

## Task1

T1

**T1-ubuntu - Microsoft Azure**

Home > Resource groups > project > **T1-ubuntu**

**Overview**

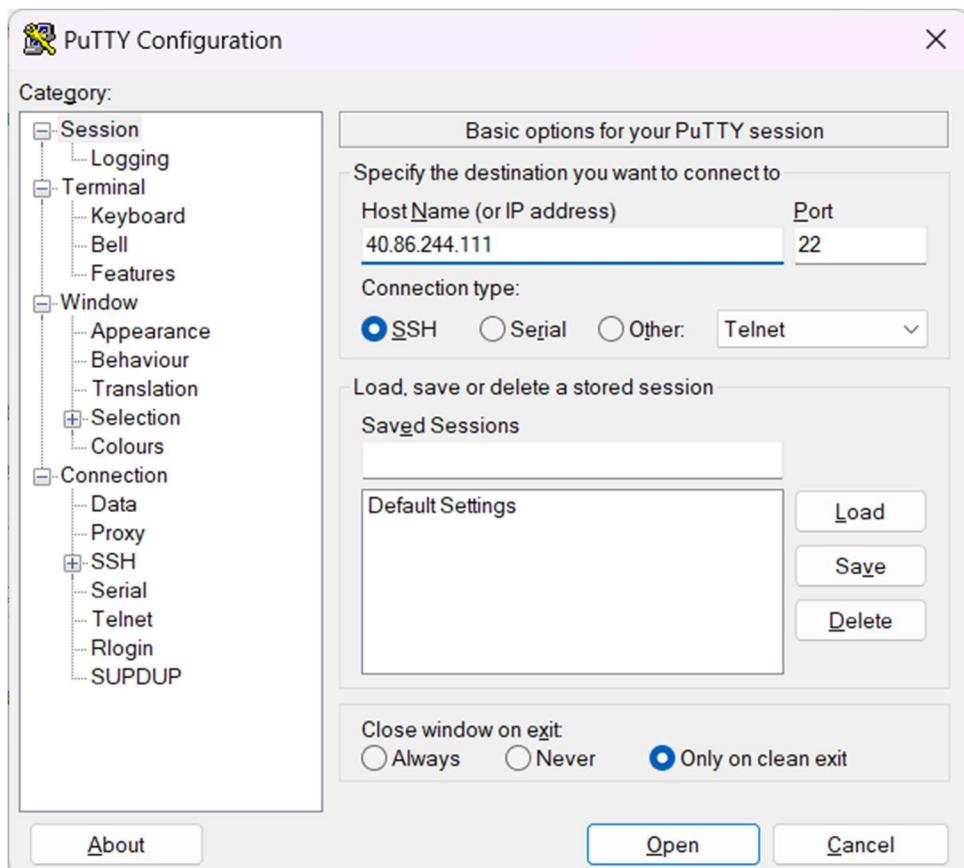
**Essentials**

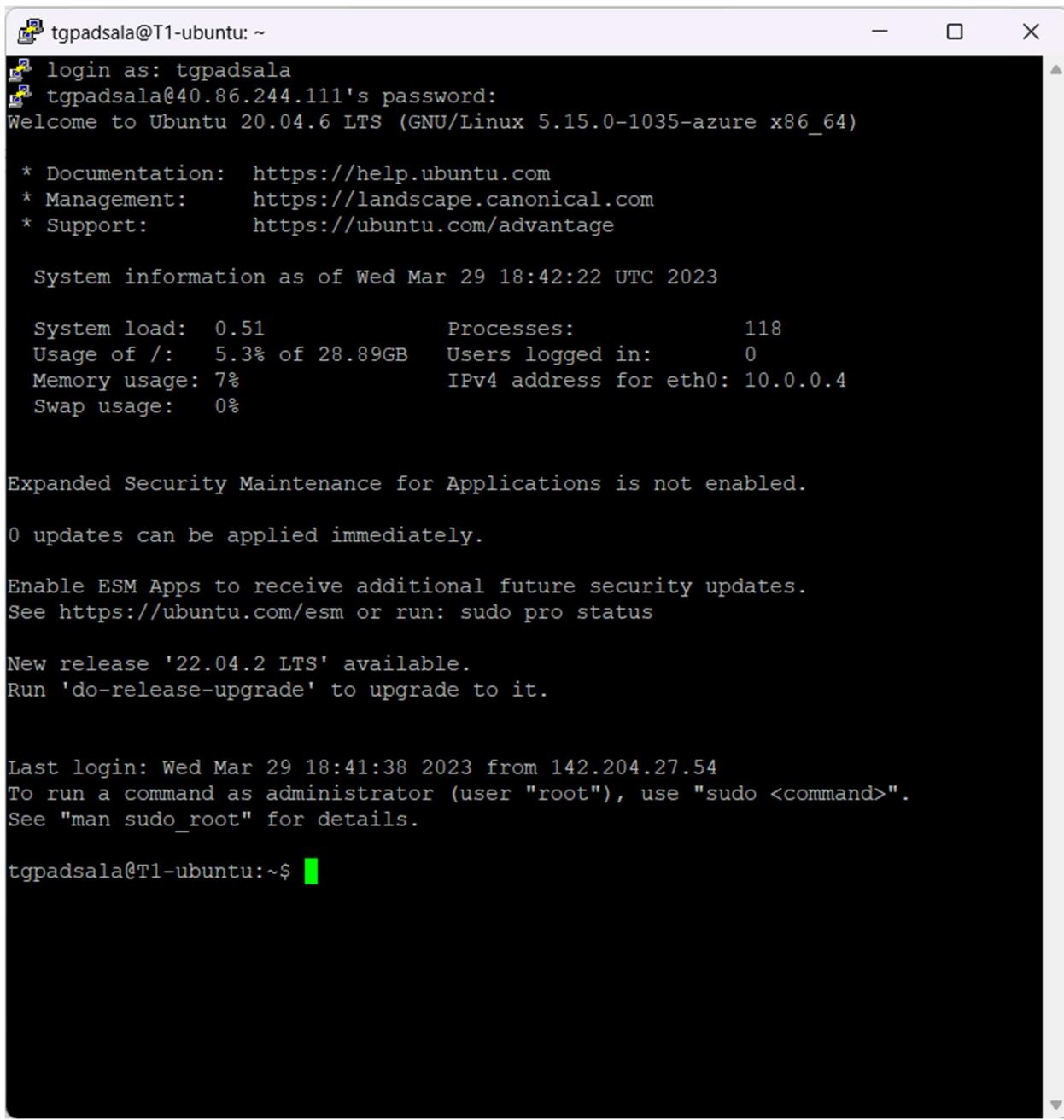
Resource group ( <a href="#">move</a> )	: project	Operating system	: Linux
Status	: Running	Size	: Standard B2s (2 vcpus, 4 GiB memory)
Location	: Canada East	Public IP address	: <a href="#">40.86.244.111</a>
Subscription ( <a href="#">move</a> )	: Seneca College : DAT330NAA - 1039	Virtual network/subnet	: <a href="#">T1-ubuntu-vnet/default</a>
Subscription ID	: 159a43b9-3d5d-48e2-9098-d94c7bf91097	DNS name	: <a href="#">Not configured</a>
Tags ( <a href="#">edit</a> )	: Click here to add tags		

**Properties**

<b>Virtual machine</b>	<b>Networking</b>
Computer name	T1-ubuntu
Health state	-
Operating system	Linux
Publisher	canonical
Offer	0001-com-ubuntu-server-focal
Plan	20_04-lts-gen2
VM generation	V2
VM architecture	x64
Agent status	Not Ready
<b>Size</b>	<b>Size</b>
	Standard B2s

T2





tgpadsala@T1-ubuntu: ~

```
login as: tgpadsala
tgpadsala@40.86.244.111's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1035-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

System information as of Wed Mar 29 18:42:22 UTC 2023

System load: 0.51           Processes:          118
Usage of /:   5.3% of 28.89GB  Users logged in:    0
Memory usage: 7%            IPv4 address for eth0: 10.0.0.4
Swap usage:   0%
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

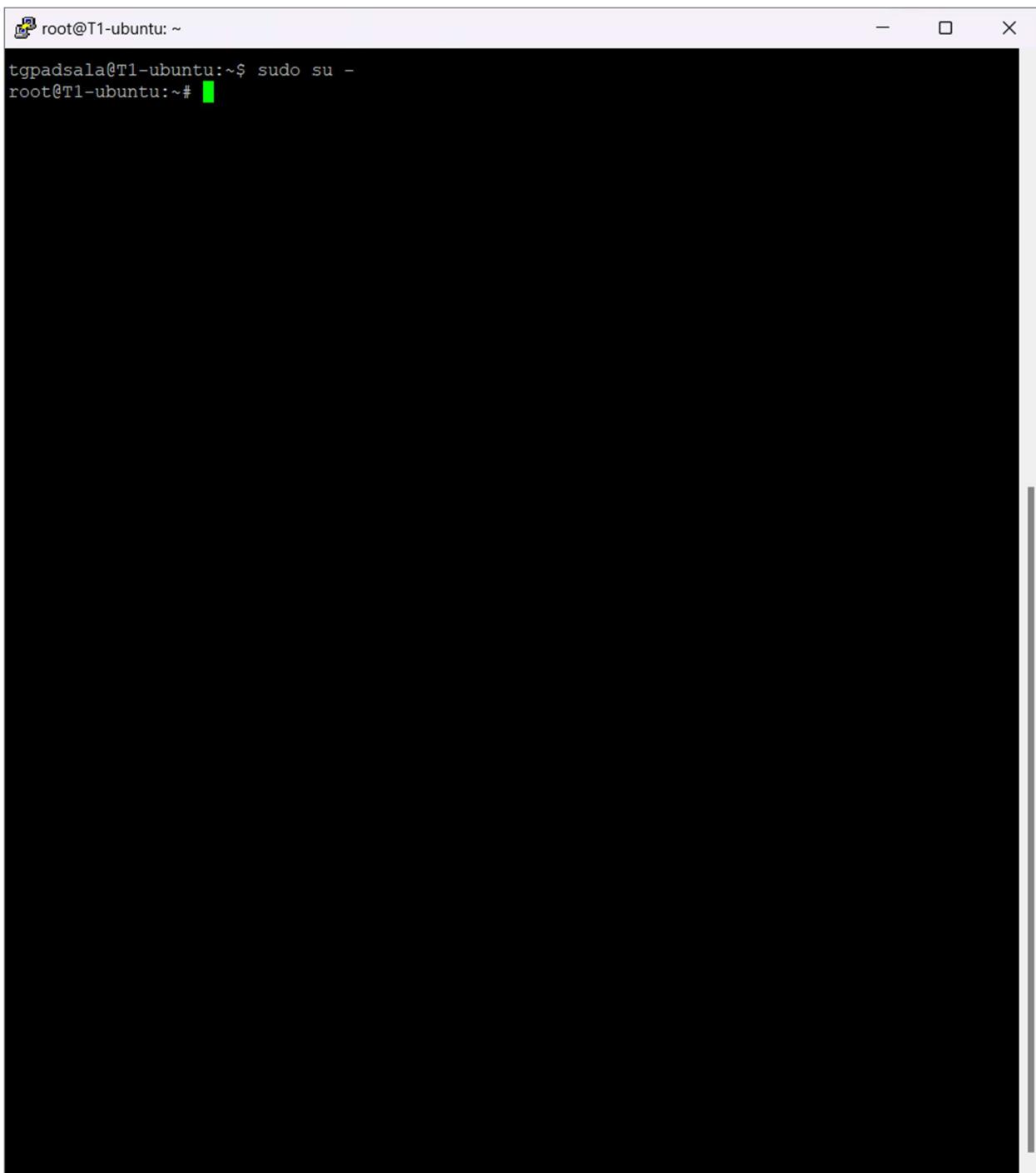
Enable ESM Apps to receive additional future security updates.  
See <https://ubuntu.com/esm> or run: sudo pro status

New release '22.04.2 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Wed Mar 29 18:41:38 2023 from 142.204.27.54
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

tgpadsala@T1-ubuntu:~$
```

1

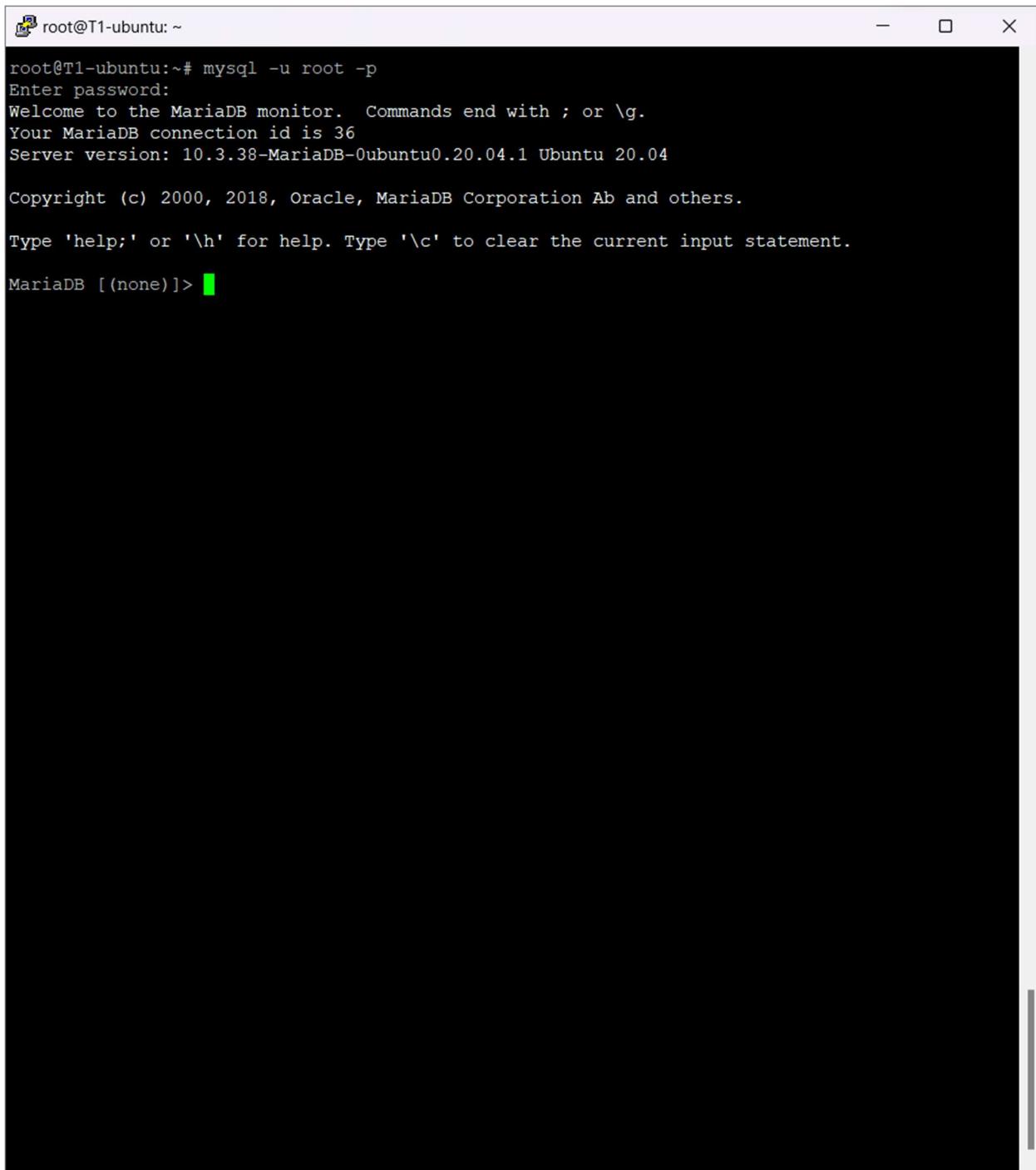


A screenshot of a terminal window titled "root@T1-ubuntu: ~". The window shows the command "sudo su -" being run, followed by a prompt "#". The rest of the terminal window is completely blacked out.

```
root@T1-ubuntu: ~
Get:4 http://azure.archive.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://azure.archive.ubuntu.com/ubuntu focal/universe amd64 Packages [8628 kB]
Get:6 http://azure.archive.ubuntu.com/ubuntu focal/universe Translation-en [5124 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f Metadata [265 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [144 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9136 B]
Get:11 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2463 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [16.4 kB]
Get:13 http://azure.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [1713 kB]
Get:14 http://azure.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1045 kB]
Get:15 http://azure.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [246 kB]
Get:16 http://azure.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [24.1 kB]
Get:17 http://azure.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [25.1 kB]
Get:18 http://azure.archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7408 B]
Get:19 http://azure.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [592 B]
Get:20 http://azure.archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [45.7 kB]
Get:21 http://azure.archive.ubuntu.com/ubuntu focal-backports/main Translation-en [16.3 kB]
Get:22 http://azure.archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [1420 B]
Get:23 http://azure.archive.ubuntu.com/ubuntu focal-backports/restricted amd64 c-n-f Metadata [116 B]
Get:24 http://azure.archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [24.9 kB]
Get:25 http://azure.archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [16.3 kB]
Get:26 http://azure.archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [880 B]
Get:27 http://azure.archive.ubuntu.com/ubuntu focal-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:28 http://azure.archive.ubuntu.com/ubuntu focal-security/main amd64 Packages [2082 kB]
Get:29 http://azure.archive.ubuntu.com/ubuntu focal-security/main Translation-en [338 kB]
Get:30 http://azure.archive.ubuntu.com/ubuntu focal-security/universe amd64 Packages [820 kB]
Get:31 http://azure.archive.ubuntu.com/ubuntu focal-security/universe Translation-en [164 kB]
Get:32 http://azure.archive.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadata [17.5 kB]
Get:33 http://azure.archive.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [22.9 kB]
Get:34 http://azure.archive.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5488 B]
Get:35 http://azure.archive.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [516 B]
Fetched 23.7 MB in 4s (5268 kB/s)
Reading package lists... Done
root@T1-ubuntu:~#
```

3

```
root@T1-ubuntu: ~
Preparing to unpack .../12-libhttp-date-perl_6.05-1_all.deb ...
Unpacking libhttp-date-perl (6.05-1) ...
Selecting previously unselected package libio-html-perl.
Preparing to unpack .../13-libio-html-perl_1.001-1_all.deb ...
Unpacking libio-html-perl (1.001-1) ...
Selecting previously unselected package liblwp-mediatypes-perl.
Preparing to unpack .../14-liblwp-mediatypes-perl_6.04-1_all.deb ...
Unpacking liblwp-mediatypes-perl (6.04-1) ...
Selecting previously unselected package libhttp-message-perl.
Preparing to unpack .../15-libhttp-message-perl_6.22-1_all.deb ...
Unpacking libhttp-message-perl (6.22-1) ...
Selecting previously unselected package libterm-readkey-perl.
Preparing to unpack .../16-libterm-readkey-perl_2.38-1build1_amd64.deb ...
Unpacking libterm-readkey-perl (2.38-1build1) ...
Selecting previously unselected package mariadb-server.
Preparing to unpack .../17-mariadb-server_1%3a10.3.38-0ubuntu0.20.04.1_all.deb ...
Unpacking mariadb-server (1:10.3.38-0ubuntu0.20.04.1) ...
Setting up libconfig-inifiles-perl (3.000002-1) ...
Setting up libmysqlclient21:amd64 (8.0.32-0ubuntu0.20.04.2) ...
Setting up libhtml-tagset-perl (3.20-4) ...
Setting up liblwp-mediatypes-perl (6.04-1) ...
Setting up libencode-locale-perl (1.05-1) ...
Setting up libsnapy1v5:amd64 (1.1.8-1build1) ...
Setting up socat (1.7.3.3-2) ...
Setting up mariadb-server-core-10.3 (1:10.3.38-0ubuntu0.20.04.1) ...
Setting up libio-html-perl (1.001-1) ...
Setting up galera-3 (25.3.29-1) ...
Setting up libtimedate-perl (2.3200-1) ...
Setting up mariadb-client-core-10.3 (1:10.3.38-0ubuntu0.20.04.1) ...
Setting up libfcgi-perl (0.79-1) ...
Setting up libterm-readkey-perl (2.38-1build1) ...
Setting up liburi-perl (1.76-2) ...
Setting up libdbi-perl:amd64 (1.643-1ubuntu0.1) ...
Setting up libhttp-date-perl (6.05-1) ...
Setting up mariadb-client-10.3 (1:10.3.38-0ubuntu0.20.04.1) ...
Setting up libdbd-mysql-perl:amd64 (4.050-3) ...
Setting up libhtml-parser-perl (3.72-5) ...
Setting up mariadb-server-10.3 (1:10.3.38-0ubuntu0.20.04.1) ...
Created symlink /etc/systemd/system/mysql.service → /lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /lib/systemd/system/mariadb.service.
Setting up libhttp-message-perl (6.22-1) ...
Setting up libcgi-pm-perl (4.46-1) ...
Setting up libhtml-template-perl (2.97-1) ...
Setting up mariadb-server (1:10.3.38-0ubuntu0.20.04.1) ...
Setting up libcgi-fast-perl (1:2.15-1) ...
Processing triggers for systemd (245.4-4ubuntu3.20) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
root@T1-ubuntu:~#
```



root@T1-ubuntu:~# mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 36  
Server version: 10.3.38-MariaDB-0ubuntu0.20.04.1 Ubuntu 20.04  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> █

