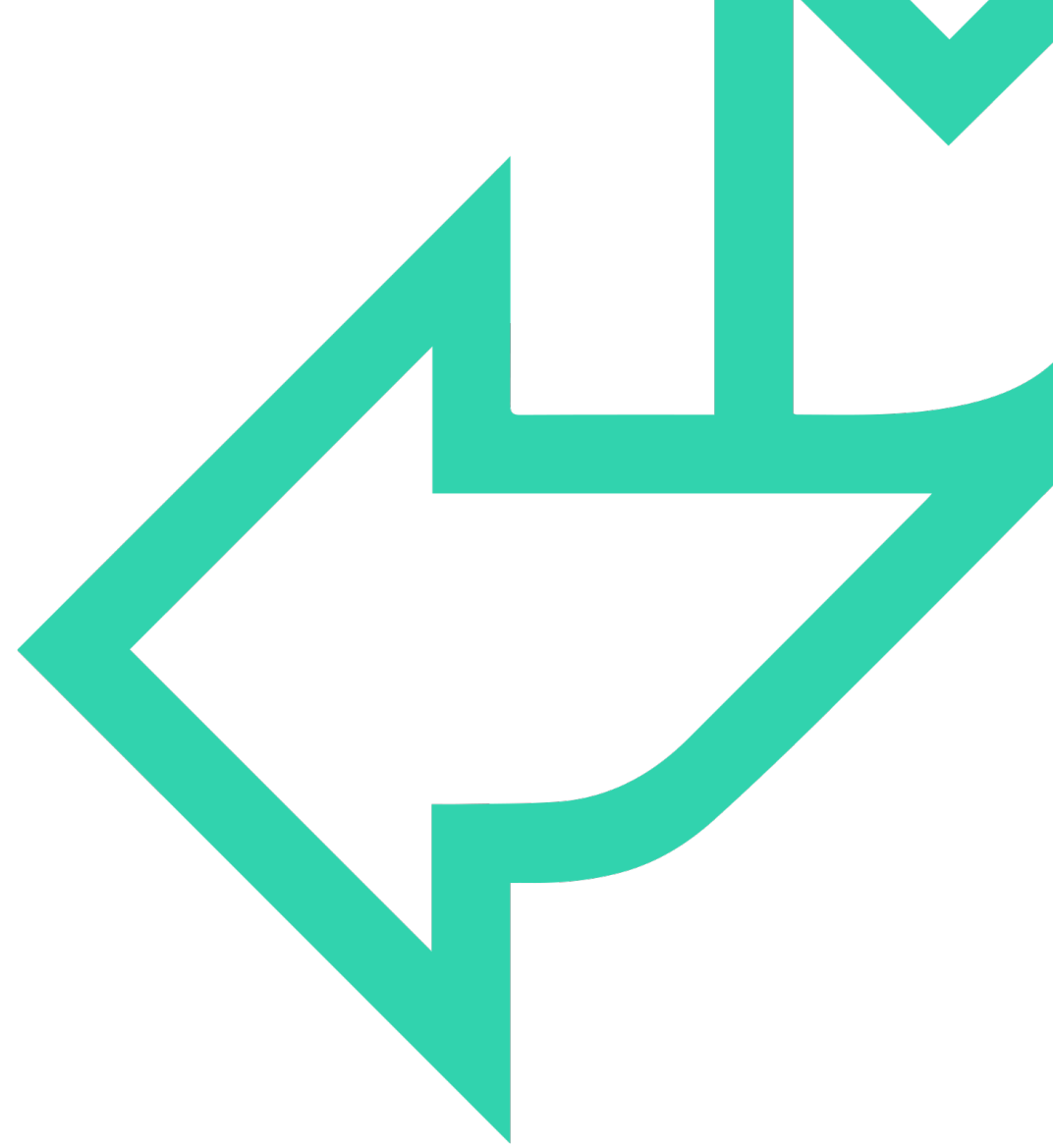




Preparing to migrate to Cloud



SCENARIO





OVERVIEW

in order to migrate on premise databases to the cloud we must prepare the following

