Introduction

In this new demo, we will show you how to create a new Azure Data Warehouse database using PowerShell.

Requirements

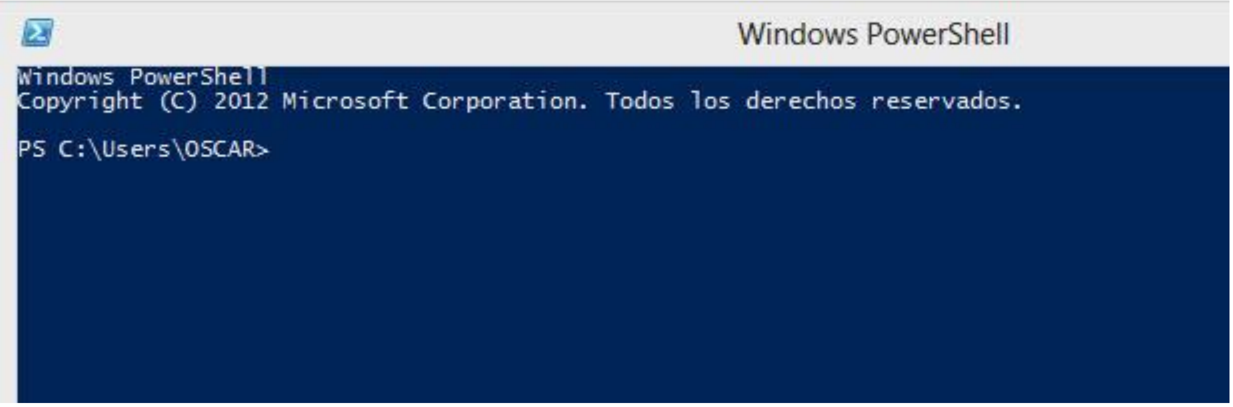
1. A local machine with PowerShell for Azure.
2. An Azure subscription

Get Started

We will do the following in this article:

1. Create a Resource Group
2. Create a SQL Server in Azure
3. Create the Azure Data Warehouse
4. Start and Pause the Data Warehouse

Open PowerShell in your machine:



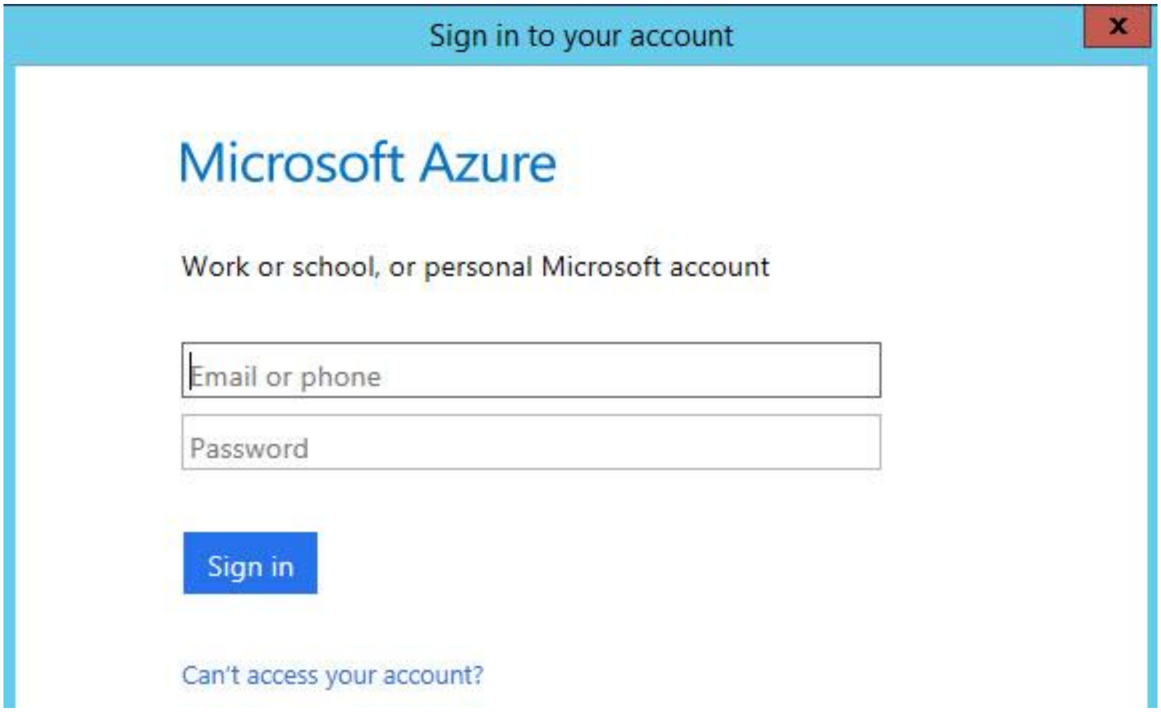
```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. Todos los derechos reservados.

PS C:\Users\OSCAR>
```

Login to Azure with this command:

```
Login-AzureRmAccount
```

This will open a popup where you specify your credentials:



