2/2020214diH-S3BucketForSAPORABackups.yml   [View in Designer]

Cancel   **Next**

Select "Upload a template" and then Click on "Choose file" and select the S3BucketForSAPORABackups.yml file. Then click on "Next"

CloudFormation > Stacks > Create stack

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Specify stack details

Stack name

Stack name

TestAgent

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.

ArchiveStorageClass
Storage Class for archiving - the default is Glacier https://aws.amazon.com/s3/storage-classes/

GLACIER ▼

ExpirationDays
Number of days before the files are expired/deleted from the long term storage

90

S3BucketName
Name of the S3 Bucket you want to create to store your backups. The name must be unique globally and follow S3 naming conventions

test-agent-non-production-sap-backups

TransitionDays
Number of days before the files are transitioned to the long term storage like GLACIER (the storage class can be selected in the ArchiveStorageClass below)

7

Cancel   Previous   **Next**
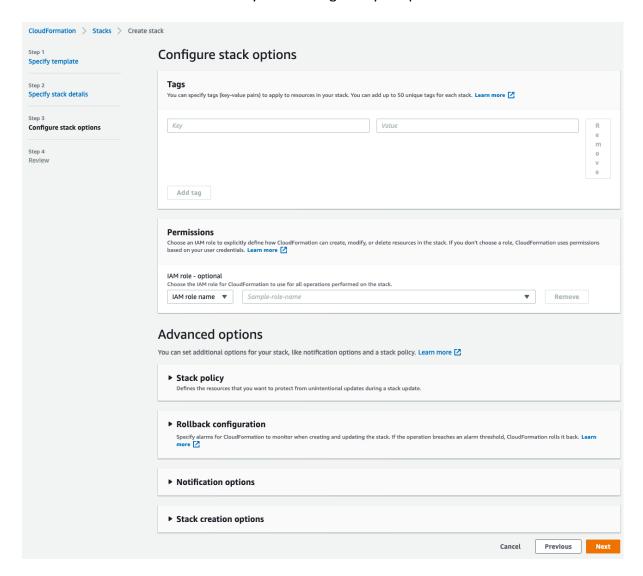
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ArchiveStorageClass has to be set to S3-Standard or S3-IA.
You can use life cycle option to send it to GLACIER based on your retention policy.

S3BucketName in above screen is an example and you can change it a unique name of your choice. This name will be used in step 8.
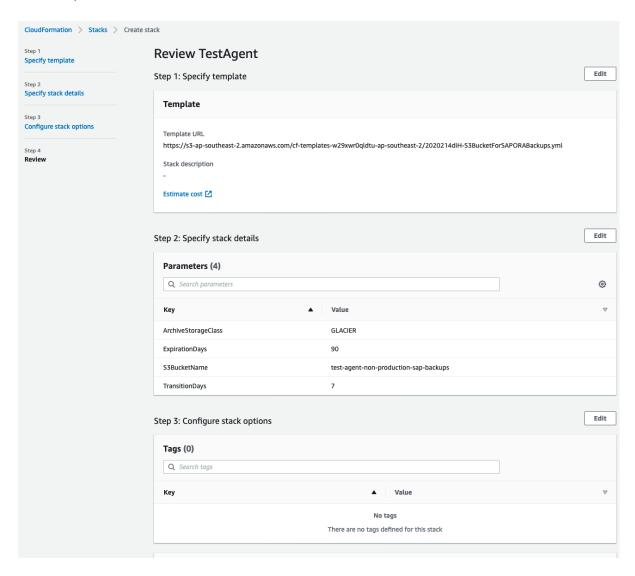
Enter a Stack Name and make sure you enter a globally unique S3 bucket name. Click on "Next"
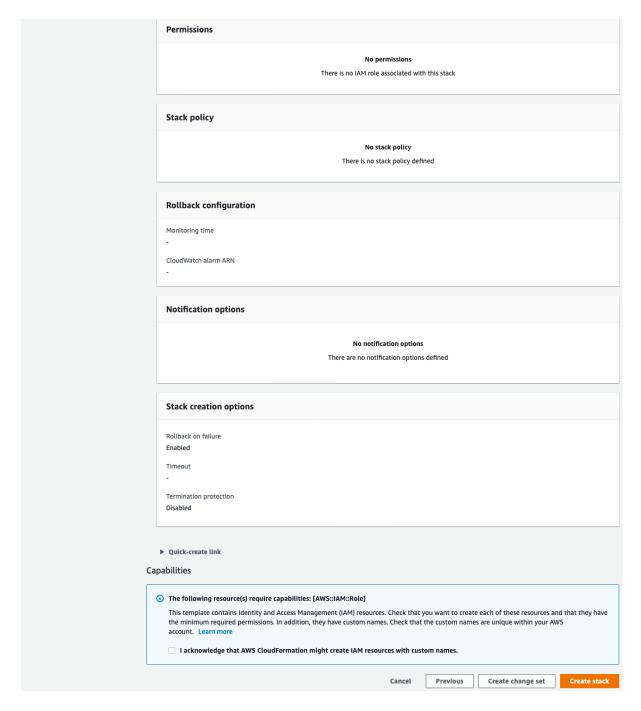

