

Installation of Azure SQL Virtual Machine (VM) for BI4Dynamics FO

Date	February 2021
Document version	1.8

Contents

1	About BI4Dynamics FO installation	3
1.1	Infrastructure and application installations	3
1.2	Installation of Azure VM	3
2	Create Azure SQL Virtual Machine	4
2.1	Create Azure SQL	4
2.2	Configure Virtual Machine	8
3	Setup Virtual Machine	10
3.1	Connect to Virtual Machine.	10
3.2	Setup SQL server Analysis Services	12
4	Result	13
4.1	Information needed for BI4Dynamics application installation	13
4.2	Next step – BI4Dynamics applications installation	13

1 About BI4Dynamics FO installation

1.1 Infrastructure and application installations

BI4Dynamics SaaS installation comes in two steps:

1.1.1 Infrastructure part: installation of Azure Virtual Machine

Azure resources must be prepared ahead of BI4Dynamics application installation. Installation is focused on the creation and setting of Azure Virtual Machine.

1.1.2 Application part: installation of BI4Dynamics application

BI4Dynamics application on VM is very similar to an on-premises installation. Here is the link to installation documentation: <https://www.bi4dynamics.com/documents/>

1.2 Installation of Azure VM

This document will guide you through the installation of Azure VM and the resources needed to run BI4Dynamics Cloud.

1.2.1 Installation documentation from Microsoft

Microsoft documentation **How to use the Azure portal to provision a Windows virtual machine with SQL Server** has more details that needed in BI4Dynamics process:

<https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/create-sql-vm-portal#4-configure-sql-server-settings>

You do not need to use this documentation if you follow BI4Dynamics installation described in below.

1.2.2 Prerequisites

User must be **administrator** in Azure portal with active **Azure subscription**.

1.2.3 Deliverables

- ✓ SQL Virtual Machine to host BI4Dynamics data warehouse

1.2.4 Expected installation time

Time needed:

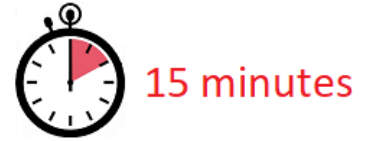


30 minutes

Deployment time of Azure resources may vary 50% (no rule in respect of daytime or region).