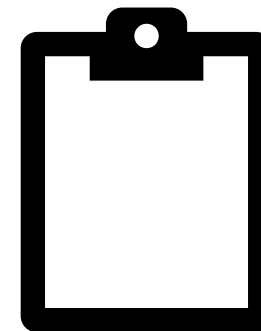
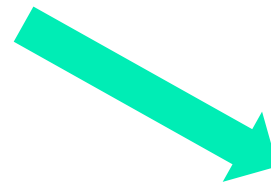
- disconnect live applications
- backup database
- create target server (RDS)
- decide how target server will see backup file (network)
- configure roles in AWS

Control point for AWS :
AWS Console or AWS CLI



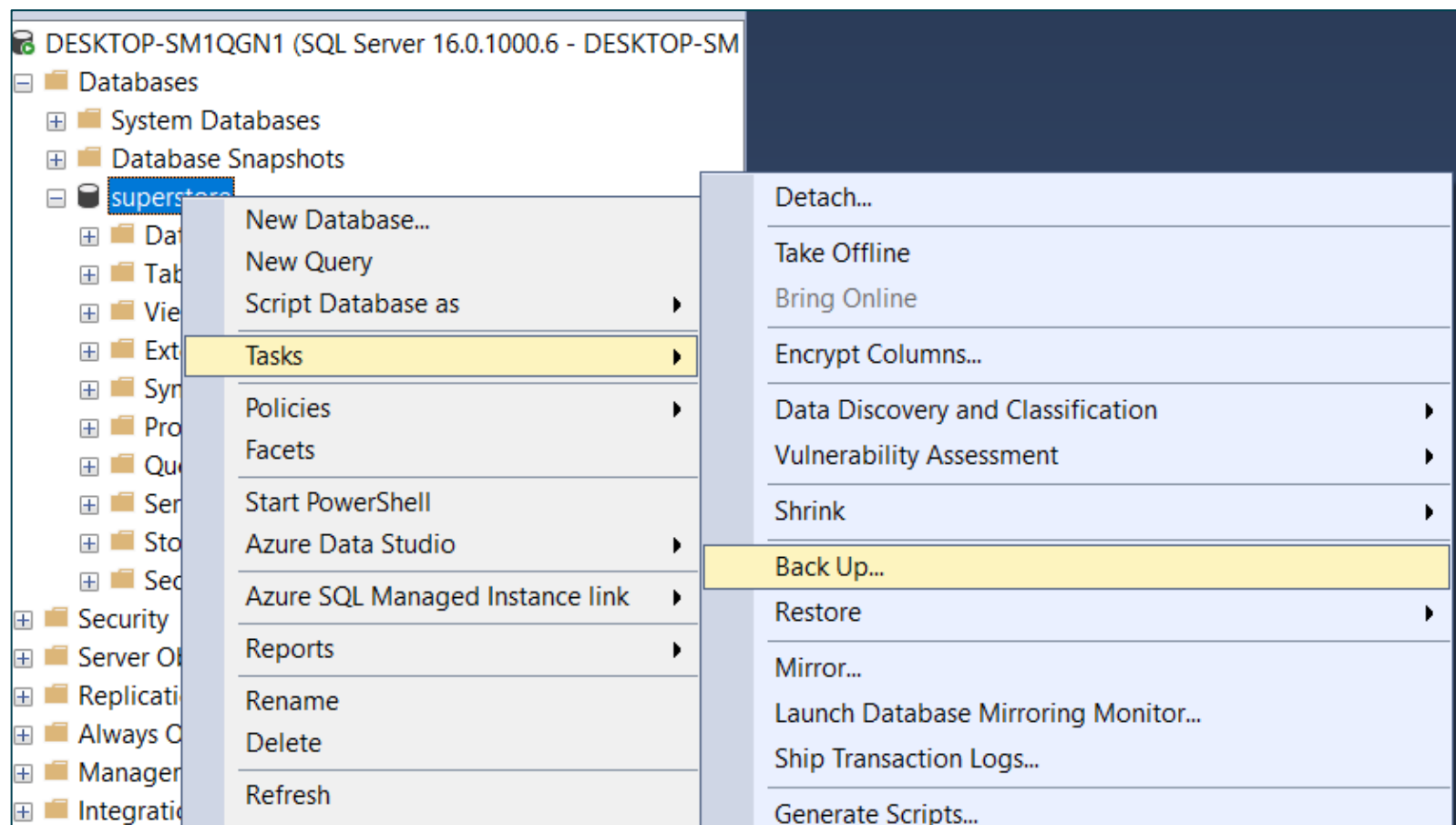
DATABASE BACKUP