5

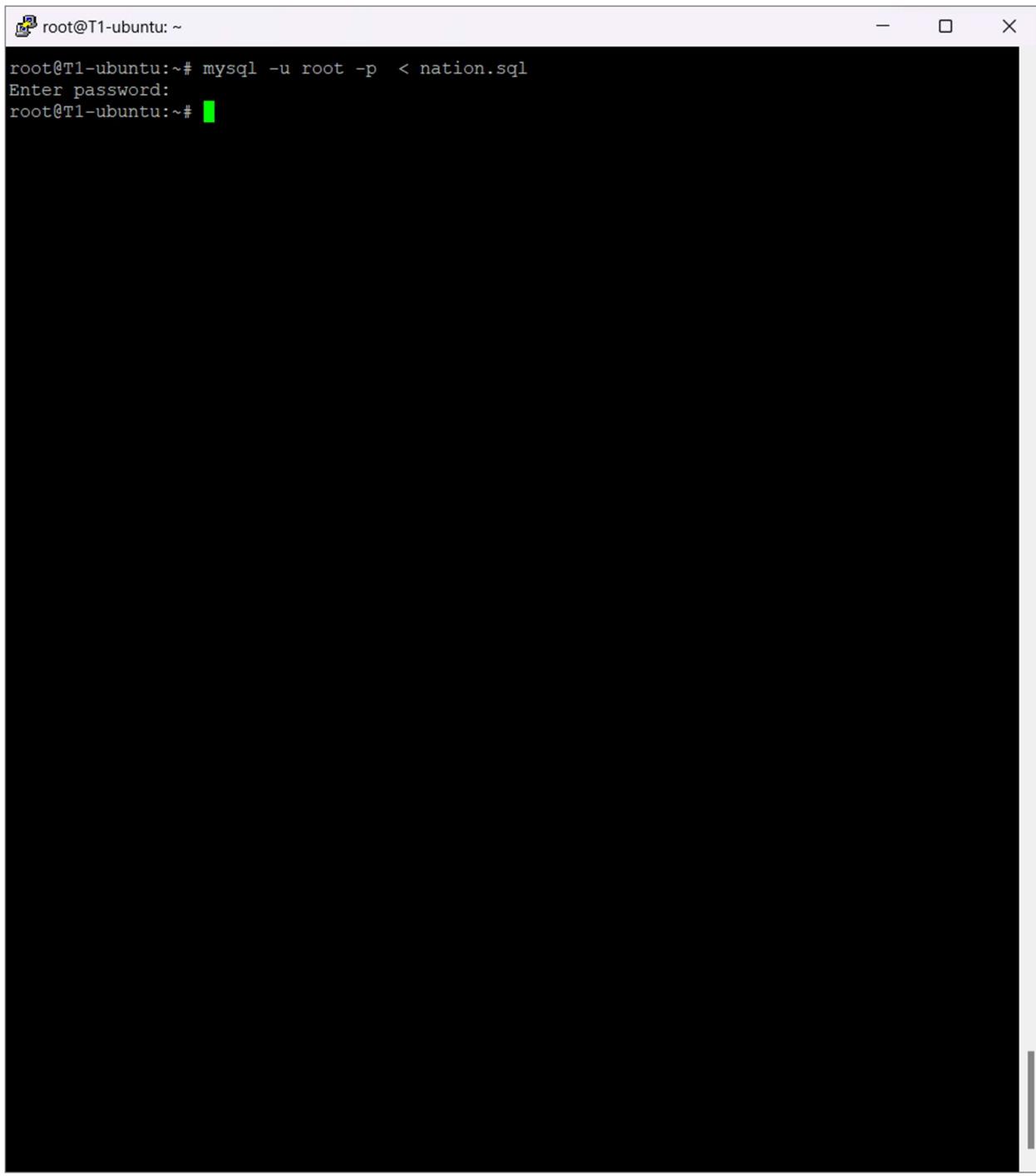


The screenshot shows a terminal window with a black background and white text. At the top left is a blue icon representing a terminal or terminal-like application. The title bar contains the text "root@T1-ubuntu: ~". On the right side of the title bar are three standard window control buttons: a minus sign for minimize, a square for maximize/minimize, and an X for close.

```
MariaDB [(none)]> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| mysql          |
| nation         |
| performance_schema |
+-----+
4 rows in set (0.000 sec)

MariaDB [(none)]> use nation;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [nation]>
```



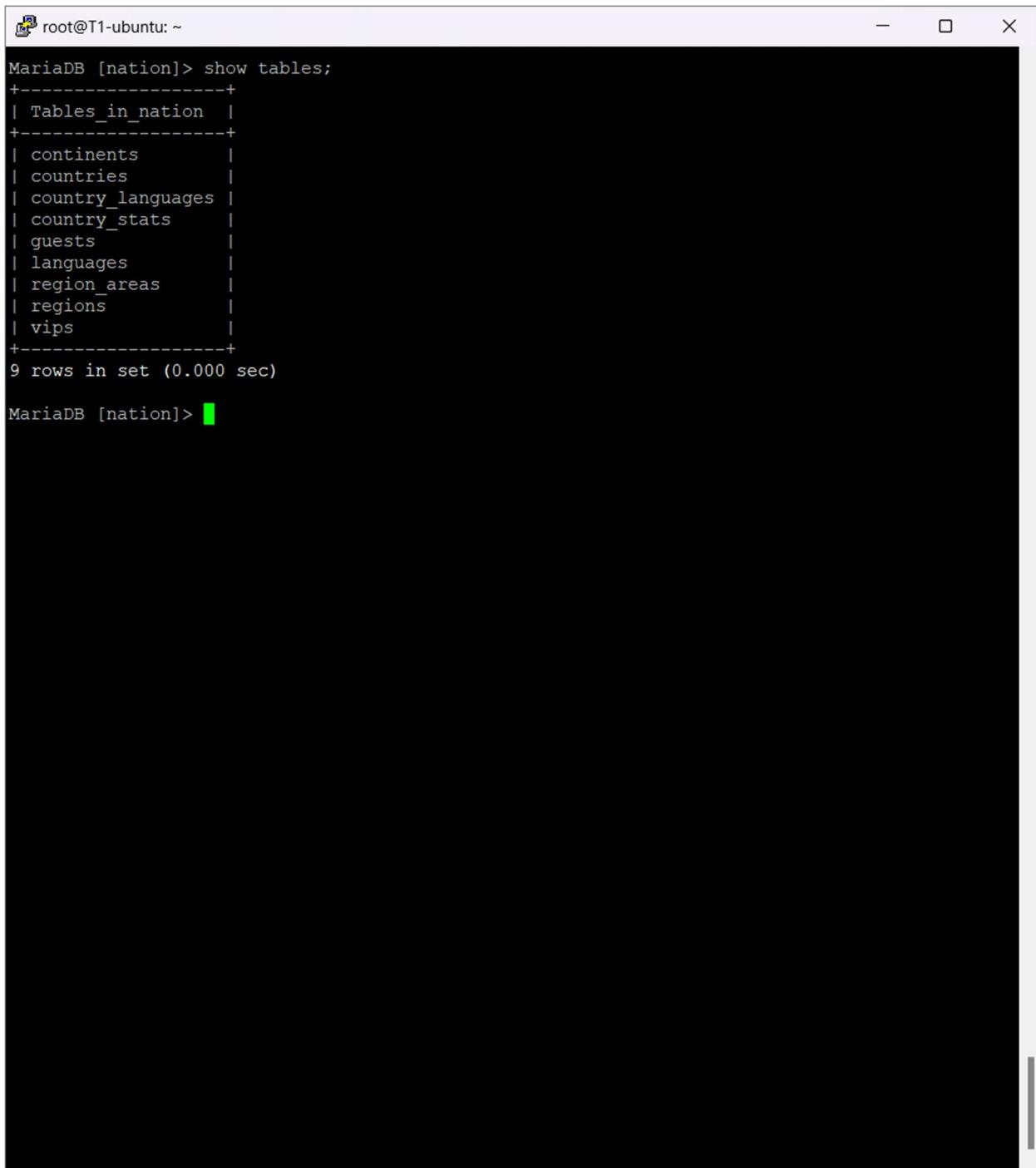
A screenshot of a terminal window titled 'root@T1-ubuntu: ~'. The window contains the following text:

```
root@T1-ubuntu:~# mysql -u root -p < nation.sql
Enter password:
root@T1-ubuntu:~#
```

The terminal window has a dark background and light-colored text. The cursor is visible at the end of the second line. The window has standard Linux-style window controls (minimize, maximize, close) in the top right corner.

S

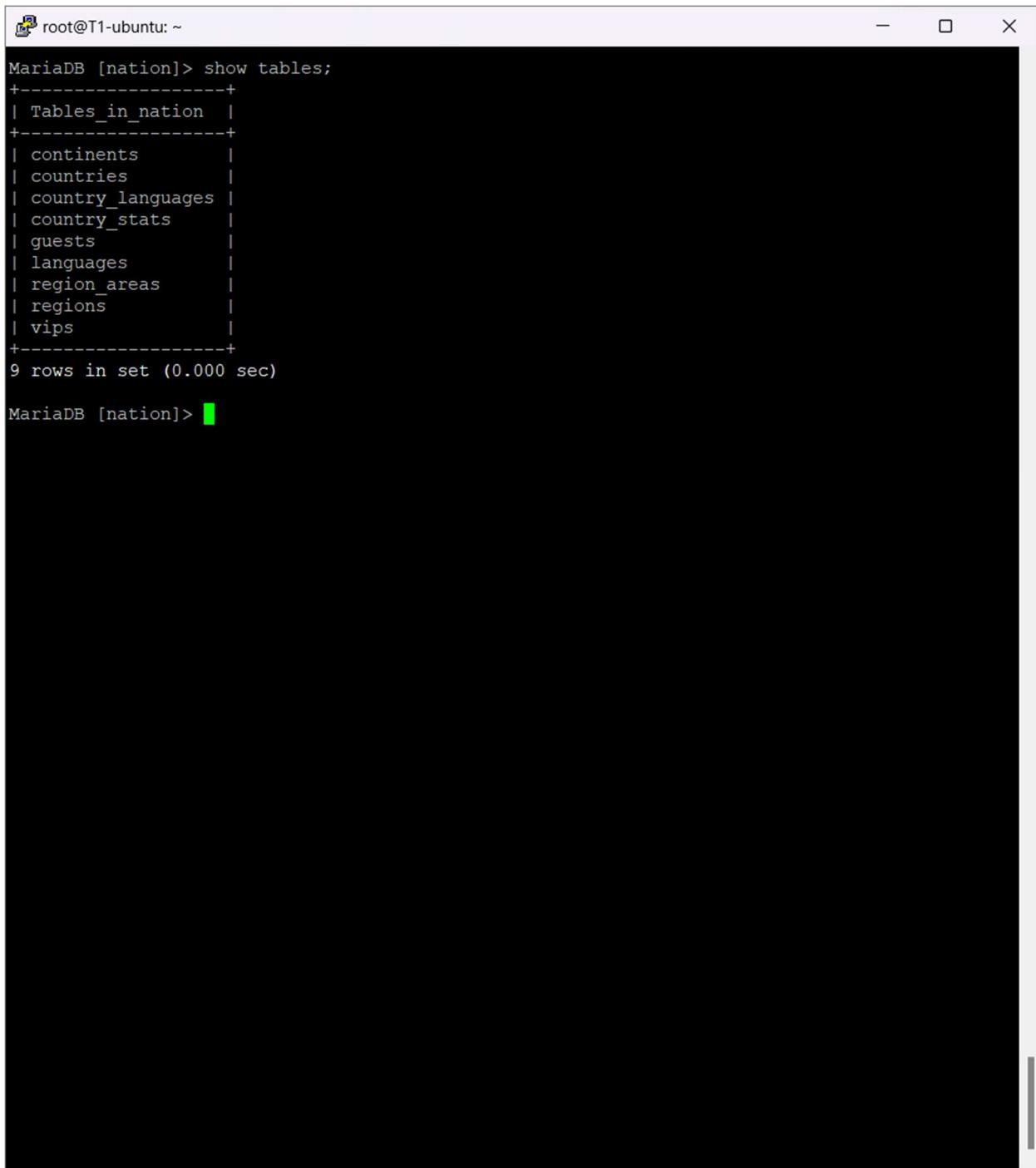
8(query)



A screenshot of a terminal window titled "root@T1-ubuntu: ~". The window displays the output of a MariaDB command: "show tables;". The output shows nine tables in the "nation" database:

Tables_in_nation
continents
countries
country_languages
country_stats
guests
languages
region_areas
regions
vips

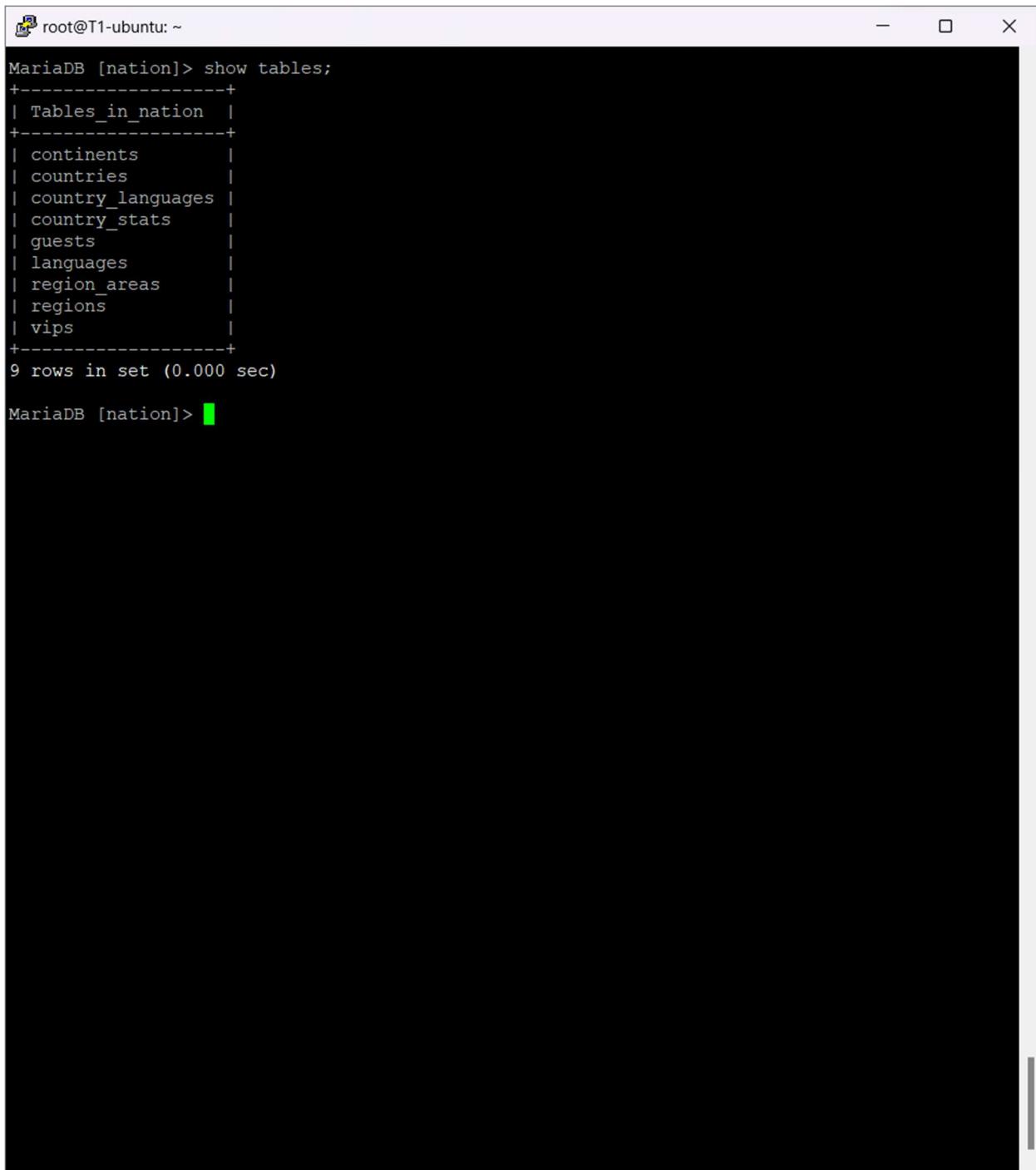
Below the table listing, the message "9 rows in set (0.000 sec)" is displayed. The prompt "MariaDB [nation]>" is visible at the bottom of the terminal window.

A screenshot of a terminal window titled 'root@T1-ubuntu: ~'. The window displays the output of a MariaDB command: 'show tables;'. The output shows nine tables: continents, countries, country\_languages, country\_stats, guests, languages, region\_areas, regions, and vips. A vertical scroll bar is visible on the right side of the terminal window.

```
MariaDB [nation]> show tables;
+-----+
| Tables_in_nation |
+-----+
| continents        |
| countries         |
| country_languages |
| country_stats     |
| guests            |
| languages          |
| region_areas      |
| regions           |
| vips              |
+-----+
9 rows in set (0.000 sec)

MariaDB [nation]>
```

8(output)

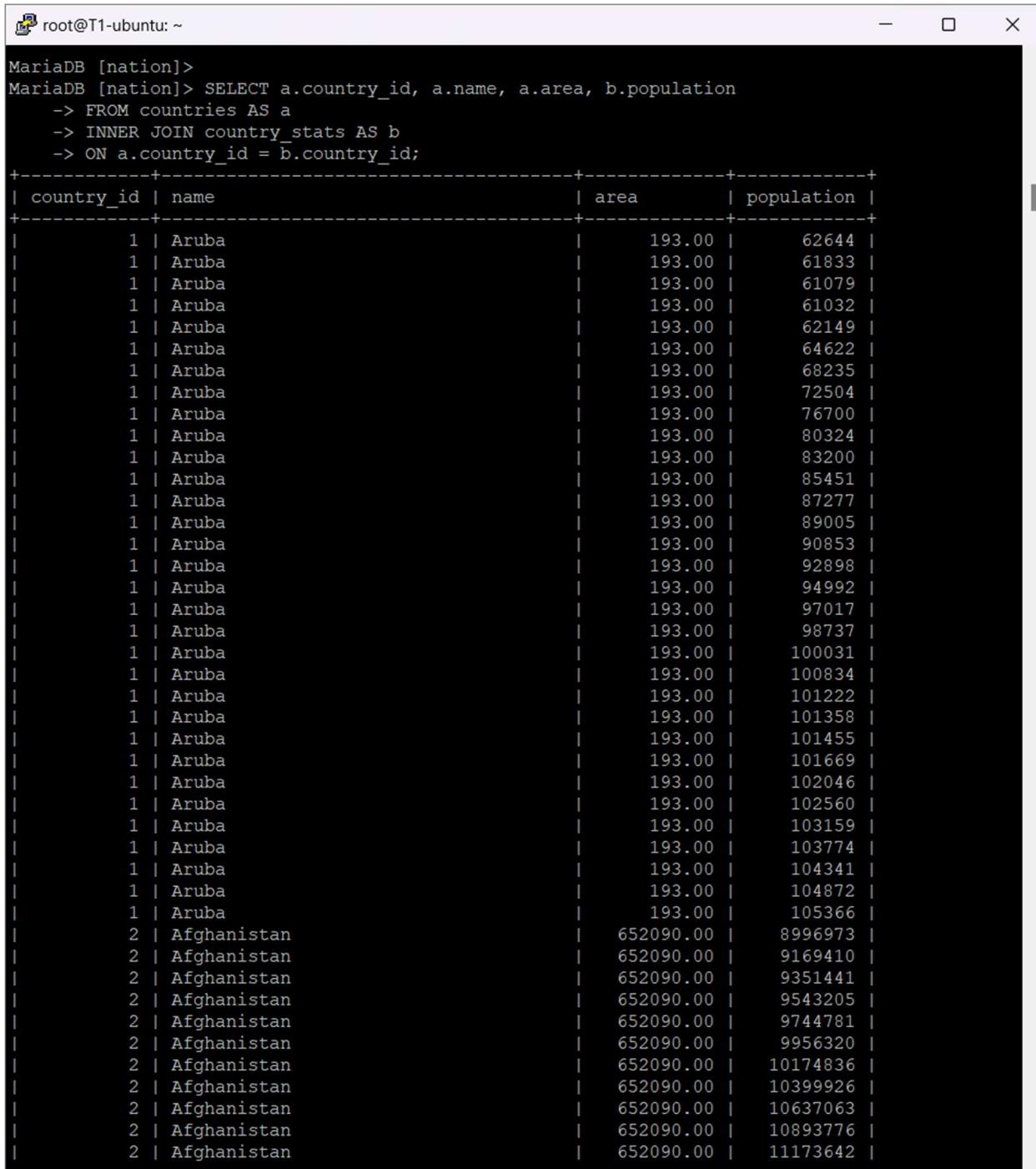


A screenshot of a terminal window titled 'root@T1-ubuntu: ~'. The window displays the output of a MariaDB command: 'show tables;'. The output shows nine tables listed in a tabular format:

	Tables_in_nation
+	continents
-	countries
-	country_languages
-	country_stats
-	guests
-	languages
-	region_areas
-	regions
+	vips

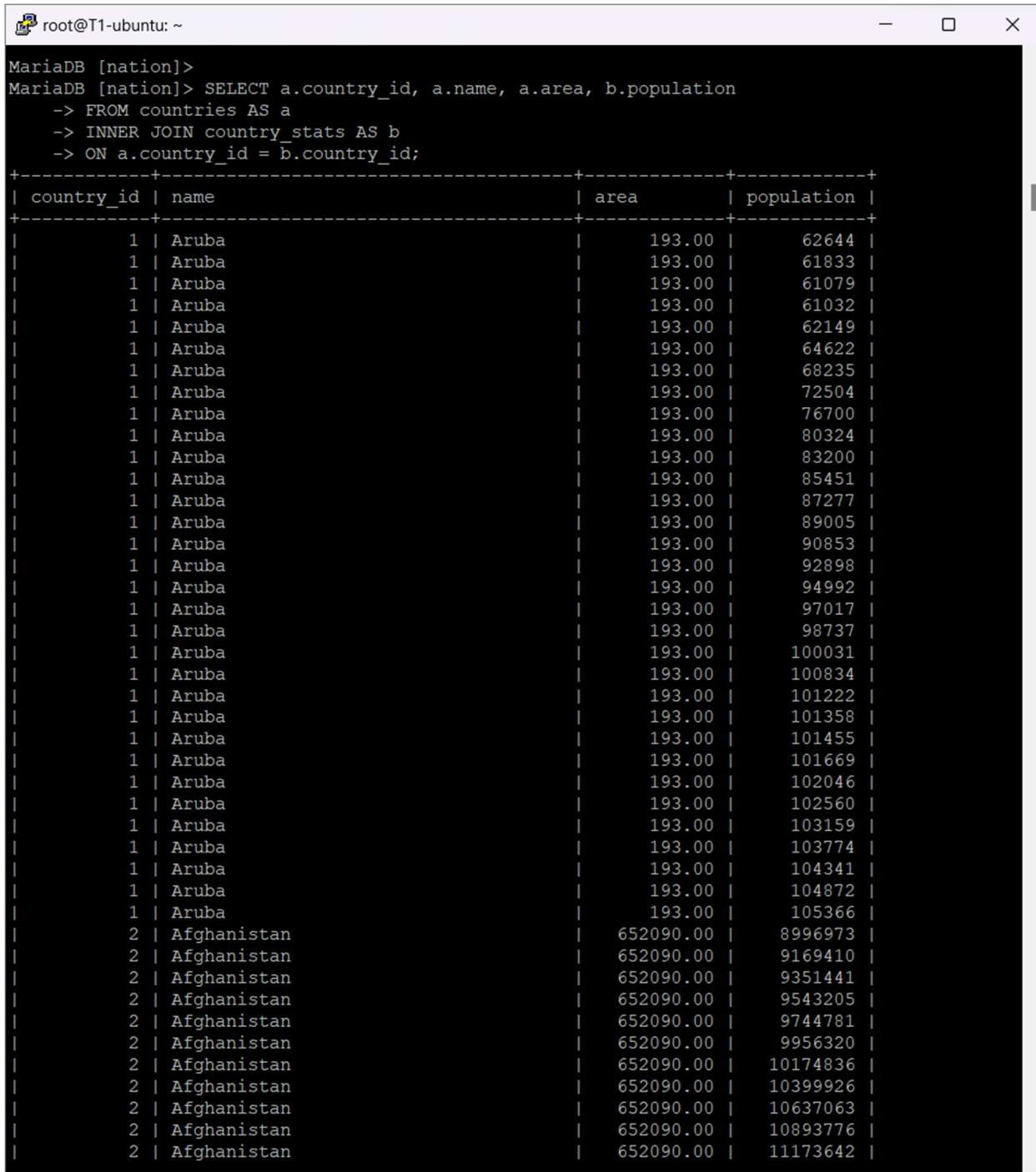
Below the table, it says '9 rows in set (0.000 sec)'. The prompt 'MariaDB [nation]>' is visible at the bottom.

9(query)

A screenshot of a terminal window titled 'root@T1-ubuntu: ~'. The window contains a MariaDB session. The user has run a query to select country\_id, name, area, and population from two tables: countries and country\_stats. The results show multiple rows for Aruba (country\_id 1) and Afghanistan (country\_id 2), with each row containing the same values for area and population, indicating a data inconsistency.

```
MariaDB [nation]>
MariaDB [nation]> SELECT a.country_id, a.name, a.area, b.population
    -> FROM countries AS a
    -> INNER JOIN country_stats AS b
    -> ON a.country_id = b.country_id;
+-----+-----+-----+
| country_id | name      | area     | population |
+-----+-----+-----+
| 1 | Aruba    | 193.00   | 62644   |
| 1 | Aruba    | 193.00   | 61833   |
| 1 | Aruba    | 193.00   | 61079   |
| 1 | Aruba    | 193.00   | 61032   |
| 1 | Aruba    | 193.00   | 62149   |
| 1 | Aruba    | 193.00   | 64622   |
| 1 | Aruba    | 193.00   | 68235   |
| 1 | Aruba    | 193.00   | 72504   |
| 1 | Aruba    | 193.00   | 76700   |
| 1 | Aruba    | 193.00   | 80324   |
| 1 | Aruba    | 193.00   | 83200   |
| 1 | Aruba    | 193.00   | 85451   |
| 1 | Aruba    | 193.00   | 87277   |
| 1 | Aruba    | 193.00   | 89005   |
| 1 | Aruba    | 193.00   | 90853   |
| 1 | Aruba    | 193.00   | 92898   |
| 1 | Aruba    | 193.00   | 94992   |
| 1 | Aruba    | 193.00   | 97017   |
| 1 | Aruba    | 193.00   | 98737   |
| 1 | Aruba    | 193.00   | 100031  |
| 1 | Aruba    | 193.00   | 100834  |
| 1 | Aruba    | 193.00   | 101222  |
| 1 | Aruba    | 193.00   | 101358  |
| 1 | Aruba    | 193.00   | 101455  |
| 1 | Aruba    | 193.00   | 101669  |
| 1 | Aruba    | 193.00   | 102046  |
| 1 | Aruba    | 193.00   | 102560  |
| 1 | Aruba    | 193.00   | 103159  |
| 1 | Aruba    | 193.00   | 103774  |
| 1 | Aruba    | 193.00   | 104341  |
| 1 | Aruba    | 193.00   | 104872  |
| 1 | Aruba    | 193.00   | 105366  |
| 2 | Afghanistan | 652090.00 | 8996973 |
| 2 | Afghanistan | 652090.00 | 9169410 |
| 2 | Afghanistan | 652090.00 | 9351441 |
| 2 | Afghanistan | 652090.00 | 9543205 |
| 2 | Afghanistan | 652090.00 | 9744781 |
| 2 | Afghanistan | 652090.00 | 9956320 |
| 2 | Afghanistan | 652090.00 | 10174836 |
| 2 | Afghanistan | 652090.00 | 10399926 |
| 2 | Afghanistan | 652090.00 | 10637063 |
| 2 | Afghanistan | 652090.00 | 10893776 |
| 2 | Afghanistan | 652090.00 | 11173642 |
```

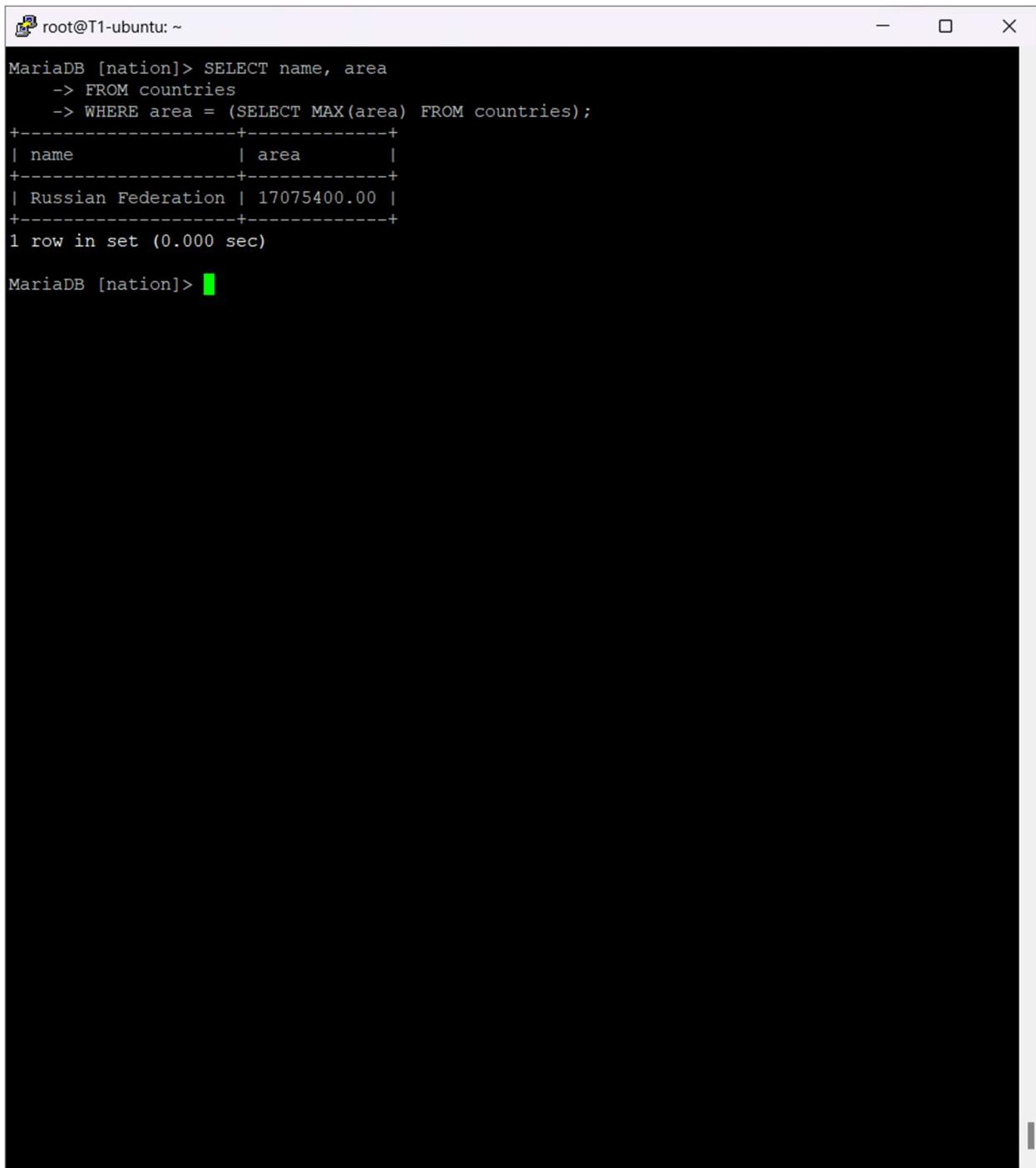
9(output)



MariaDB [nation]>  
MariaDB [nation]> SELECT a.country\_id, a.name, a.area, b.population  
 -> FROM countries AS a  
 -> INNER JOIN country\_stats AS b  
 -> ON a.country\_id = b.country\_id;

country_id	name	area	population
1	Aruba	193.00	62644
1	Aruba	193.00	61833
1	Aruba	193.00	61079
1	Aruba	193.00	61032
1	Aruba	193.00	62149
1	Aruba	193.00	64622
1	Aruba	193.00	68235
1	Aruba	193.00	72504
1	Aruba	193.00	76700
1	Aruba	193.00	80324
1	Aruba	193.00	83200
1	Aruba	193.00	85451
1	Aruba	193.00	87277
1	Aruba	193.00	89005
1	Aruba	193.00	90853
1	Aruba	193.00	92898
1	Aruba	193.00	94992
1	Aruba	193.00	97017
1	Aruba	193.00	98737
1	Aruba	193.00	100031
1	Aruba	193.00	100834
1	Aruba	193.00	101222
1	Aruba	193.00	101358
1	Aruba	193.00	101455
1	Aruba	193.00	101669
1	Aruba	193.00	102046
1	Aruba	193.00	102560
1	Aruba	193.00	103159
1	Aruba	193.00	103774
1	Aruba	193.00	104341
1	Aruba	193.00	104872
1	Aruba	193.00	105366
2	Afghanistan	652090.00	8996973
2	Afghanistan	652090.00	9169410
2	Afghanistan	652090.00	9351441
2	Afghanistan	652090.00	9543205
2	Afghanistan	652090.00	9744781
2	Afghanistan	652090.00	9956320
2	Afghanistan	652090.00	10174836
2	Afghanistan	652090.00	10399926
2	Afghanistan	652090.00	10637063
2	Afghanistan	652090.00	10893776
2	Afghanistan	652090.00	11173642

10(query)

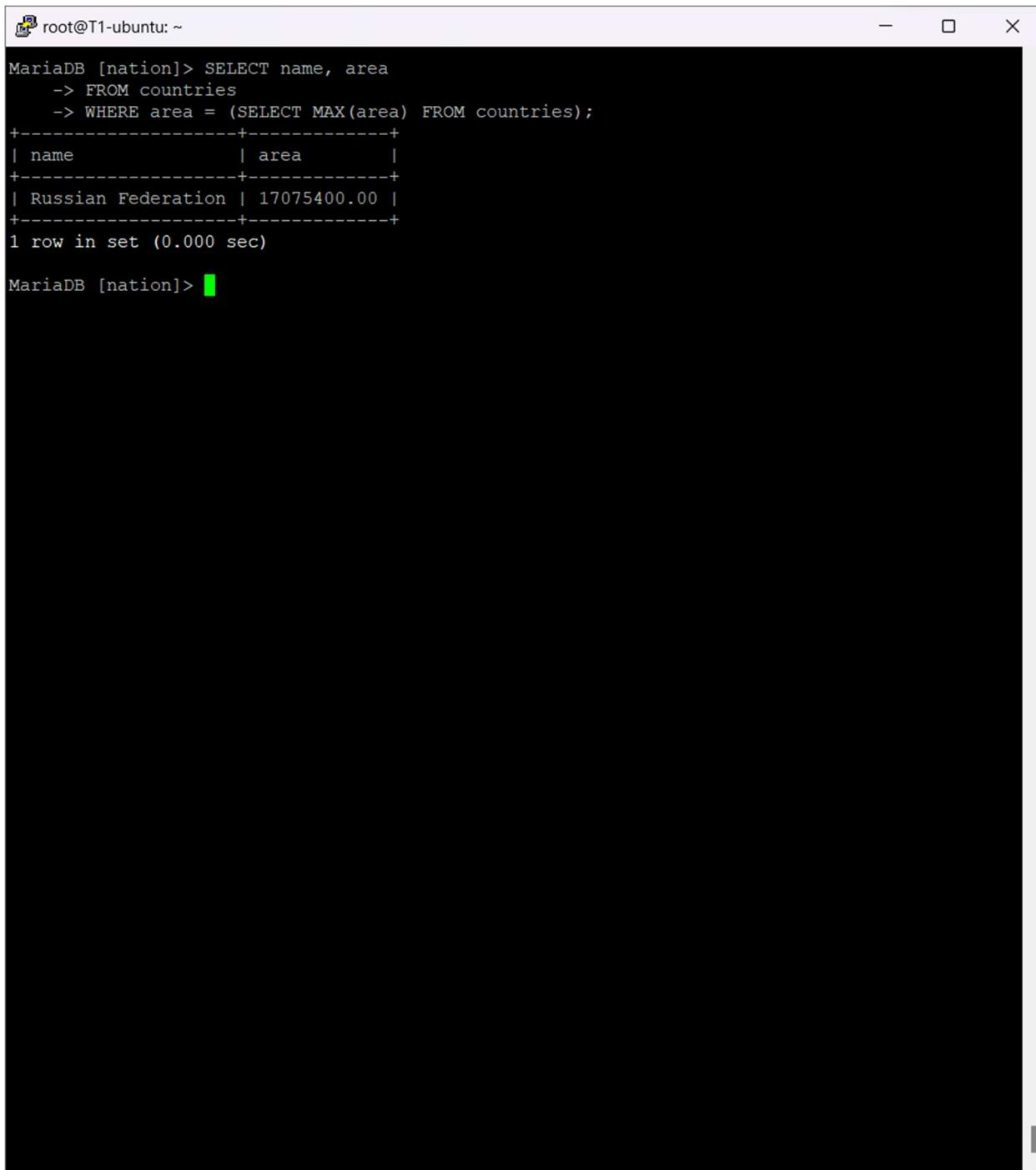


The screenshot shows a terminal window with a black background and white text. At the top left is a small icon of a computer monitor. The title bar says "root@T1-ubuntu: ~". The main area contains the following text:

```
MariaDB [nation]> SELECT name, area
-> FROM countries
-> WHERE area = (SELECT MAX(area) FROM countries);
+-----+-----+
| name | area |
+-----+-----+
| Russian Federation | 17075400.00 |
+-----+-----+
1 row in set (0.000 sec)

MariaDB [nation]>
```

10(output)



A screenshot of a terminal window titled "root@T1-ubuntu: ~". The window contains the following MySQL command and its output:

```
MariaDB [nation]> SELECT name, area
    -> FROM countries
    -> WHERE area = (SELECT MAX(area) FROM countries);
+-----+-----+
| name      | area      |
+-----+-----+
| Russian Federation | 17075400.00 |
+-----+-----+
1 row in set (0.000 sec)

MariaDB [nation]>
```

**Task2****Screenshot of vm (step 1,2,3,4,5,6,7,8,9,10)****1**

Azure SQL - Microsoft Azure | Content | Microsoft Word - proj.docx | Image to Text Converter - Conv... | +

portal.azure.com/#view/HubsExtension/BrowseResource/resourceType/Microsoft.Sql%2Fazuresql

Microsoft Azure Search resources, services, and docs (G+/)

odl\_user.846738@sene... SENICA COLLEGE SENICACOLLE...

**Azure SQL** ...

Seneca College (senecacollegelabs.onmicrosoft.com)

+ Create Reservations Manage view Refresh Export to CSV Open query Assign tags Delete

Filter for any field... Subscription equals all Resource group equals all Location equals all Add filter

Showing 0 to 0 of 0 records.

Name ↑ Resour... ↑ Service tier ↑ Resource group ↑ Location ↑ Subscription ↑

No grouping List view

No Azure SQL resources to display

Try changing or clearing your filters.

Create Azure SQL resource

Learn more ⓘ

Select SQL deployment option - | Content | Microsoft Word - proj.docx | Image to Text Converter - Conv... | +

portal.azure.com/#create/Microsoft.AzureSQL

Microsoft Azure Search resources, services, and docs (G+/)

odl\_user.846738@sene... SENICA COLLEGE SENICACOLLE...

Home > Azure SQL >

**Select SQL deployment option** ...

Feedback

How do you plan to use the service?