Sign in to your account

Microsoft Azure

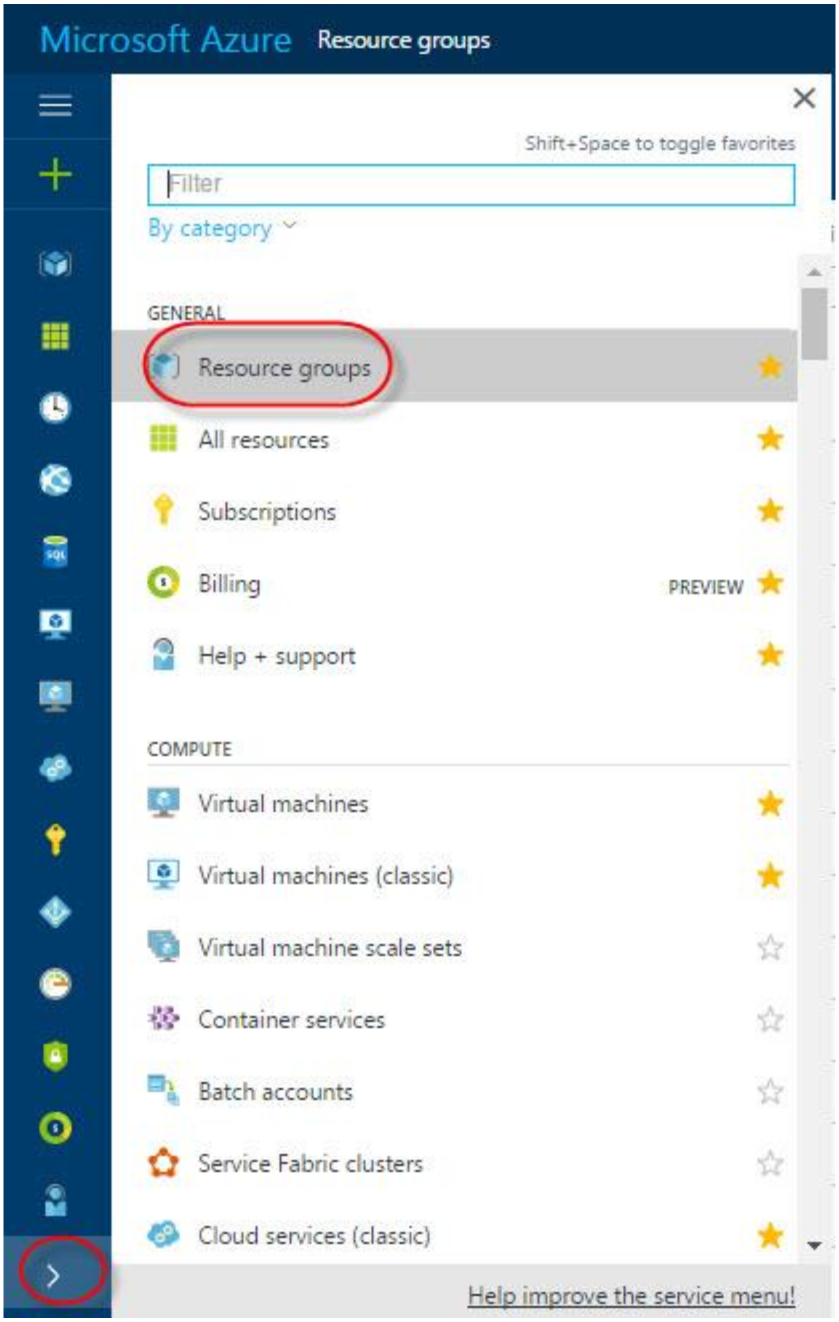
Work or school, or personal Microsoft account

