Lab: Create and Migrate to Azure SQL Database

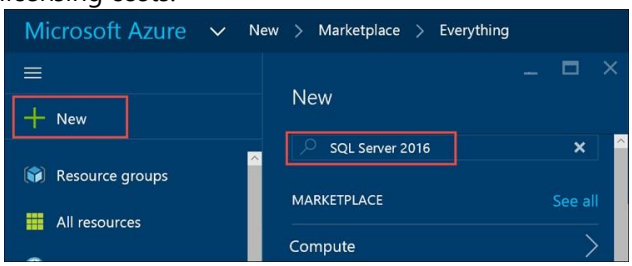
Lab Overview

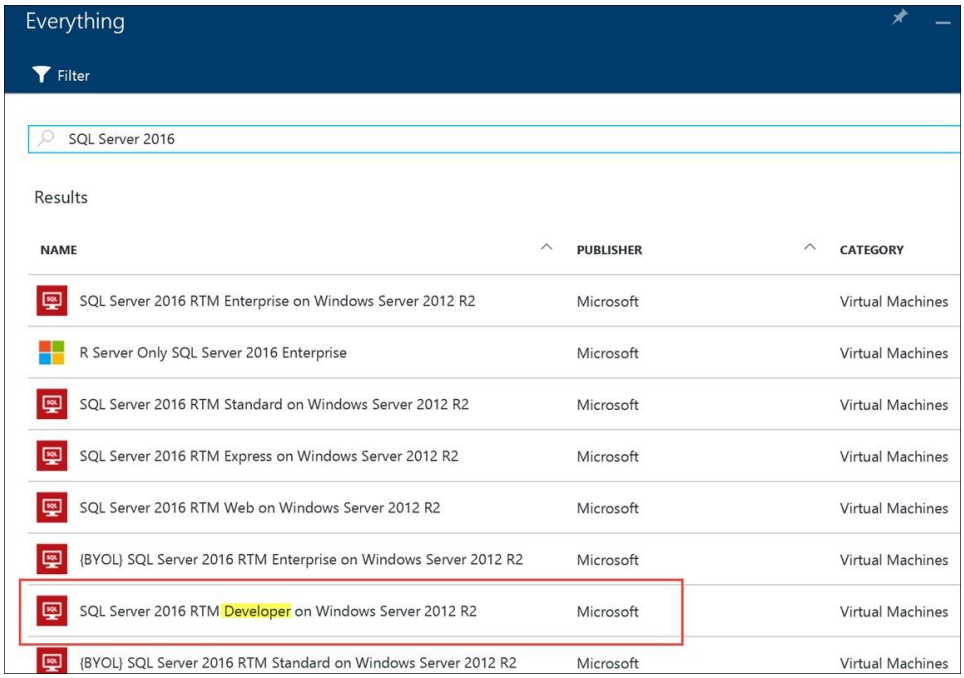
In this lab you will create an Azure SQL Database using the Azure Portal and connect to it using SQL Server Management Studio. You will then migrate a database hosted on a virtual machine to an Azure SQL Database.

Exercise 1: Create a Lab machine and restore the sample database

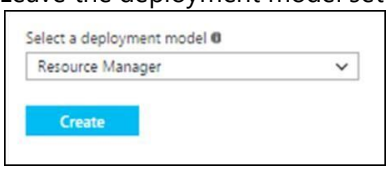
In this exercise you will create a lab machine using a SQL Server image from the Azure Marketplace. You will also restore the AdventureWorks sample database to your lab machine. This virtual machine will be used as your lab server for completing the remaining exercises.

1. In the Azure Portal, click New, then type SQL Server 2016 into the search field. Choose SQL Server 2016 RTM Developer from the results. Verify that you are choosing the developer edition as other editions will incur additional licensing costs.



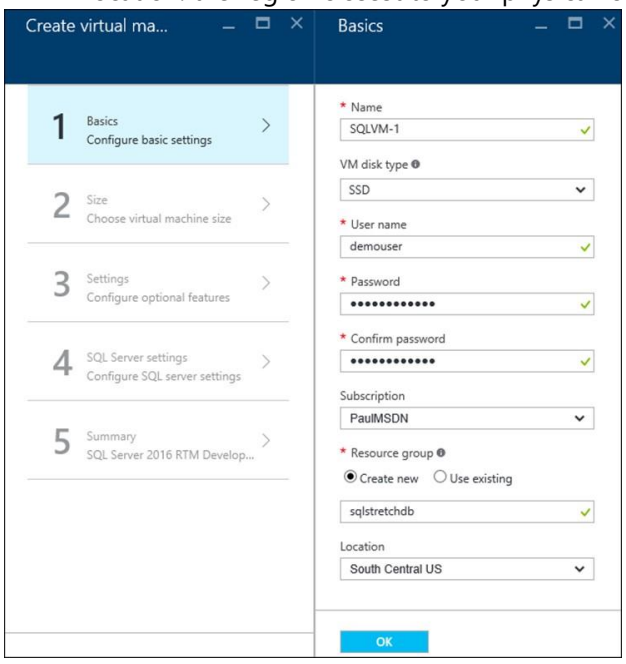


2. Leave the deployment model set to Resource Manager and click Create.



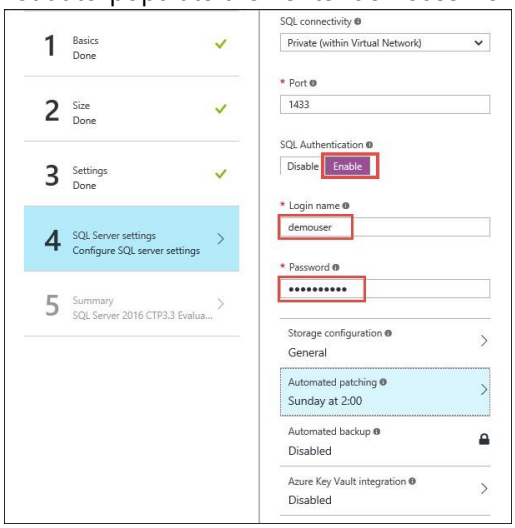
3. On the Basics blade, specify the following configuration and click OK.
   - Name: empidName
   - VM disk type: HDD
   - User name: demouser
   - Password: demo@pass123
   - Subscription: Ensure the correct subscription is selected Resource Group: Create a new resource group

- Location: the region closest to your physical location



4. On the size blade, select View all to see all available VM size options. Choose **A0 Standard** and then click Select at the bottom of the page.