**SQL databases**  
Best for modern cloud applications. Hyperscale and serverless options are available.  
Resource type: Single database  
Create Show details

**SQL managed instances**  
Best for most migrations to the cloud. Lift-and-shift ready.  
Resource type: Single instance  
Create Show details

**SQL virtual machines**  
Best for migrations and applications requiring OS-level access. Lift-and-shift ready.  
Image: [dropdown menu]  
Create Show details  High availability

**2**

**Select SQL deployment option**

**How do you plan to use the service?**

- SQL databases**: Best for modern cloud applications. Hyperscale and serverless options are available.
- SQL managed instances**: Best for most migrations to the cloud. Lift-and-shift ready.
- SQL virtual machines**: Best for migrations and applications requiring OS-level access. Lift-and-shift ready.

**Image**: Please select an offer

- Free SQL Server License: SQL Server 2019 Developer on Ubuntu Server 20.04 LTS
- SQL Server 2019 Enterprise on Ubuntu Server 20.04 LTS
- SQL Server 2019 Standard on Ubuntu Server 20.04 LTS
- SQL Server 2019 web on Ubuntu Server 20.04 LTS
- SQL Server 2019 on Ubuntu Pro 20.04
- SQL Server 2019 Developer on Ubuntu Pro 20.04
- SQL Server 2019 Enterprise on Ubuntu Pro 20.04
- SQL Server 2019 Standard on Ubuntu Pro 20.04
- SQL Server 2019 Web on Ubuntu Pro 20.04
- SQL Server 2019 on SUSE Linux Enterprise Server 12 SP5 (SLES 12 SP5)

**Create a virtual machine**

**Basics**

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [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**: Seneca College : DAT330NAA - 1039

**Resource group**: (New) T2-ubuntu\_group

**Virtual machine name**: T2-ubuntu

**Region**: (Canada) Canada East

**Availability options**: No infrastructure redundancy required

**Security type**: Standard

**Image**: Free SQL Server License: SQL Server 2019 Developer on Ubuntu Server 20.04

**Vm size**: Standard\_B2s

**Review + create** | **< Previous** | **Next : Disks >** | **Give feedback**

**Essentials**

- Resource group ([move](#)) : T2-ubuntu\_group
- Status : Running
- Location : Canada East
- Subscription ([move](#)) : Seneca College : DAT330NAA - 1039
- Subscription ID : 159a43b9-3d5d-48e2-9098-d94c7bf91097
- Tags ([edit](#)) : Click here to add tags

**Properties**

Virtual machine	Networking	Size
Computer name : T2-ubuntu Health state : - Operating system : Linux (ubuntu 20.04) Publisher : microsoftsqlserver Offer : sq12019-ubuntu2004 Plan : sqldev VM generation : V1 VM architecture : x64 Agent status : Ready Agent version : 2.9.0.4 Host group : None	Public IP address : 20.104.143.7 ( Network interface t2-ubuntu699 ) Public IP address (IPv6) : - Private IP address : 10.1.0.4 Private IP address (IPv6) : - Virtual network/subnet : T2-ubuntu-vnet/default DNS name : Configure	Size : Standard B2s vCPUs : 2 RAM : 4 GiB

3

**Add inbound security rule**

T2-ubuntu-nsg

Source : Any

Source port ranges \* :

Destination : Any

Service : Custom

Destination port ranges \* : 1433

Protocol : Any

Action : Allow

Priority \* : 200

Add Cancel Give feedback

**Inbound port rules**

Priority	Name	Port	Protocol
300	SSH	22	TCP
320	RDP	3389	TCP
65000	AllowVnetInBound	Any	Any
65001	AllowAzureLoadBalancerInBound	Any	Any
65500	DenyAllInBound	Any	Any

4

**t2-ubuntu699**

**Network Interface: t2-ubuntu699** Effective security rules Troubleshoot VM connection issues Topology

Virtual network/subnet: T2-ubuntu-vnet/default NIC Public IP: 20.104.143.7 NIC Private IP: 10.1.0.4 Accelerated networking: Disabled

Priority	Name	Port	Protocol	Source	Destination	Action
200	AllowAnyCustom1433Inbound	1433	Any	Any	Any	Allow
300	SSH	22	TCP	Any	Any	Allow
320	RDP	3389	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

5

**Created security rule**  
Successfully created security rule 'AllowAnyCustom1433Inbound'.

6

**t2-ubuntu699**

**IP configuration:** ipconfig1 (Primary)

**Network Interface:** t2-ubuntu699 Effective security rules Troubleshoot VM connection issues Topology

Virtual network/subnet: T2-ubuntu-vnet/default NIC Public IP: 20.104.143.7 NIC Private IP: 10.1.0.4 Accelerated networking: Disabled

**Inbound port rules**

Priority	Name	Port	Protocol	Source	Destination	Action
200	AllowAnyCustom1433Inbound	1433	Any	Any	Any	Allow
300	SSH	22	TCP	Any	Any	Allow
320	RDP	3389	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

7

**PuTTY Configuration**

**Category:**

- Session
- Logging
- Terminal
- Keyboard
- Bell
- Features
- Window
- Appearance
- Behaviour
- Translation
- Selection
- Colours
- Connection
- Data
- Proxy
- SSH
- Serial
- Telnet
- Rlogin
- SUPDUP

**Basic options for your PuTTY session**

Specify the destination you want to connect to

Host Name (or IP address): 20.104.143.7 Port: 22

Connection type:  SSH  Serial  Other: Telnet

Load, save or delete a stored session

Saved Sessions

Default Settings

Load Save Delete

Close window on exit

Always  Never  Only on clean exit

**Open Cancel**

tgpadsala@T2-ubuntu: ~

```
login as: tgpadsala
tgpadsala@20.104.143.7's password:
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-1034-azure x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/advantage

System information as of Wed Mar 29 19:53:51 UTC 2023

System load: 0.2          Processes:           122
Usage of /: 14.5% of 28.89GB  Users logged in:      0
Memory usage: 8%           IPv4 address for eth0: 10.1.0.4
Swap usage: 0%

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

* Introducing Expanded Security Maintenance for Applications. Receive updates to over 25,000 software packages with your Ubuntu Pro subscription. Free for personal use.

https://ubuntu.com/azure/pro

Expanded Security Maintenance for Applications is not enabled.

25 updates can be applied immediately.
17 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

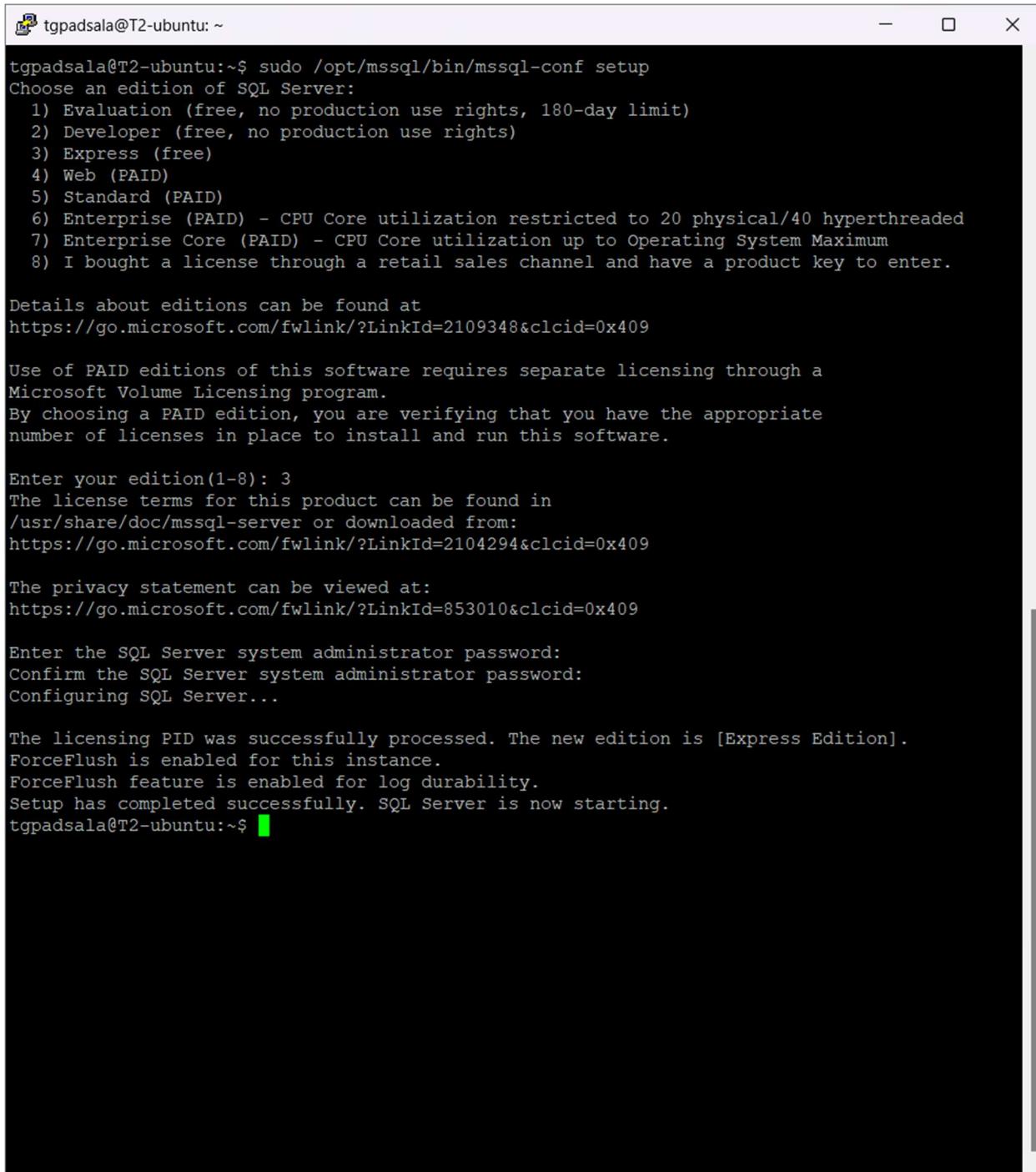
The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
```

tgpadsala@T2-ubuntu:~\$ █



tgpadsala@T2-ubuntu: ~

```
tgpadsala@T2-ubuntu:~$ sudo /opt/mssql/bin/mssql-conf setup
Choose an edition of SQL Server:
 1) Evaluation (free, no production use rights, 180-day limit)
 2) Developer (free, no production use rights)
 3) Express (free)
 4) Web (PAID)
 5) Standard (PAID)
 6) Enterprise (PAID) - CPU Core utilization restricted to 20 physical/40 hyperthreaded
 7) Enterprise Core (PAID) - CPU Core utilization up to Operating System Maximum
 8) I bought a license through a retail sales channel and have a product key to enter.

Details about editions can be found at
https://go.microsoft.com/fwlink/?LinkId=2109348&clcid=0x409

Use of PAID editions of this software requires separate licensing through a
Microsoft Volume Licensing program.
By choosing a PAID edition, you are verifying that you have the appropriate
number of licenses in place to install and run this software.

Enter your edition(1-8): 3
The license terms for this product can be found in
/usr/share/doc/mssql-server or downloaded from:
https://go.microsoft.com/fwlink/?LinkId=2104294&clcid=0x409

The privacy statement can be viewed at:
https://go.microsoft.com/fwlink/?LinkId=853010&clcid=0x409

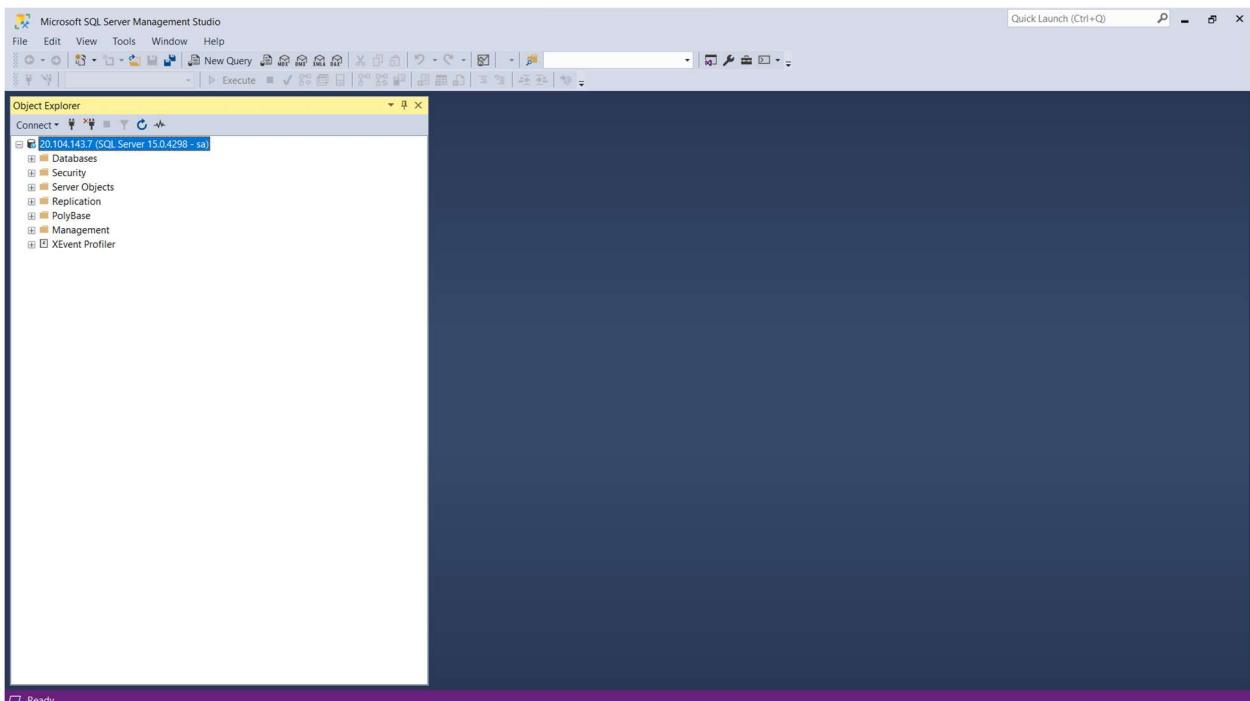
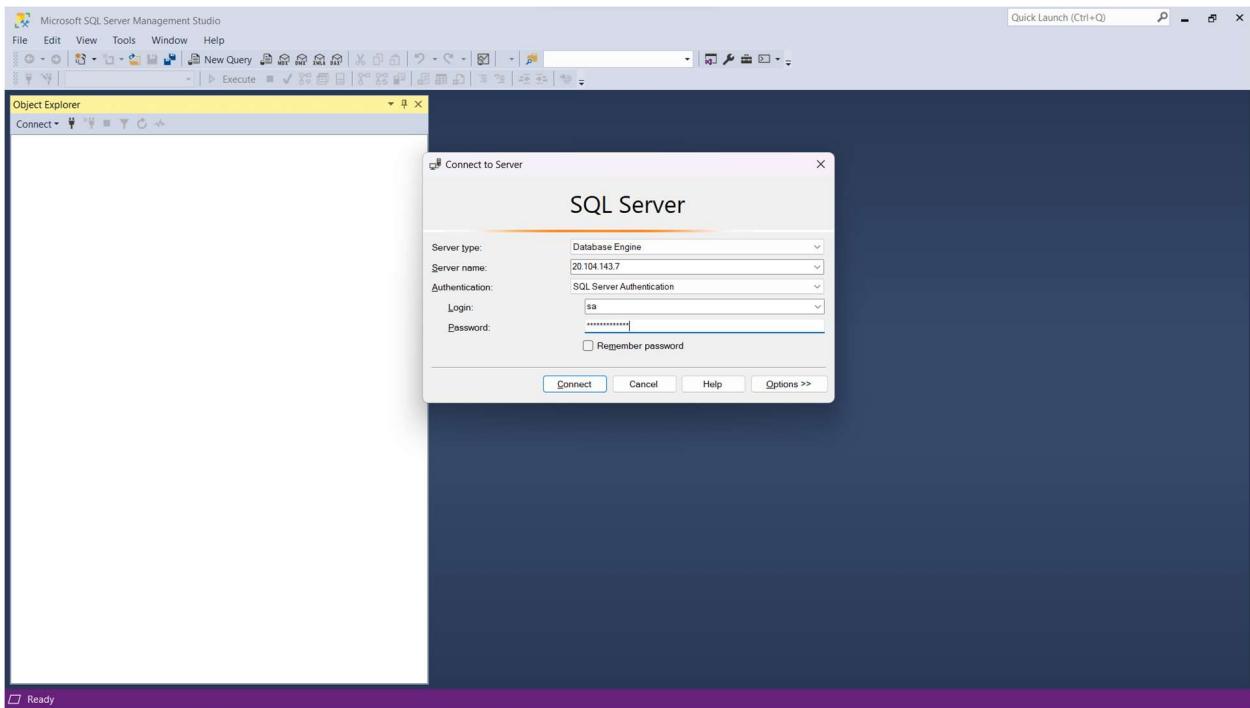
Enter the SQL Server system administrator password:
Confirm the SQL Server system administrator password:
Configuring SQL Server...

The licensing PID was successfully processed. The new edition is [Express Edition].
ForceFlush is enabled for this instance.
ForceFlush feature is enabled for log durability.
Setup has completed successfully. SQL Server is now starting.
tgpadsala@T2-ubuntu:~$
```

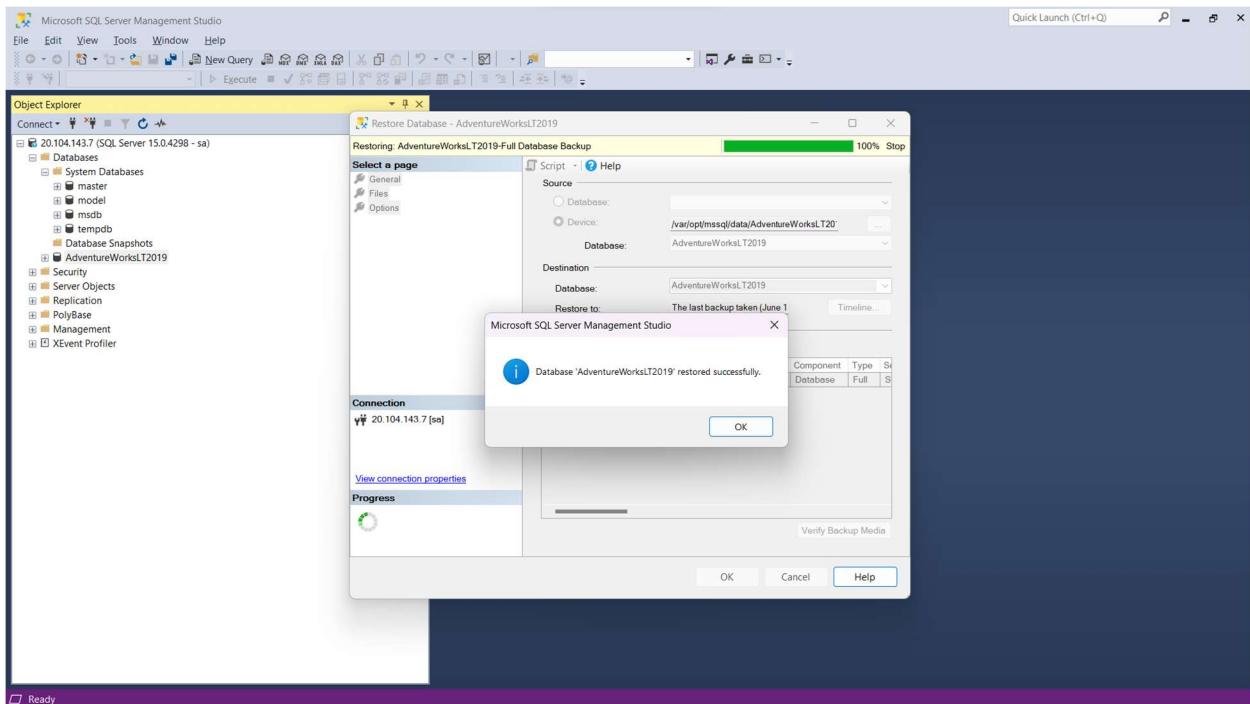


A screenshot of a terminal window titled 'tgpadslal@T2-ubuntu: ~'. The window contains the command 'sudo systemctl start mssql-server' which has been partially typed. The terminal is black with white text, and the cursor is visible at the end of the command.