1. Create a Resource Group

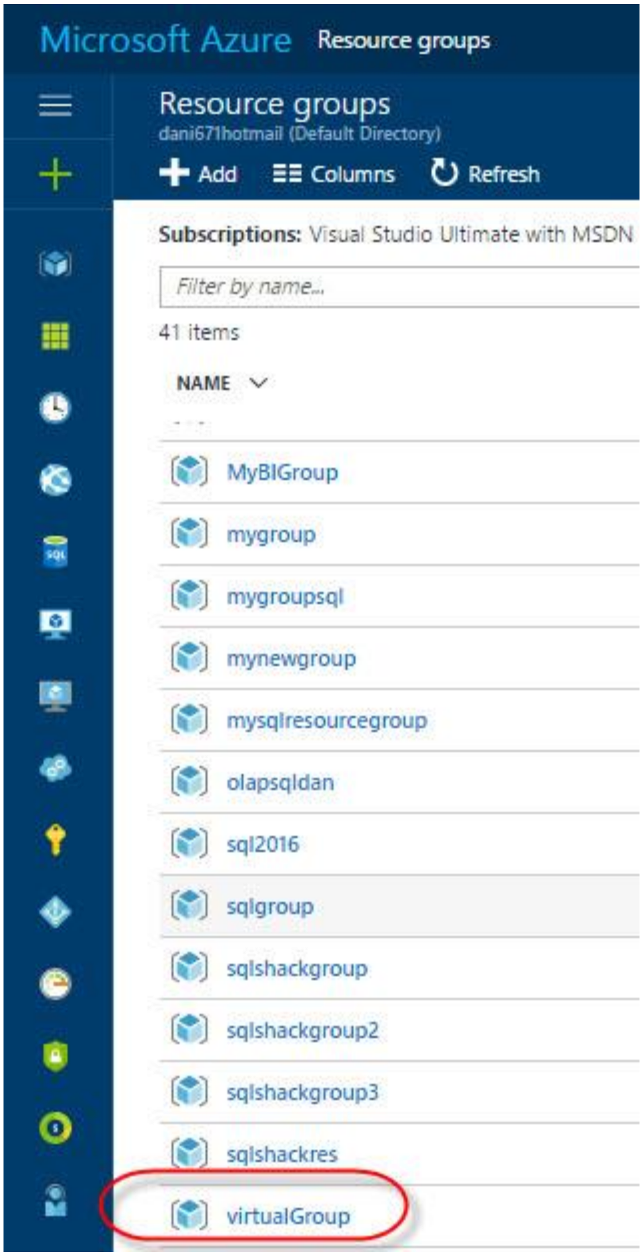
You can group your Azure resources together for easy management. In PowerShell, we will use the New-AzureRmResourceGroup cmlet to create a resource group named virtualGroup in South Central USA:

```
New-AzureRmResourceGroup -Name virtualGroup -Location "South Central US"
```

You can verify that the Resource Group was created using the Azure Portal and going to Resource groups:



The virtualGroup is in the list of Resource groups:



Resource groups
dani671hotmail (Default Directory)

Subscriptions: Visual Studio Ultimate with MSDN

Filter by name...

41 items

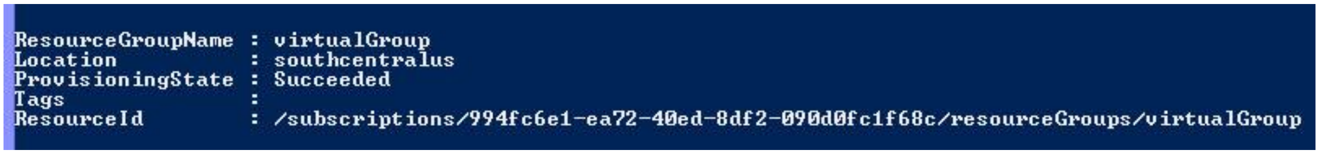
NAME

- MyBIGroup
- mygroup
- mygroupsql
- mynewgroup
- mysqlresourcegroup
- olapsqldan
- sql2016
- sqlgroup
- sqlshackgroup
- sqlshackgroup2
- sqlshackgroup3
- sqlshackres
- virtualGroup

You can also run the following cmdlet in PowerShell to verify that the resource group was created:

```
Get-AzureRmResourceGroup -Name "virtualGroup"
```

The result displayed will be similar to this one:



```
ResourceGroupName : virtualGroup
Location          : southcentralus
ProvisioningState : Succeeded
Tags              :
ResourceId        : /subscriptions/994fc6e1-ea72-40ed-8df2-090d0fc1f68c/resourceGroups/virtualGroup
```

2. Create a SQL Server in Azure

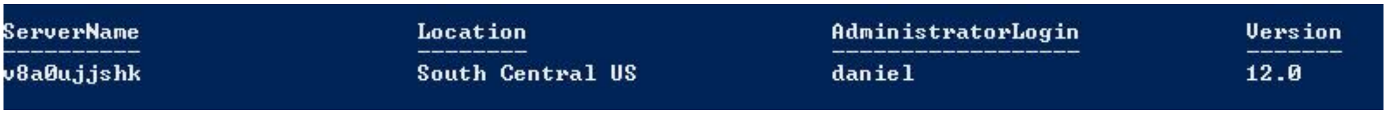
In order to create a SQL Server in Azure, run the following cmdlets in PowerShell:

```
New-AzureSqlDatabaseServer -Location "South Central US" -
AdministratorLogin "daniel" -AdministratorLoginPassword "Ssqlcentral7988!"
-ResourceGroupName "virtualGroup"
```

We are creating a SQL Server in PowerShell in the resource group virtualGroup in the Azure labs in South Central USA. This has a login named daniel and a password specified. We are also using the virtualGroup resource group created. To verify that the server was created, run the following cmdlet:

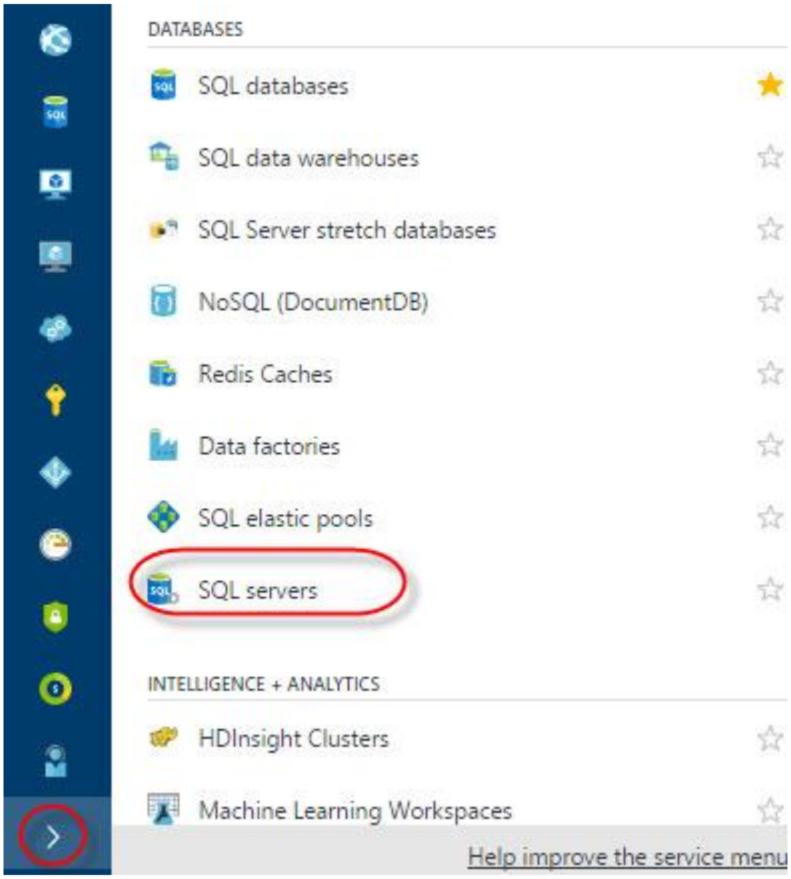
```
Get-AzureSqlDatabaseServer -ServerName "v8a0ujjshk"
```

This is the information displayed by the cmdlets. V8a0ujjshk is the server name:

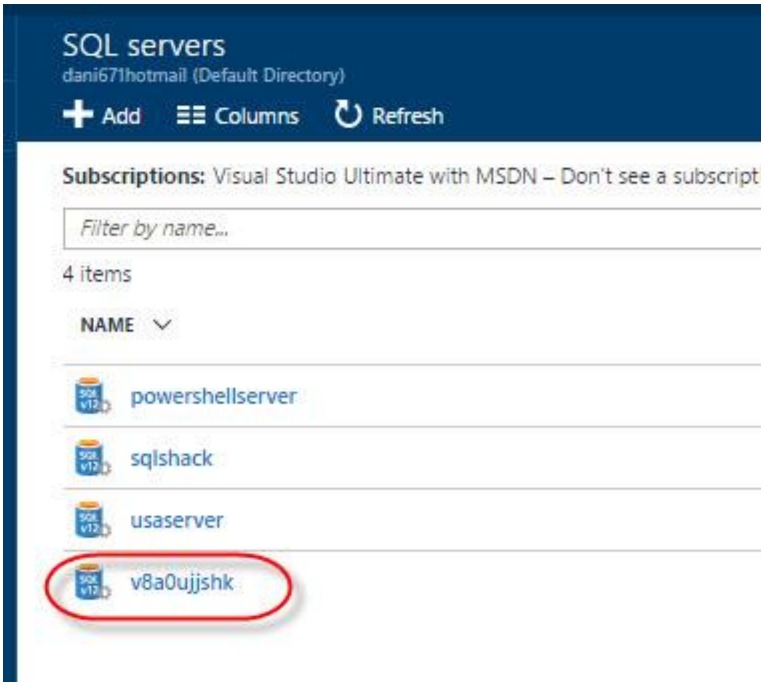


```
ServerName              Location                AdministratorLogin      Version
----------              --------                ------------------      -------
v8a0ujjshk              South Central US        daniel                  12.0
```

In addition, it is possible to see the SQL Servers using the portal. Go to SQL servers:



In the list of SQL server, you will be able to see the SQL Server created:



SQL servers
dani671hotmail (Default Directory)

Subscriptions: Visual Studio Ultimate with MSDN – Don't see a subscript

4 items

NAME
powershellserver
sqlshack
usaserver
v8a0ujjshk

3. Create an Azure SQL Data Warehouse

Finally, we will create the Azure Data Warehouse in PowerShell:

```
New-AzureRmSqlDatabase -RequestedServiceObjectiveName "DW100" -
DatabaseName "myWarehouse" -ServerName "v8a0ujjshk" -ResourceGroupName
"virtualGroup" -Edition "DataWarehouse"
```

The RequestedServiceObjective is very important, because you define the price that you want to pay here. DW100 is the cheapest price. Other options are DW200, DW300, DW400, etc. A DW100 costs 1.5 USD per hour approximately and a DW6000 is 90 USD per hour. It depends on the database size and the number of user requested. If you want faster queries, you will require paying more. For a complete list of prices, refer to this link: Azure Data Warehouse Prices

