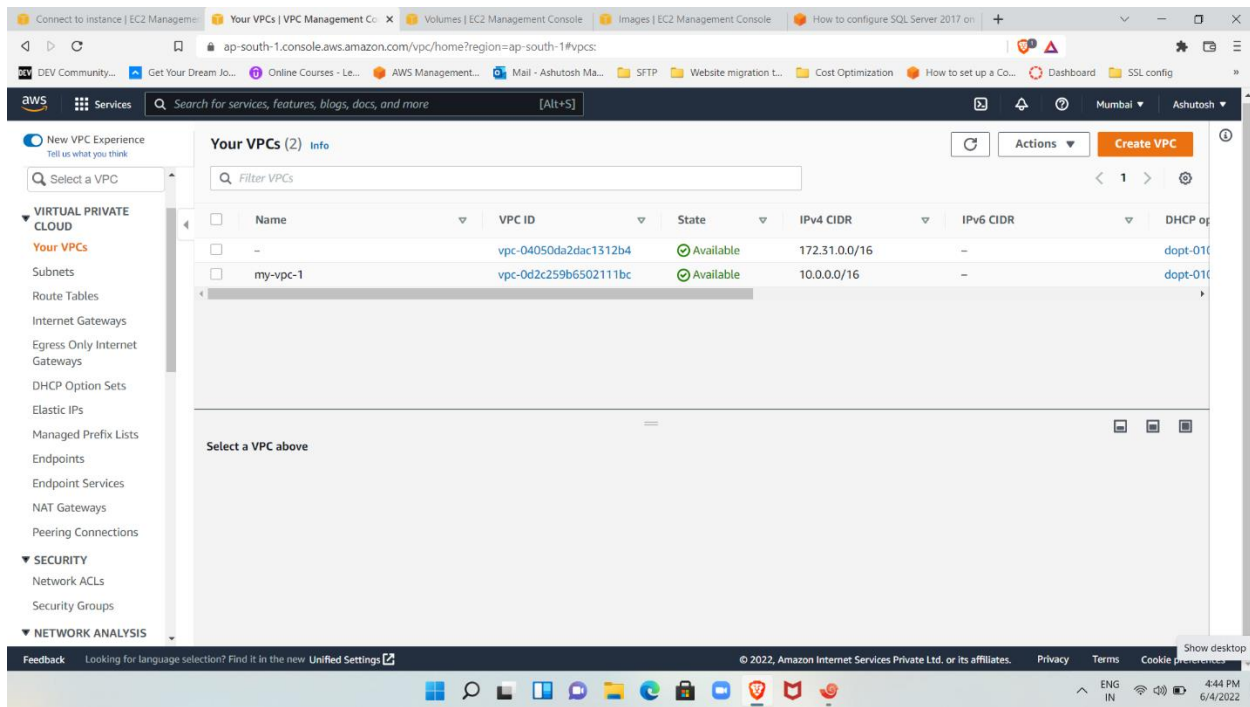
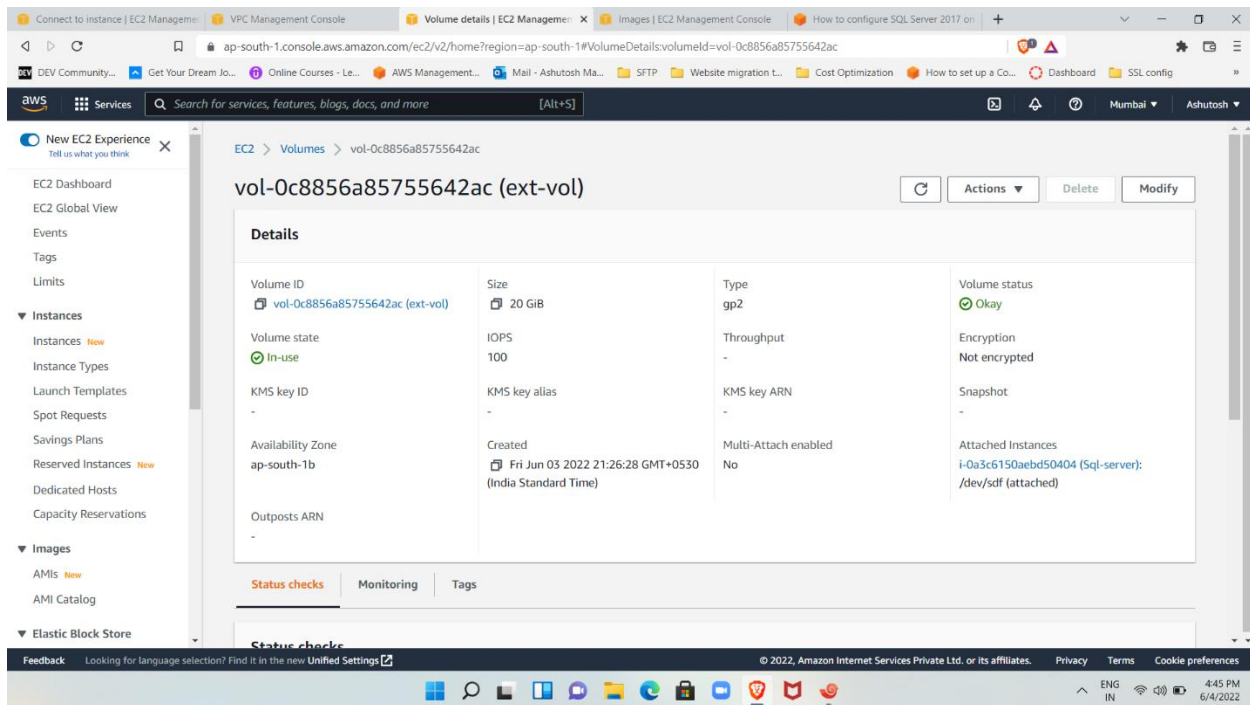