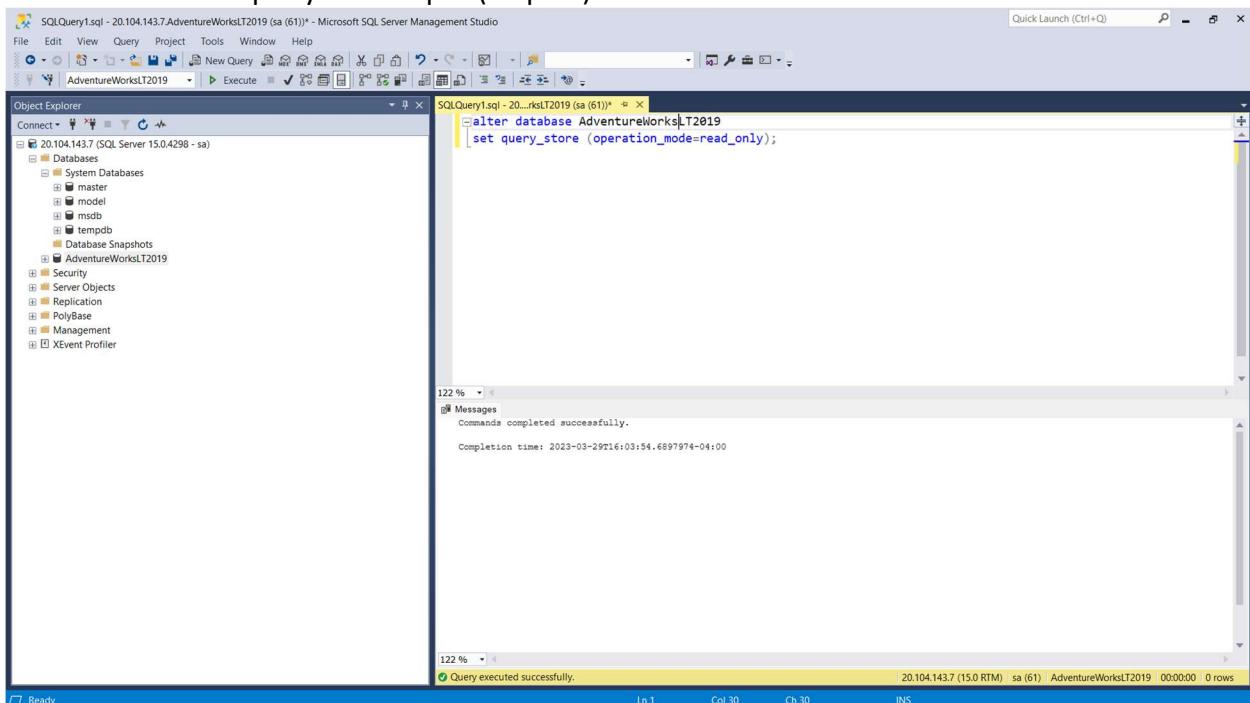
Screenshot of (step 11)



Screenshot of database restore (step 12)

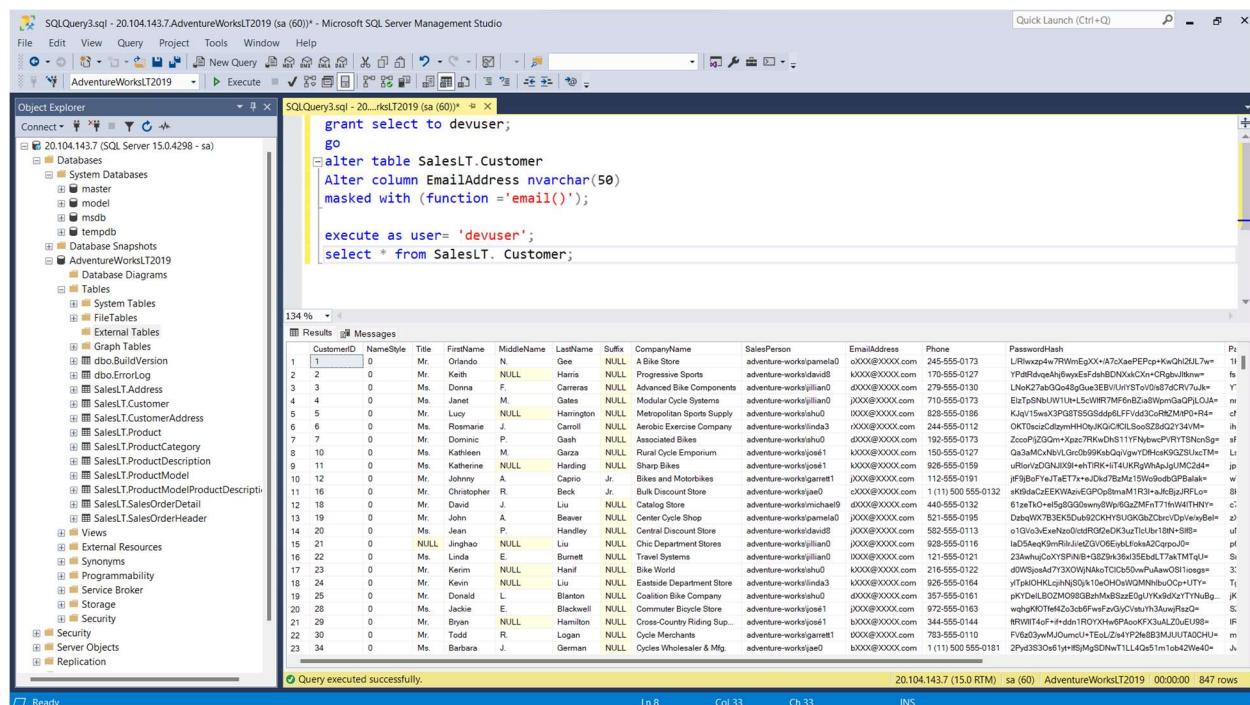
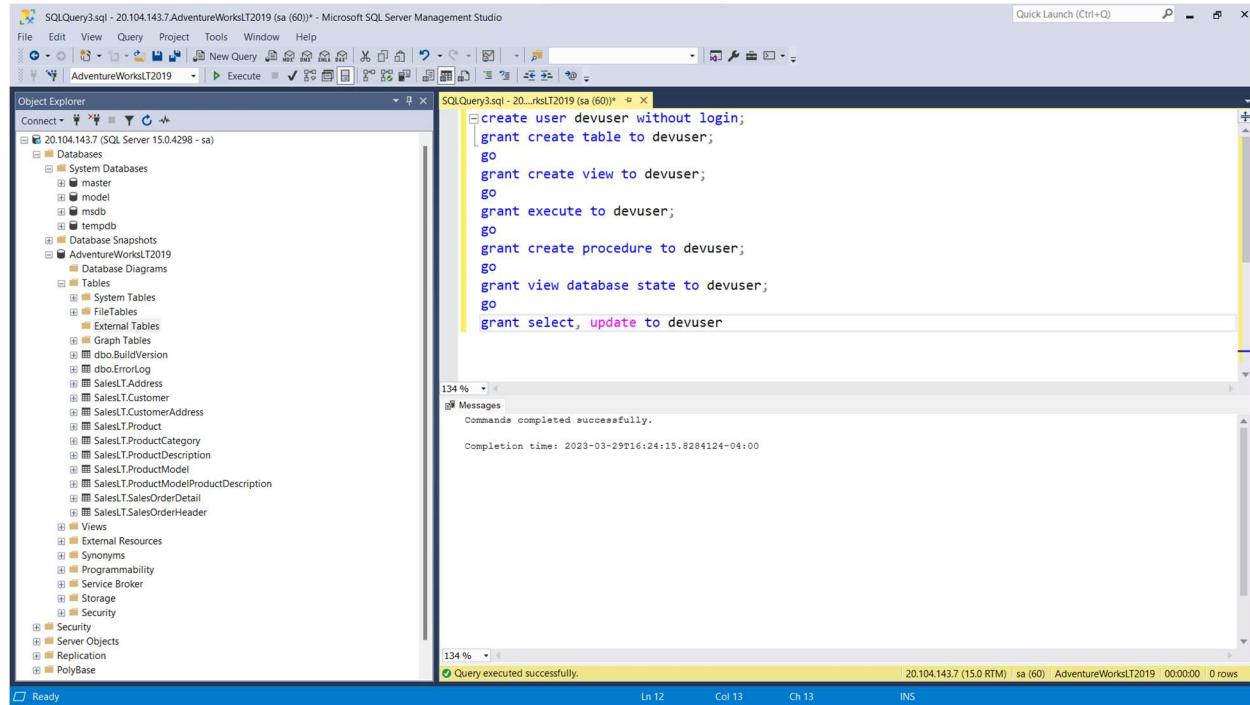


Screenshot of the query and output (step 13)



### Task3

Screenshot of all the steps (1,2,3,4)



## Key vault

**tgpadala-key-1**

**Essentials**

- Resource group (move) : ODL-seneca-lab-846738
- Location : Canada East
- Subscription (move) : Seneca College : DAT30NAA - 1039
- Subscription ID : 159a43b9-3d5d-48e2-9098-d94c7bf91097
- Vault URI : https://tgpadala-key-1.vault.azure.net/
- Sku (Pricing tier) : Standard
- Directory ID : ed27b597-cea0-4942-8c6f-40e6a78b147d
- Directory Name : Seneca College
- Soft-delete : Enabled
- Purge protection : Disabled

**Tags (edit)** : DeploymentId : 846738 | LaunchId : 28945 | LaunchType : ON\_DEMAND\_LAB | TemplateId : 4675 | TenantId : 353

**Get started** Properties Monitoring Tools + SDKs Tutorials

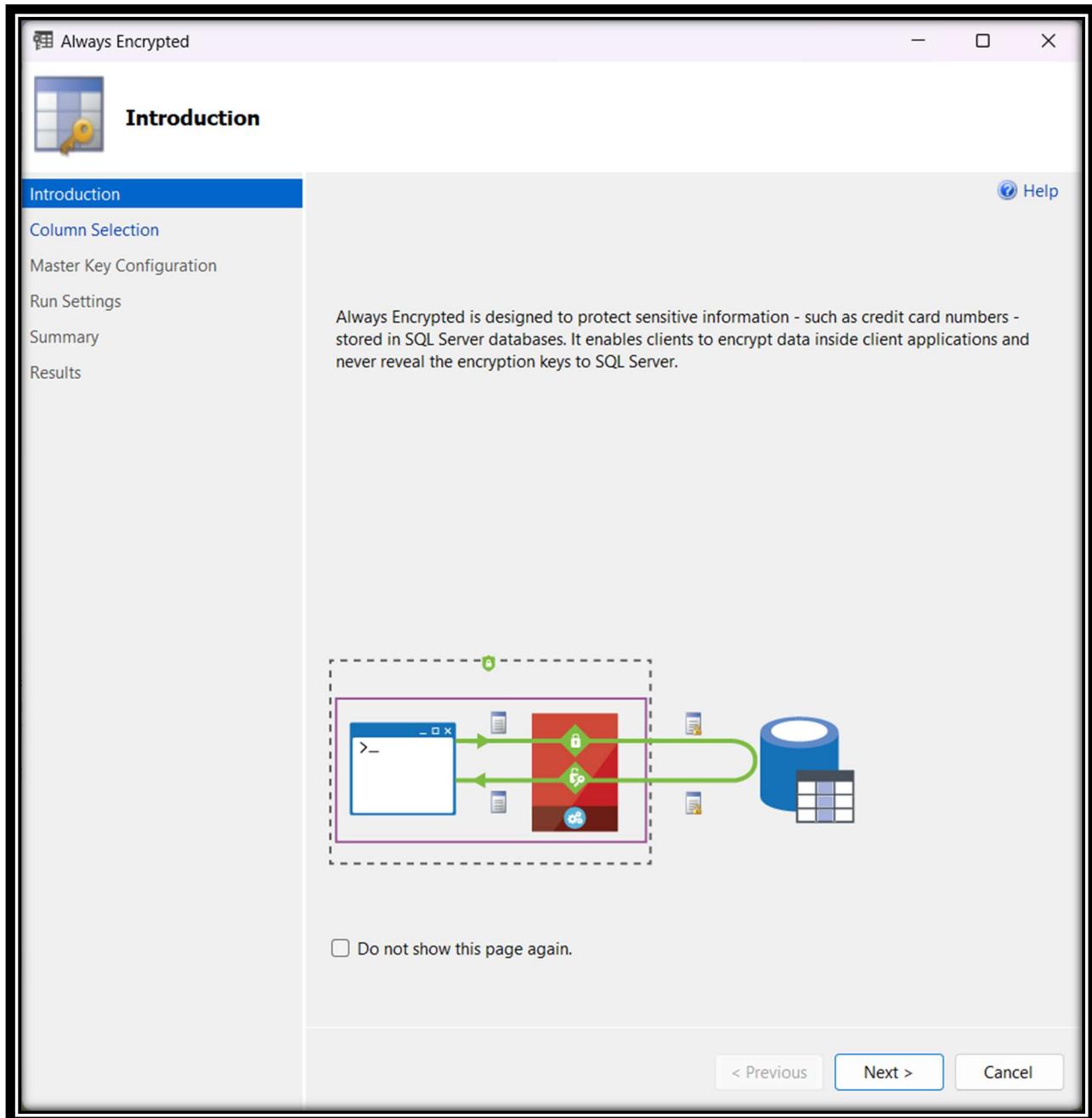
**Manage keys and secrets used by apps and services**

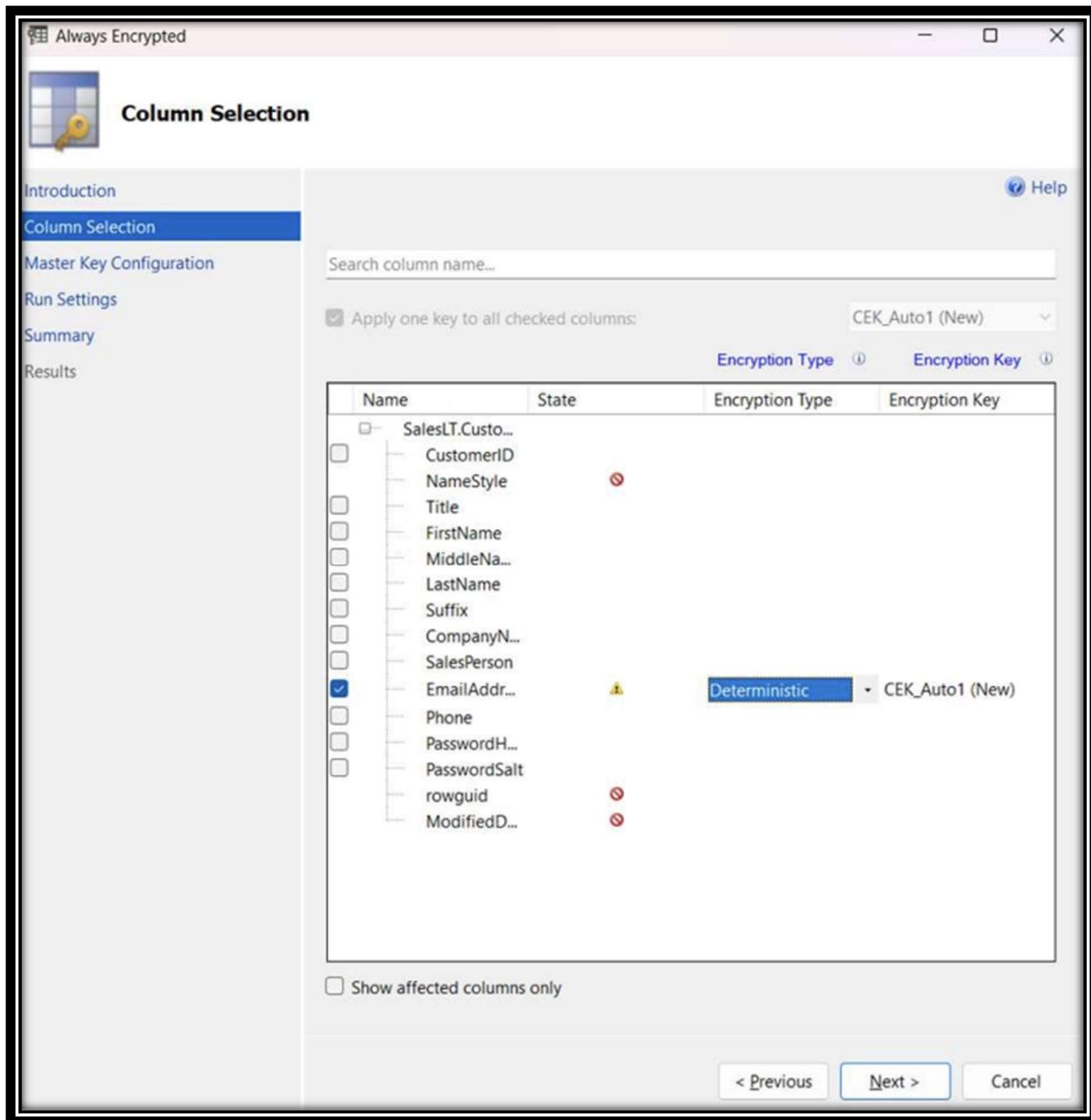
Our recommendation is to use a vault per application per environment (Development, Pre-Production and Production). This helps you to not share secrets across environments and also reduces the threat in case of a breach.

