Microsoft

# Advanced Analytics Lab: Prerequisite activity

# Contents

# Overview

## Summary

In the coming weeks you will be taking part in the Advanced Analytics Laboratory hosted at a Microsoft Technology Centre (MTC). In order for you to complete the labs we have prepared, you need to ensure that you have an **Azure subscription with admin rights.** This will allow you to create small clusters (max 4 nodes) that we will utilize during the lab – n.b. you do **not** need to create these clusters before arriving.

Please liaise with your internal IT organization to gain the necessary privileges to complete the lab.

Once your internal IT organization has granted you access to the Azure Portal we highly recommend you complete the sections in this document **before** coming to the lab to test the access granted. This document should take no more than 30 minutes to complete. If you have any difficulties at all then please get in contact with your Microsoft representative.

## Required Software

The software required to complete the lab is already installed on a pre-configured VM in Azure called *The Data Science Virtual Machine*. This virtual machine has the following software installed:

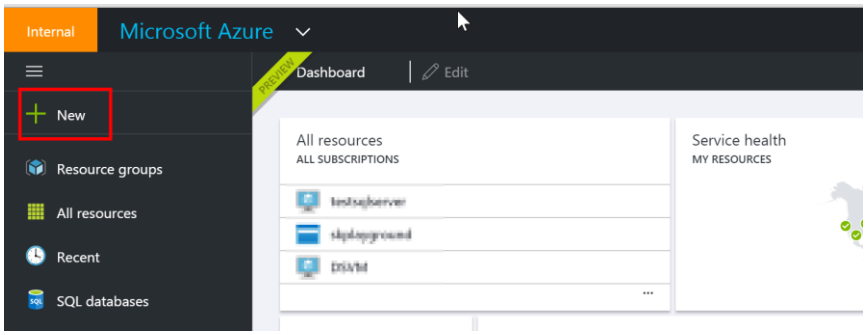
- Visual Studio 2015 Community Edition
- Azure SDK.
- Revolution R Open.
- Power BI Desktop
- SQL Server Express 2014
- IPython
- Azure PowerShell
- Azure Storage Explorer

In this prerequisite activity we will create an instance of this virtual machine and install RTools on the VM. We will also create a standard Azure Machine Learning workspace.

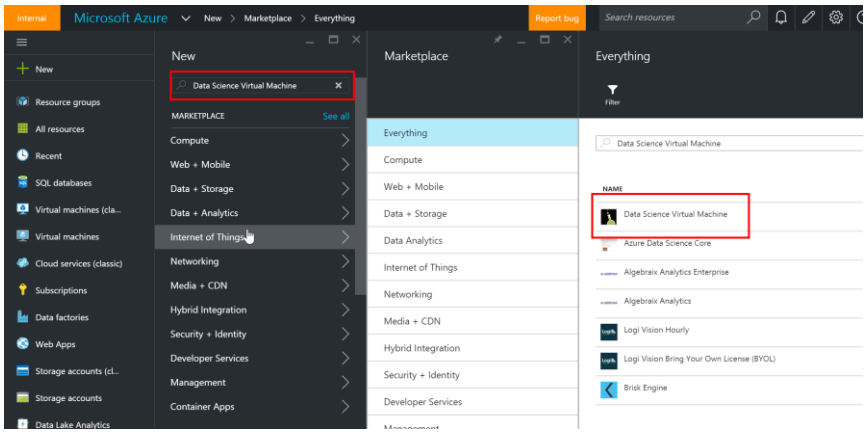
# Create the VM

1. Sign in to the Azure preview portal - https://ms.portal.azure.com/

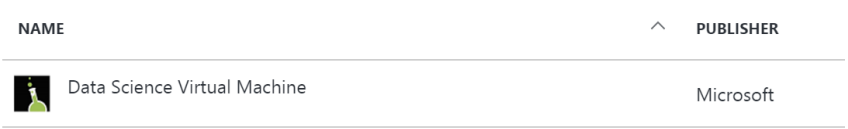
2. Click on **+ New**.