Click on "Next"

![aws](aws logo)

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Summary Screen

CloudFormation > Stacks > Create stack

Step 1
Specify template

Step 2
Specify stack details

Step 3
Configure stack options

Step 4
Review

Review TestAgent

Step 1: Specify template   [Edit]

Template

Template URL
https://s3-ap-southeast-2.amazonaws.com/cf-templates-w29xwr0qldtu-ap-southeast-2/2020214diH-S3BucketForSAPORABackups.yml

Stack description
-

Estimate cost ↗

Step 2: Specify stack details   [Edit]

Parameters (4)

Q Search parameters   ⚙

Key ▲	Value ▽
ArchiveStorageClass	GLACIER
ExpirationDays	90
S3BucketName	test-agent-non-production-sap-backups
TransitionDays	7

Step 3: Configure stack options   [Edit]

Tags (0)

Q Search tags

Key ▲	Value ▽
No tags	
There are no tags defined for this stack	

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Check checkbox next to "**I acknowledge that AWS CloudFormation might create IAM resources with custom names.**" And then click on "Create Stack"

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This will create the S3 bucket, an IAM role and a managed IAM Policy. Once they have been created, assign the role to the EC2 instance where you want to install the S3 backup agent. If you already have an IAM role assigned to your EC2 instance, you can add the managed IAM policy to your existing role.

For mapping an existing S3 bucket to a EC2 instance please map the IAM role for S3 bucket to the EC2 instance. If you already have an IAM role assigned to your EC2 instance, you can add the managed IAM inline policy to your existing role.

Step 3
You can log on to the EC2 instance (Oracle database) where you need to install the agent. Shutdown oracle database before running the script.

Step 4
Create a directory under *tmp* and call it *agentinstall*

Step 5
Place the files (*sap-ora-backup-agent*, *setup_backup_agent.sh, root.sh*) which are downloaded in step1 into this directory (*/tmp/agentinstall*) and provide 775 permission to /tmp/agentinstall folder.

Step 6
Place the file *sap-ora-backup-agent* from */tmp/agentinstall* into kernel directory and provide 775 permission with owner as SIDADM:sapsys

Step 7
Change to the user to *oracle*

Step 8
Is not already set please set environment variables for *ORACLE_SID, ORACLE_HOME* and *PATH* similar to oraSID user

Step 9
Run the install by issuing the below command:
./setup_backup_agent.sh <S3 bucket name created in step 2>

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Step 10
After the run is completed successfully change to user to root and go into */tmp/agentinstall* directory

Step 11
Execute *./root.sh SID*

Step 12
Change the user to oraSID
Now you are ready to use brtools to do a log, full backups and restore – See Appendix for sample commands and also ensure the sticky bit is set.

Appendix

Sample Commands
Log backup: *brarchive -c -u / (or use brtools and brgui)*
Full backup: *brbackup -c -u / -t online -e 21 / (or use brtools and brgui)*
Restore: *Use brtools command line or brgui and follow the prompts*
Point-in-time restore: *Use brtools command line or brgui and follow the prompts*

Setting up sticky bit
Make sure you have below permission set as below, if not you can use these commands to run it. These commands has to be run as root user.
chown oracle:oinstall brarchive brbackup brconnect brrecover brrestore brspace
chmod 6774 brarchive brbackup brconnect brrecover brrestore brspace
chown SIDADM:sapsys brtools
chmod 775 brtools

Compression
If you want to turn on compression, please go into initSID.sap as editor and add compress infront of s3 for remote_host variable as shown below.
remote_host = s3compress://<your bucketname>

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Restoring from another System

Copy *backSID.log* and latest backup file (*********.ans*) from */oracle/SID/sapbackup/* from the source system to target system.

Copy *archSID.log* and all the logs file catalogs (*********.svd*) after the full back up from */oracle/SID/saparch/* from the source system to target system.

Backup *backSID.log* and *archSID.log* in target system to a *tmp* directory

On the Target system rename *SID* to target system for *backSID.log* and *archSID.log* that is copied from source to the target.

Use *brtools* to perform full restore or point-in-time restore.

Please note, there will be additional steps that will have to be performed if changing the SID.
Refer to SAP System Copy Guide for Instructions:
https://help.sap.com/viewer/30839dda13b2485889466316ce5b39e9/CURRENT_VERSION/en-US/bf15a049b0044c79b19109023291fa67.html (this is for UNIX)