OPTIONS : CREATE COPY OF A DATABASE



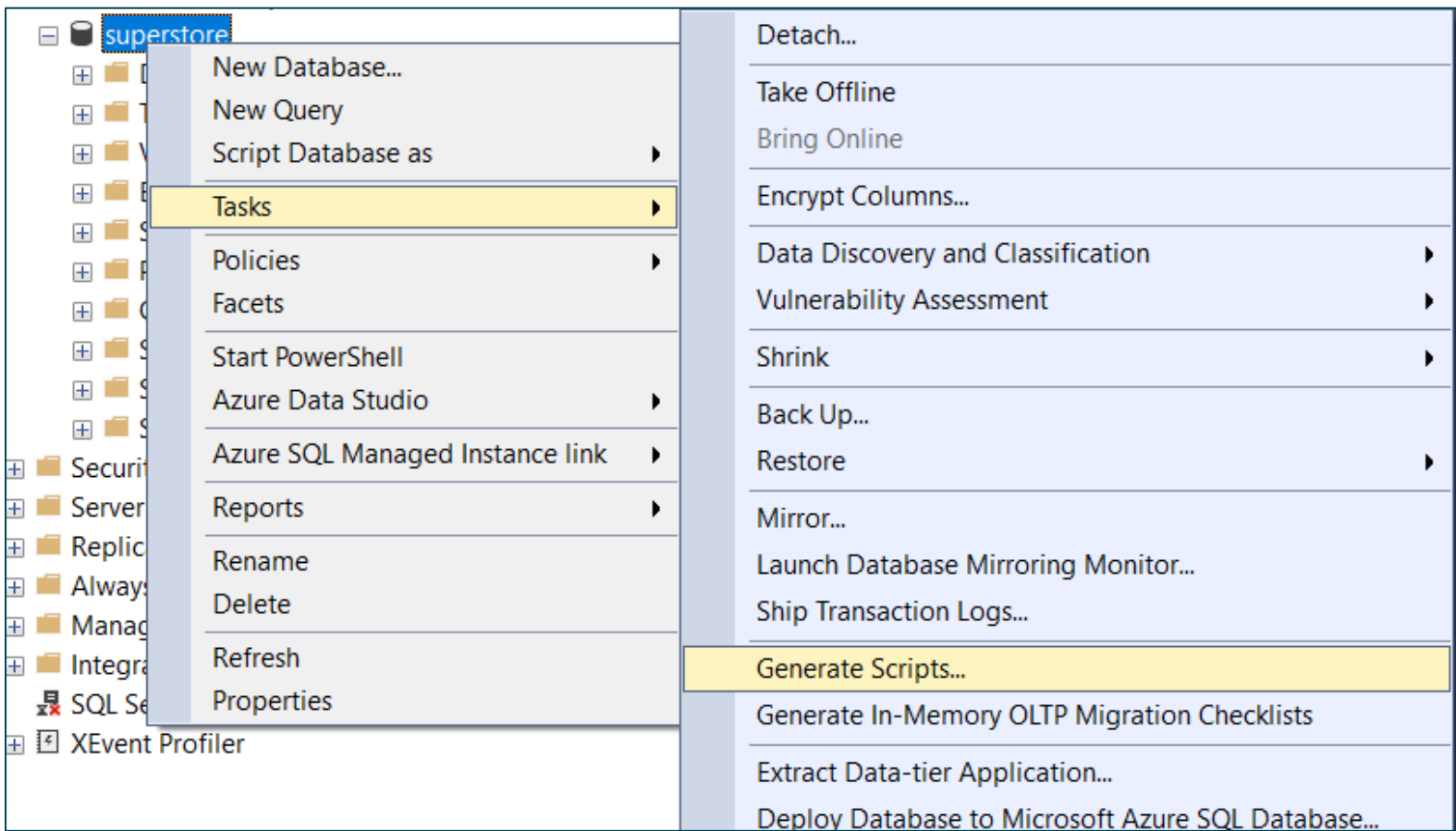


DATABASE .BAK FILE



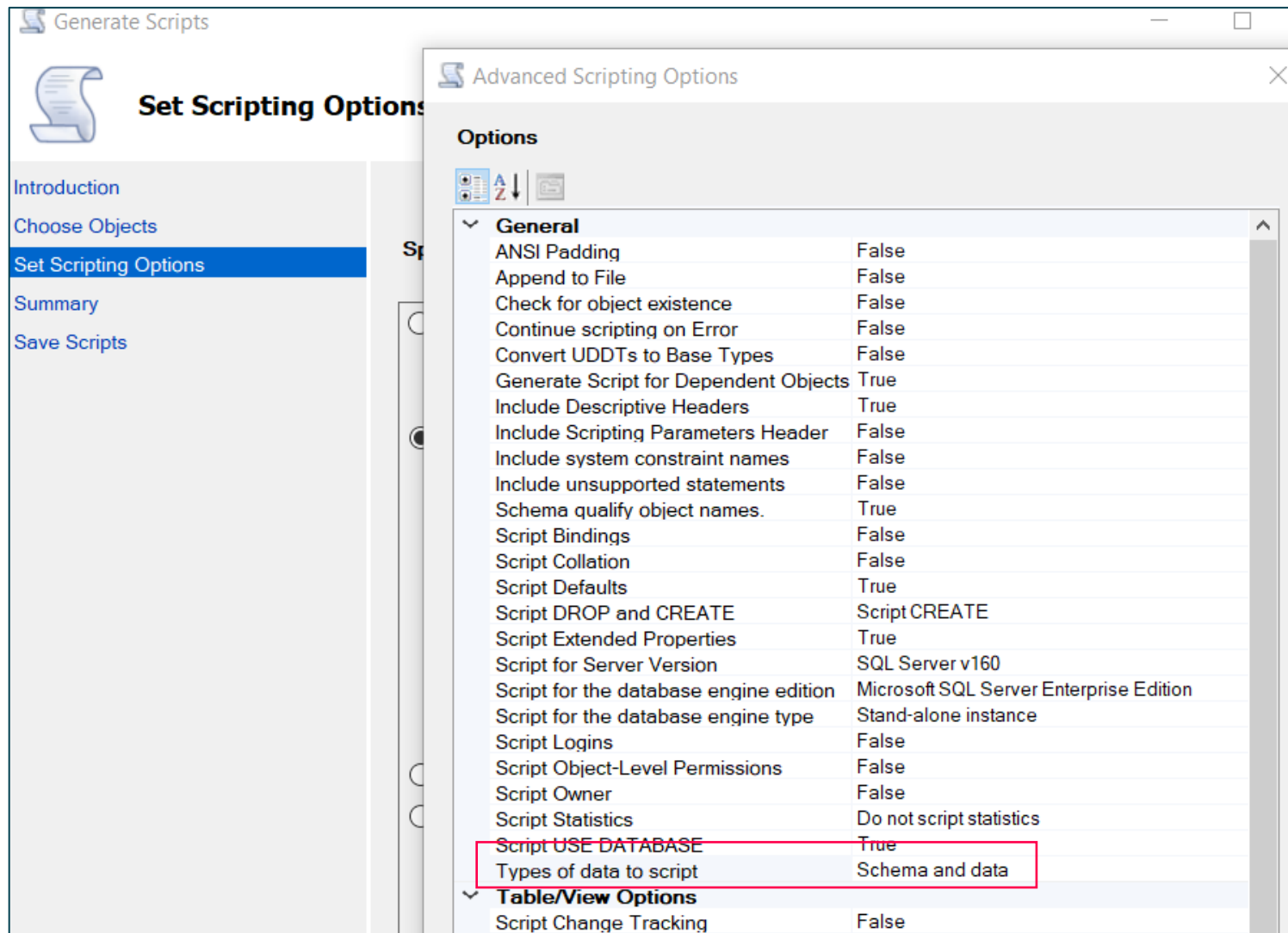


GENERATE SCRIPT





GENERATE SCRIPT (2)