VPC creation:



Adding 20 GB extra volume to the instance "Sql-server"



Creating Instance “Sql-server”

The screenshot shows the AWS Management Console interface for an EC2 instance. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, and Elastic Block Store. The main content area displays the 'Instance summary for i-0a3c6150aebd50404 (Sql-server)'. The instance is in the 'Running' state. Key details include: Instance ID: i-0a3c6150aebd50404 (Sql-server), Public IPv4 address: 3.110.165.155, Private IPv4 addresses: 10.0.1.53, Instance state: Running, Hostname type: IP name: ip-10-0-1-53.ap-south-1.compute.internal, Instance type: t3.xlarge, VPC ID: vpc-0d2c259b6502111bc (my-vpc-1), Subnet ID: subnet-0b515a82b8133416e (my-sub-1), and Auto Scaling Group name: -. The bottom of the console shows the footer with copyright information and navigation links.

| Instance summary for i-0a3c6150aebd50404 (Sql-server) | | |
|---|---|----------------------------------|
| Instance ID | Public IPv4 address | Private IPv4 addresses |
| i-0a3c6150aebd50404 (Sql-server) | 3.110.165.155 open address | 10.0.1.53 |
| IPv6 address | Instance state | Public IPv4 DNS |
| - | Running | - |
| Hostname type | Private IP DNS name (IPv4 only) | Answer private resource DNS name |
| IP name: ip-10-0-1-53.ap-south-1.compute.internal | ip-10-0-1-53.ap-south-1.compute.internal | IPv4 (A) |
| Instance type | Elastic IP addresses | Auto-assigned IP address |
| t3.xlarge | - | 3.110.165.155 [Public IP] |
| VPC ID | AWS Compute Optimizer finding | IAM Role |
| vpc-0d2c259b6502111bc (my-vpc-1) | Opt-in to AWS Compute Optimizer for recommendations. Learn more | - |
| Subnet ID | Auto Scaling Group name | - |
| subnet-0b515a82b8133416e (my-sub-1) | - | - |

Subnet Creation:

The screenshot shows the AWS Management Console interface for a subnet. The left sidebar contains navigation links for VPC, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Option Sets, Elastic IPs, Managed Prefix Lists, Endpoints, Endpoint Services, NAT Gateways, Peering Connections, SECURITY, Network ACLs, Security Groups, and NETWORK ANALYSIS. The main content area displays the 'Details' for the subnet 'subnet-0b515a82b8133416e / my-sub-1'. The subnet is in the 'Available' state. Key details include: Subnet ID: subnet-0b515a82b8133416e, Subnet ARN: arn:aws:ec2:ap-south-1:739767204060:subnet/subnet-0b515a82b8133416e, State: Available, Availability Zone: ap-south-1b, Network ACL: acl-0afde4fe59ae6dba1, Auto-assign customer-owned IPv4 address: No, IPv6 CIDR reservations: No, Resource name DNS AAAA record: Disabled, and IPv4 CIDR: 10.0.1.0/24. The bottom of the console shows the footer with copyright information and navigation links.