2 Create Azure SQL Virtual Machine

2.1 Create Azure SQL

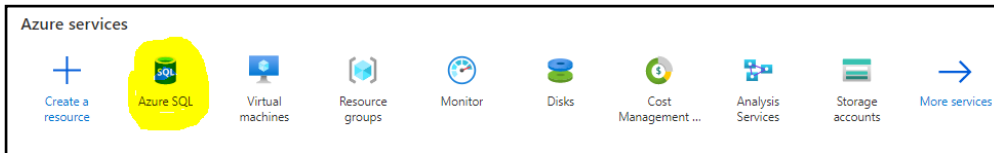


2.1.1 Login to azure portal

Login to Azure portal: <https://portal.azure.com/#home>

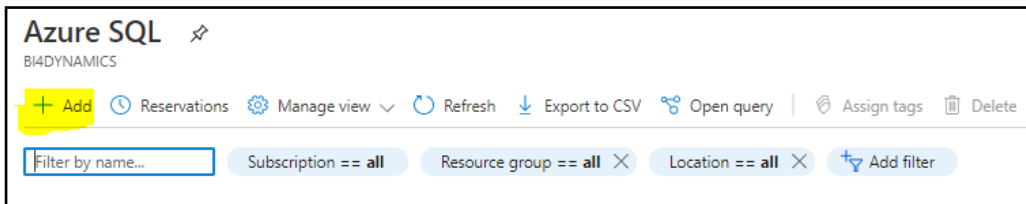
2.1.2 Create VM as Azure SQL Service

Select **Azure SQL**

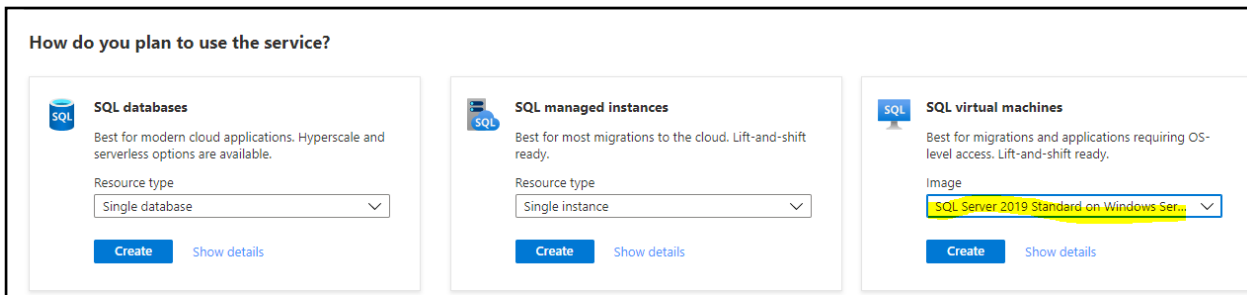


Do not use Virtual machine ikon, as that will install VM without SQL server pre-installed and would require SQL server installation separately. Use Azure SQL option, that is VM with SQL server preinstalled.

Click **Add**



Select **SQL Server 2019 Standard on Windows Server**



Click **Create**

Settings start on **Basic** tab:

- Create or select **Resource Group**.
- Set virtual machine **Name** and **Region**.

Create a virtual machine

Basics | Disks | Networking | Management | Advanced | SQL Server settings | Tags | Review + create

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 *

Resource group * [Create new](#)

Instance details

Virtual machine name *

Region *

Availability options

Image * [See all images](#)

Azure Spot instance

Size * [See all sizes](#)

- Select **Size** that will support your data load (a new window will open for this selection):

Search by VM size... | Display cost: Monthly | vCPUs: 2 | RAM (GiB): 8 | Add filter

Showing 13 of 408 VM sizes. | Subscription: Pay-As-You-Go | Region: West Europe | Current size: Standard_B2ms | Image: SQL Server 2019 Standard on Windows Server 2019 | [Learn more about VM sizes](#)

VM Size	Family	vCPUs	RAM (GiB)	Data disks	Max IOPS	Temp storage (GiB)
Most used by Azure users						
The most used sizes by users in Azure						
D2s_v3	General purpose	2	8	4	3200	16
B2ms	General purpose	2	8	4	1920	16
D-Series v4						
The latest generation D family sizes recommended for your general purpose needs						
D2as_v4	General purpose	2	8	4	3200	16
D2ds_v4	General purpose	2	8	4	3200	75
D2s_v4	General purpose	2	8	4	3200	0
B-Series						
Ideal for workloads that do not need continuous full CPU performance						
B2ms	General purpose	2	8	4	1920	16
D-Series v3						
The 3rd generation D family sizes for your general purpose needs						

- Click **Select**
- Enter **Administrator account**: this is a new account; you cannot use any existing AD, AAD or other account.