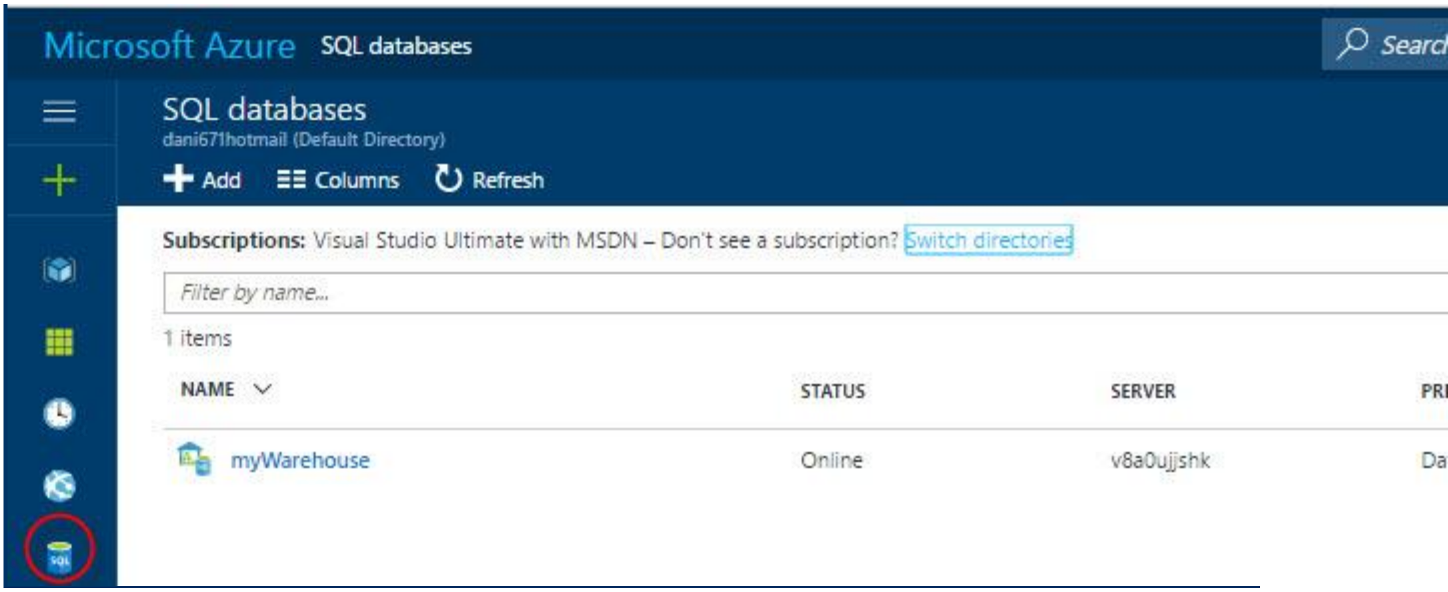
Another parameter is the Database name. In this example, the name is myWarehouse.

ServerName is the Azure SQL Server name created before.

ResourceGroupName is the name of the Resource Group that we created at the beginning of this article.

Edition is the type of database. In this example, it is a DataWarehouse, but it can be a Standard, Premium or Basic database.

You can verify the Data Warehouse database created in the Portal. Just click on the Databases icon:



SQL databases

dani671hotmail (Default Directory)

Subscriptions: Visual Studio Ultimate with MSDN – Don't see a subscription? Switch directories

