



# Oracle DB using Data Guard (DG) and ASM

**\*\*\*\* Quick Start Deployment \*\*\*\***

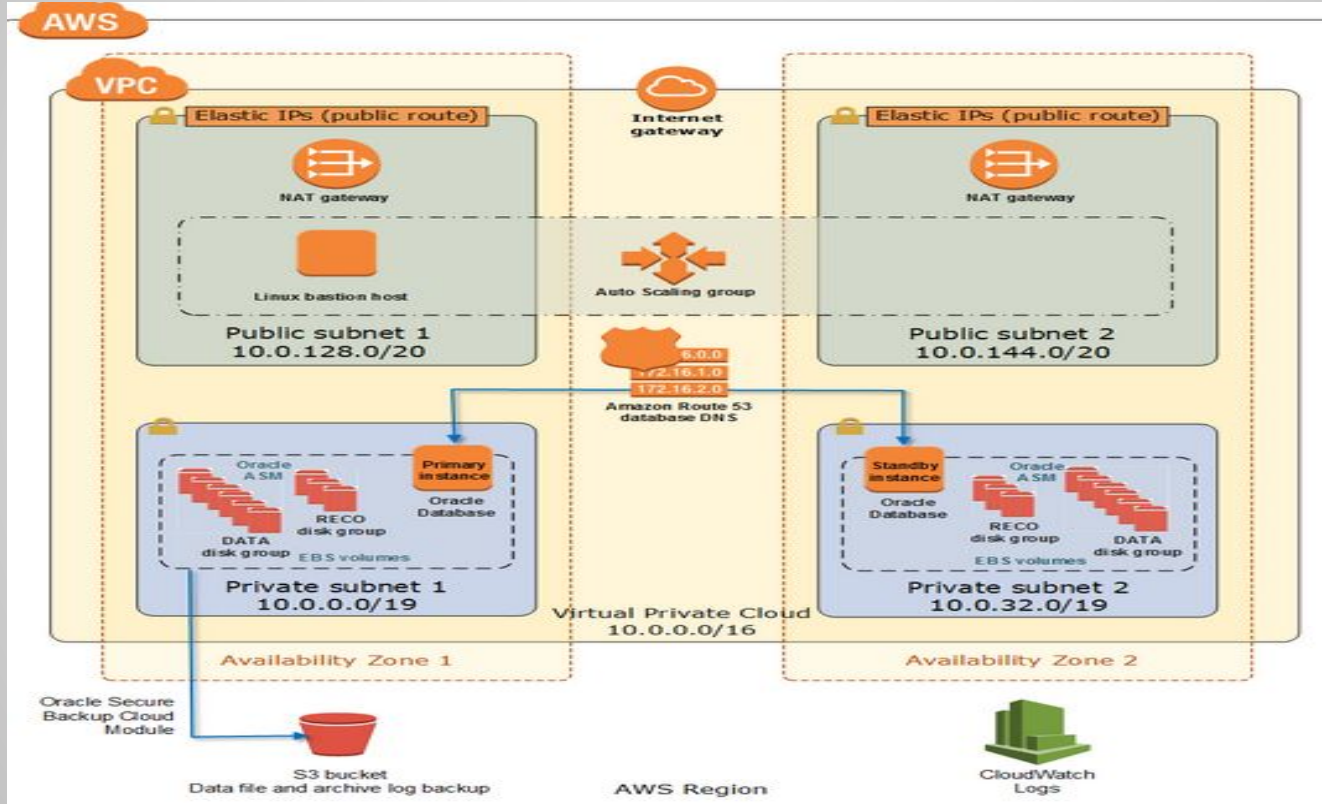
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## **Oracle DB using Data Guard (DG) and ASM**

- **Auto deployment of Oracle DB 12c EE on AWS Cloud**
- **Uses AWS CloudFormation template**
- **Guarantees a repeatable and secure process**
- **Enterprise class architecture, high availability, and support for Oracle DB larger than 16 TiB, or relies on features not currently supported Amazon RDS**

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## Architecture



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## What you'll build

The Quick Start deploys the Oracle primary database (using the preconfigured, general-purpose starter database from Oracle) on an Amazon EC2 instance in the first Availability Zone. It then sets up a second EC2 instance in a second Availability Zone, copies the primary database to the second instance by using the `DUPLICATE` command, and configures Oracle Data Guard. (The template that deploys the Quick Start into an existing VPC skips the tasks marked by asterisks.)