5. On the setting blade, accept the defaults and click OK.
6. On the SQL Server settings blade, click the Enable button for SQL Authentication. The Login name field should autopopulate with the demouser account you entered in the basic configuration for the VM. If the login name did not auto-populate then enter demouser for the login name and demo@pass123 for the password.



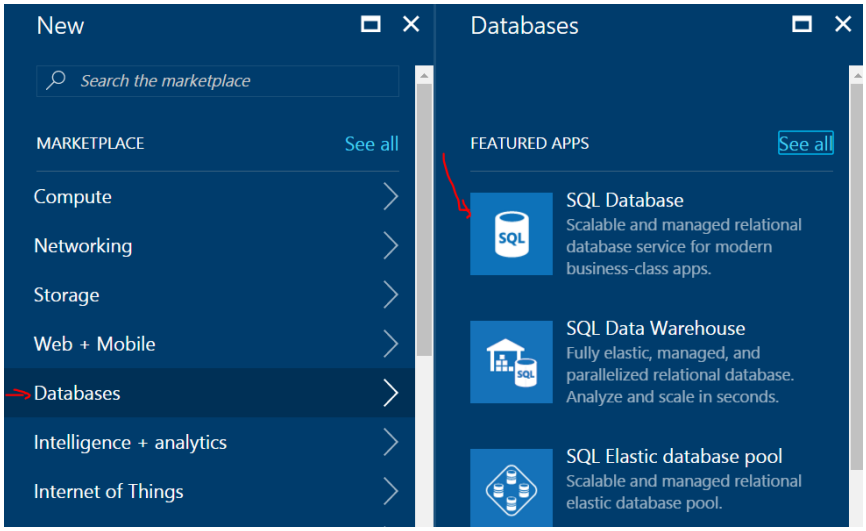
7. On the Summary blade review the summary of your configuration and settings. Click the OK button to begin provisioning your virtual machine. The virtual machine will take approximately 10 minutes to create. Wait for the virtual machine deployment to complete before moving to the next exercise.

Exercise 2: Create an Azure SQL Database

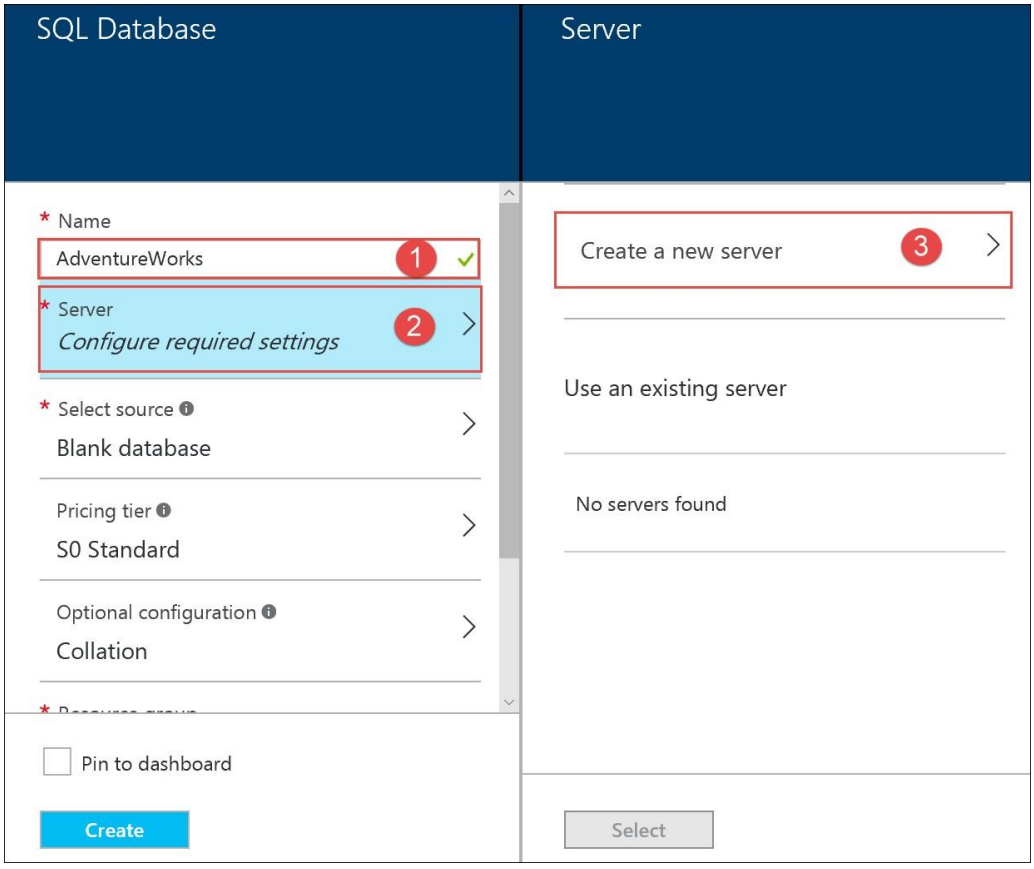
In this exercise you will create an Azure SQL Database.

1. Launch a browser and navigate to https://portal.azure.com. Once prompted, login with your Microsoft Azure credentials. If prompted, choose whether your account is an organization account or just a Microsoft Account.

2. Click New, Database, and then click SQL Database.

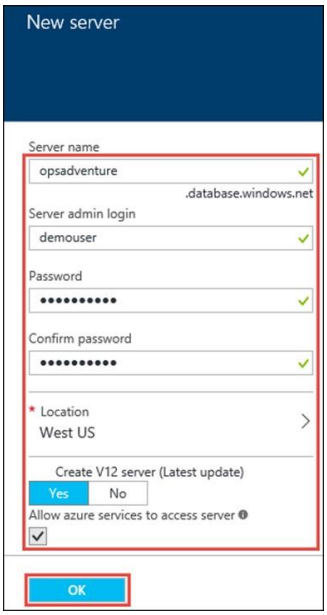


3. On the SQL Database blade, type AdventureWorks for the name then click the Server tile and select Create a new server.