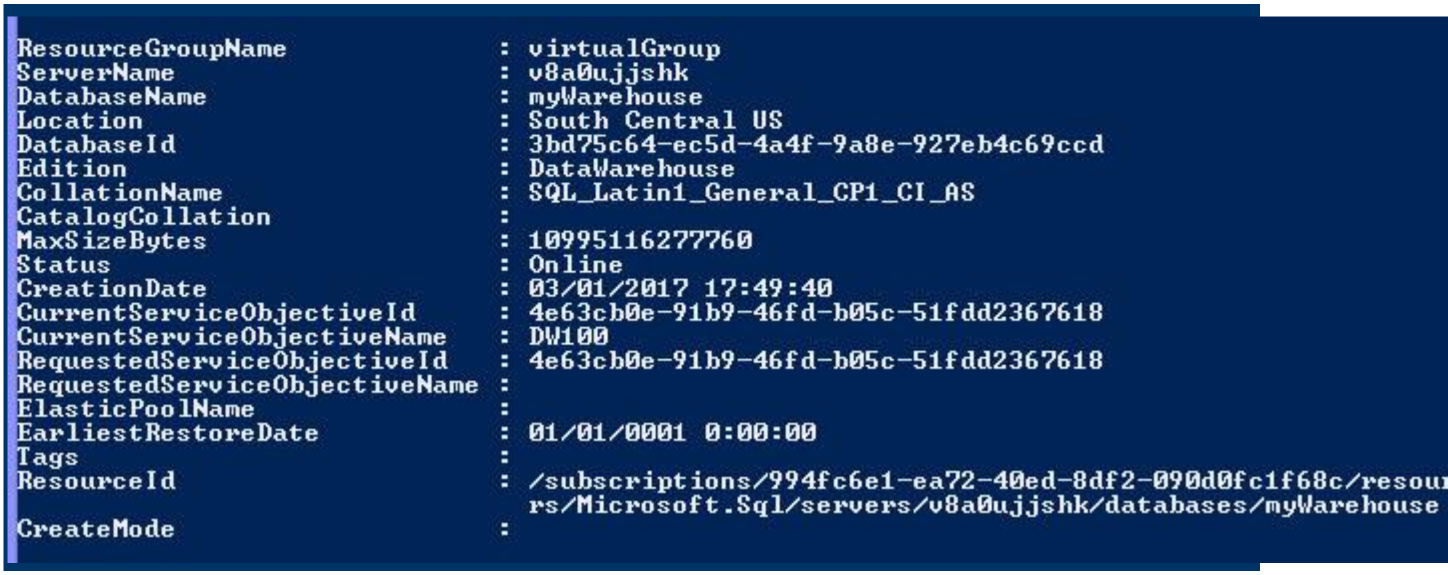
1 items

NAME	STATUS	SERVER	PRI
myWarehouse	Online	v8a0ujjshk	Da

In PowerShell, you can use the following cmdlet to verify that the database named myWarehouse created in the Server v8a0ujjshk and Resource Group Name named virtualGruop was created:

```
Get-AzureRmSqlDatabase -ServerName "v8a0ujjshk" -ResourceGroupName
"virtualGroup" -DatabaseName "myWarehouse"
```

The information displayed is the following:



```
ResourceGroupName                : virtualGroup
ServerName                       : v8a0ujjshk
DatabaseName                     : myWarehouse
Location                         : South Central US
DatabaseId                       : 3bd75c64-ec5d-4a4f-9a8e-927eb4c69ccd
Edition                          : DataWarehouse
CollationName                    : SQL_Latin1_General_CP1_CI_AS
CatalogCollation                 :
MaxSizeBytes                     : 10995116277760
Status                           : Online
CreationDate                     : 03/01/2017 17:49:40
CurrentServiceObjectiveId        : 4e63cb0e-91b9-46fd-b05c-51fdd2367618
CurrentServiceObjectiveName      : DW100
RequestedServiceObjectiveId      : 4e63cb0e-91b9-46fd-b05c-51fdd2367618
RequestedServiceObjectiveName    :
ElasticPoolName                  :
EarliestRestoreDate              : 01/01/0001 0:00:00
Tags                             :
ResourceId                       : /subscriptions/994fc6e1-ea72-40ed-8df2-090d0fc1f68c/resou
                                   rs/Microsoft.Sql/servers/v8a0ujjshk/databases/myWarehouse

CreateMode                       :
```