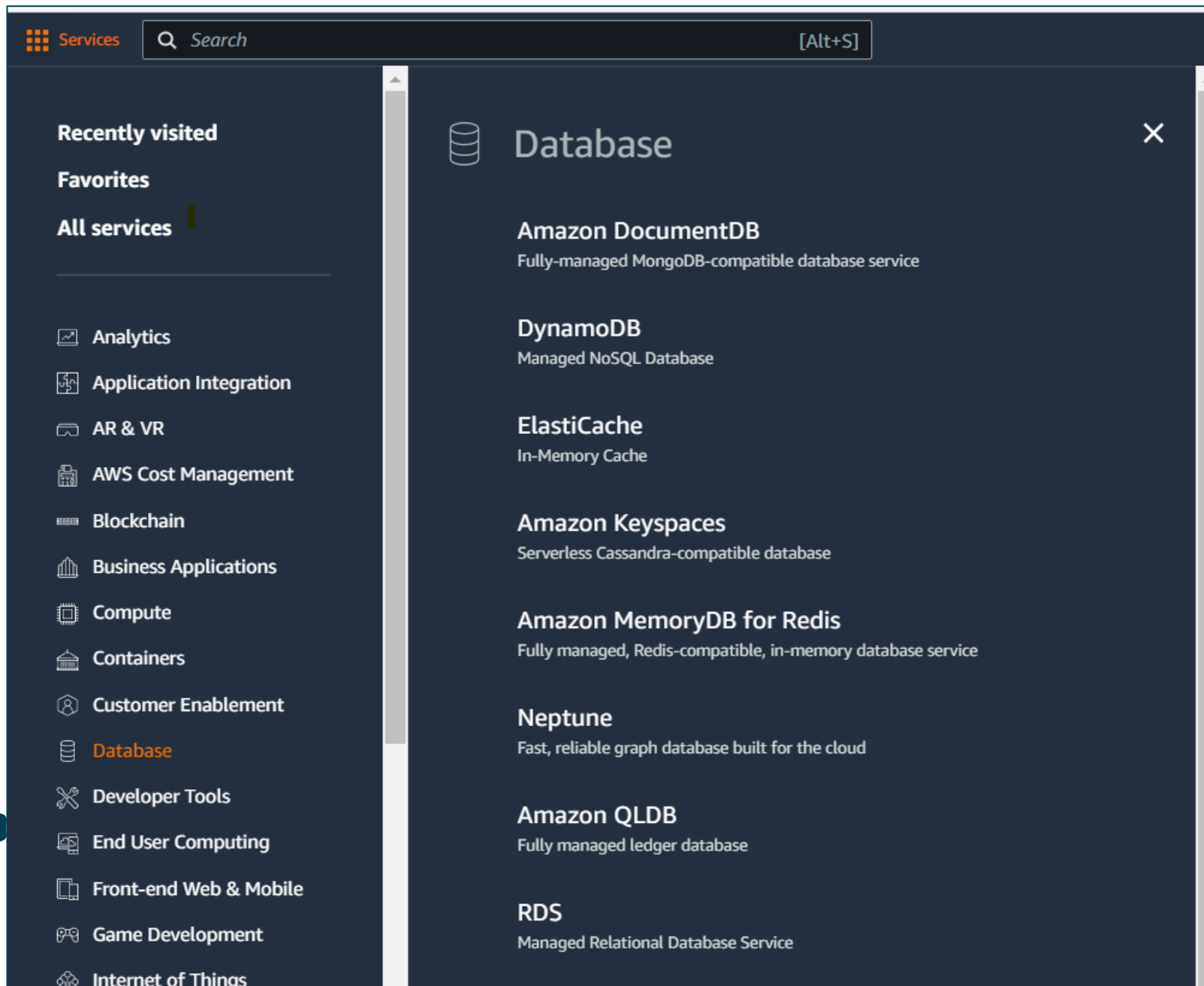




CREATE TARGET SERVER



GO TO RDS SERVICES





CREATE SQL SERVER INSTANCE



Create database

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

ORACLE®



Microsoft SQL Server





**NOTE THE
PASSWORD!**

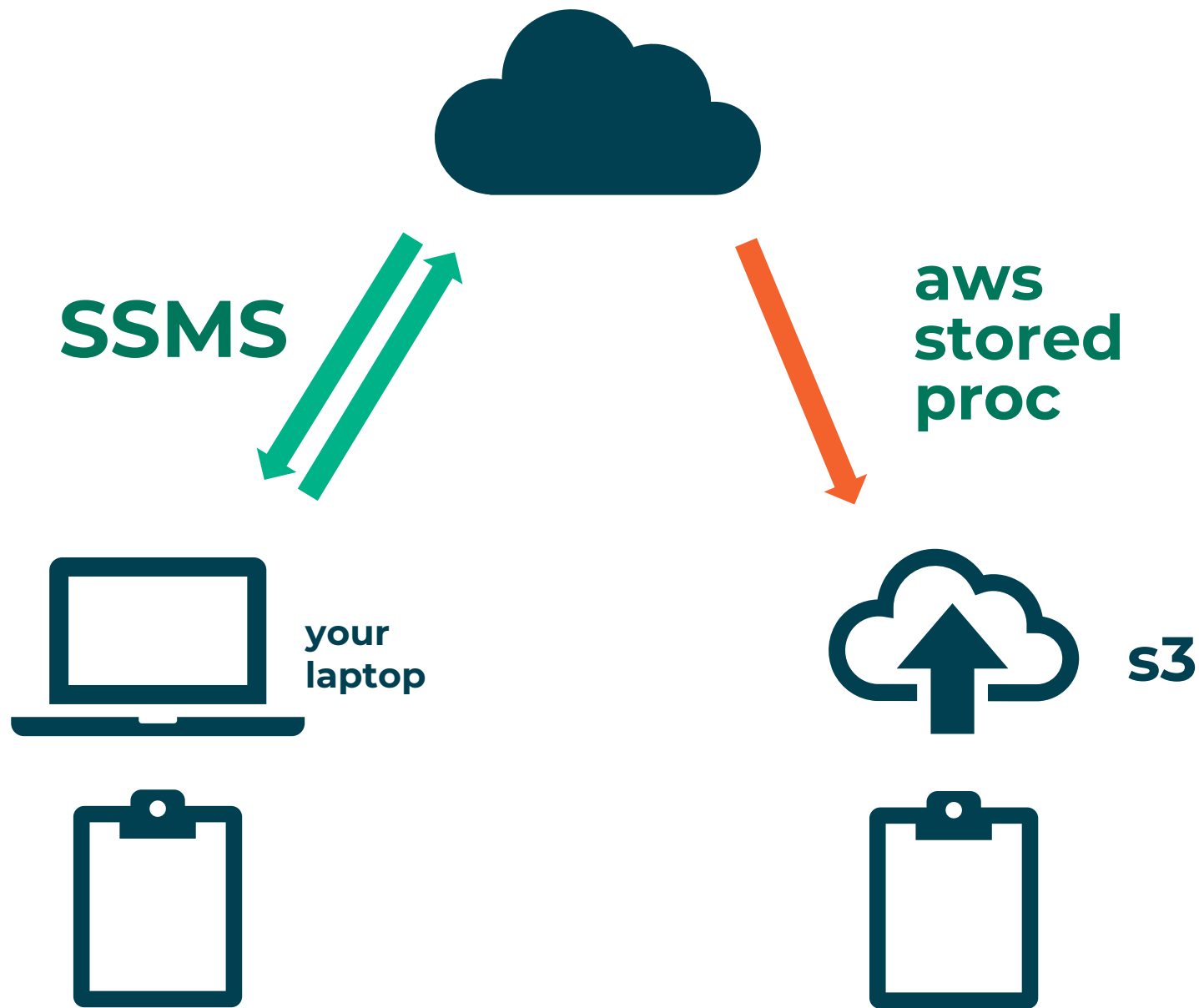




ACCESS TO THE BACKUP

QA

OPTIONS : RETRIEVE FILE FROM WHERE?





CREATE S3 BUCKET



| Buckets (1) Info | | | Copy ARN | Empty | Delete | Create bucket |
|--|-----------------------------|---------------------------------|--------------------------------------|--|--------|---------------|
| Buckets are containers for data stored in S3. Learn more | | | | | | |
| <input type="text" value="Find buckets by name"/> | | < 1 > | | | | |
| | Name ▲ | AWS Region ▼ | Access ▼ | Creation date ▼ | | |
| <input type="radio"/> | siansbucket | US East (N. Virginia) us-east-1 | <u>Bucket and objects not public</u> | January 15, 2023, 16:39:08 (UTC+00:00) | | |





UPLOAD FILE TO S3



Upload [Info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (0)

[Remove](#) [Add files](#) [Add folder](#)

All files and folders in this table will be uploaded.

< 1 >

| <input type="checkbox"/> | Name | Folder | Type | Size |
|---|------|--------|------|------|
| No files or folders | | | | |
| You have not chosen any files or folders to upload. | | | | |



RDS PUBLIC ACCESSIBILITY



Network & Security

Virtual Private Cloud (VPC) [info](#)

VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-707bd719) ▼



Only VPCs with a corresponding DB subnet group are listed.