| subnet-0b515a82b8133416e / my-sub-1 | | | |
|-------------------------------------|---|---|--------------------------|
| Subnet ID | Subnet ARN | State | IPv4 CIDR |
| subnet-0b515a82b8133416e | arn:aws:ec2:ap-south-1:739767204060:subnet/subnet-0b515a82b8133416e | Available | 10.0.1.0/24 |
| Available IPv4 addresses | IPv6 CIDR | Availability Zone | Availability Zone ID |
| 250 | - | ap-south-1b | aps1-az3 |
| VPC | Route table | Network ACL | Default subnet |
| vpc-0d2c259b6502111bc my-vpc-1 | rtb-0dbdfc50272969b6e my-rt | acl-0afde4fe59ae6dba1 | No |
| Auto-assign public IPv4 address | Auto-assign IPv6 address | Auto-assign customer-owned IPv4 address | Customer-owned IPv4 pool |
| Yes | No | No | - |
| Outpost ID | IPv4 CIDR reservations | IPv6 CIDR reservations | IPv6-only |
| - | - | - | No |
| Hostname type | Resource name DNS A record | Resource name DNS AAAA record | DNS54 |
| IP name | Disabled | Disabled | Disabled |
| Owner | - | - | - |
| 739767204060 | - | - | - |

Route Table defined:

The screenshot shows the AWS Management Console interface for a Route Table. The breadcrumb navigation is **VPC > Route tables > rtb-0dbdfc50272969b6e**. The main heading is **rtb-0dbdfc50272969b6e / my-rt**. A notification bar at the top says "You can now check network connectivity with Reachability Analyzer" with a **Run Reachability Analyzer** button. The **Details** section shows the following information:

| Route table ID | Main | Explicit subnet associations | Edge associations |
|-----------------------|------|-------------------------------------|-------------------|
| rtb-0dbdfc50272969b6e | No | subnet-0b515a82b8133416e / my-sub-1 | - |

Below the details, the **VPC** is listed as **vpc-0d2c259b6502111bc | my-vpc-1** and the **Owner ID** is **739767204060**. The **Routes** section shows 3 routes, with a filter bar and pagination controls. The left sidebar shows the navigation menu with **Route Tables** selected under **VIRTUAL PRIVATE CLOUD**.

Internet Gateway attached:

The screenshot shows the AWS Management Console interface for an Internet Gateway. The breadcrumb navigation is **VPC > Internet gateways > igw-028f06abc2fa6bc5f**. The main heading is **igw-028f06abc2fa6bc5f / my-igw**. The **Details** section shows the following information:

| Internet gateway ID | State | VPC ID | Owner |
|-----------------------|----------|----------------------------------|--------------|
| igw-028f06abc2fa6bc5f | Attached | vpc-0d2c259b6502111bc my-vpc-1 | 739767204060 |

Below the details, the **Tags** section shows a search bar and a table with one tag:

| Key | Value |
|------|--------|
| Name | my-igw |

The left sidebar shows the navigation menu with **Internet Gateways** selected under **VIRTUAL PRIVATE CLOUD**.

Creation Of Database using RDS:

aws

Services

Search for services, features, blogs, docs, and more

[Alt+S]

Mumbai

Ashutosh


Choose a database creation method [Info](#)


☒ **Standard create**
You set all of the configuration options, including ones for availability, security, backups, and maintenance.


☐ **Easy create**
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.


Engine options


Engine type [Info](#)


☐ Amazon Aurora


☐ MySQL


☐ MariaDB


☐ PostgreSQL


☐ Oracle


☒ Microsoft SQL Server


Edition

☐ SQL Server Express Edition
Affordable database management system that supports database sizes up to 10 GB.

☐ SQL Server Web Edition
In accordance with Microsoft's licensing policies, it can only be used to support public and Internet-accessible webpages, websites, web applications, and web services.

☒ SQL Server Standard Edition
Core data management and business intelligence capabilities for mission-critical applications and mixed workloads.

Feedback

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aws

Services

Search for services, features, blogs, docs, and more

[Alt+S]

Mumbai

Ashutosh

my-sub-grp

Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.

Description

my-sub-grp

VPC

Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.

my-vpc-1 (vpc-0d2c259b6502111bc)

Add subnets

Availability Zones

Choose the Availability Zones that include the subnets you want to add.

Choose an availability zone

ap-south-1a X ap-south-1b X ap-south-1c X

Subnets

Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.

Select subnets

subnet-0b515a82b8133416e (10.0.1.0/24) X

Subnets selected (1)

| Availability zone | Subnet ID | CIDR block |
|-------------------|--------------------------|-------------|
| ap-south-1b | subnet-0b515a82b8133416e | 10.0.1.0/24 |