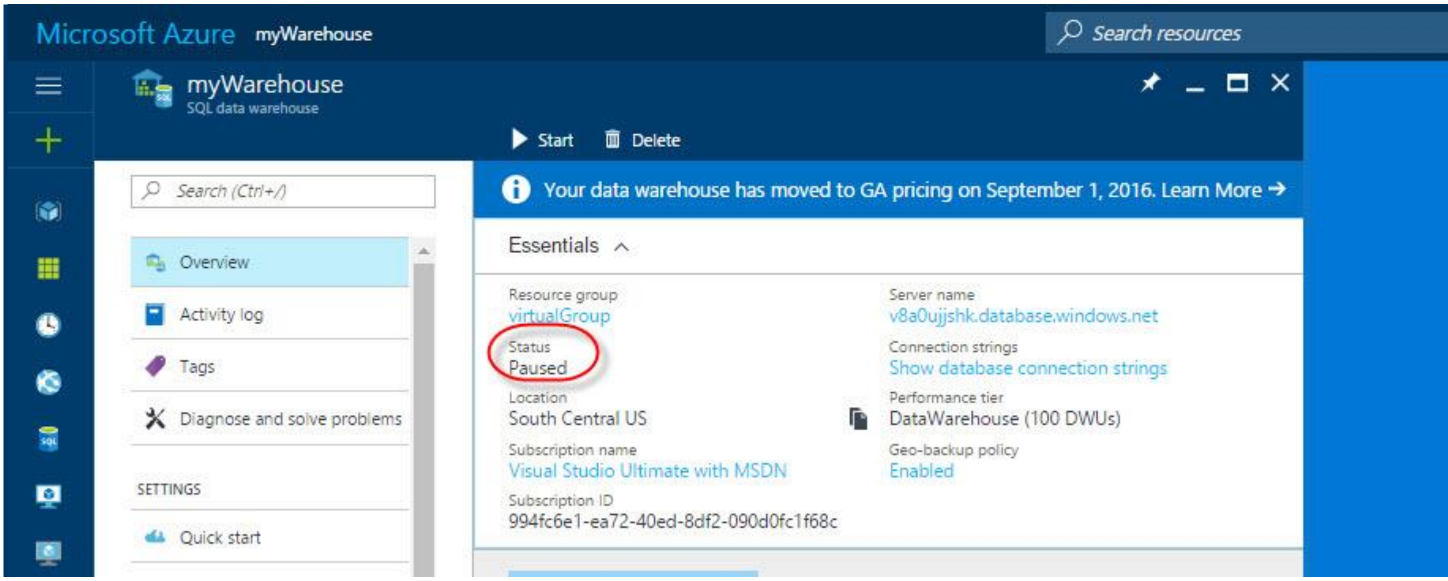
4. Start

Pause the Data Warehouse

In Azure, it is a good idea to pause the Database, because you will pay less. For example, when it is night in your company, nobody will be using the Warehouse. When the Data Warehouse is paused, you are only charged per storage, but not for the use of the database. To pause, you can use the following cmdlet:

```
Suspend-AzureRmSqlDatabase -ResourceGroupName "virtualGroup" -ServerName
"v8a0ujjshk" -DatabaseName "myWarehouse"
```

In the Azure Portal, you can verify the Status of the database:



Your data warehouse has moved to GA pricing on September 1, 2016. Learn More →

Resource group
virtualGroup

Status
Paused

Location
South Central US

Subscription name
Visual Studio Ultimate with MSDN

Subscription ID
994fc6e1-ea72-40ed-8df2-090d0fc1f68c

Server name
v8a0ujjshk.database.windows.net

Connection strings
Show database connection strings

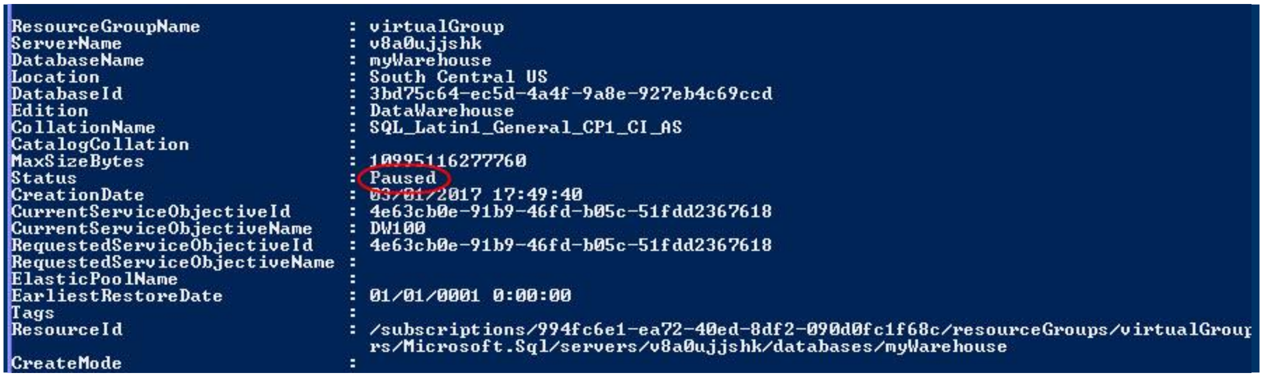
Performance tier
DataWarehouse (100 DWUs)

Geo-backup policy
Enabled

With the Get-AzureRmSqlDatabase cmdlet used before, you can also verify the Data Warehouse status in PowerShell:

```
Get-AzureRmSqlDatabase -ServerName "v8a0ujjshk" -ResourceGroupName
"virtualGroup" -DatabaseName "myWarehouse"
```

The status will be paused:

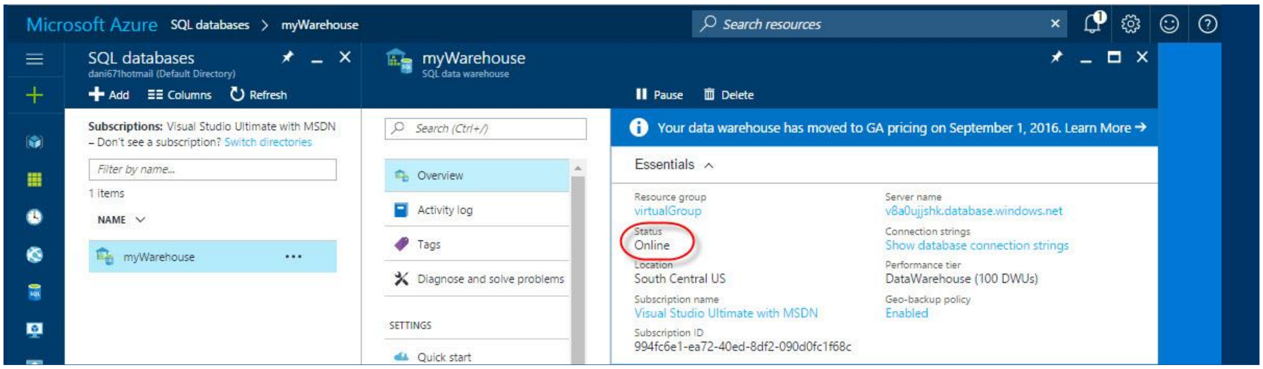


```
ResourceGroupName              : virtualGroup
ServerName                     : v8a0ujjshk
DatabaseName                   : myWarehouse
Location                       : South Central US
DatabaseId                     : 3bd75c64-ec5d-4a4f-9a8e-927eb4c69ccd
Edition                        : DataWarehouse
CollationName                  : SQL_Latin1_General_CP1_CI_AS
CatalogCollation               :
MaxSizeBytes                   : 10995116277760
Status                         : Paused
CreationDate                   : 03/01/2017 17:49:40
CurrentServiceObjectiveId      : 4e63cb0e-91b9-46fd-b05c-51fdd2367618
CurrentServiceObjectiveName    : DW100
RequestedServiceObjectiveId    : 4e63cb0e-91b9-46fd-b05c-51fdd2367618
RequestedServiceObjectiveName  :
ElasticPoolName                :
EarliestRestoreDate            : 01/01/0001 0:00:00
Tags                           :
ResourceId                     : /subscriptions/994fc6e1-ea72-40ed-8df2-090d0fc1f68c/resourceGroups/virtualGroup
                                 rs/Microsoft.Sql/servers/v8a0ujjshk/databases/myWarehouse
CreateMode                     :
```