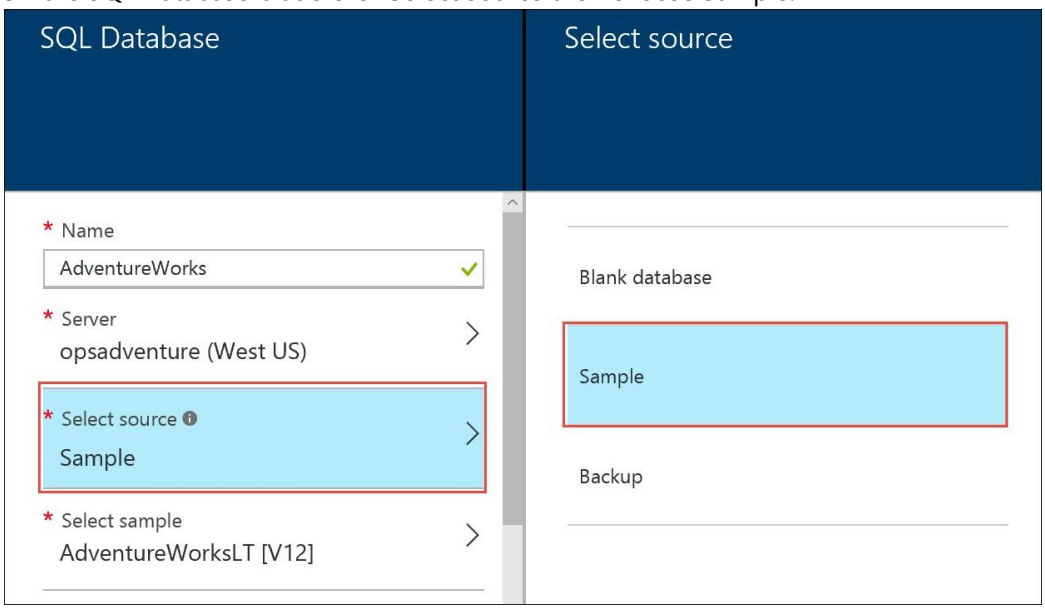


4. Specify the following configuration:

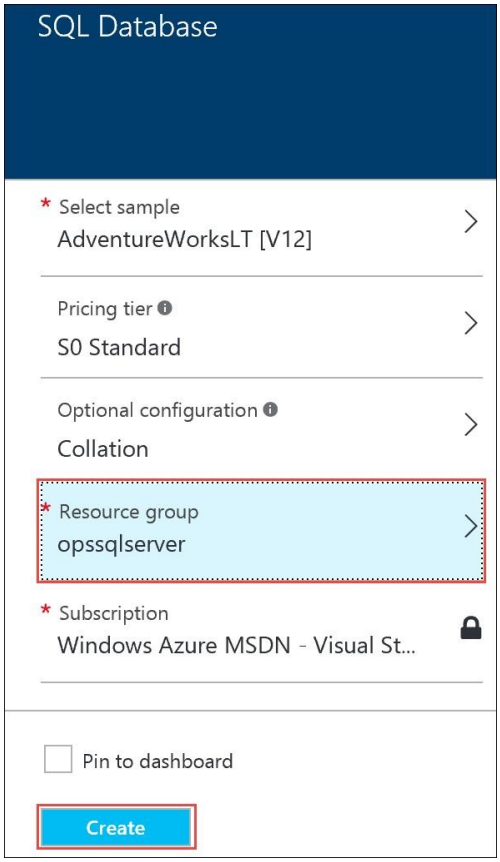
- Server name: a unique name for your server. This is the name you will connect to.
- Server admin login: demouser
- Password: demo@pass123
- Location: Select the Azure region you are using for your labs
- Create V12 server: Yes
- Check the box next to Allow azure services to access server
- Click OK.



5. On the SQL Database blade click Select source then choose Sample.



6. On the SQL Database blade change the Resource group to Infosyssqlserver then click the Create button.



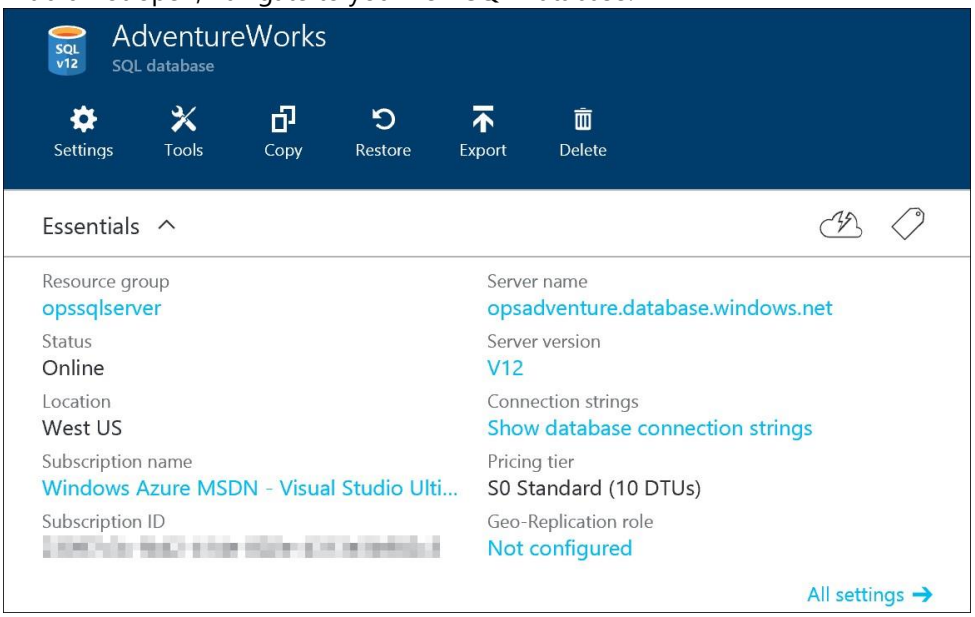
7. Wait for the SQL Database to create before starting the next exercise.

Exercise 2: Connect to and Manage an Azure SQL Database

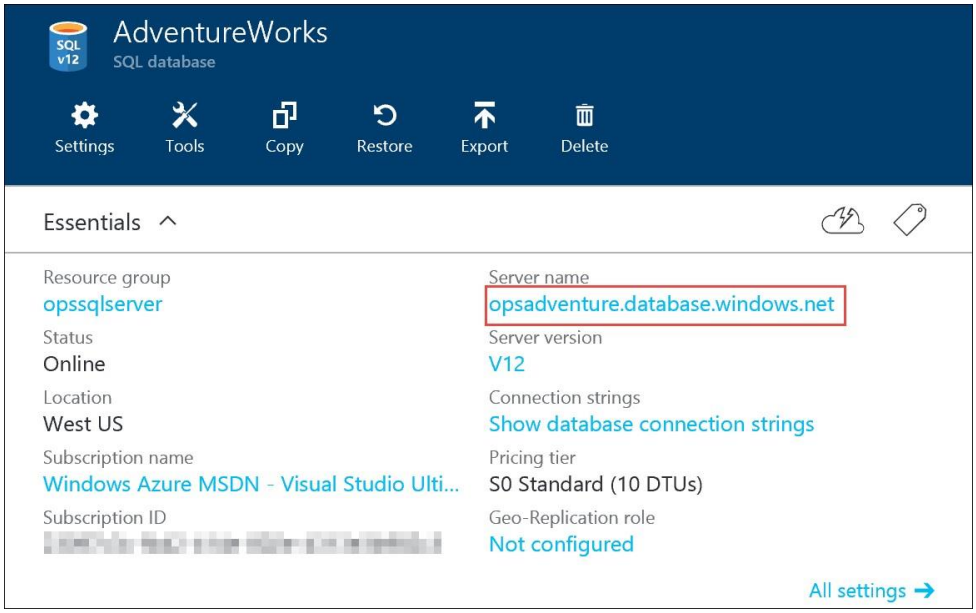
In this exercise you will connect to your new SQL Database.