- A highly available architecture that spans two Availability Zones.\*
- A VPC configured with public and private subnets according to AWS best practices, to provide you with your own virtual network on AWS.\*
- An internet gateway to allow access to the internet. This gateway is used by the bastion hosts to send and receive traffic.\*
- Managed NAT gateways to allow outbound internet access for resources in the private subnets. Database instances use this layer to securely download Linux packages required for Oracle installation.\*
- A Linux bastion host in each public subnet with an Elastic IP address to allow inbound Secure Shell (SSH) access to EC2 instances in public and private subnets.\*

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## What you'll build (contd)

- Three security groups for fine-grained inbound access control from the bastion host, between the database instances, and for application access to the database.
- AWS Command Line Interface (AWS CLI) and an instance role for installation bucket access.
- The Amazon Route 53 Domain Name System (DNS) web service to provide independency from using IP addresses or server host names. This is useful in failover or switchover scenarios.
- A set of solid state drive (SSD) disks—six for ASM data (DATA) disk groups, and three for recovery (RECO) disk groups—which can be set to Provisioned IOPS (io1) volumes.

The Quick Start can also integrate with an existing Amazon S3 bucket, which helps you store backups and archive logs in a very cost-effective way. You can also use Oracle Secure Backup library commands to interact directly with Oracle Recovery Manager (RMAN).

## Planning the Deployment

Before you deploy Oracle Database on AWS, please review the following sections for more information about the Oracle Database installation and deployment options.

### Deployment Scenarios

This Quick Start provides two deployment options:

- **Deploy Oracle Database into a new VPC (end-to-end deployment).** This option builds a new AWS environment consisting of the VPC, subnets, NAT gateways, security groups, bastion hosts, and other infrastructure components, and then deploys Oracle Database into that new VPC.
- **Deploy Oracle Database into an existing VPC.** This option provisions Oracle Database in your existing AWS infrastructure.

The Quick Start provides separate templates for these options. It also lets you configure additional settings such as CIDR blocks and instance types, and install optional Oracle products, as discussed later in this guide.

## Deployment Steps

The procedure for an end-to-end deployment of Oracle Database on AWS consists of the following steps. For detailed instructions, follow the links for each step.

- [Step 1. Prepare an AWS account](#)

This involves signing up for an AWS account, choosing a region, creating a key pair, and requesting increases for account limits, if necessary.

- [Step 2. Download the Oracle Database software](#)

This step involves downloading the software from Oracle and placing the files in an S3 bucket.

- [Step 3. Launch the stack](#)

In this step, you'll launch the AWS CloudFormation template into your AWS account, specify parameter values, and create the stack. The Quick Start provides separate templates for end-to-end deployment and deployment into an existing VPC.

- [Step 4. Access your Oracle Database instance to verify your deployment](#)

Access the Oracle Database instance from Amazon EC2 and use Java utilities to manage your instance.

- [Step 5. Check your Oracle Database environment on AWS](#)

Verify that your standby database has been set up and configured correctly and that your log files are in sync.

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## References:

<https://docs.aws.amazon.com/quickstart/latest/oracle-database/welcome.html>

**This guide is for database administrators, enterprise architects, system administrators, and developers**

## Parameters screenshots

[https://drive.google.com/open?id=1Y3SsB2PPK46\\_Z0mK-dK-IMuZRzICMmPo](https://drive.google.com/open?id=1Y3SsB2PPK46_Z0mK-dK-IMuZRzICMmPo)

**Google Drive - Oracle DG Quick start links, CloudFormation Template, SessionLog (verify deployed resources and check Data Guard env - Primary and Standby)**

<https://drive.google.com/open?id=1w6U-oeZ3Y2CGdM086TNMfxR91WfZwSiG>



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