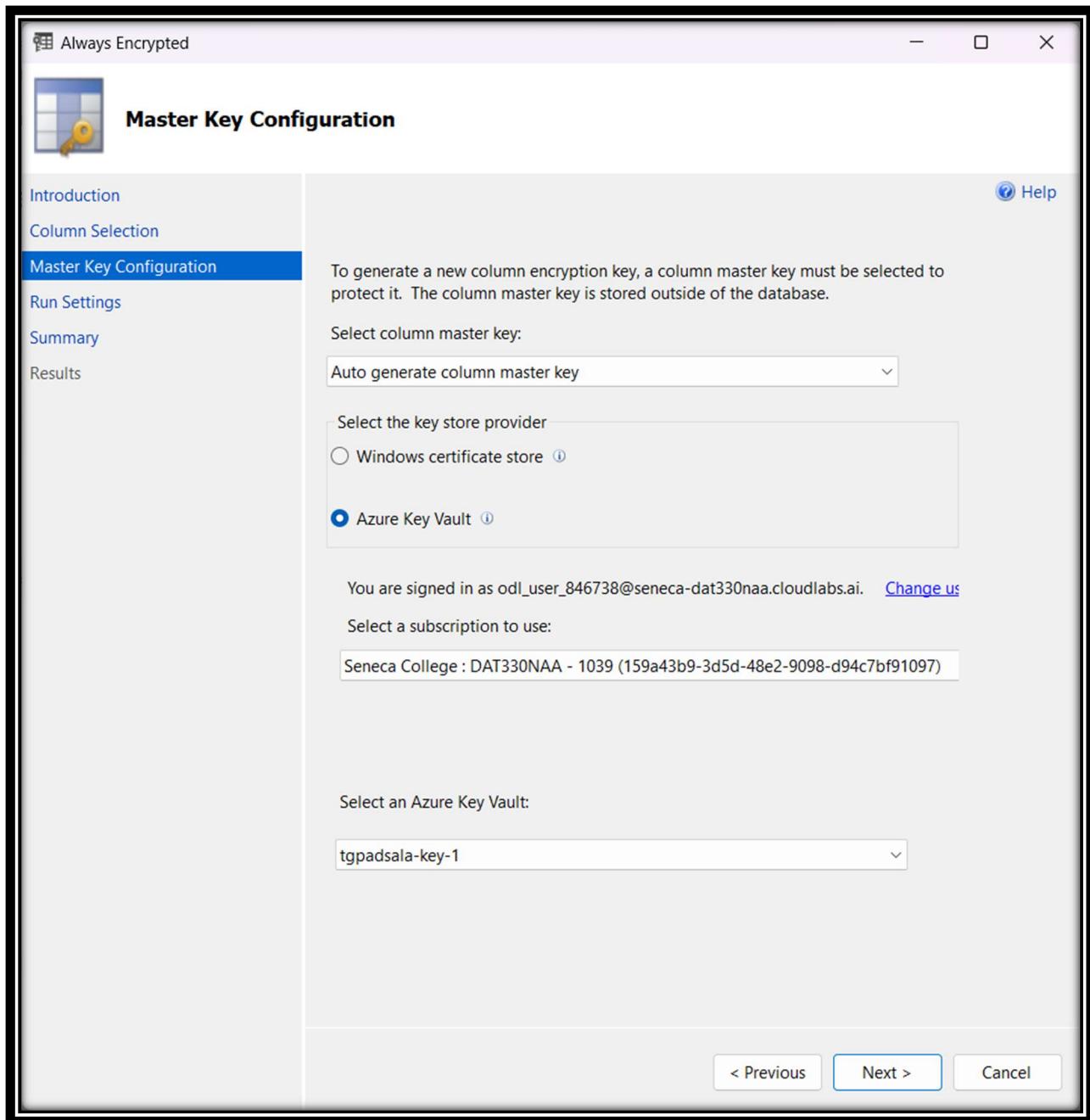
**Control access to key vault**

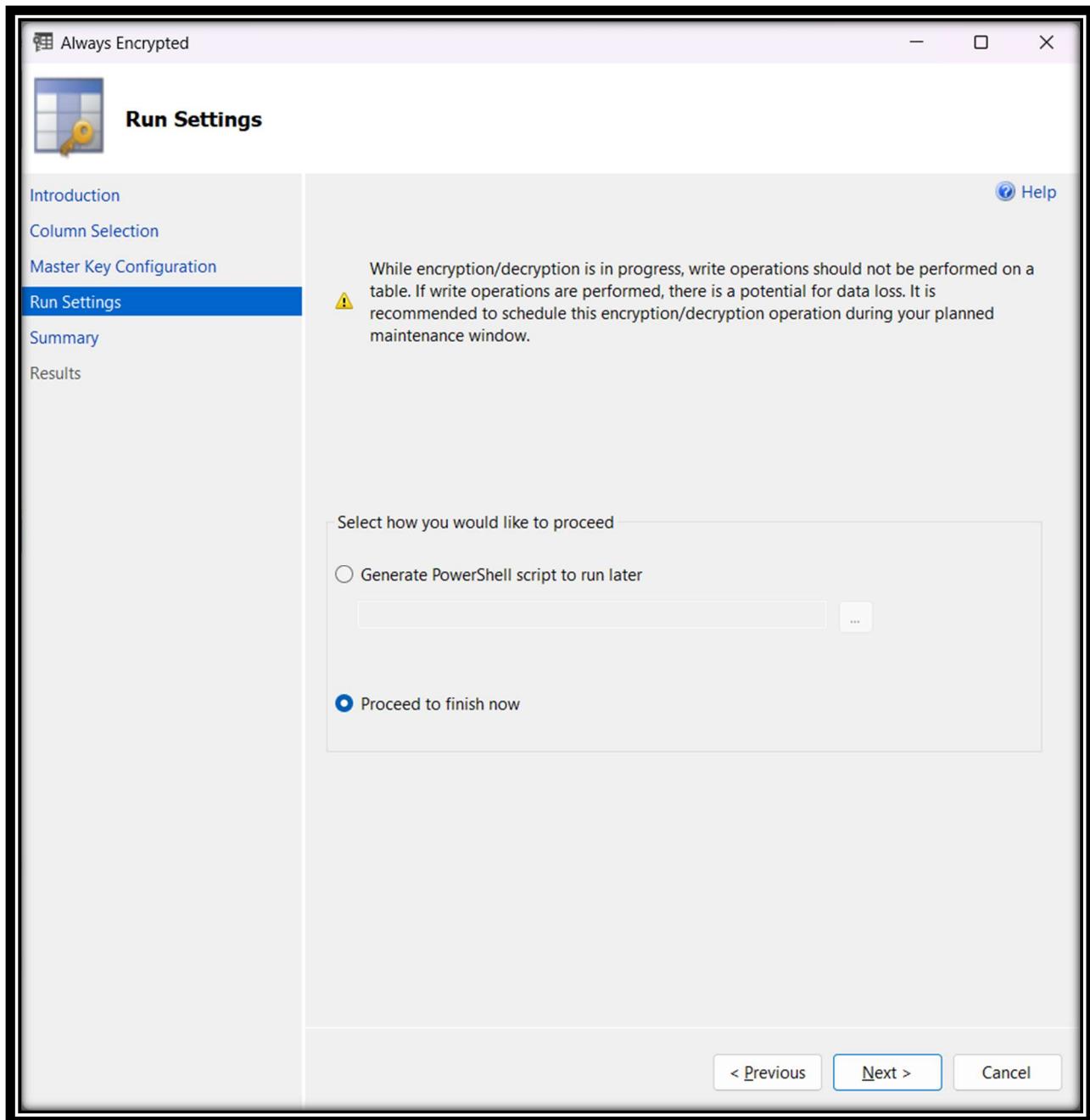
Assign access policy and determine whether a given service principal, namely an application or user group, can perform different operations on key vault keys, secrets or certificates.

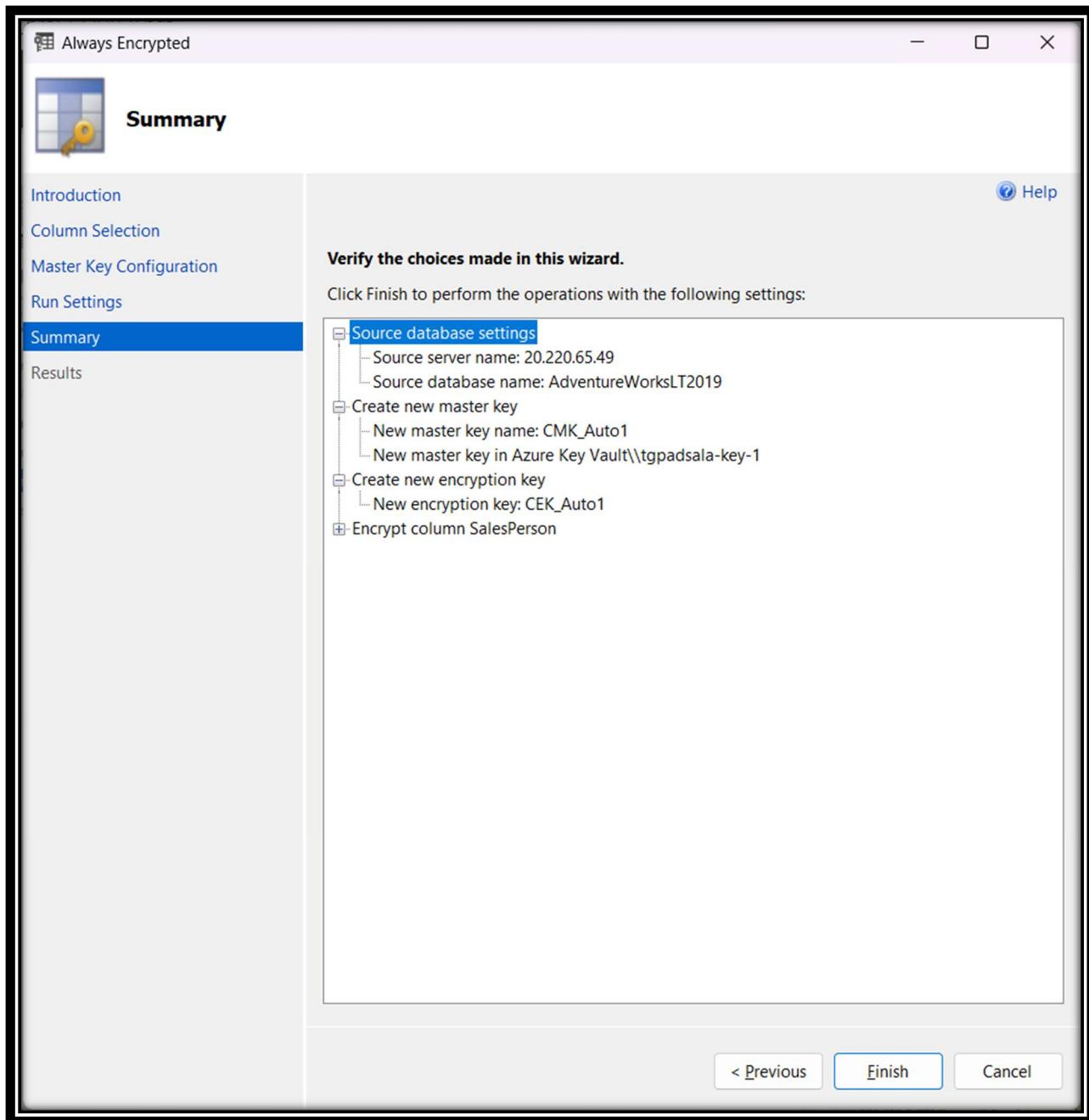
Edit OD_L_User 846738		
Key permissions	Secret permissions	Certificate permissions
<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> Get <input checked="" type="checkbox"/> List <input checked="" type="checkbox"/> Update <input checked="" type="checkbox"/> Create <input checked="" type="checkbox"/> Import <input checked="" type="checkbox"/> Delete <input checked="" type="checkbox"/> Recover <input checked="" type="checkbox"/> Backup <input checked="" type="checkbox"/> Restore	<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> Get <input checked="" type="checkbox"/> List <input checked="" type="checkbox"/> Set <input checked="" type="checkbox"/> Delete <input checked="" type="checkbox"/> Recover <input checked="" type="checkbox"/> Backup <input checked="" type="checkbox"/> Restore	<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> Get <input checked="" type="checkbox"/> List <input checked="" type="checkbox"/> Update <input checked="" type="checkbox"/> Create <input checked="" type="checkbox"/> Import <input checked="" type="checkbox"/> Delete <input checked="" type="checkbox"/> Recover <input checked="" type="checkbox"/> Backup <input checked="" type="checkbox"/> Restore <input checked="" type="checkbox"/> Manage Contacts <input checked="" type="checkbox"/> Manage Certificate Authorities <input checked="" type="checkbox"/> Get Certificate Authorities <input checked="" type="checkbox"/> List Certificate Authorities <input checked="" type="checkbox"/> Set Certificate Authorities <input checked="" type="checkbox"/> Delete Certificate Authorities
<input type="checkbox"/> Select all <input type="checkbox"/> Privileged Secret Operations <input type="checkbox"/> Cryptographic Operations <input type="checkbox"/> Unwrap Key <input type="checkbox"/> Wrap Key <input type="checkbox"/> Verify <input type="checkbox"/> Sign <input type="checkbox"/> Privileged Certificate Operations <input type="checkbox"/> Purge		

