

06 - Create a SQL database (5 min)

In this walkthrough, we will create a SQL database in Azure and then query the data in that database.

Task 1: Create the database

In this task, we will create a SQL database based on the AdventureWorksLT sample database.

- 1. Sign in to the Azure portal at <https://portal.azure.com>.
- 2. From the **All services** blade, search for and select **SQL databases**, and then click **+ Add, + Create, + New**.
- 3. On the **Basics** tab, fill in this information.

Setting	Value
Subscription	Use default supplied
Resource group	Create new resource group
Database name	db1
Server	Select Create new (A new sidebar will open on the right)
Server name	sqlserverxxxx (must be unique)
Location	(US) East US
Authentication method	Use SQL authentication
Server admin login	sqluser
Password	Pa\$\$w0rd1234
Click	OK

Home > SQL databases > Create SQL Database

Create SQL Database

Microsoft

Basics Networking Additional settings Tags Review + create

Create a SQL database with your preferred configurations. Complete the Basics tab then go to Review + Create to provision with smart defaults, or visit each tab to customize. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure Pass - Sponsorship

Resource group * (New) myRGDb

Create new

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name * db1

Server (new) sqlserver4321 (East US)

Create new

Want to use SQL elastic pool? * No

Compute + storage * General Purpose

Gen5, 2 vCores, 32 GB storage

Configure database

Review + create

Next : Networking >

New server

Microsoft

Server name * sqlserver4321

.database.windows.net

Server admin login * sqluser

Password *

Confirm password *

Location * (US) East US

☒ Allow Azure services to access server

OK

- 4. On the **Networking** tab and configure the following settings (leave others with their defaults)

Setting	Value
---------	-------

Setting	Value
Connectivity method	Public endpoint
Allow Azure services and resources to access this server	Yes
Add current client IP address	No

[Home](#) > [SQL databases](#) > Create SQL Database

Create SQL Database

Microsoft

[Basics](#) [Networking](#) [Additional settings](#) [Tags](#) [Review + create](#)

Configure network access and connectivity for your server. The configuration selected below will apply to the selected server 'sqlserver4321' and all databases it manages. [Learn more](#)

Network connectivity

Choose an option for configuring connectivity to your server via public endpoint or private endpoint. Choosing no access creates with defaults and you can configure connection method after server creation. [Learn more](#)

Connectivity method * ⓘ

☐ No access
☒ Public endpoint
☐ Private endpoint

Firewall rules

Setting 'Allow Azure services and resources to access this server' to Yes allows communications from all resources inside the Azure boundary, that may or may not be part of your subscription. [Learn more](#)

Setting 'Add current client IP address' to Yes will add an entry for your client IP address to the server firewall.

Allow Azure services and resources to access this server *

Add current client IP address *

[Review + create](#)
[< Previous](#)
[Next : Additional settings >](#)

5. On the **Security** tab.

Setting	Value
Microsoft Defender for SQL	Not now

6. Move to the **Additional settings** tab. We will be using the AdventureWorksLT sample database.

Setting	Value
Use existing data	Sample

Create SQL Database ...



Microsoft

Basics Networking Additional settings Tags Review + create

Customize additional configuration parameters including collation & sample data.

Data source

Start with a blank database, restore from a backup or select sample data to populate your new database.

Use existing data *

None Backup **Sample**

AdventureWorksLT will be created as the sample database.

Database collation

Database collation defines the rules that sort and compare data, and cannot be changed after database creation. The default database collation is SQL_Latin1_General_CP1_CI_AS. [Learn more](#)

Collation ⓘ

SQL_Latin1_General_CP1_CI_AS

Azure Defender for SQL

Protect your data using Azure Defender for SQL, a unified security package including vulnerability assessment and advanced threat protection for your server. [Learn more](#)

Get started with a 30 day free trial period, and then 19.2 CAD/server/month.

Enable Azure Defender for SQL * ⓘ

Start free trial **Not now****Review + create**

< Previous

Next : Tags >

- Click **Review + create** and then click **Create** to deploy and provision the resource group, server, and database. It can take approx. 2 to 5 minutes to deploy.

Task 2: Test the database.

In this task, we will configure the SQL server and run a SQL query.

- When the deployment has completed, click Go to resource from the deployment blade. Alternatively, from the **All Resources** blade, search and select **Databases**, then **SQL databases** ensure your new database was created. You may need to **Refresh** the page.