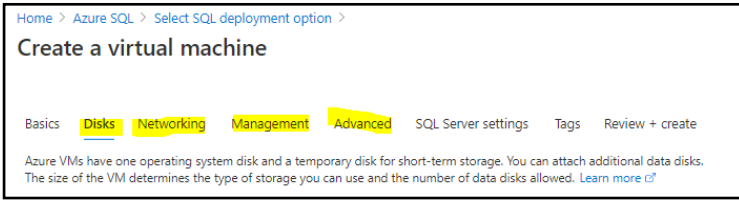
Administrator account

Username *

Password *

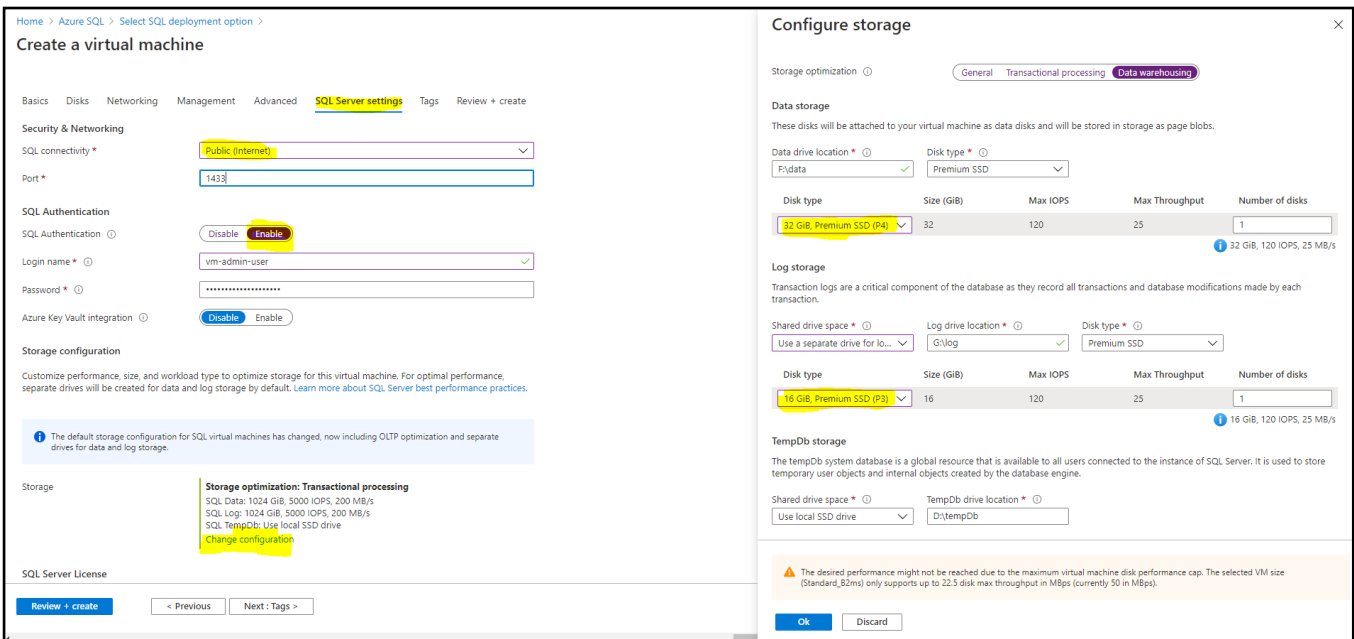
Confirm password *

Leave default values on **Disks, Networking, Management, Advanced** or change it according to your needs.



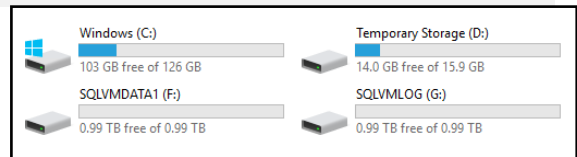
Click on **SQL Server Settings** tab

- **SQL Connectivity** select **Public (Internet)**
- **SQL Authentication** select **Enable** (default Login name and password from VM is populated automatically)
- Under storage section click **Change configuration** and select the setup (separate or shared) configuration and size of your SQL data disks.



Default VM disk configuration comes with 4 disks:

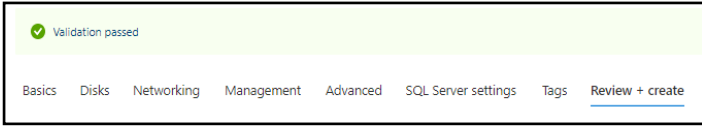
- C: 128 GB for **operating system** (default option in VM SKU)
- D: 16 GB for **temporary files** (default option in VM SKU)
- F: 1 TB for **SQL data** (default option in VM SQL installation)
- G: 1 TB for **SQL log** (default option in VM SQL installation)



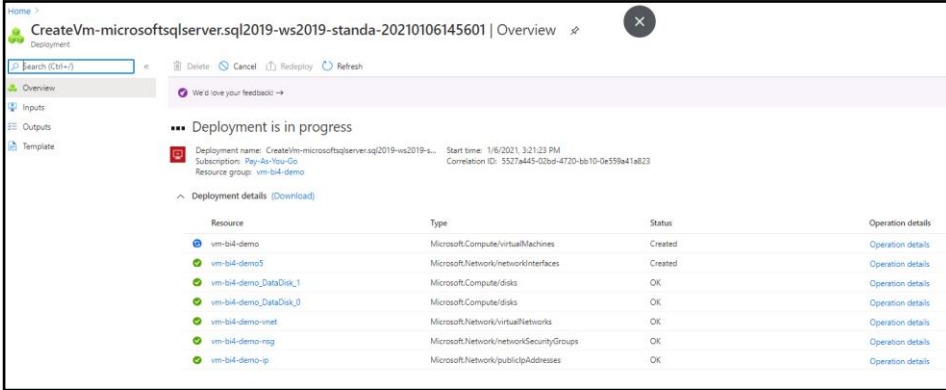
Default disk configuration for 2 data disks are SSD Premium disks, 1 TB each. **Check which disk type you need.**

It may happen that the costs of default VM SQL data disks are higher than the cost of provisioned core VM with SQL server.