3. In the search box type **Data science virtual machine** press the return key. You should see the following

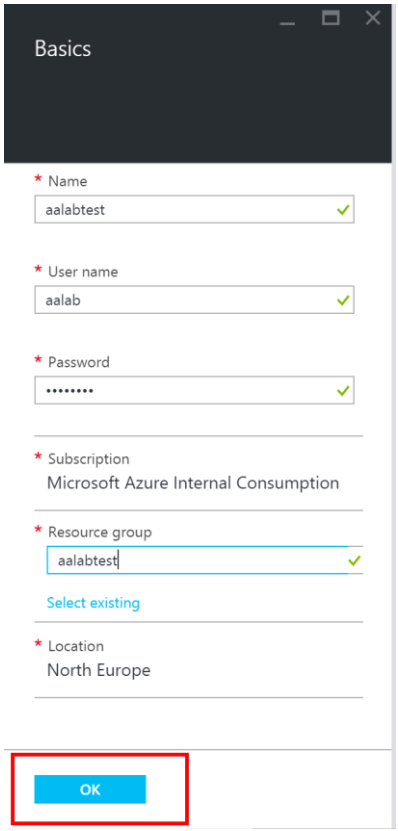



4. Click on the Data Science Virtual Machine (published by Microsoft)

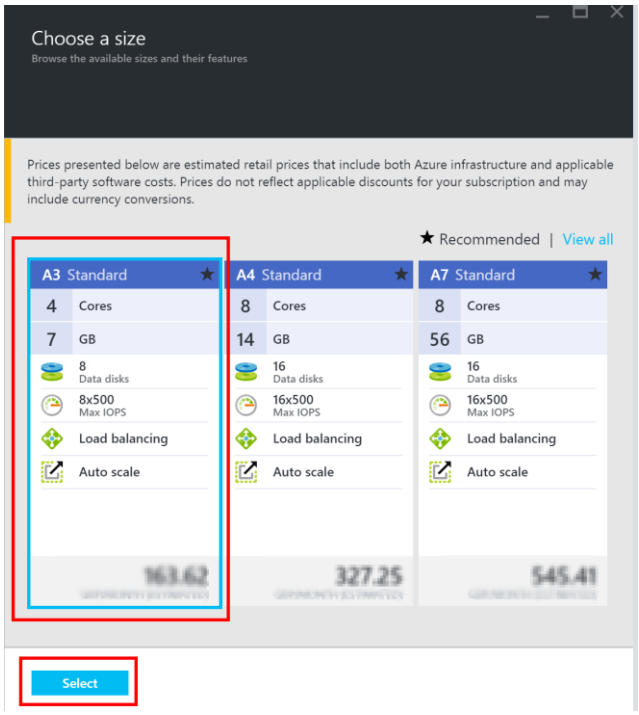



5. Click on **Create**.

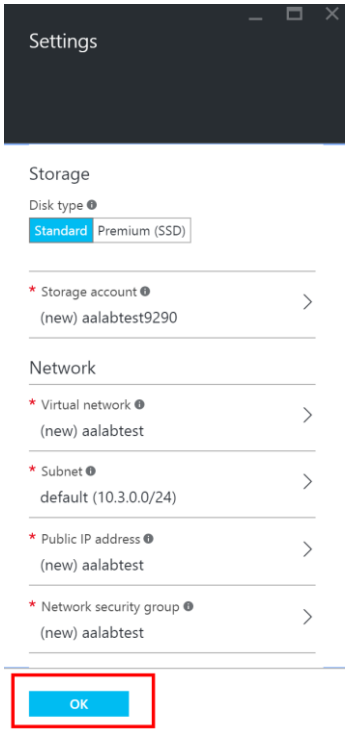
6. In the **Basics** Blade fill out a **Name** (n.b. this has to be a unique name to the whole of Azure), **User name**, **Password**, **Resource group**. Select a **location** nearest to you (this is the location of the Microsoft data center). Example entry is outlined below:



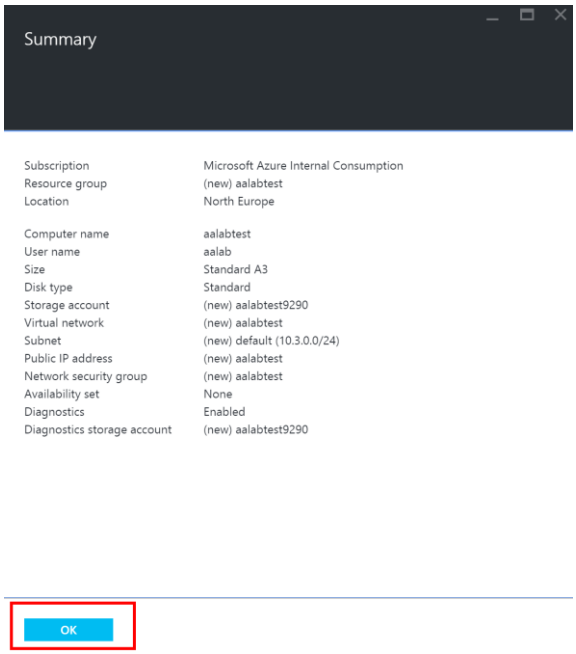

7. The Size blade will pop up next. Select **A3** (n.b. we will shut down the VM at the end of this lab).



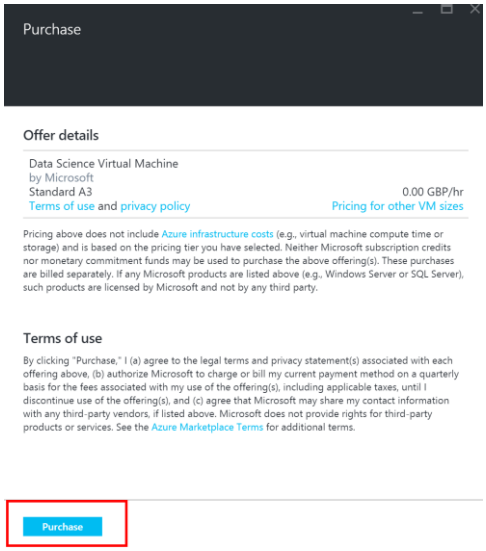

8. On the **Settings** blade click **OK**:



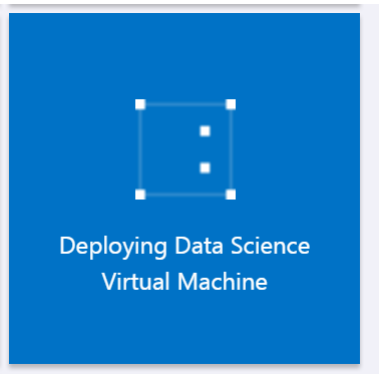

9. On the **Summary** Blade click **OK**:



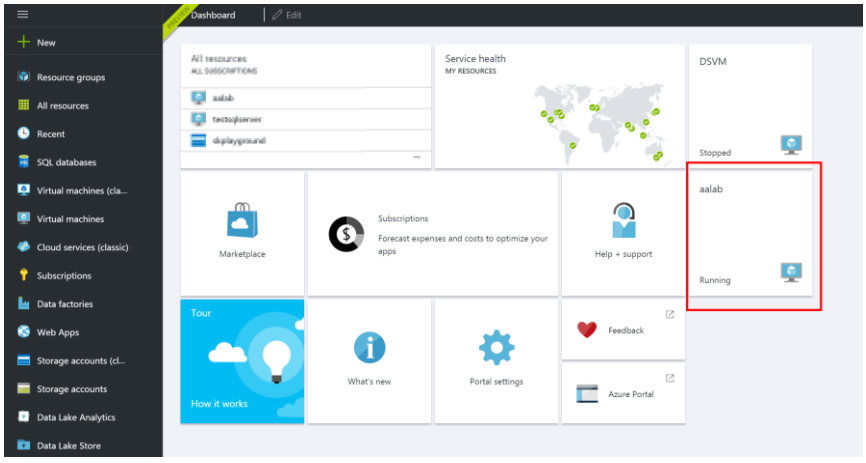

10. On the **Buy** Blade click **Purchase**:



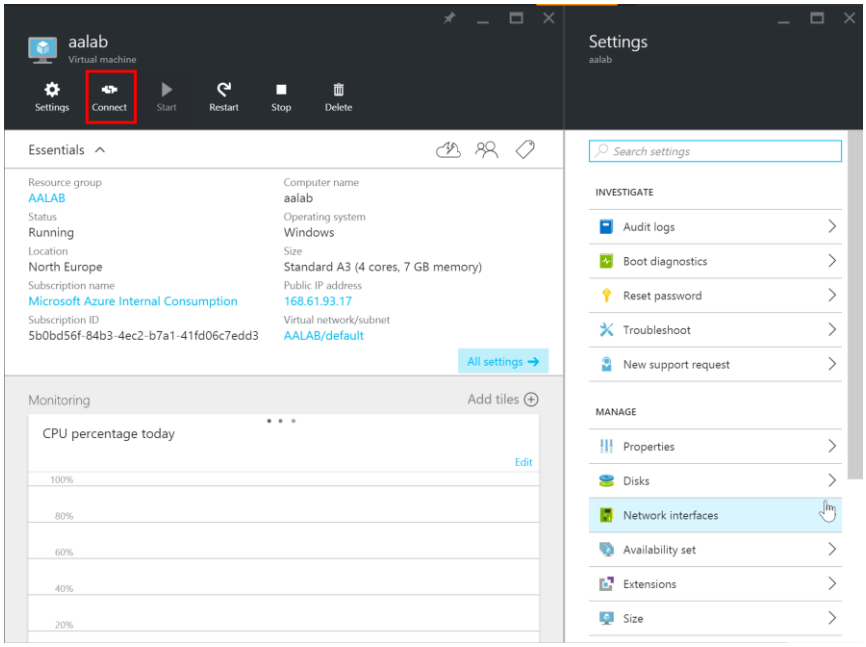

11. On the startboard you will see the VM being deployed. This will take approximately 5-10minutes.