SQL databases

Microsoft

[+ Add](#)
[🕒 Reservations](#)
[☰ Edit columns](#)
[🔄 Refresh](#)
[🏷️ Assign tags](#)
[🗑️ Delete](#)

1 items

<input type="checkbox"/>	Name ↑↓	Status	Replication role	Server	Pricing tier	Location ↑↓	Subscription ↑↓
<input type="checkbox"/>	db1	Online	None	mysqlserverces	General Purpose: Gen5, 2 vCores	East US	Visual Studio Enterprise

- Click the **db1** entry representing the SQL database you created. On the db1 blade click **Query editor (preview)**.
- Login as **sqluser** with the password **Pa\$\$w0rd1234**.
- You will not be able to login. Read the error closely and make note of the IP address that needs to be allowed through the firewall.



Welcome to SQL Database Query Editor

SQL server authentication

Login *

sqluser

Password *

.....

✖ Cannot open server 'sqlserverxxx1' requested by the login. Client with IP address [redacted] is not allowed to access the server. To enable access, use the Windows Azure Management Portal or run sp_set_firewall_rule on the master database to create a firewall rule for this IP address or address range. It may take up to five minutes for this change to take effect.

[Set server firewall \(sqlserverxxx1\)](#)

Active Directory authentication

Continue as [redacted]

OR

5. Back on the **db1** blade, click **Overview**.

db1 (sqlserver4321/db1) | Query editor (preview)

SQL database

Search (Ctrl+/) « Login + New Query ↑ Open query Feedback

- Overview
- Activity log
- Tags
- Diagnose and solve problems
- Quick start
- Query editor (preview)

6. From the db1 **Overview** blade, click **Set server firewall** Located on the top center of the overview screen.
7. Click + **Add client IP** (top menu bar) to add the IP address referenced in the error. (it may have autofilled for you - if not paste it into the IP address fields). Be sure to **Save** your changes.

Firewall settings
sqlserver4321 (SQL server)

Deny public network access ? Yes No

i Setting to **Yes** allows connections via approved private endpoint only and disables any existing firewall rules. [Learn more.](#)

Connection Policy ? Default Proxy Redirect

Allow Azure services and resources to access this server Yes No

i Connections from the IPs specified below provides access to all the databases in sqlserver43210.

Client IP address

Rule name	Start IP	End IP	
<input type="text"/>	<input type="text"/>	<input type="text"/>	...
ClientIPAddress_2020-5-...	your IP address	your IP address	...

- Return to your SQL database (slide the bottom toggle bar to the left) and click on **Query Editor (Preview)**. Try to login again as **sqluser** with the password **Pa\$\$w0rd1234**. This time you should succeed. Note that it may take a couple of minutes for the new firewall rule to be deployed.
- Once you log in successfully, the query pane appears. Enter the following query into the editor pane.

Code Copy

```

SELECT TOP 20 pc.Name as CategoryName, p.name as ProductName
FROM SalesLT.ProductCategory pc
JOIN SalesLT.Product p
ON pc.productcategoryid = p.productcategoryid;

```

db1 - Query editor (preview)
SQL database

db1 (azureuser)

i Showing limited object explorer here. For full capability please open SSDT.

- Tables
- Views
- Stored Procedures

Query 1

```

1 SELECT TOP 20 pc.Name as CategoryName, p.name as ProductName
2 FROM SalesLT.ProductCategory pc
3 JOIN SalesLT.Product p
4 ON pc.productcategoryid = p.productcategoryid;

```

Run Cancel query

Results Messages

- Click **Run**, and then review the query results in the **Results** pane. The query should run successfully.

Query 1 X

Run Cancel query

```
1 SELECT TOP 20 pc.Name as CategoryName, p.name as ProductName
2 FROM SalesLT.ProductCategory pc
3 JOIN SalesLT.Product p
4 ON pc.productcategoryid = p.productcategoryid;
```

Results Messages

Search to filter items...

CATEGORYNAME	PRODUCTNAME
Road Frames	HL Road Frame - Black, 58
Road Frames	HL Road Frame - Red, 58
Helmets	Sport-100 Helmet, Red
Helmets	Sport-100 Helmet, Black
Socks	Mountain Bike Socks, M

Query succeeded | 1s

Congratulations! You have created a SQL database in Azure and successfully queried the data in that database.

Note: To avoid additional costs, you can optionally remove this resource group. Search for resource groups, click your resource group, and then click **Delete resource group**. Verify the name of the resource group and then click **Delete**. Monitor the **Notifications** to see how the delete is proceeding.