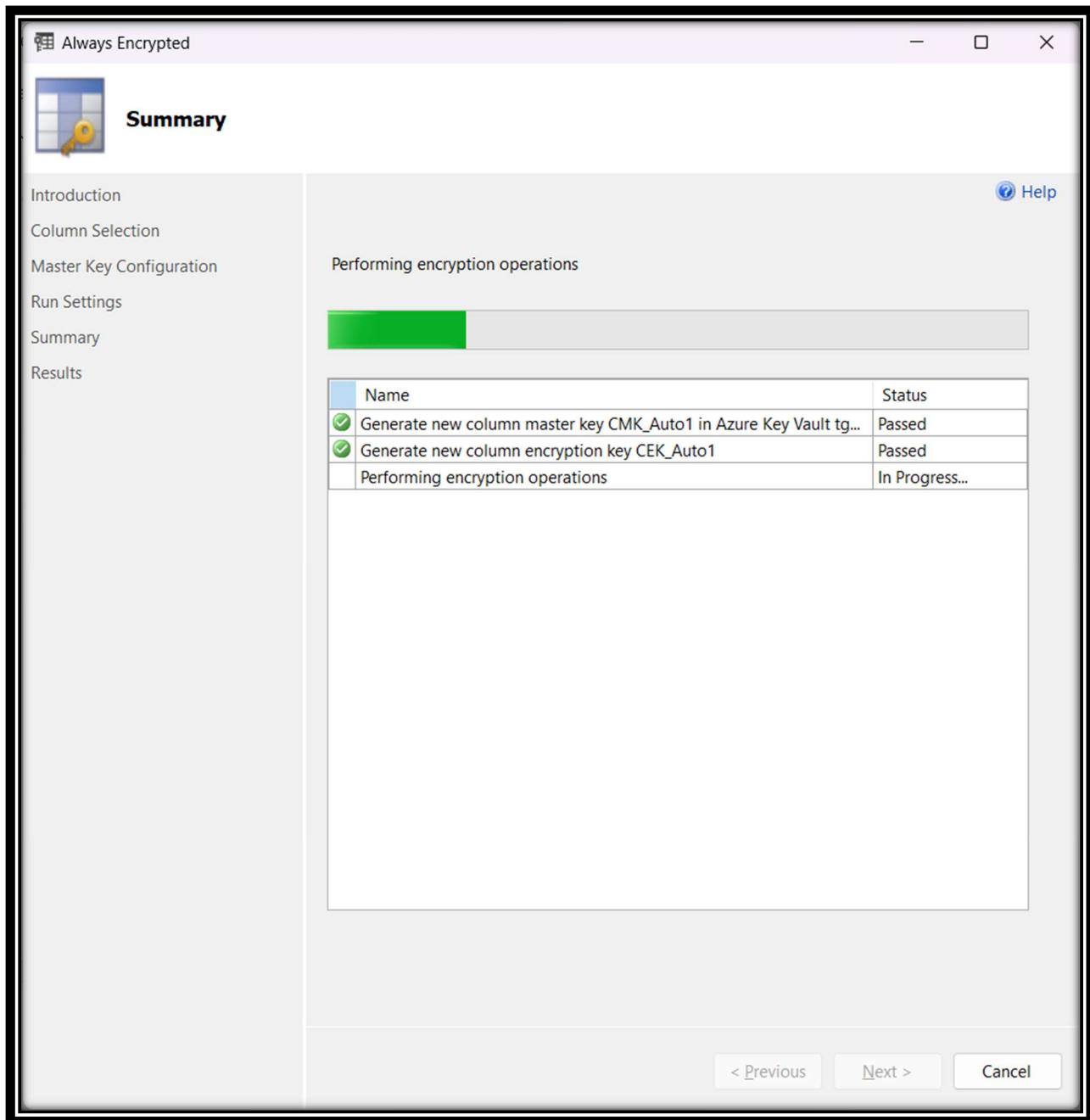


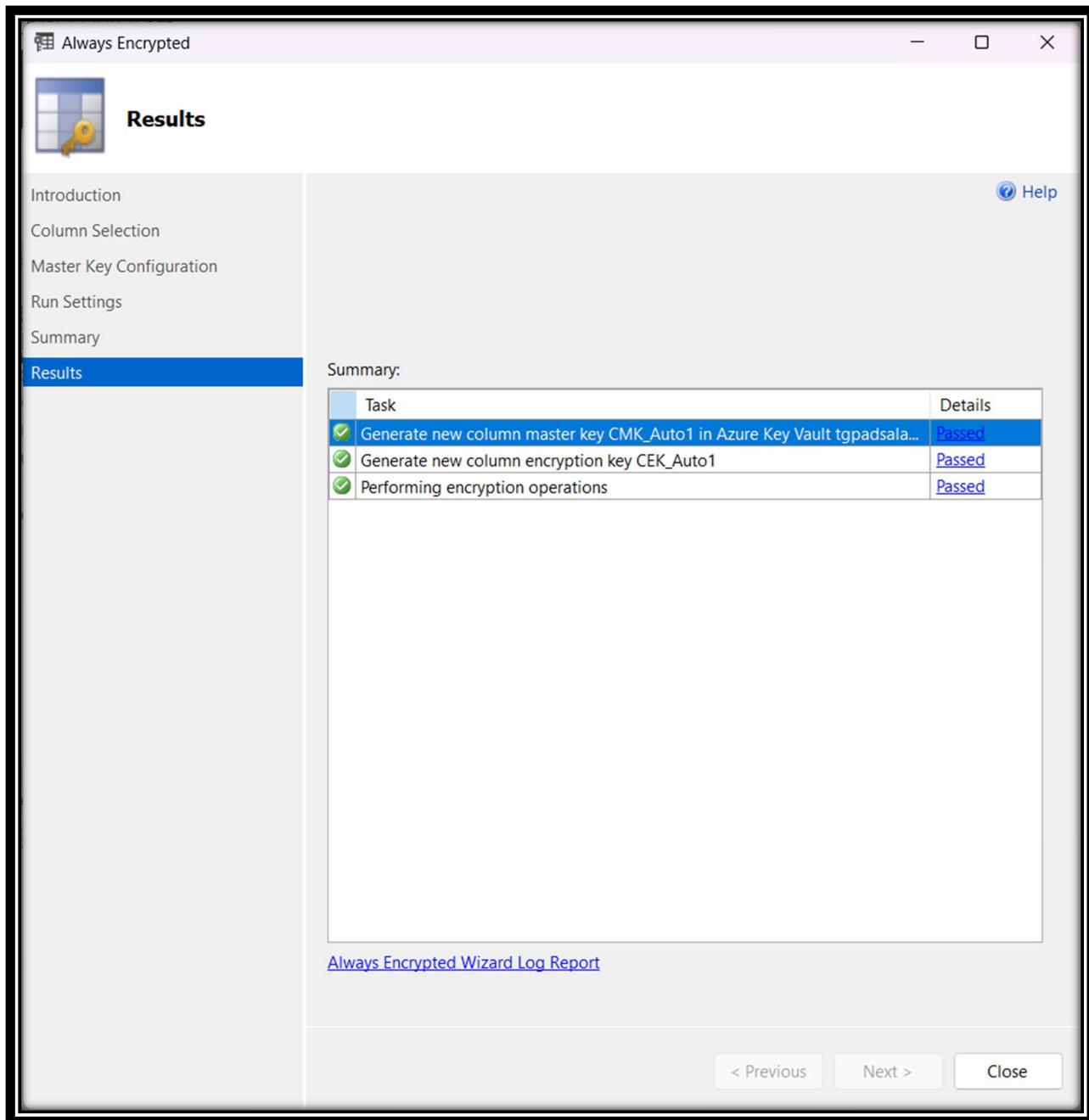


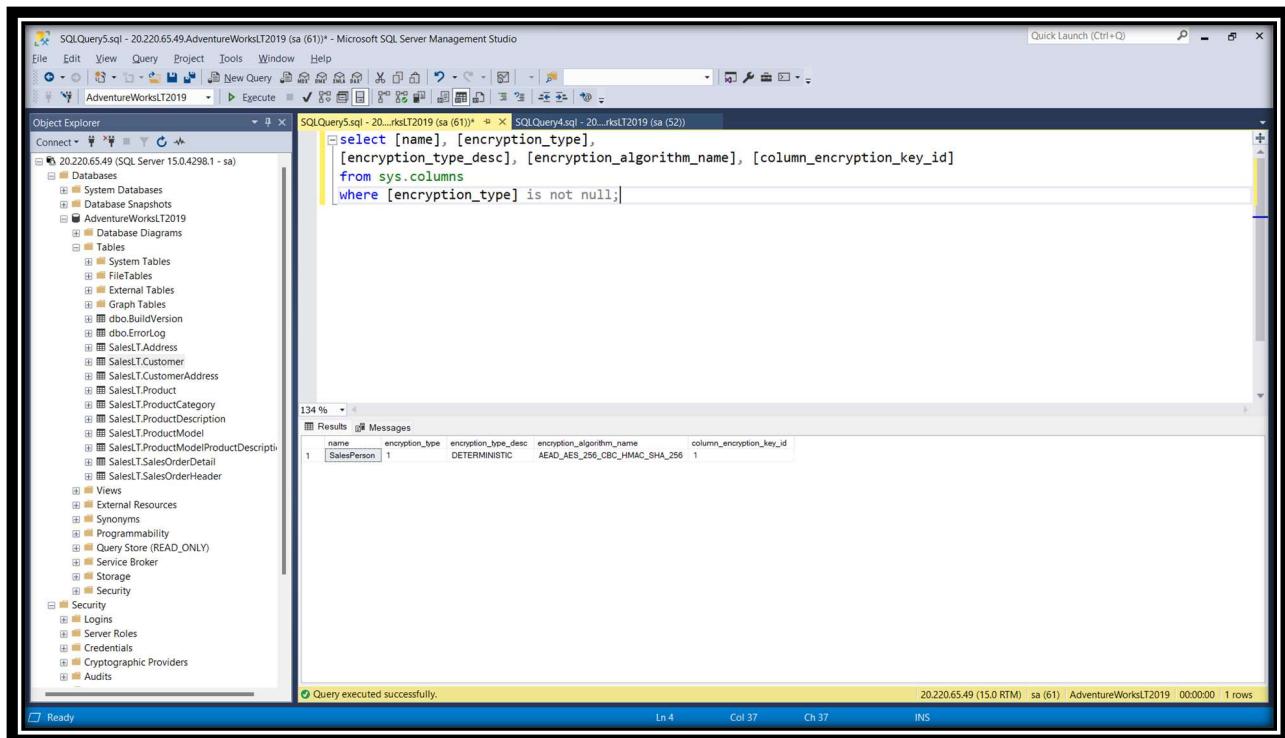












Object Explorer

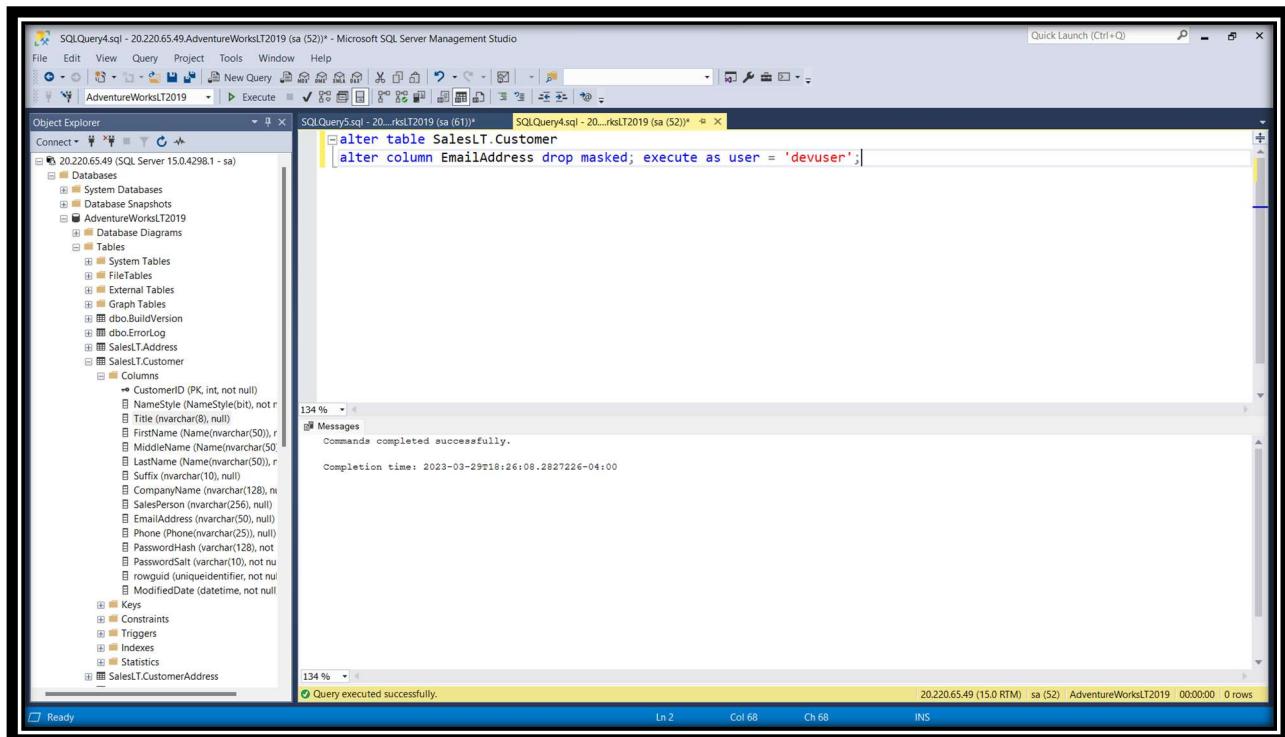
```
SQLQuery5.sql - 20220.6549 AdventureWorksLT2019 (sa (61)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
AdventureWorksLT2019 Execute New Query Object Explorer SQL Server Object Explorer
SQLQuery5.sql - 20...rksLT2019 (sa (61)) * X SQLQuery4.sql - 20...rksLT2019 (sa (52))
select [name], [encryption_type],
[encryption_type_desc], [encryption_algorithm_name], [column_encryption_key_id]
from sys.columns
where [encryption_type] is not null;
```

Results Messages

name	encryption_type	encryption_type_desc	encryption_algorithm_name	column_encryption_key_id
SalesPerson	1	DETERMINISTIC	AES_256_CBC_HMAC_SHA_256	1

Query executed successfully.

20220.6549 (15.0 RTM) sa (61) AdventureWorksLT2019 00:00:00 1 rows



Object Explorer

```
SQLQuery4.sql - 20220.6549 AdventureWorksLT2019 (sa (52)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
AdventureWorksLT2019 Execute New Query Object Explorer SQL Server Object Explorer
SQLQuery5.sql - 20...rksLT2019 (sa (61)) * X SQLQuery4.sql - 20...rksLT2019 (sa (52)) *
```

```
alter table SalesLT.Customer
alter column EmailAddress drop masked; execute as user = 'devuser';
```

Messages

Commands completed successfully.

Completion time: 2023-03-29T18:26:08.2827226-04:00

Query executed successfully.

20220.6549 (15.0 RTM) sa (52) AdventureWorksLT2019 00:00:00 0 rows

## Task4

### Creating server and databases

The screenshot shows the 'Create SQL Database Server' page in the Microsoft Azure portal. The URL in the address bar is <https://portal.azure.com/#view/Sq|AzureExtension/SharedCreateServer/isNewServer~/true/subscriptionId/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroupName/project/infoFilter...>. The page title is 'Create SQL Database Server'. The 'Server details' section contains fields for 'Server name' (proddb-1-server) and 'Location' ((Canada) Canada East). The 'Authentication' section includes options for 'Authentication method' (radio buttons for 'Use only Azure Active Directory (Azure AD) authentication', 'Use both SQL and Azure AD authentication' (selected), and 'Use SQL authentication'), 'Set Azure AD admin' (button for 'Not Selected' and 'Set admin'), 'Server admin login' (tgpadsala), and 'Password' (\*\*\*\*\*). A blue 'OK' button is at the bottom.



The screenshot shows the 'Create SQL Database - Restore database' wizard in the Microsoft Azure portal. The top navigation bar includes 'Microsoft Azure' and a search bar. The main content area displays 'Product details' for a 'SQL database by Microsoft'. An 'Estimated cost per month' of 417.90 USD is shown. A 'Terms' section contains legal text and links to Marketplace Terms. Below this, a 'Basics' section lists configuration details:

Setting	Value
Subscription	Seneca College : DAT330NAA - 1039
Resource group	project
Source Database	proddb-1
Source	Point-in-time
Restore point (UTC)	2023-03-29 22:48:00 UTC
Region	canadaeast
Database name	proddb-1-restore
Server	proddb-1-server
Compute + storage	General Purpose: Standard-series (Gen5), 2 vCores, 32 GB storage
Backup storage redundancy	Geo-redundant backup storage

At the bottom, there are buttons for 'Create', '< Previous', and 'Download a template for automation'.

2

Microsoft.SQLDatabase.newDatabaseRestoreExistingServerWithPricin | Inputs

Deployment

databaseName: proddb-1-clone

serverName: proddb-1-server

location: canadaeast

sourceDatabaseId: /subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/servers/proddb-1-server/databases/proddb-1

dateTimeString: 2023-03-29T22:56:00.000Z

skuName: GP\_Gen5\_2

tier: GeneralPurpose

zoneRedundant: false

Database	Earliest PITR restore p...	Available LTR backups	Action
proddb-1	2023-03-29 22:41 UTC	None	<input type="button" value="Restore"/>
proddb-1-clone	2023-03-29 23:06 UTC	None	<input type="button" value="Restore"/>
proddb-1-restore	2023-03-29 22:59 UTC	None	<input type="button" value="Restore"/>

The screenshot shows the Microsoft Azure portal interface for a SQL database named 'testdb-1'. The left sidebar has a 'Getting started' section selected. The main content area displays the database's configuration, including its resource group ('project'), status ('Online'), location ('Canada East'), and subscription information ('Seneca College : DAT330NAA - 1039'). It also shows connection strings, pricing tier ('General Purpose: Gen5, 2 vCores'), and the earliest restore point ('No restore point available'). Below this, there are sections for 'Start working with your database', 'Configure access', 'Connect to application', and 'Start developing', each with a 'Configure' or 'See connection strings' button.

4

The screenshot shows the Microsoft Azure portal interface for managing SQL databases. The left sidebar has a 'Reservations' section selected. The main content area lists three databases: 'proddb-1-clone', 'proddb-1-restore', and 'testdb-1'. Each entry includes a checkbox, the database name, the server it belongs to, its replica type, its location, and its subscription. A success message box is visible in the top right corner, stating 'Executed delete command on 1 selected items'.

Name	Server	Replica type	Pricing tier	Location	Subscription
proddb-1-clone (proddb-1-server/proddb-1-clone)	proddb-1-s...	--	General Purpose: G...	Canada East	Seneca College : DAT330NAA - 1039
proddb-1-restore (proddb-1-server/proddb-1-restore)	proddb-1-s...	--	General Purpose: G...	Canada East	Seneca College : DAT330NAA - 1039
testdb-1 (proddb-1-server/testdb-1)	proddb-1-s...	--	General Purpose: G...	Canada East	Seneca College : DAT330NAA - 1039

5

**Create SQL Database - Restore database**

**Source Details**

Select a backup source and details. Additional settings will be defaulted where possible based on the backup selected.

Source Database: proddb-1-clone

Select source: Point-in-time

Earliest restore point: 2023-03-29 23:06 UTC

Restore point (UTC) \*: 03/29/2023 11:21:00 PM

Choose a restore point between the earliest restore point and the current time in UTC.

**Database details**

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

Database name \*: proddb-1-restore-latest

Server: proddb-1-server (Canada East)

Want to use SQL elastic pool?  Yes  No

Compute + storage \*  General Purpose

**Review + create** **Next : Review + create >**

**Create SQL Database - Restore database**

**Product details**

SQL database by Microsoft

Estimated cost per month: 417.90 USD

**Terms**

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).

**Basics**

Subscription	Seneca College : DAT330NAA - 1039
Resource group	project
Source Database	proddb-1-clone
Source	Point-in-time
Restore point (UTC)	2023-03-29 23:21:00 UTC
Region	canadaeast
Database name	proddb-1-restore-latest
Server	proddb-1-server
Compute + storage	General Purpose: Standard-series (Gen5), 2 vCores, 32 GB storage
Backup storage redundancy	Geo-redundant backup storage

**Create** **< Previous** **Download a template for automation**

**proddb-1-restore-latest (proddb-1-server/proddb-1-restore-latest)**

**Essentials**

- Resource group (move) : project
- Status : Online
- Location : Canada East
- Subscription (move) : Seneca College : DAT330NAA - 1039
- Subscription ID : 159a43b9-3d5d-48e2-9098-d94c7bf91097
- Tags (edit) : Click here to add tags

**Getting started**    Monitoring    Properties    Features    Notifications (0)    Integrations    Tutorials

**Start working with your database**

Connect to your database and start working with data with a few simple steps. [Learn more](#)

**Configure access**    **Connect to application**    **Start developing**

[Configure](#)    [See connection strings](#)    [Open Azure Data Studio](#)    [Open in Visual Studio](#)

Name	Resource type	Service tier	Resource group	Location	Subscription
proddb-1-clone (proddb-1-server/proddb-1-clone)	SQL database	General Purpose: Ge...	project	Canada East	Seneca College : DAT330NAA - 1039
proddb-1-restore (proddb-1-server/proddb-1-restore)	SQL database	General Purpose: Ge...	project	Canada East	Seneca College : DAT330NAA - 1039
proddb-1-restore-latest (proddb-1-server/proddb-1-restore-latest)	SQL database	General Purpose: Ge...	project	Canada East	Seneca College : DAT330NAA - 1039
proddb-1-server	SQL server	--	project	Canada East	Seneca College : DAT330NAA - 1039
testdb-1 (proddb-1-server/testdb-1)	SQL database	General Purpose: Ge...	project	Canada East	Seneca College : DAT330NAA - 1039

## Task5

**Create SQL Database Server**

**Server details**

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

**Server name \*** t5-tgpadsala-server .database.windows.net

**Location \*** (US) East US

**Authentication**

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication [Learn more](#) or using an existing Azure AD user, group, or application as Azure AD admin [Learn more](#), or select both SQL and Azure AD authentication.

Use only Azure Active Directory (Azure AD) authentication

Use both SQL and Azure AD authentication

Use SQL authentication

**Server admin login \*** tgpadsala

**Password \*** \*\*\*\*\*

**Confirm password \*** \*\*\*\*\*

**OK**

**Create SQL Database**

**Basics**

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 \*** Seneca College : DAT330NAA - 1039

**Resource group \*** project

**Database details**

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

**Database name \*** T5-tgpadsala-db

**Server \*** (new) t5-tgpadsala-server (East US)

**Review + create** **Next : Networking >**

**Service and compute tier**

Select from the available tiers based on the needs of your workload. The vCore model provides a wide range of configuration controls and offers Hyperscale and Serverless to automatically scale your database based on your workload needs. Alternately, the DTU model provides set price/performance packages to choose from for easy configuration. [Learn more](#)

Service tier: **Basic (For less demanding workloads)**

DTUs: [Compare DTU options](#)

**5 (Basic)**

Data max size (GB):

Cost summary	
Basic (Basic)	0.98
Cost per DTU (in USD)	
DTUs selected	x 5
ESTIMATED COST / MONTH	4.90 USD

PLEASE CONTACT YOUR RESELLER

**Apply**

Learn more'."/>

**Create SQL Database**

⚠️ Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

⚠️ Selected value for backup storage redundancy is Geo-redundant backup storage. Database backups will be geo-replicated which might impact your data residency requirements. [Learn more](#)

Cost summary	
Basic (Basic)	0.98
Cost per DTU (in USD)	
DTUs selected	x 5
ESTIMATED COST / MONTH	4.90 USD

PLEASE CONTACT YOUR RESELLER

**Review + create** **Next: Networking >**

**Create SQL Database**

**Basics**

Subscription	Seneca College : DAT330NAA - 1039
Resource group	project
Region	East US
Database name	T5-tgpdalsal-db
Server	(new) t5-tgpdalsal-server
Authentication method	SQL authentication
Server admin login	tgpdalsal
Compute + storage	Basic: 2 GB storage
Backup storage redundancy	Geo-redundant backup storage

**Networking**

Allow Azure services and resources to access this server	Yes
Add current client IP address 142.204.27.54	Yes
Private endpoint	None
Minimum TLS version	1.2
Connection Policy	Default

**Security**

**Create** < Previous Download a template for automation

**Microsoft.SQLDatabase.newDatabaseNewServer\_584411623abd470985e77 | Overview**

**Deployment**

Deployment in progress... Deployment to resource group 'project' is in progress.

**Overview**

Deployment name: Microsoft.SQLDatabase.newDatabaseNewServer... Start time: 3/29/2023, 8:59:14 PM Correlation ID: bd42ddd3-c0f2-490a-86c8-572827e44dc9

**Deployment details**

Resource	Type	Status	Operation details
No results.			

Give feedback Tell us about your experience with deployment

**Microsoft Defender for Cloud**  
Secure your apps and infrastructure Go to Microsoft Defender for Cloud >

**Free Microsoft tutorials**  
Start learning today >

**Work with an expert**  
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support. Find an Azure expert >

<https://portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a...>

The screenshot shows the Microsoft Azure portal interface for a SQL database named 'T5-tgpadsala-db'. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, Query editor (preview), Settings, Compute + storage, Connection strings, Properties, Locks, Data management (Replicas, Sync to other databases), Integrations (Azure Synapse Link, Stream analytics (preview)), and Add Azure Search. The main content area displays the 'Essentials' section with details such as Resource group (project), Status (Online), Location (East US), Subscription (Seneca College : DAT330NAA - 1039), Subscription ID (159a43b9-3d5d-48e2-9098-d94c7bf91097), Server name (t5-tgpadsala-server.database.windows.net), Elastic pool (No elastic pool), Connection strings (Show database connection strings), Pricing tier (Basic), and Earliest restore point (No restore point available). Below this, there is a 'Getting started' tab and a 'Start working with your database' section with three buttons: 'Configure access', 'Connect to application', and 'Start developing'. A 'See connection strings' button is also present.

The screenshot shows the 'Replicas' section of the 'T5-tgpadsala-db' database page. The left sidebar is identical to the previous screenshot. The main content area shows a table header for 'Geo replicas for your database' with columns: Name, Server, Region, Failover policy, Pricing tier, and Replica state. Below the header, it says 'No replicas found'. There are buttons for '+ Create replica', 'Refresh', and 'Feedback' at the top of the table area.

**Create SQL Database Server**

**Server details**

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

**Server name \*** t5-tgpadsala-rep .database.windows.net

**Location \*** (Canada) Canada Central

Allow Azure services to access server

**Authentication**

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication [Learn more](#) or using an existing Azure AD user, group, or application as Azure AD admin [Learn more](#), or select both SQL and Azure AD authentication.

**Authentication method**

- Use only Azure Active Directory (Azure AD) authentication
- Use both SQL and Azure AD authentication
- Use SQL authentication

**Server admin login \*** tgpadsala

**Password \*** \*\*\*\*\*

**Confirm password \*** \*\*\*\*\*

**OK**

**Create SQL Database - Geo Replica**

**Region** Canada Central

**Want to use SQL elastic pool?**  No

**Compute + storage \*** Basic  
2 GB storage  
[Configure database](#)

**Backup storage redundancy**

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

The default backup storage redundancy setting is taken from the setting of the source.

**Backup storage redundancy**  Locally-redundant backup storage  
 Zone-redundant backup storage  
 Geo-redundant backup storage

**⚠️** Selected value for backup storage redundancy is Geo-redundant backup storage. Database backups will be geo-replicated which might impact your data residency requirements. [Learn more](#)

**Review + create** **Next: Networking >**

**Product details**

SQL database by Microsoft  
Estimated cost per month: 5.38 USD

**Terms**  
By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).

**Basics**

Subscription	Seneca College : DAT330NAA - 1039
Resource group	project
Primary database	T5-tgpadsala-db
Region	Canada Central
Database name	T5-tgpadsala-db
Server	(new) t5-tgpadsala-rep
Authentication method	SQL authentication
Server admin login	tgpadsala
Compute + storage	Basic: 2 GB storage

**Create** < Previous Download a template for automation

**Product details**

SQL database by Microsoft  
Estimated cost per month: 5.38 USD

**Terms**  
By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).

**Basics**

Subscription	Seneca College : DAT330NAA - 1039
Resource group	project
Primary database	T5-tgpadsala-db
Region	Canada Central
Database name	T5-tgpadsala-db
Server	(new) t5-tgpadsala-rep
Authentication method	SQL authentication
Server admin login	tgpadsala
Compute + storage	Basic: 2 GB storage
Backup storage redundancy	Geo-redundant backup storage

**Networking**  
Allow Azure services to access server: Yes

**Additional settings**  
Enable Microsoft Defender for SQL: Not now

**Create** < Previous Download a template for automation

The screenshot shows the Microsoft Azure portal interface. The main title bar reads "Microsoft.SQLDatabase.newDatabaseCopyNewServer\_4b00831fa26643c18 | Overview". The left sidebar has a "Deployment" section with "Overview", "Inputs", "Outputs", and "Template" options. The main content area displays a deployment status card with the following details:

- Deployment name:** Microsoft.SQLDatabase.newDatabaseCopyNew...
- Subscription:** Seneca College : DAT330NAA - 1039
- Correlation ID:** f5a109a1-1bec-4360-9cf9-1535803cc4f8
- Resource group:** project
- Start time:** 3/29/2023, 9:07:48 PM

Below this, a table titled "Deployment details" lists one resource:

Resource	Type	Status	Operation details
t5-tgpadsala-rep	Microsoft.Sql/servers	Accepted	<a href="#">Operation details</a>

The right sidebar contains promotional links for Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

The screenshot shows the Microsoft Azure portal interface for a specific SQL database named "T5-tgpadsala-db". The title bar reads "T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Overview". The left sidebar includes sections for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, Query editor (preview), Compute + storage, Connection strings, Properties, Locks, Replicas, Sync to other databases, Azure Synapse Link, Stream analytics (preview), and Add Azure Search.

The main content area displays the database's essential properties:

Resource group	: project	Server name	: t5-tgpadsala-rep.database.windows.net
Status	: Online	Elastic pool	: No elastic pool
Location	: Canada Central	Connection strings	: Show database connection strings
Subscription	: Seneca College : DAT330NAA - 1039	Pricing tier	: Basic
Subscription ID	: 159a43b9-3d5d-48e2-9098-d94c7bf91097	Earliest restore point	: No restore point available
		Replica type	: Geo
		Primary database	: T5-tgpadsala-db

Below the properties, there are sections for "Tags (edit)", "Getting started", "Monitoring", "Properties", "Features", "Notifications (0)", "Integrations", and "Tutorials". A "Start working with your database" section provides links to "Configure access", "Connect to application", and "Start developing".