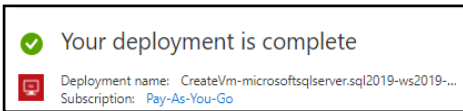
Click on **Tags** and leave default values (or change it according to your needs)
Click on **Review + create** to validate the settings



Click **Create** to create your VM (deployment will take 5-10 minutes, depends on geo location and time):



With this step we have created a VM.



In next steps we will configure VM.

You have successfully created VM.

2.2 Configure Virtual Machine



3 minutes

2.2.1 Set public IP and DNS name

Go to resource Virtual Machine and click **Configure** in DNS name:

Select Assignment: **Static IP** (message about rebooting will appear, you will reboot later)

Enter **DNS name** (hint: name can be the same as virtual machine name).

Click on **Save**

go back to main Virtual machine page

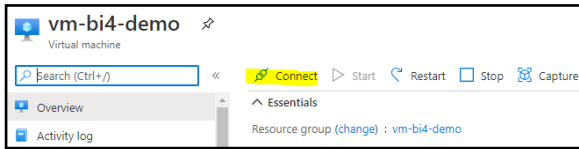
And click **Refresh**

We click refresh to get the DNS name updated. DNS name will be used for accessing VM from your local PC. Copy and paste DNS name to temporary Notepad file. We will need this information later when creating RDP access to VM.

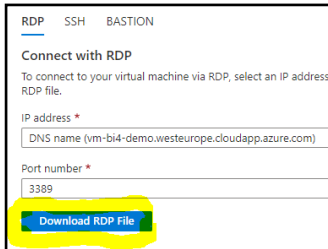
Our demo DNS name is **vm-bi4-demo.westeurope.cloudapp.azure.com**

2.2.2 Setup RDP connection

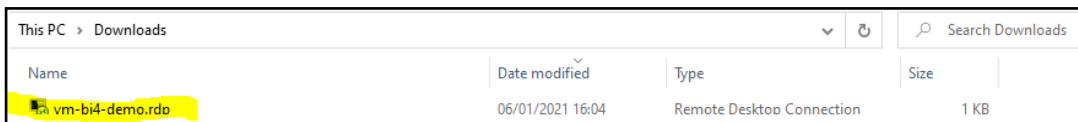
Click on **Connect** button on header toolbar



and select **RDP** and **Download RDP File**.



You have downloaded RDP file to download folder. File name is the VM name.



You have successfully created and configured VM.

3 Setup Virtual Machine

We have created a VM in previous step. Now we continue with settings and adding resources to VM.

3.1 Connect to Virtual Machine.

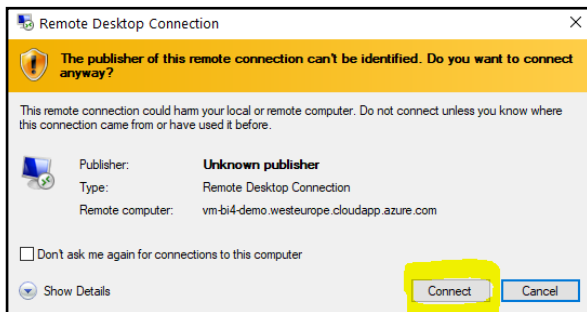


3 minutes

Click on **RDP file** that you have saved to download folder in previous steps

Name	Date modified	Type	Size
vm-bi4-demo.rdp	06/01/2021 16:04	Remote Desktop Connection	1 KB

and click **Connect**:

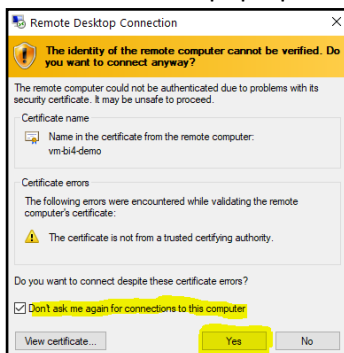


Enter administrator account credential that you have entered for this VM. Login does not require domain therefore start the name with \ followed by the **Name**.