12. Once it is successfully deployed you will see the following on the startboard:

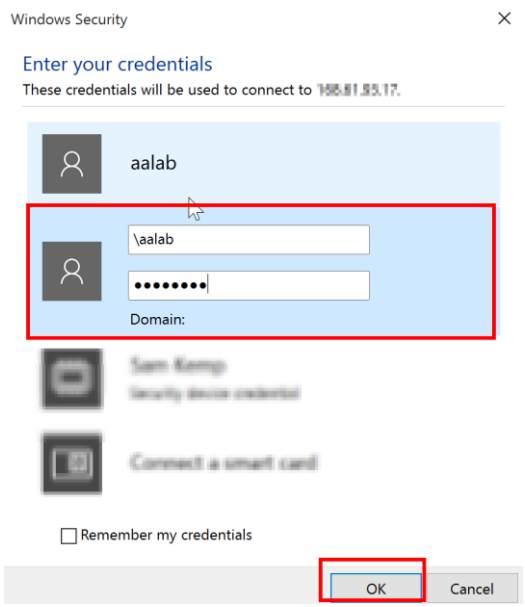



13. Click on the VM you created from the startboard to get the following page:



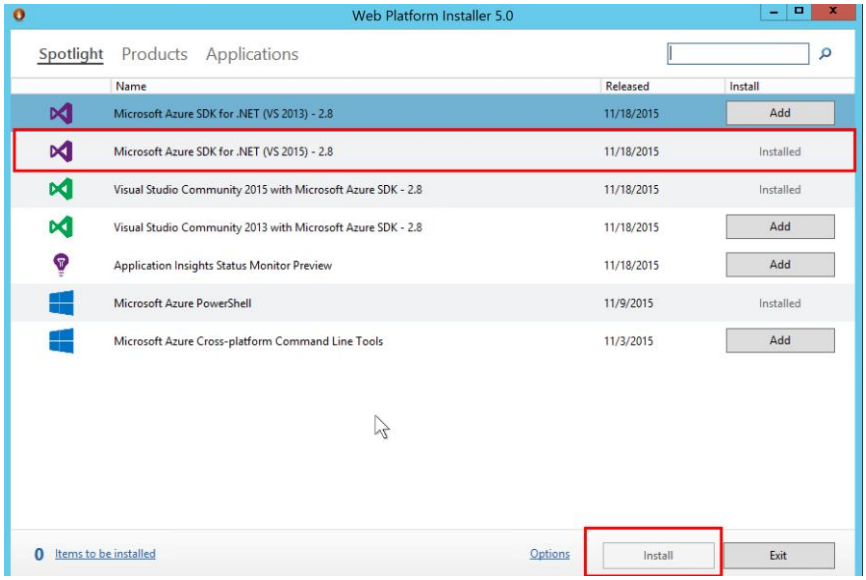

14. Click on the **Connect** button as highlighted above. Save the RDP file.

15. Double click on the downloaded RDP file to connect to the VM and enter you credentials (note the **** before the username):



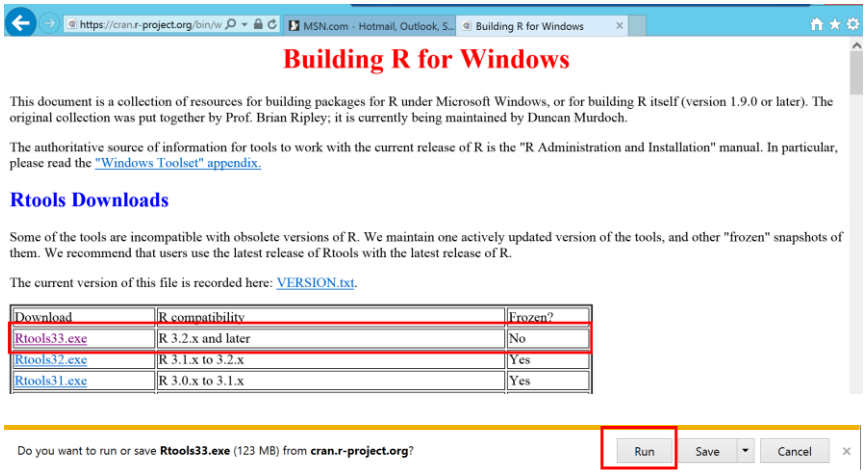