13. Connect to your lab machine, launch Internet Explorer and navigate to the Azure Portal.

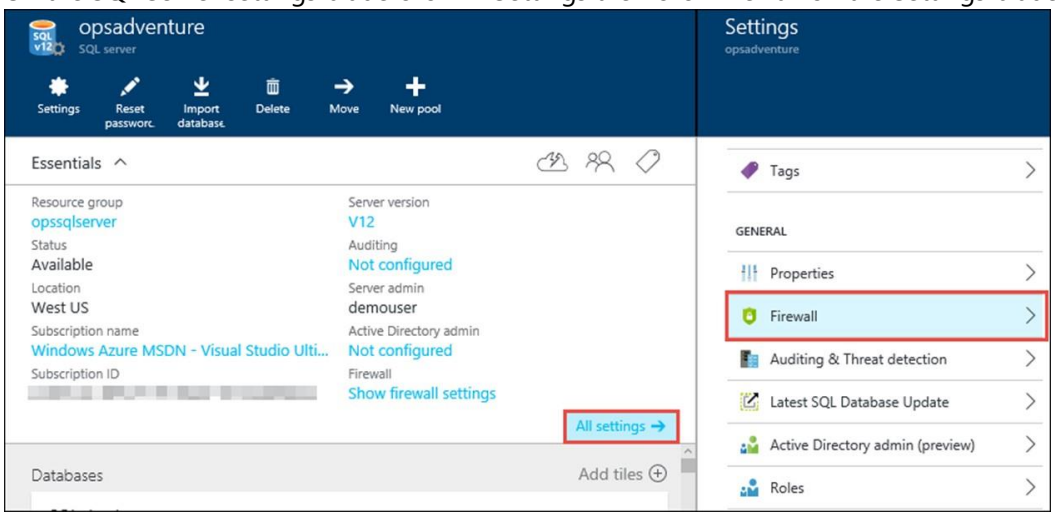
14. In the Azure Portal, your AdventureWorks SQL Database configuration should automatically open upon completion. If it did not open, navigate to your new SQL Database.



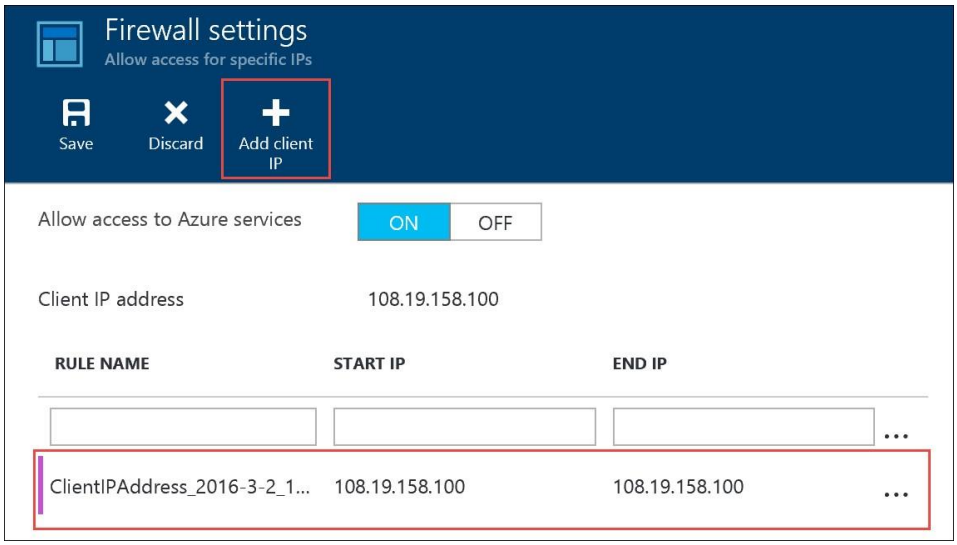
15. Copy the Server name and paste it into notepad for future reference, then click on the Server name to open the SQL Server settings blade.



16. On the SQL Server settings blade click All Settings then click Firewall on the Settings blade.

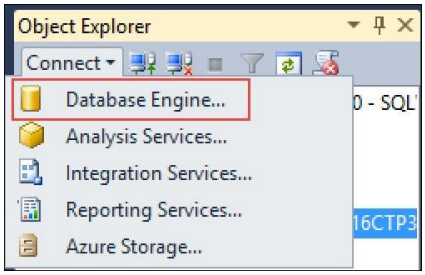


17. On the Firewall settings blade click the Add client IP button then click the Save button. This will create a firewall rule to allow access from your current client IP address. If your IP address changes in the future, you will need to add a new firewall rule for the new IP address.
new firewall rule for the new IP address.