Feedback

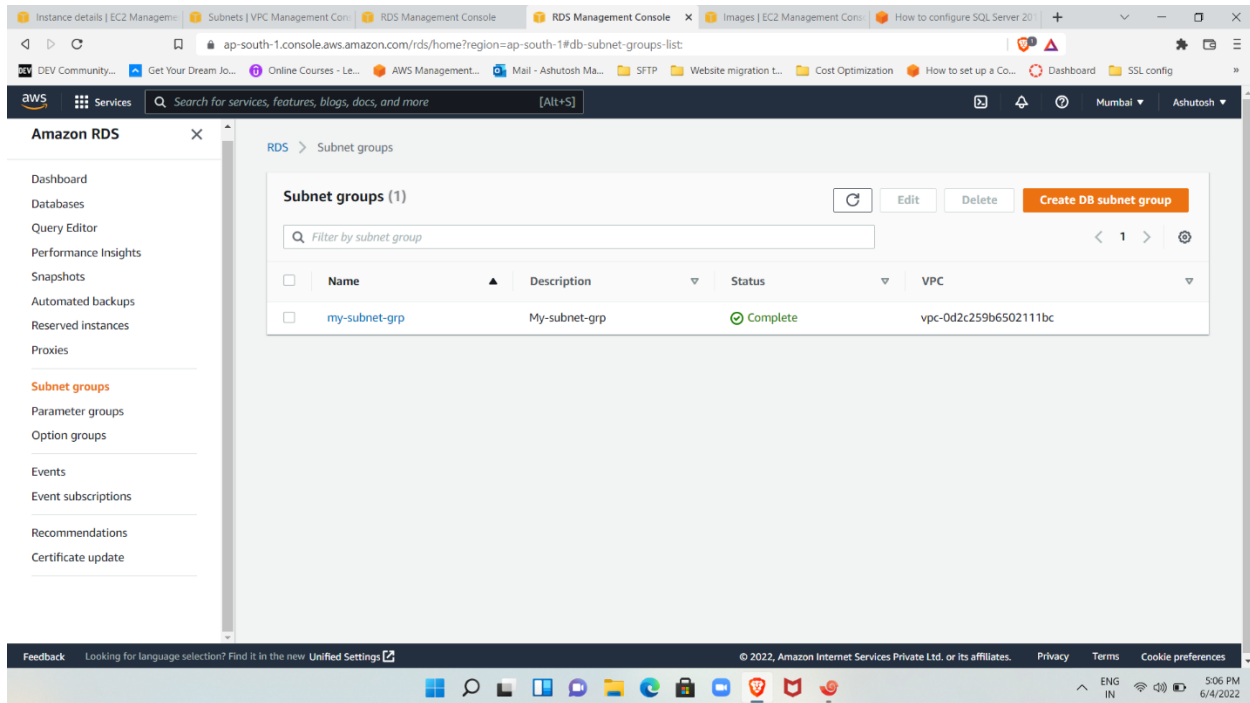
Looking for language selection? Find it in the new [Unified Settings](#)

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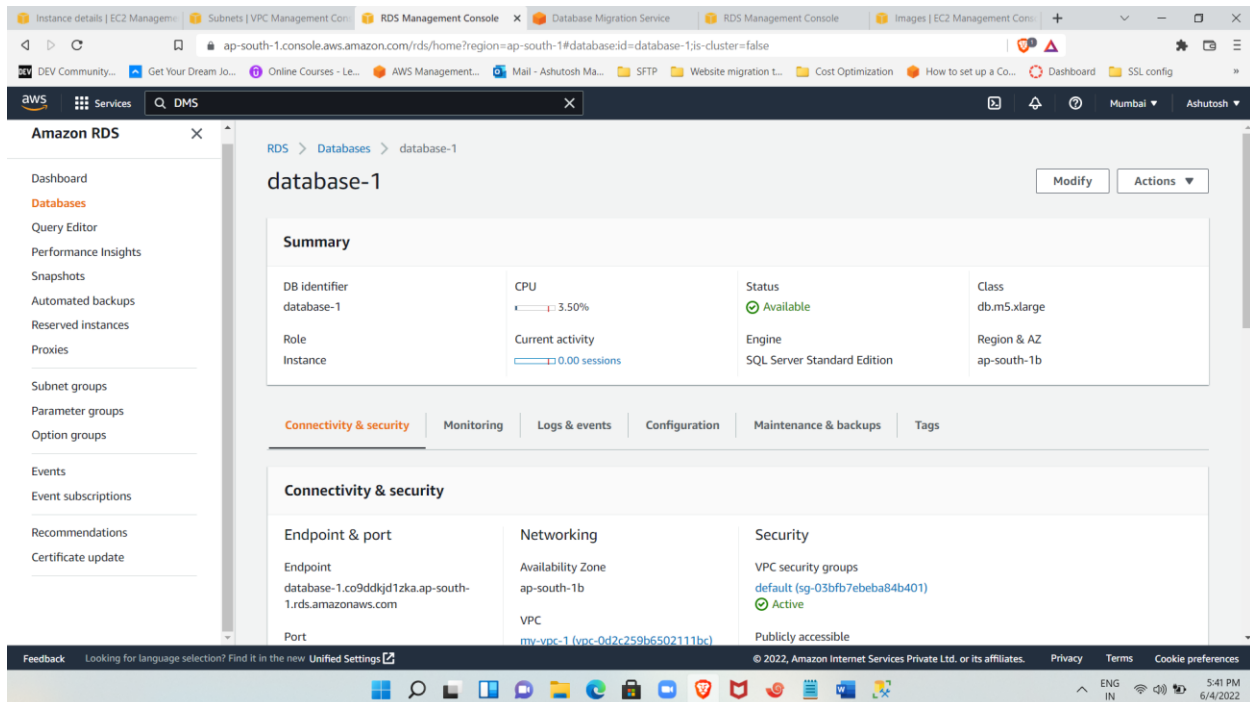
Privacy