The screenshot shows the Microsoft Azure portal interface for managing a SQL database named T5-tgpadsala-db. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, Query editor (preview), Settings (Compute + storage, Connection strings, Properties, Locks), Data management (Replicas, Sync to other databases), Integrations (Azure Synapse Link, Stream analytics (preview), Add Azure Search), and a search bar.

The main content area is titled "T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas". It displays a table of geo replicas:

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-server	East US	None	Basic	Online
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central		Basic	Readable

The screenshot shows the Microsoft Azure portal interface for managing a SQL database named T5-tgpadsala-db. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, Query editor (preview), Settings (Compute + storage, Connection strings, Properties, Locks), Data management (Replicas, Sync to other databases), Integrations (Azure Synapse Link, Stream analytics (preview), Add Azure Search), and a search bar.

The main content area is titled "T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas". It displays a table of geo replicas. A modal dialog box is open over the table, titled "Failover". The dialog contains the following text:

Forced failover will switch t5-tgpadsala-rep/T5-tgpadsala-db to the primary role. The old primary t5-tgpadsala-server/T5-tgpadsala-db will automatically become the new secondary if it is online. All TDS sessions will be disconnected. This operation may cause data loss. Are you sure you want to proceed?

Two buttons are visible at the bottom of the dialog: "Yes" and "No".

The screenshot shows the Microsoft Azure portal interface for managing a SQL database named T5-tgpadsala-db. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, Query editor (preview), Settings (Compute + storage, Connection strings, Properties, Locks), Data management (Replicas, Sync to other databases), Integrations (Azure Synapse Link, Stream analytics (preview), Add Azure Search), and Help & feedback.

The main content area is titled "T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas". It displays a table of geo replicas:

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-server	East US		Basic	Failover...

This screenshot is identical to the one above, showing the Microsoft Azure portal interface for managing the T5-tgpadsala-db database. The left sidebar and main content area are the same, displaying the Replicas blade with the same table of geo replicas.

**t5-tgpadsala-server - Microsoft Azure**

**Microsoft Azure** Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas >

**t5-tgpadsala-server** SQL server

**Essentials**

- Resource group (move) : project
- Status : Available
- Location : East US
- Subscription (move) : Seneca College : DAT330NAA – 1039
- Subscription ID : 159a43b9-3d5d-48e2-9098-d94c7bf91097
- Tags (edit) : Click here to add tags
- Server admin : tgpadsala
- Networking : Show networking settings
- Active Directory admin : Not configured
- Server name : t5-tgpadsala-server.database.windows.net

**Notifications (0)** **Features (6)**

All Security (4) Performance (1) Recovery (1)

<b>Active Directory admin</b> Allows you to centrally manage identity and access to your Azure SQL databases. <b>NOT CONFIGURED</b>	<b>Microsoft Defender for SQL</b> Vulnerability Assessment and Advanced Threat Protection. <b>NOT CONFIGURED</b>	<b>Automatic tuning</b> Monitors and tunes your database automatically to optimize performance. <b>CONFIGURED</b>
<b>Auditing</b> Track database events and writes them to an audit log in Azure storage. <b>NOT CONFIGURED</b>	<b>Failover groups</b> Automatically manages replication, connectivity and failover for a set of databases. <b>NOT CONFIGURED</b>	<b>Transparent data encryption</b> Encryption at rest for your databases, backups, and logs. <b>SERVICE-MANAGED KEY</b>

Available resources Filter by name All types

**Failover group - Microsoft Azure**

**Microsoft Azure** Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups >

**Failover group**

Create a failover group to automatically failover databases in it.

**Failover group name \***  
Enter failover group name... .database.windows.net

**Server \* (radio button)**  
Select a server  
Create new

**Read/Write failover policy**  
Automatic

**Read/Write grace period (hours)**  
1 hours

**Database within the group (radio button)**  
Not configured yet  
1 databases eligible  
Configure database

**Create**

New server - Microsoft Azure

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene... SENECA COLLEGE SENECACOLLE...

Microsoft Azure Search resources, services, and docs (G+/)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups > Failover group >

### New server

Server name \*  
tgpadsala-fg .database.windows.net

Server admin login \*  
tgpadsala

Password \*  
\*\*\*\*\*

Confirm password \*  
\*\*\*\*\*

Location \*  
(US) East US 2

Allow Azure services to access server

Select

Failover group - Microsoft Azure

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene... SENECA COLLEGE SENECACOLLE...

Microsoft Azure Search resources, services, and docs (G+/)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups >

### Failover group

Create a failover group to automatically failover databases in it.

Failover group name \*  
fg010 .database.windows.net

Server \*  (new) tgpadsala-fg  
 Create new

Read/Write failover policy  
Automatic

Read/Write grace period (hours)  
1 hours

Database within the group  Not configured yet  
1 databases eligible  
Configure database

Create

The screenshot shows the Microsoft Azure Deployment Overview page for a deployment named "Microsoft.SQL.FG-ba3ea909-b945-4e2f-85ed-d66e482cee32". The deployment status is "Deployment is in progress". The deployment details table shows one resource, "tgpadsala-fg", of type "Microsoft.Sql/servers" with status "Accepted". The page also includes links for Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

The screenshot shows the Microsoft Azure Resource Group Overview page for a resource group named "project". The "Essentials" section displays a list of resources, including "T5-tgpadsala-db", "T5-tgpadsala-server", "tgpadsala-rep", and "tgpadsala-fg", categorized by Type (SQL database, SQL server) and Location (Canada Central, East US). The left sidebar provides navigation links for Activity log, Access control (IAM), Tags, Resource visualizer, Events, Deployments, Security, Policies, Properties, Locks, Cost Management, and Monitoring.

Name	Type	Location
T5-tgpadsala-db	SQL database	Canada Central
T5-tgpadsala-server	SQL database	East US
tgpadsala-rep	SQL server	Canada Central
tgpadsala-fg	SQL server	East US 2

**T5-tgpadsala-db (t5-tgpadsala-db) | Replicas**

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-server	East US		Basic	Failover...

**SQL databases**

**T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas**

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-server	East US	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central		Basic	Failover...

**T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas**

Geo replicas for your database are listed below. Geo replicas reside on a different logical server from the primary and protect against regional failures or prolonged data center outage. Learn more ↗

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-server	East US	Automatic	Basic	Failover...

**t5-tgpadsala-server | Failover groups**

Failover group are a SQL server feature designed to automatically manage replication, connectivity and failover of a set of databases.

Name	Primary server	Secondary server	Read/Write failover policy	Grace Period (minutes)	Database count
fg010	t5-tgpadsala-server	tgpadsala-fg	Automatic	60	0/1

**fg010 - Microsoft Azure**

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene... SENeca College (SENECACOLLE...

**Microsoft Azure** Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups >

**fg010** ...

t5-tgpadsala-server

Save Discard Add databases Edit configuration Remove databases Failover Forced Failover Delete

**Configuration details** Databases within group Databases selected to be added (0) Databases selected for removal (0)

Server	Role	Read/Write failover policy	Grace period
t5-tgpadsala-server (East US)	Primary	Automatic	1 hours
tgpadsala-fg (East US 2)	Secondary		

**Read/write listener endpoint**

**fg010 - Microsoft Azure**

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene... SENeca College (SENECACOLLE...

**Microsoft Azure** Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups >

**fg010** ...

t5-tgpadsala-server

Save Discard Add databases Edit configuration Remove databases Failover Forced Failover Delete

Server	Role	Read/Write failover policy	Grace period
t5-tgpadsala-server (East US)	Primary	Automatic	1 hours
tgpadsala-fg (East US 2)	Secondary		

**Read/write listener endpoint**

fg010.database.windows.net

**Read-only listener endpoint**

fg010.secondary.database.windows.net

**Warning**

This will switch all secondary databases to the primary role. All TDS sessions will be disconnected. All new TDS sessions will be automatically re-routed to the secondary server, which now becomes primary server.

Yes No

Server	Role	Read/Write failover policy	Grace period
t5-tgpadsala-server (East US)	Primary	Automatic	1 hours
tgpadsala-fg (East US 2)	Secondary		

... Failover group failover in progress

Failover group failover in progress for failover group: fg010, old secondary server: tgpadsala-fg

Failover in progress...

Server	Role	Read/Write failover policy	Grace period
t5-tgpadsala-server (East US)	Primary	Automatic	1 hours
tgpadsala-fg (East US 2)	Secondary		

**fg010 - Microsoft Azure**

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene...

Microsoft Azure Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups > fg010 ...

t5-tgpadsala-server

Save Discard Add databases Edit configuration Remove databases Failover Forced Failover Delete

**Configuration details** Databases within group Databases selected to be added (0) Databases selected for removal (0)

Server	Role	Read/Write failover policy
tgpadsala-fg (East US 2)	Primary	Automatic
t5-tgpadsala-server (East US)	Secondary	

**Read/write listener endpoint**

**Notifications**

More events in the activity log → Dismiss all

✓ Failover group failover succeeded

Failover group failover succeeded for failover group: fg010, old secondary server: tgpadsala-fg

a few seconds ago

**fg010 - Microsoft Azure**

portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/server... odl\_user.846738@sene...

Microsoft Azure Search resources, services, and docs (G+)

Home > SQL databases > T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas > t5-tgpadsala-server | Failover groups > fg010 ...

t5-tgpadsala-server

Save Discard Add databases Edit configuration Remove databases **Failover** Forced Failover Delete

**Warning**

This will switch all secondary databases to the primary role. All TDS sessions will be disconnected. All new TDS sessions will be automatically re-routed to the secondary server, which now becomes primary server.

**Yes** **No**

Server	Role	Read/Write failover policy	Grace period
tgpadsala-fg (East US 2)	Primary	Automatic	1 hours
t5-tgpadsala-server (East US)	Secondary		

**Read/write listener endpoint**

Server	Role	Read/Write failover policy	Grace period
t5-tgpadsala-server (East US)	Primary	Automatic	1 hours
tgpadsala-fg (East US 2)	Secondary		

**Notifications**

- Failover group failover succeeded
 

Failover group failover succeeded for failover group: fg010, old secondary server: t5-tgpadsala-server

2 minutes ago
- Failover group failover succeeded
 

Failover group failover succeeded for failover group: fg010, old secondary server: tgpadsala-fg

4 minutes ago

Server	Role	Read/Write failover policy
t5-tgpadsala-server (East US)	Primary	Automatic
tgpadsala-fg (East US 2)	Secondary	

**Read/write listener endpoint**

fg010.database.windows.net

**Read-only listener endpoint**

fg010.secondarystorage.database.windows.net  
[https://portal.azure.com/#blade/Microsoft\\_Azure\\_ActivityLog/ActivityLogBlade/queryInputs/...](https://portal.azure.com/#blade/Microsoft_Azure_ActivityLog/ActivityLogBlade/queryInputs/)

**T5-tgpadsala-db (t5-tgpadsala-db) | Replicas**

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-server	East US		Basic	Failover...

**T5-tgpadsala-db (t5-tgpadsala-rep/T5-tgpadsala-db) | Replicas**

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-server	East US		Basic	Failover...

**T5-tgpadsala-db (t5-tgpadsala-server/T5-tgpadsala-db) | Replicas**

Name	Server	Region	Failover policy	Pricing tier	Replica state
T5-tgpadsala-db	t5-tgpadsala-server	East US	None	Basic	Pending
T5-tgpadsala-db	t5-tgpadsala-rep	Canada Central		Basic	Failover...

**t5-tgpadsala-server | Failover groups**

Name	Primary server	Secondary server	Read/Write failover
You have no group created			

**Notifications**

- Failover group deletion succeeded (3 minutes ago)
- Failover group forced failover (with data loss) succeeded (4 minutes ago)
- Failover group failover succeeded (7 minutes ago)
- Failover group failover succeeded (9 minutes ago)

**1**

The screenshot shows the Microsoft Azure portal interface for managing SQL databases. The URL in the address bar is <https://portal.azure.com/#view/HubsExtension/BrowseResource/resourceType/Microsoft.Sql%2Fservers%2Fdatabases>. The page title is "SQL databases". The main content area displays two database entries:

Name	Server	Replica type	Pricing tier	Location	Subscription
task5-tgpadsala (task5-tgpadsala-server/task5-tgpadsala)	task5-tgpadsala	--	Basic: 5 DTUs	Canada Central	Seneca College : DAT330NAA - 1039
task5-tgpadsala (tgpadsala-replica/task5-tgpadsala)	tgpadsala-replica	Geo	Basic: 5 DTUs	Canada Central	Seneca College : DAT330NAA - 1039

At the bottom of the table, there are navigation links: < Previous, Page 1 of 1, Next >, and a Give feedback link.

**1**

The screenshot shows the Microsoft Azure portal interface for managing SQL databases. The top navigation bar includes tabs for 'SQL databases - Microsoft Azure', 'Resource groups - Microsoft Azure', and 'Content'. The main title is 'SQL databases' under 'Seneca College (senecacollegelabs.onmicrosoft.com)'. Below the title, there are filter options: 'Subscription equals all', 'Resource group equals all', 'Location equals all', and 'Add filter'. The results table shows one record: 'task5-tgpadsala' (task5-tgpadsala-server/task5-tgpadsala). The columns include Name, Server, Replica type, Pricing tier, Location, and Subscription. The database is located in 'Canada Central' with a 'Basic: 5 DTUs' pricing tier. The bottom of the page shows pagination controls ('Page 1 of 1') and a 'Give feedback' link.

2

The screenshot shows the Microsoft Azure portal interface for a deployment overview. The title is 'Microsoft.SQLDatabase.newDatabaseCopyNewServer\_c674ad1c476c471c9 | Overview'. The left sidebar has sections for 'Deployment' (selected), 'Overview', 'Inputs', 'Outputs', and 'Template'. The main content area displays a green checkmark indicating 'Your deployment is complete'. It shows deployment details: name 'Microsoft.SQLDatabase.newDatabaseCopyNew...', subscription 'Seneca College : DAT330NAA - 1039', and resource group 'project'. The start time was 3/29/2023, 8:32:08 PM. A correlation ID is also provided. Below this, the 'Deployment details' section lists four resources: 'tgpadsala-replica/task5-tgpadsala' (Microsoft.Sql/servers/databases, Status: Created), 'tgpadsala-replica/AllowAllWindows' (Microsoft.Sql/servers/firewallrules, Status: OK), 'tgpadsala-replica' (Microsoft.Sql/servers, Status: OK), and 'tgpadsala-replica' (Microsoft.Sql/servers, Status: Created). To the right, there are promotional cards for 'Cost Management', 'Microsoft Defender for Cloud', 'Free Microsoft tutorials', and 'Work with an expert'.

3

**task5-tgpadsala (tgpadsala-replica/task5-tgpadsala)**

**Overview**

**Essentials**

Resource group <a href="#">(move)</a>	: project
Status	: Online
Location	: Canada Central
Subscription <a href="#">(move)</a>	: Seneca College : DAT330NAA - 1039
Subscription ID	: 159a43b9-3d5d-48e2-9098-d94c7bf91097
Server name	: tgpadsala-replica.database.windows.net
Elastic pool	: No elastic pool
Connection strings	: Show database connection strings
Pricing tier	: Basic
Earliest restore point	: No restore point available
Replica type	: Geo
Primary database	: task5-tgpadsala

**Tags (edit)** : Click here to add tags

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**Start working with your database**

Connect to your database and start working with data with a few simple steps. [Learn more](#)

**Configure access**  
Configure network access to your SQL server. [Learn more](#)

**Connect to application**  
Use connection strings to connect to your SQL database from your applications and favorite tools.

**Start developing**  
Work in your database by using tools to add, modify and query data. [Compare tools](#)

<https://portal.azure.com/#@senecacollegelabs.onmicrosoft.com/resource/subscriptions/159a43b9-3d5d-48e2-9098-d94c7bf91097/resourceGroups/project/providers/Microsoft.Sql/servers/tgpadsala-replica/databases/task5-tgpadsala/overview>

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**Create SQL Database Server**

**Server details**

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

**Server name \*** tgpadsala-replica .database.windows.net

**Location \*** (Canada) Canada Central

Allow Azure services to access server

**Authentication**

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication Learn more or using an existing Azure AD user, group, or application as Azure AD admin Learn more, or select both SQL and Azure AD authentication.

**Authentication method**

- Use only Azure Active Directory (Azure AD) authentication
- Use both SQL and Azure AD authentication
- Use SQL authentication

**Server admin login \*** tgpadsala

**Password \*** \*\*\*\*\*

**Confirm password \*** \*\*\*\*\*

**OK**

## Extra

**Create SQL Database Server**

**Server details**

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

**Server name \*** t5tgpadala .database.windows.net

**Location \*** (Canada) Canada East

Allow Azure services to access server

**Authentication**

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication Learn more or using an existing Azure AD user, group, or application as Azure AD admin Learn more, or select both SQL and Azure AD authentication.

**Authentication method**

- Use only Azure Active Directory (Azure AD) authentication
- Use both SQL and Azure AD authentication
- Use SQL authentication

**Server admin login \*** tgpadsala

**Password \*** \*\*\*\*\*

**Confirm password \*** \*\*\*\*\*

**OK**



## Task deletion

The screenshot shows the Microsoft Azure portal interface for a resource group named 'project'. In the top right corner, there is a message box indicating that a delete command was executed on four selected items, with a success rate of 4, 0 failures, and 0 cancellations. The main content area displays a search bar and filter options for resources. A prominent message states 'No resources match your filters' with a 'Create resources' button.

This screenshot shows the same Microsoft Azure portal interface after the task deletion. A 'Notifications' sidebar is open, displaying a single event: 'Deleted resource group project' with a timestamp of 'a few seconds ago'. The main content area remains empty, showing the 'No resources match your filters' message.

**A Virtual machines - Microsoft Azure**

Virtual machines

No virtual machines to display

Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

+ Create

Learn more about Windows virtual machines

Learn more about Linux virtual machines

Give feedback

**A Azure SQL - Microsoft Azure**

Azure SQL

No Azure SQL resources to display

Try changing or clearing your filters.

Create Azure SQL resource

Learn more

Give feedback

Azure Database for MySQL servers

No Azure Database for MySQL servers to display

Try changing or clearing your filters.

Create Azure Database for MySQL server

Learn more ⓘ

Give feedback

Key vaults

No key vaults to display

Safeguard cryptographic keys and other secrets used by cloud apps and services.

Create key vault

Learn more ⓘ

Give feedback

The screenshot shows the Microsoft Azure portal interface for 'Virtual networks'. The top navigation bar includes 'Microsoft Azure' and a search bar. Below it, a toolbar has options like '+ Create', 'Manage view', 'Refresh', 'Export to CSV', 'Open query', and 'Assign tags'. A filter bar at the top allows filtering by 'Subscription equals all', 'Resource group equals all', 'Location equals all', and 'Add filter'. The main area displays a message: 'No virtual networks to display'. It encourages users to 'Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.' A prominent blue button labeled 'Create virtual network' is centered. At the bottom right, there's a 'Give feedback' link.

The screenshot shows the Microsoft Azure portal interface for 'Resource groups'. The top navigation bar includes 'Microsoft Azure' and a search bar. Below it, a toolbar has options like '+ Create', 'Manage view', 'Delete resource group', 'Refresh', 'Export to CSV', 'Open query', and 'Assign tags'. A filter bar at the top allows filtering by 'Type equals all', 'Location equals all', and 'Add filter'. The main area displays a message: 'No resources match your filters'. It suggests changing or clearing filters and provides 'Create resources' and 'Clear filters' buttons. At the bottom right, there's a 'Give feedback' link.

The screenshot shows the Microsoft Azure portal interface. The main window displays the 'Resource groups' blade for the resource group 'ODL-seneca-lab-846738'. The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Resource visualizer, Events, Settings (Deployments, Security, Policies, Properties, Locks), Cost Management (Cost analysis, Cost alerts (preview), Budgets, Advisor recommendations), and Monitoring. The right side shows a 'Notifications' sidebar with two entries: 'Deleted resource group NetworkWatcherRG' (a few seconds ago) and 'Deleted resource group project' (6 minutes ago). The central area shows a 'Resources' section with a search bar and a message stating 'Showing 0 to 0 of 0 records.' A 'Create resource' button is visible at the bottom.