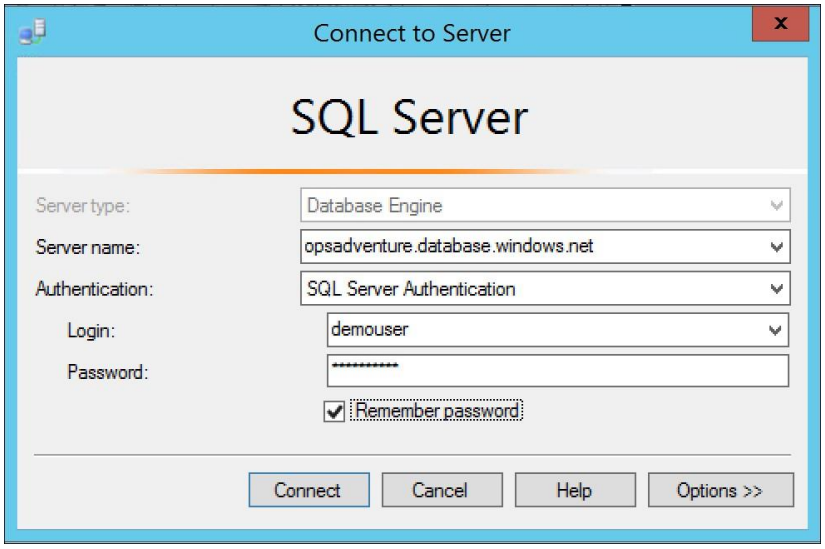


18. Launch SQL Server Management Studio from within your lab machine and connect to the local server.

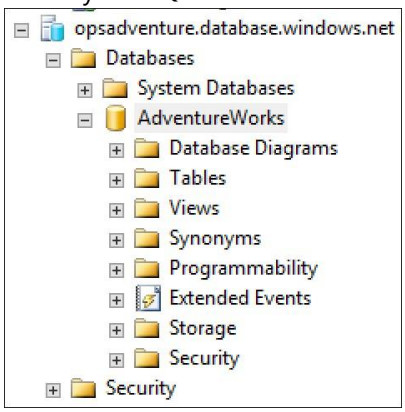
19. Click the Connect button and select Database Engine…



20. In the Connect to Server window change the server name to the FQDN of your Azure SQL Database. Set the Authentication to SQL Server Authentication, use your demouser administrative account and password. Click Connect.



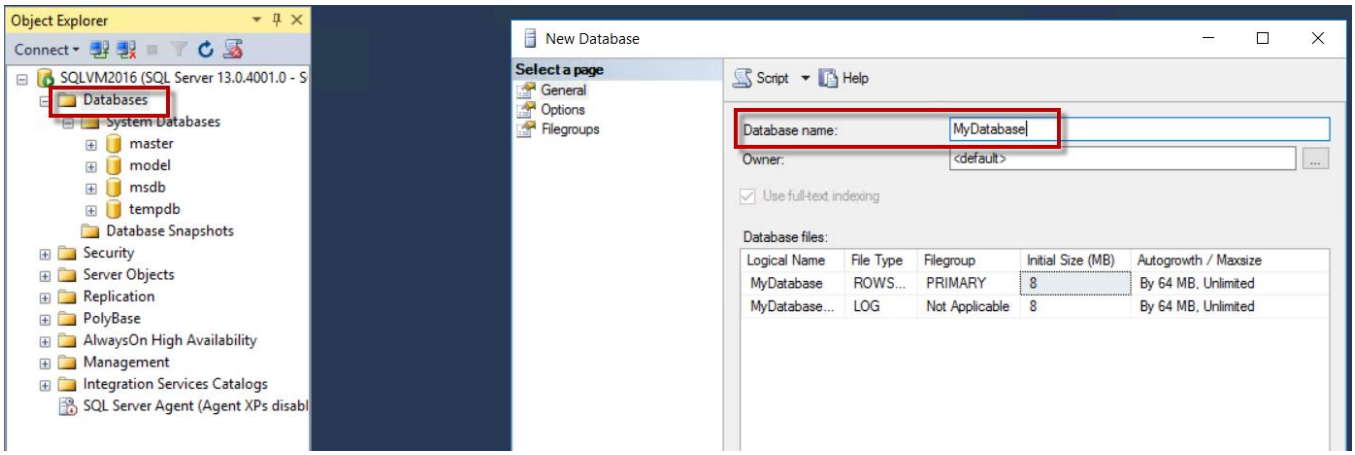
21. Under your SQL Database connection, expand Databases. You should see your AdventureWorks sample database.



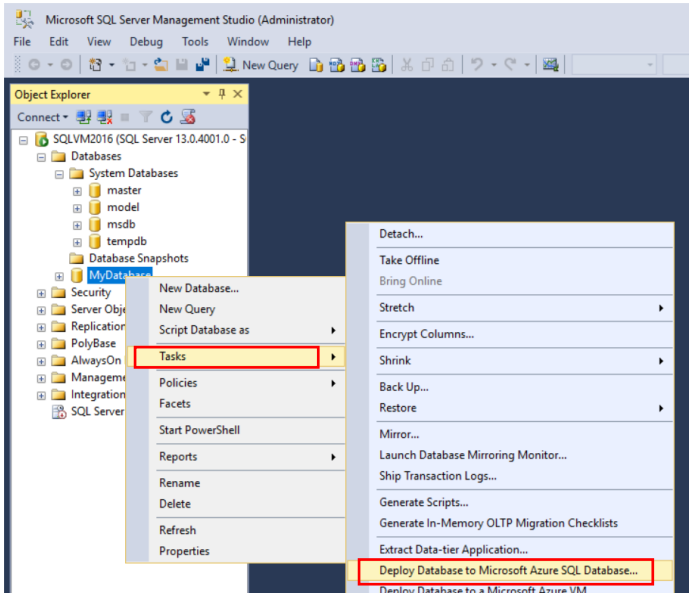
Exercise 3: Migrate an Existing SQL Server Database to Azure SQL Database

In this exercise you will connect to your local server and migrate a database from SQL Server 2016 to Azure SQL Database.