Subnet group [info](#)

DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

default ▼

Public accessibility [info](#)

☒ Yes

EC2 instances and devices outside of the VPC hosting the DB instance will connect to the DB instances. You must also select one or more VPC security groups that specify which EC2 instances and devices can connect to the DB instance.

☐ No

DB instance will not have a public IP address assigned. No EC2 instance or devices outside of the VPC will be able to connect.

Availability zone [info](#)

No preference ▼



SSMS TO RDS



| Endpoint & port | Networking | Security |
|---|---|---|
| Endpoint database-1.cqsbtlqgg9mk.us-east-1.rds.amazonaws.com | Availability Zone us-east-1d | VPC security groups default (sg-06d00be0d46ee2f92) ✔ Active |
| Port 1433 | VPC vpc-04908241bbb86740f | |
| | Subnet group default-vpc-04908241bbb86740f | Publicly accessible Yes |

Connect to Server

SQL Server

Server type:

Database Engine

Server name:

database-1.cqsbtlqgg9mk.us-east-1.rds.amazonaws.com,143

Authentication:

SQL Server Authentication

Login:

admin

Password:

☒ Remember password

Connect

Cancel

Help

Options >>

SCENARIO





OVERVIEW

Now we will deploy our SQL database to the Cloud and connect to the database for visualisation

- restore the database
- create a role for quicksight to access RDS
- connect to data to test





CONFIGURE OPTION GROUP



Add option

Modify option

Delete option

Delete option group

Create group

Associated DB instances and snapshots

Resource

Type

database-1

Instance

Options

Name

Persistent

Permanent

Port

Security groups

Version

SQLSERVER_BACKUP_RESTORE

No

No

-

-

-

This allows native SQL backup restore option – not needed for a create approach



RUN QUERY TO CREATE DB



The screenshot shows the SQL Server Enterprise Manager interface. On the left, the Object Explorer displays the server hierarchy for 'database-1.cqsbtlqgq9mk.us-east-1.rds.amazonaws.com,1433'. The 'Databases' folder is expanded, showing 'System Databases', 'Database Snapshots', 'rdsadmin', and 'superstore'. The 'superstore' database is selected. On the right, a query window titled 'create_superstore_...master (admin (68))' contains the following SQL script:

```
CREATE DATABASE [superstore]
GO

USE [superstore]
GO

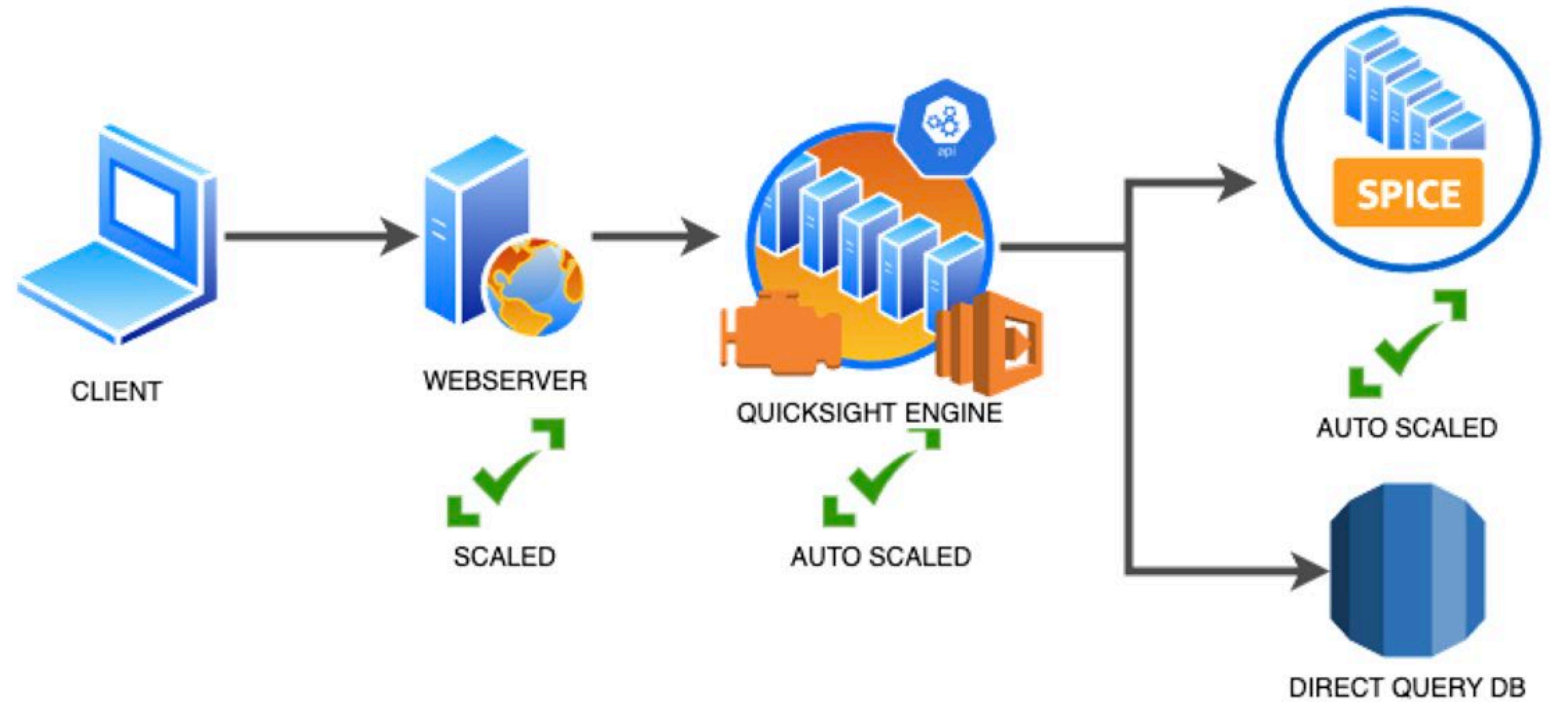
-- table definition

CREATE TABLE [dbo].[dim_cust](
    [customerid] [nvarchar](50) NOT NULL,
    [customername] [nvarchar](50) NOT NULL,
    [segment] [nvarchar](50) NOT NULL,
    [cust_key] [smallint] NOT NULL,
    CONSTRAINT [PK_dim_cust] PRIMARY KEY CLUSTERED
(
    [cust_key] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF,
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[dim_geog](
    [country] [nvarchar](50) NOT NULL,
    [city] [nvarchar](50) NOT NULL,
    [state] [nvarchar](50) NOT NULL,
```