You can also resume a paused Data Warehouse using the following cmdlet:

```
Resume-AzureRmSqlDatabase -ResourceGroupName "virtualGroup" -ServerName
"v8a0ujjshk" -DatabaseName "myWarehouse"
```

You can verify in the Azure Portal in Databases, that the Warehouse is online:



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Filter by name...

1 items

NAME

myWarehouse ...

Your data warehouse has moved to GA pricing on September 1, 2016. Learn More →

Resource group
virtualGroup

Status
Online

Location
South Central US

Subscription name
Visual Studio Ultimate with MSDN

Subscription ID
994fc6e1-ea72-40ed-8df2-090d0fc1f68c

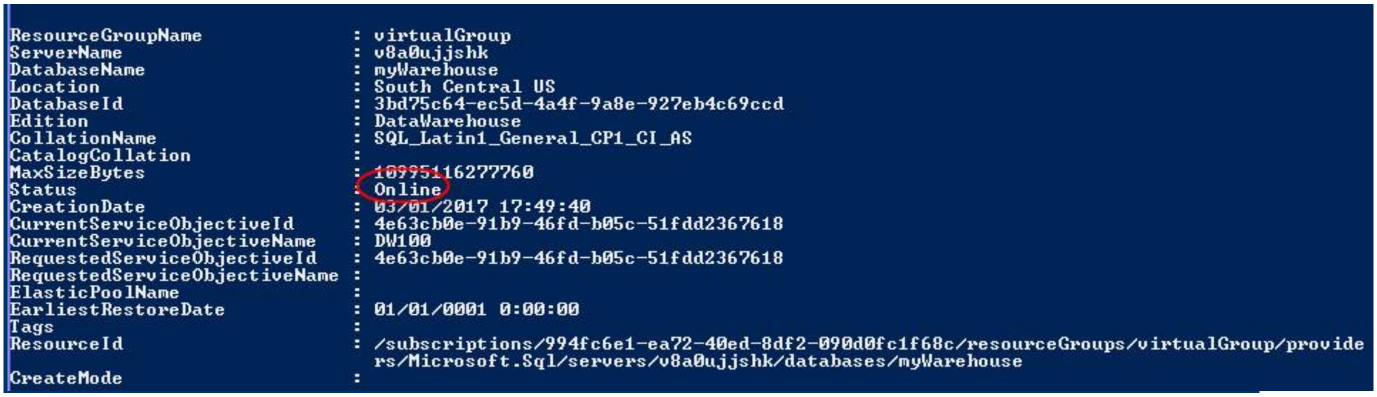
Server name
v8a0ujjshk.database.windows.net

Connection strings
Show database connection strings

Performance tier
DataWarehouse (100 DWUs)

Geo-backup policy
Enabled

In PowerShell, you can use the the Get-AzureRmSqlDatabase cmdlet used before:



```
ResourceGroupName              : virtualGroup
ServerName                     : v8a0ujjshk
DatabaseName                   : myWarehouse
Location                       : South Central US
DatabaseId                     : 3bd75c64-ec5d-4a4f-9a8e-927eb4c69ccd
Edition                        : DataWarehouse
CollationName                  : SQL_Latin1_General_CP1_CI_AS
CatalogCollation               :
MaxSizeBytes                   : 10995116277760
Status                         : Online
CreationDate                   : 03/01/2017 17:49:40
CurrentServiceObjectiveId      : 4e63cb0e-91b9-46fd-b05c-51fdd2367618
CurrentServiceObjectiveName    : DW100
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RequestedServiceObjectiveName  :
ElasticPoolName                :
EarliestRestoreDate            : 01/01/0001 0:00:00
Tags                           :
ResourceId                     : /subscriptions/994fc6e1-ea72-40ed-8df2-090d0fc1f68c/resourceGroups/virtualGroup/provide
                                 rs/Microsoft.Sql/servers/v8a0ujjshk/databases/myWarehouse
CreateMode                     :
```