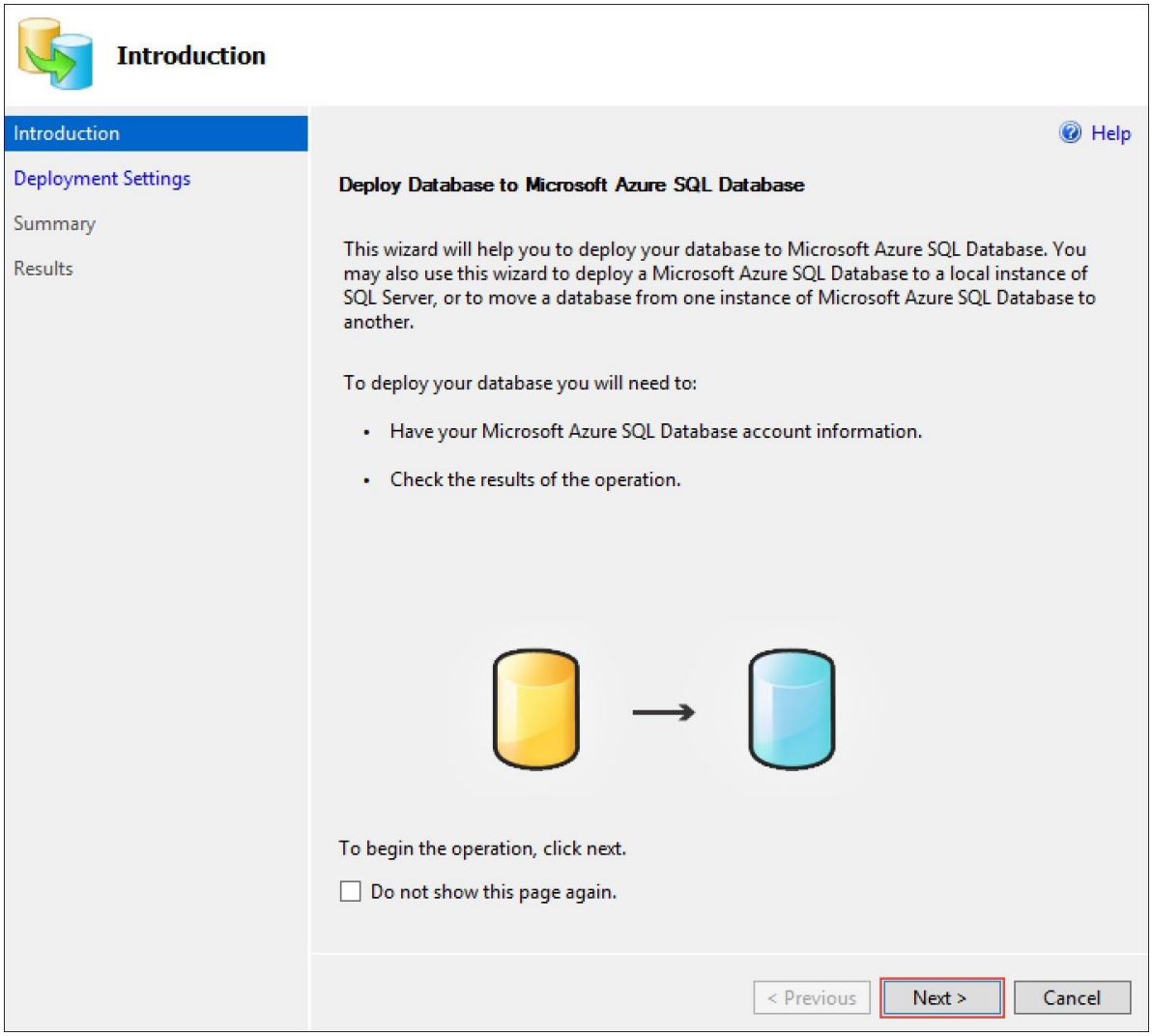
1. Connect to the SQL Server instance on your lab machine. Expand the Databases folder, Create New Database,



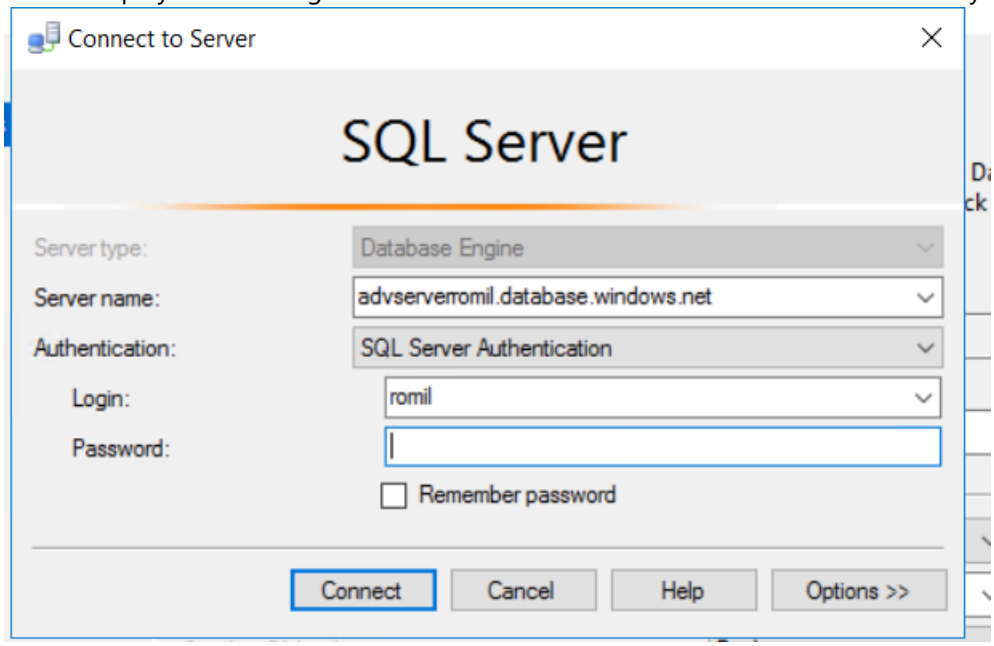
select Tasks, and click Deploy Database to Microsoft Azure SQL Database…