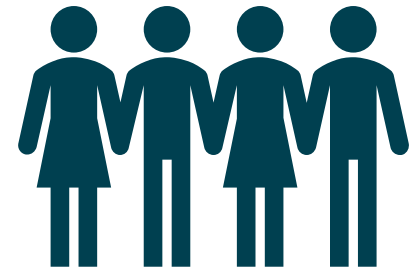
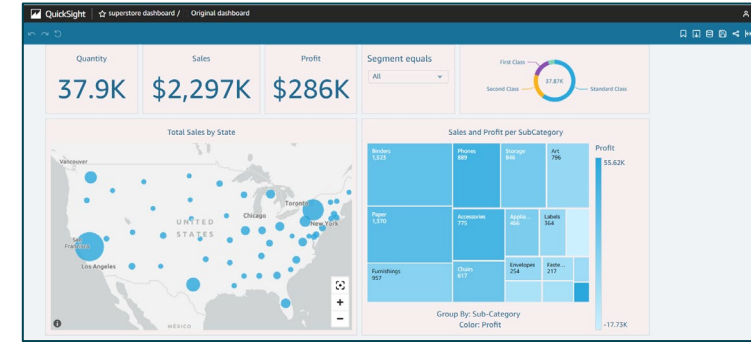


QUICKSIGHT CLOUD DATA ANALYSIS





DATA ANALYSIS DASHBOARD SHARE





CONFIGURE INBOUND CONNECTION



▼ Virtual private cloud

Your VPCs

Security group name

 Amazon-QuickSight-access

| Type Info | Protocol Info | Port range Info | Source Info |
|---------------------------|-------------------------------|---------------------------------|--|
| MSSQL ▼ | TCP | 1433 | Custom ▼ |
| | | | <input type="text" value="35.158.12"/> |



CONFIGURE INBOUND CONNECTION (2)



Security

VPC security groups

default (sg-06d00be0d46ee2f92)

✔ Active

Amazon-QuickSight-access (sg-0c511d3dac74b00c0)

✔ Active