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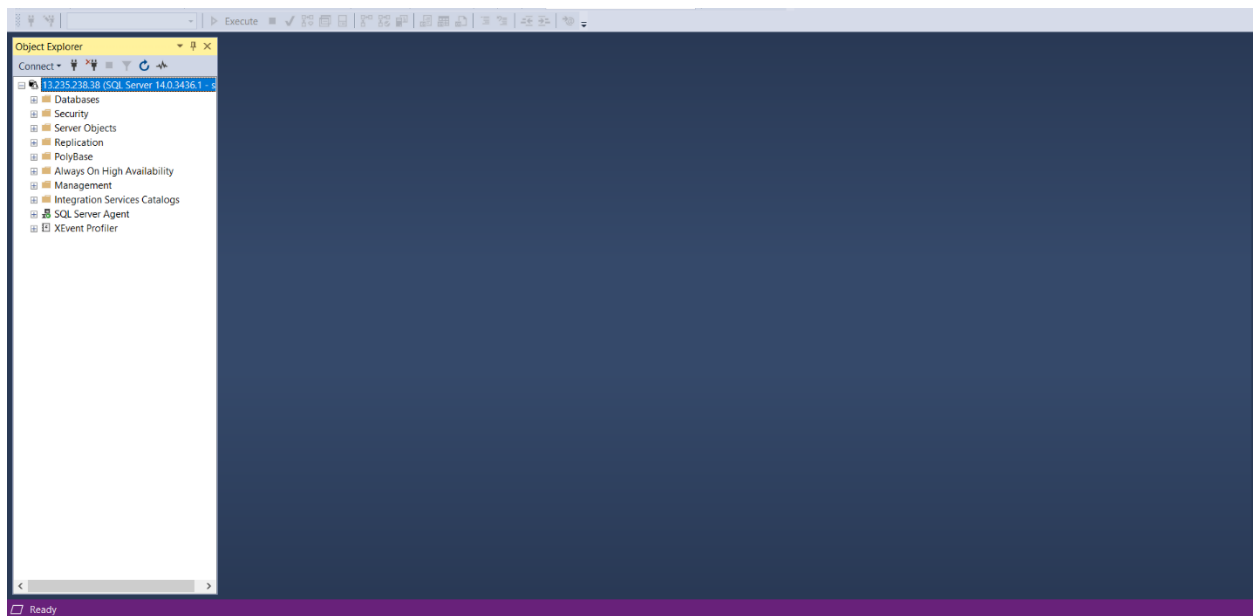
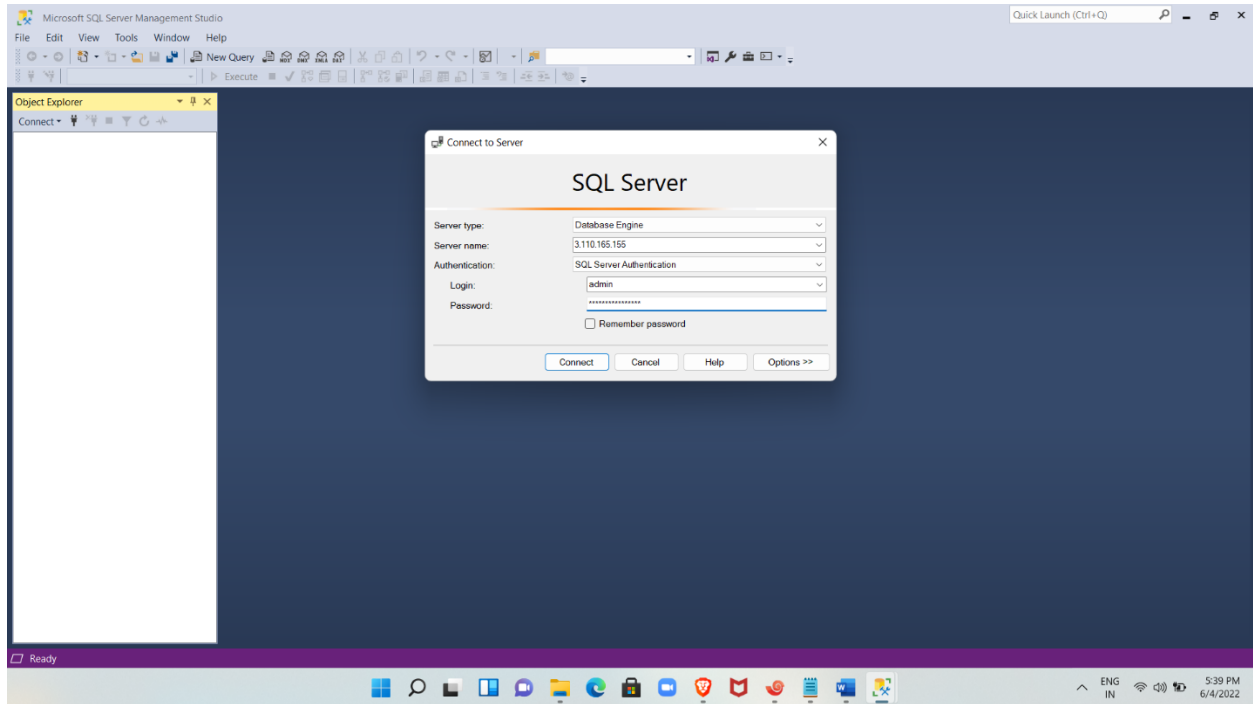
Cookie preferences