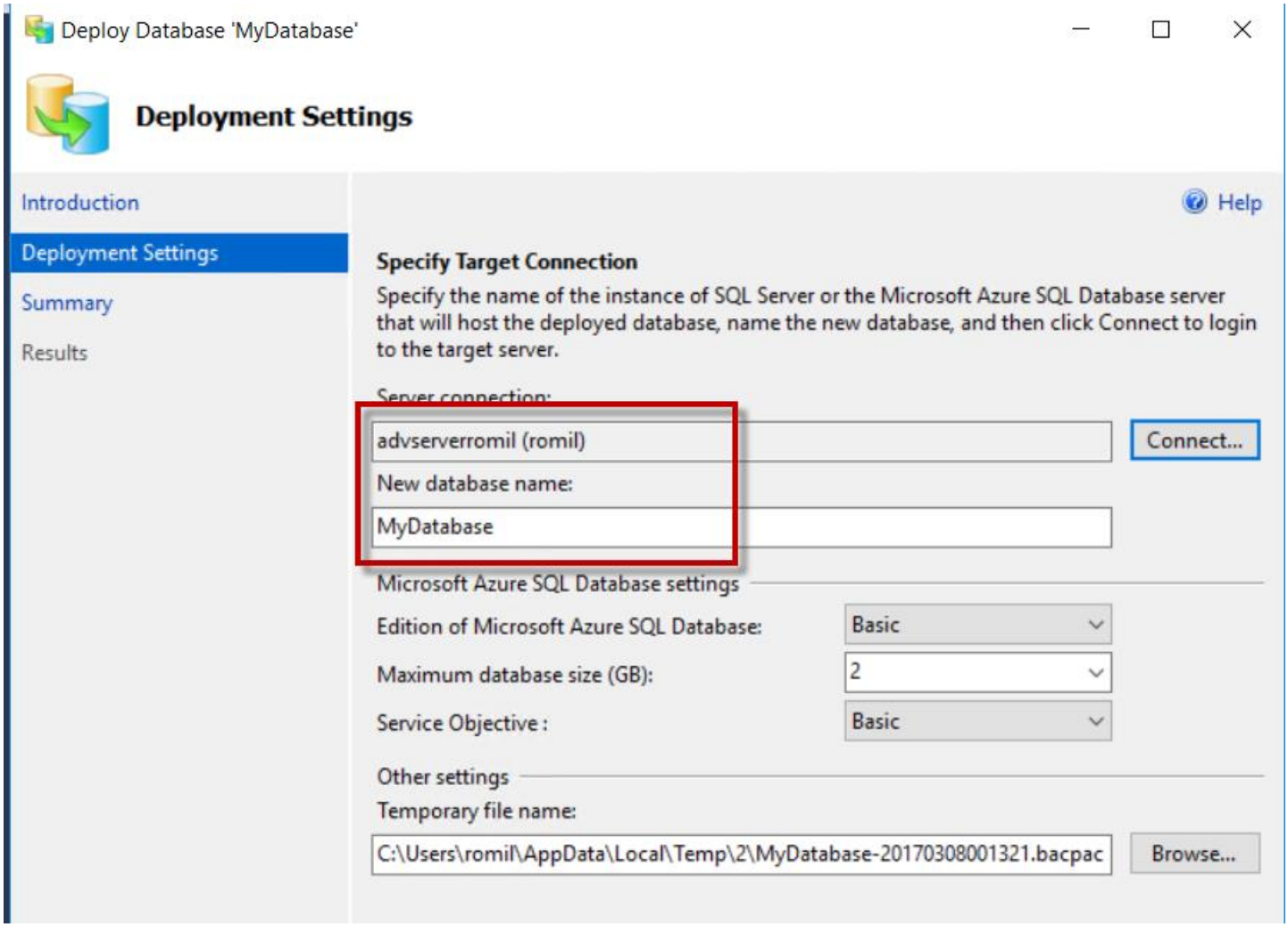
2. Click Next on the Introduction window.



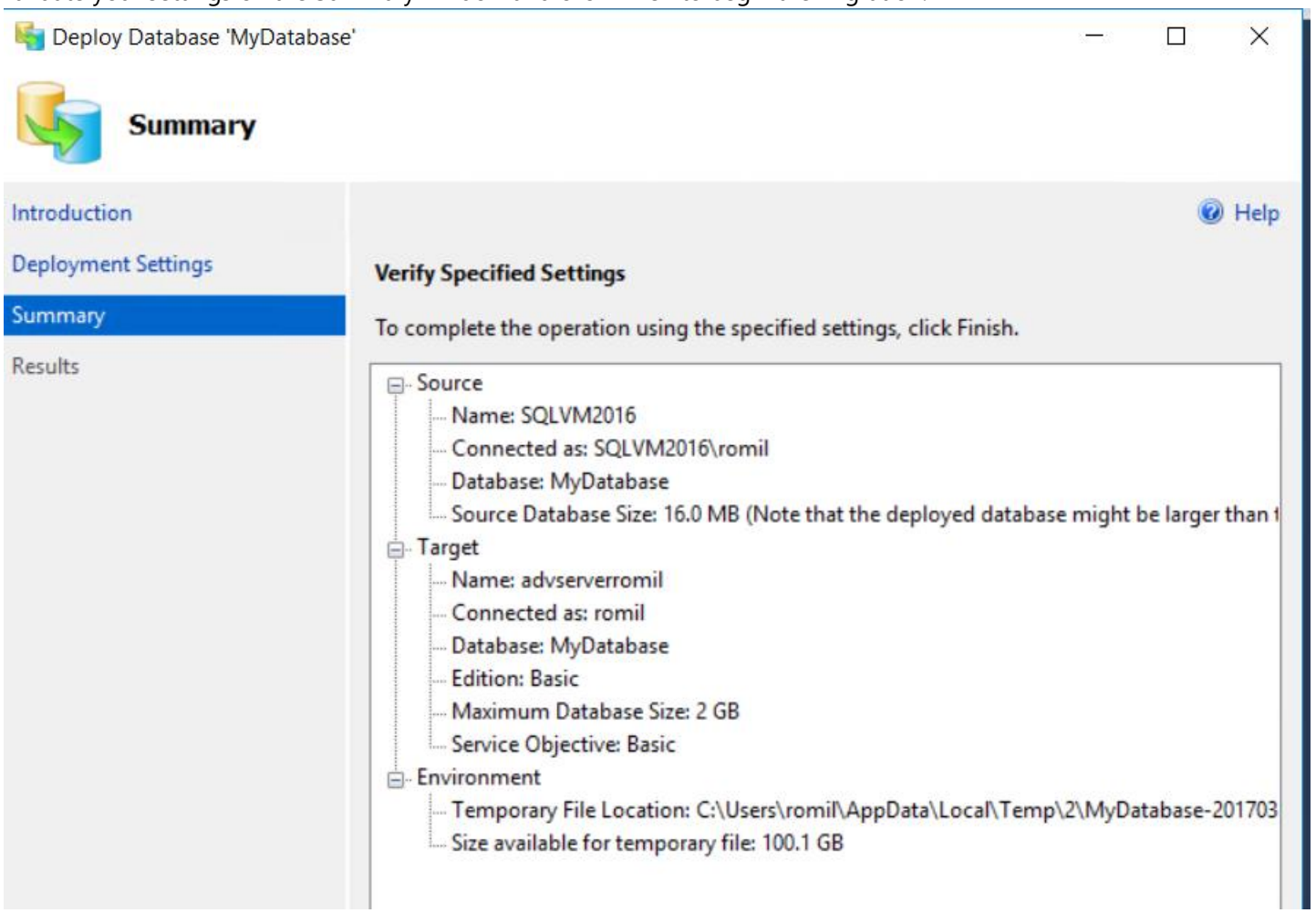
3. On the Deployment Settings window and click the Connect button and connect to your Azure SQL Server.