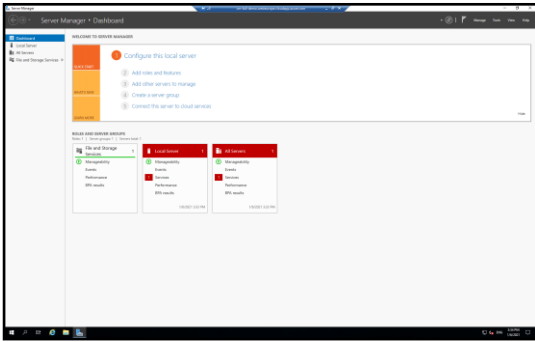
Click **OK**

This window will pop-up. Check **Don't ask me again for a connection to this computer**.



and click **Yes** to connect.

Now you should be connected to VM with RDP. Your screen should look like this:



Server Manager is started automatically.

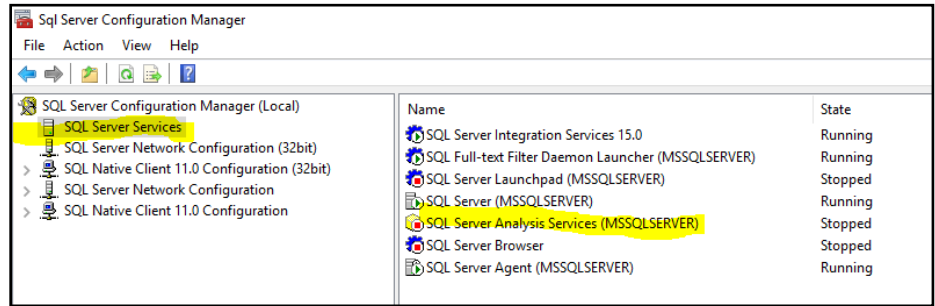
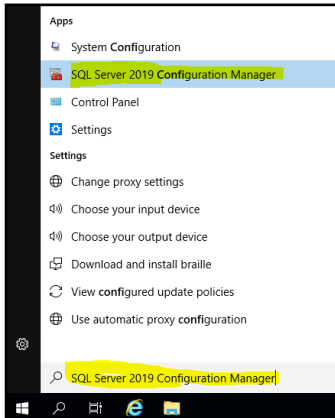
You are connected to VM by using RDP access.

3.2 Setup SQL Server Analysis Services



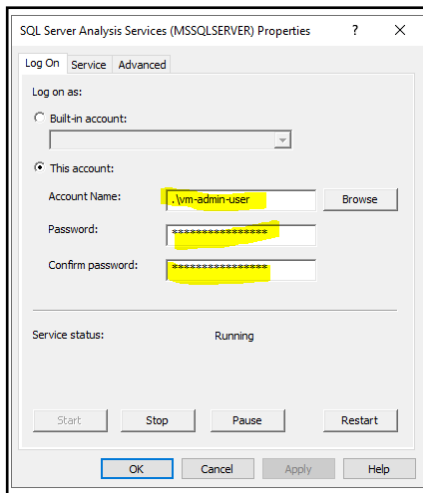
SQL Server Analysis Services is by default running as services. We need to change it to user (administrator that we created).

Go to **SQL Server 2019 Configuration Manager** and go to **SQL Server Services** menu:

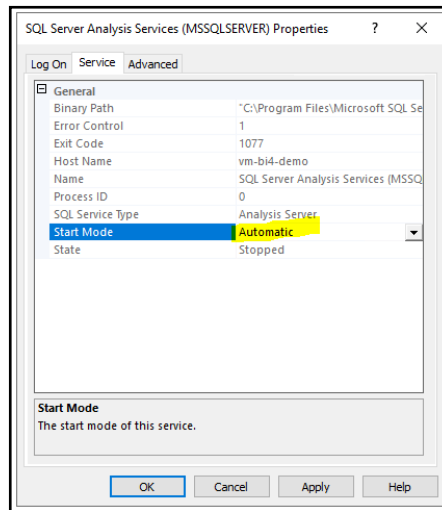


Change Log-on Account for SQL Server Analysis Services

to VM admin account:



Set start mode to Automatic:



And **Start** the service.

4 Result

4.1 Information needed for BI4Dynamics application installation

These fields created in this installation will be needed in BI4Dynamics **application** installation.

4.1.1 Information about Azure SQL Virtual Machine

Description	Value
RDP connection string (or RDP file)	vm-bi4-demo.westeurope.cloudapp.azure.com:3389
VM Admin Account	vm-admin-user
VM Admin Account Password	6!dJ2yS34MbbQiPHs@rd

4.2 Next step – BI4Dynamics applications installation

Here is document to install BI4Dynamics FO: <https://www.bi4dynamics.com/documents/>