Database Created successfully:



Connecting Instance via Mssql client



Insertion of data via sql queries:

Object Explorer

Connect - 13.235.238.38 (SQL Server 14.0.3436.1 - s)

SQLQuery1.sql - 13.235.238.38 (sa (53))

```

create database silicon;
use silicon;

CREATE TABLE Employee(Employee_id varchar(10) PRIMARY KEY,Employee_code varchar(10) UNIQUE NOT NULL,Employee_name varchar(20) NOT NULL,Employee_email varchar(40) NOT NULL,Employee_phoneno varchar(10) NOT NULL,Employee_designation varchar(20) NOT NULL,Department_id varchar(2) NOT NULL)
INSERT INTO Employee VALUES('E123','emp_sun','Surya Shankar','surya035@gmail.com','9938909','system_manager','D1');
INSERT INTO Employee VALUES('E124','emp_asu','Ashutosh malik','ashutosh035@gmail.com','9938908','system_manager','D2');
INSERT INTO Employee VALUES('E126','emp_tap','Tapas kumar','tapas035@gmail.com','8930908','networking','D3');
INSERT INTO Employee VALUES('E127','emp_soumya','Soumya ranjan','soumya035@gmail.com','89306798','networking','D4');
INSERT INTO Employee VALUES('E128','emp_sou','Sou ranjan','sou035@gmail.com','89389798','networking','D5');
INSERT INTO Employee VALUES('E129','emp_suvam','Suvam Dash','suvam035@gmail.com','79306798','cyber_security','D7');
INSERT INTO Employee VALUES('E132','emp_suprit','Suprit','suprit035@gmail.com','89506798','software_developer','D6');
INSERT INTO Employee VALUES('E137','emp_sonu','Sonu mishra','sonu035@gmail.com','89356798','Developer','D4');
INSERT INTO Employee VALUES('E134','emp_basu','Basudev ranjan','basu035@gmail.com','89390798','Communication','D7');

select * from Employee

```

100 %

Results Messages

| Employee_id | Employee_code | Employee_name | Employee_email | Employee_phoneno | Employee_designation | Department_id |
|-------------|---------------|---------------|----------------|-----------------------|----------------------|--------------------|
| 1 | E123 | emp_sun | Surya Shankar | surya035@gmail.com | 9938909 | system_manager |
| 2 | E124 | emp_asu | Ashutosh malik | ashutosh035@gmail.com | 9938908 | system_manager |
| 3 | E126 | emp_tap | Tapas kumar | tapas035@gmail.com | 8930908 | networking |
| 4 | E127 | emp_soumya | Soumya ranjan | soumya035@gmail.com | 89306798 | networking |
| 5 | E128 | emp_sou | Sou ranjan | sou035@gmail.com | 89389798 | networking |
| 6 | E129 | emp_suvam | Suvam Dash | suvam035@gmail.com | 79306798 | cyber_security |
| 7 | E132 | emp_suprit | Suprit | suprit035@gmail.com | 89506798 | software_developer |
| 8 | E134 | emp_basu | Basudev ranjan | basu035@gmail.com | 89390798 | Communication |
| 9 | E137 | emp_sonu | Sonu mishra | sonu035@gmail.com | 89356798 | Developer |

Query executed successfully.