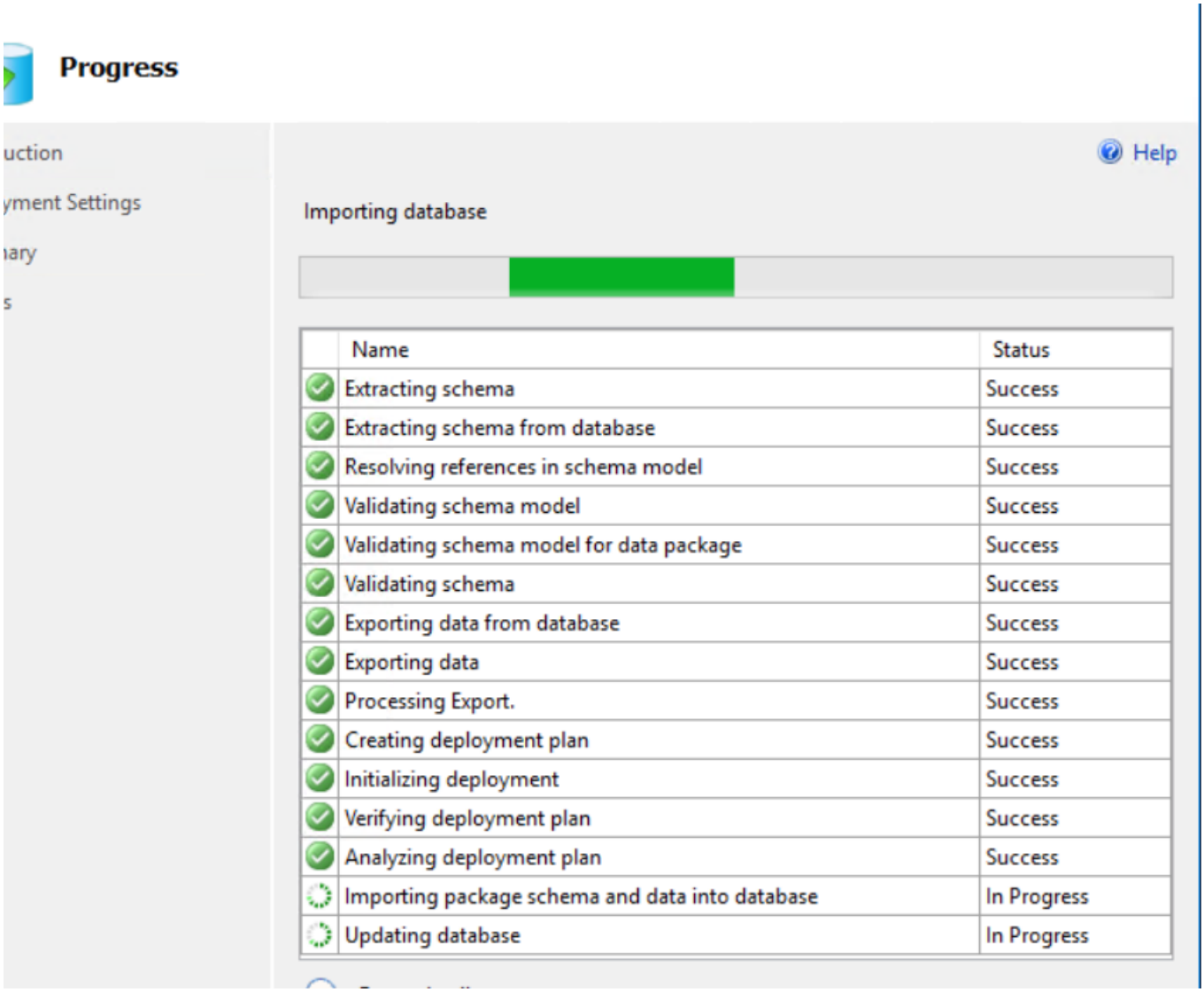


4. The rest of the Deployment Settings should auto-populate and look similar to what you see below. Click the Next button to continue.


Deploy Database 'MyDatabase'
Deployment Settings
Introduction
Deployment Settings
Summary
Results
Help
Specify Target Connection
Specify the name of the instance of SQL Server or the Microsoft Azure SQL Database server that will host the deployed database, name the new database, and then click Connect to login to the target server.
Server connection:
advserverromil (romil)
Connect...
New database name:
MyDatabase
Microsoft Azure SQL Database settings
Edition of Microsoft Azure SQL Database:
Basic
Maximum database size (GB):
2
Service Objective :
Basic
Other settings
Temporary file name:
C:\Users\romil\AppData\Local\Temp\2\MyDatabase-20170308001321.bacpac
Browse...

5. Validate your settings on the Summary window and click Finish to begin the migration.




Progress
uction
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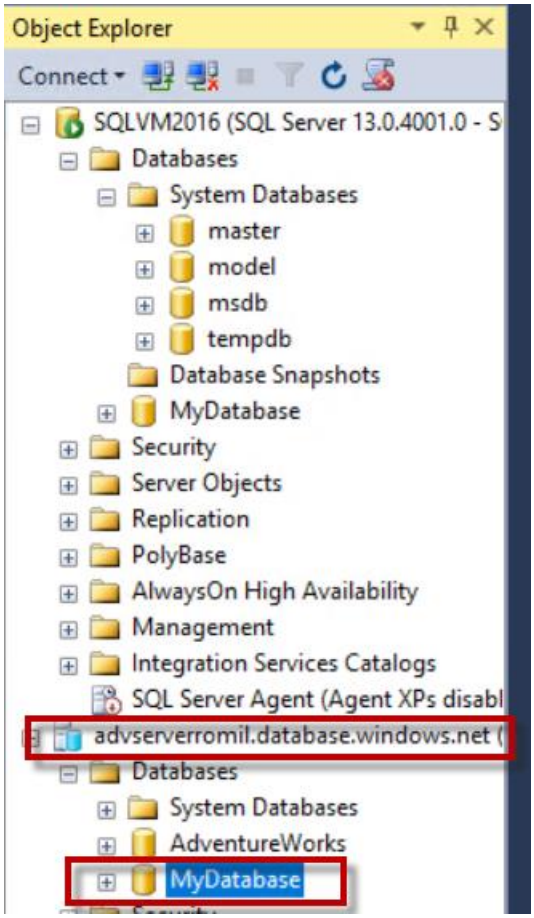
s
Help
Importing database
Name
Status
Extracting schema
Success
Extracting schema from database
Success
Resolving references in schema model
Success
Validating schema model
Success
Validating schema model for data package
Success
Validating schema
Success
Exporting data from database
Success
Exporting data
Success
Processing Export.
Success
Creating deployment plan
Success
Initializing deployment
Success
Verifying deployment plan
Success
Analyzing deployment plan
Success
Importing package schema and data into database
In Progress
Updating database
In Progress



Lab Summary

In this lab you created an Azure SQL Database using the Azure Portal and connected to it using SQL Server Management Studio. You then migrated an existing database hosted on a virtual machine to an Azure SQL Database.