13.235.238.38 (14.0 RTM) sa (53) silicon 00:00:00 9 rows

Create Replication Instance:

AWS DMS

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What's new 13

DMS > Replication instances > Create replication instance

Create replication instance

Replication instance configuration

Name
The name must be unique among all of your replication instances in the current AWS region.

Replication

Replication instance name must not start with a numeric value

Descriptive Amazon Resource Name (ARN) - optional
A friendly name to override the default DMS ARN. You cannot modify it after creation.

Replication

Description

Replication

The description must only have unicode letters, digits, whitespace, or one of these symbols: _/=-@. 1000 maximum character.

Instance class info
Choose an appropriate instance class for your replication needs. Each instance class provides differing levels of compute, network and memory capacity. [DMS pricing](#)

dms.t3.medium
2 vCPUs 4 GiB Memory

☐ Include previous-generation instance classes

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☒ Publicly accessible

If you choose this option, AWS DMS will assign a public IP address to your replication instance, and you'll be able to connect to databases outside of your Amazon VPC.

▼ Advanced security and network configuration

Replication subnet group

Choose a subnet group for your replication instance. The subnet group defines the IP ranges and subnets that your replication instance can use within the Amazon VPC you've chosen.

default-vpc-02edcb5c8fb0f5df9

Availability zone

Choose an availability zone (AZ) where you want your replication instance to run. The default is "No preference", meaning that AWS DMS will determine which AZ to use.

ap-south-1a

VPC security group(s)

Choose one or more security groups for your replication instances. The security group(s) specify inbound and outbound rules to control network access to your replication instance.

Use default

KMS key [info](#)

(Default) aws/dms

Account

-

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What's new 13

2 VCPUs 4 GiB Memory

☐ Include previous-generation instance classes

Engine version

Choose an AWS DMS version to run on your replication instance. [DMS versions](#)

3.4.6

☐ Include Beta DMS versions

Allocated storage (GiB) [info](#)

Choose the amount of storage space you want for your replication instance. AWS DMS uses this storage for log files and cached transactions while replication tasks are in progress.

5

VPC

Choose an Amazon Virtual Private Cloud (VPC) where your replication instance should run.

vpc-02edcb5c8fb0f5df9 - VPC

Multi AZ

The Multi-AZ option deploys a primary replication instance in one Availability Zone (AZ) and a standby in another AZ. The Single-AZ option deploys a single replication instance in one AZ. Billing is based on DMS pricing.

Dev or test workload (Single-AZ)

☒ Publicly accessible

If you choose this option, AWS DMS will assign a public IP address to your replication instance, and you'll be able to connect to databases outside of your Amazon VPC.

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VPC security group(s)

Choose one or more security groups for your replication instances. The security group(s) specify inbound and outbound rules to control network access to your replication instance.

Use default

KMS key Info

(Default) aws/dms

Account

-

Description

-

Key ARN

-

Maintenance

Tags

Cancel

Create

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What's new 13

Create endpoint

Endpoint type Info

Source endpoint

Target endpoint

Select RDS DB instance

Endpoint configuration

Endpoint identifier Info

Source-endpoint

Descriptive Amazon Resource Name (ARN) - optional

Source-endpoint

Source engine

Microsoft SQL Server

AWS DMS

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What's new 13

Access to endpoint database

AWS Secrets Manager

Provide access information manually

Server name

13.235.238.38

Port

1433

Secure Socket Layer (SSL) mode

none

User name Info

sa

Password Info

Database name

silicon

Endpoint settings

KMS key

Tags

AWS DMS

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What's new 13

DMS > Endpoints > Create endpoint

Create endpoint

Endpoint type info

☐ Source endpoint

☒ Target endpoint

Select RDS DB instance

RDS Instance

rds

Endpoint configuration

Endpoint identifier info

Target-endpoint

Feedback

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Certificate update

RDS > Databases > rds

rds

Modify

Actions

Summary

DB identifier

rds

CPU

5.96%

Status

Available

Class

db.m5.large

Role

Instance

Current activity

0.00 sessions

Engine

SQL Server Standard Edition

Region & AZ

ap-south-1a

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Tags

Connectivity & security

Endpoint & port

Endpoint

rds.cxbmol9dstfz-ap-south-1.rds.amazonaws.com

Port

Networking

Availability Zone

ap-south-1a

VPC

VPC (vpc-02edcb5c8fb0f5df9)

Security

VPC security groups

launch-wizard-5 (sg-0892799849d2c599e)

Active

Feedback

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Microsoft SQL Server

Access to endpoint database

☐ AWS Secrets Manager

☒ Provide access information manually

Server name

rds.cxbmol9dstfz-ap-south-1.rds.amazonaws.com

Port

1433

Secure Socket Layer (SSL) mode

none

User name info

admin

Password info

Database name

target

Endpoint settings

KMS key

Feedback

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AWS DMS

×

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What's new

13

DMS > Database migration tasks > Create database migration task

Create database migration task

Task configuration

Task identifier

Migration

Descriptive Amazon Resource Name (ARN) - optional

A friendly name to override the default DMS ARN. You cannot modify it after creation.

Friendly-ARN-name

Replication instance

Choose a replication instance

Source database endpoint

Choose a source database endpoint

Target database endpoint

Choose a target database endpoint

Migration type [Info](#)

Migrate existing data

Migration

Replication instance

replication - vpc-02edcb5c8fb0f5df9

Source database endpoint

source-endpoint

Target database endpoint

target-endpoint

Migration type [Info](#)

Migrate existing data

ⓘ

When switching database engines, the AWS Schema Conversion Tool can automatically convert your database schema and code to the engine of your choice. Click here to find out more. [Learn more](#)

×

Task settings

[Editing mode Info](#)

ⓘ

⌵

Specify at least one selection rule with an include action. After you do this, you can add one or more transformation rules.

▼ Selection rules

Choose the schema and/or tables you want to include with, or exclude from, your migration task. [Info](#)

Add new selection rule

▼ where schema name is like '%w' and table name is like '%%', include

⌵

×

Schema

Enter a schema

Source name

Use the % character as a wildcard

%

Table name

Use the % character as a wildcard

%

Action

Choose "Include" to migrate your selected objects, or "Exclude" to ignore them during the migration.

Include

Source filters [Info](#)

Add column filter

Feedback

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10:42 PM

6/3/2022

AWS DMS

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Transformation rules

Premigration assessment Info

A premigration assessment warns you of potential migration issues before starting your migration task. Premigration assessments generally have minimal impact on your databases and take minimal time to run.

☐ Enable premigration assessment run

Migration task startup configuration

Start migration task

☒ Automatically on create
Available only if the premigration assessment is not enabled.

☐ Manually later

Tags

Cancel>Create task

AWS DMS

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What's new 13

migration creation in progress.

DMS > Database migration tasks

Database migration tasks (1)

Find database migration tasks

< 1 >

| <input type="checkbox"/> | Identifier ▾ | Status ▾ | Progress ▾ | Type ▾ | Source ▾ | Target ▾ | Replication instance ▾ | Started ▾ | Stopped ▾ |
|--------------------------|--------------|----------|------------|-----------|-----------------|-----------------|------------------------|-----------|-----------|
| <input type="checkbox"/> | migration | Creating | | Full load | source-endpoint | target-endpoint | replication | - | - |

AWS DMS

Dashboard

Database migration tasks

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What's new 13

migration created successfully.

DMS > Database migration tasks

Database migration tasks (1)

Find database migration tasks

1

migration Ready 0% Full load source-endpoint target-endpoint replication - -

Feedback

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Object Explorer

Connect 13.235.238.38 (SQL Server 14.0.3436.1 - s)

Databases

System Databases

Database Snapshots

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent

XEvent Profiler

rds.cbmo9d9stfz.ap-south-1.rds.amazonaws.com

Databases

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent

XEvent Profiler

SQLQuery2.sql - rds...target (admin (68))

SQLQuery1.sql - not connected

create database target;
use target;
select * from Employee

100 %

Results Messages

| | Employee_id | Employee_code | Employee_name | Employee_email | Employee_phoneno | Employee_designation | Department_id |
|---|-------------|---------------|----------------|-----------------------|------------------|----------------------|---------------|
| 1 | E123 | emp_sar | Surya Shankar | surya035@gmail.com | 9938909 | system_manager | D1 |
| 2 | E124 | emp_asu | Ashutosh malik | ashutosh035@gmail.com | 9938908 | system_manager | D2 |
| 3 | E126 | emp_tap | Tapas kumar | tapas035@gmail.com | 9930908 | networking | D3 |
| 4 | E127 | emp_sourya | Sourya ranjan | sourya035@gmail.com | 99306798 | networking | D4 |
| 5 | E128 | emp_sou | Sou ranjan | sou035@gmail.com | 99389798 | networking | D5 |
| 6 | E129 | emp_suvam | Suvam Dash | suvam035@gmail.com | 79306798 | cyber_security | D7 |
| 7 | E132 | emp_supri | Supri | supri035@gmail.com | 99506798 | software_developer | D6 |
| 8 | E134 | emp_basu | Basudev ranjan | basu035@gmail.com | 99390798 | Communication | D7 |
| 9 | E137 | emp_sonu | Sonu mishra | sonu035@gmail.com | 99356798 | Developer | D4 |

Query executed successfully.

rds.cbmo9d9stfz.ap-south-1... admin (68) target 00:00:00 9 rows

Ready

Ln 3

Col 1

Ch 1

INS