16. Once you have connected to the Data Science Virtual Machine install the Azure SDK by double clicking on the Microsoft Web Platform shortcut on the desktop:


In the installer click on **Add** for **Microsoft Azure SDK for .Net (VS 2015)** - <VERSION NUMBER> and then install:

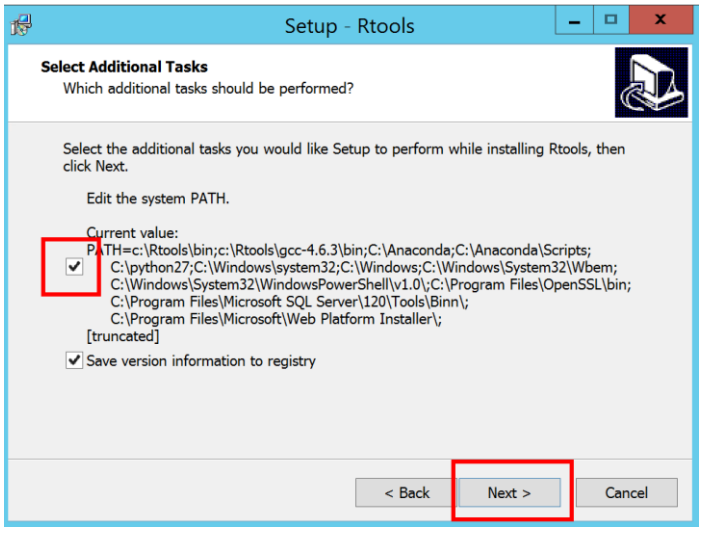



This takes approximately 5minutes to finish installing.

17. Next, **install RTools** by visiting the following site - https://cran.r-project.org/bin/windows/Rtools/ - in Internet Explorer and downloading Rtools33.exe

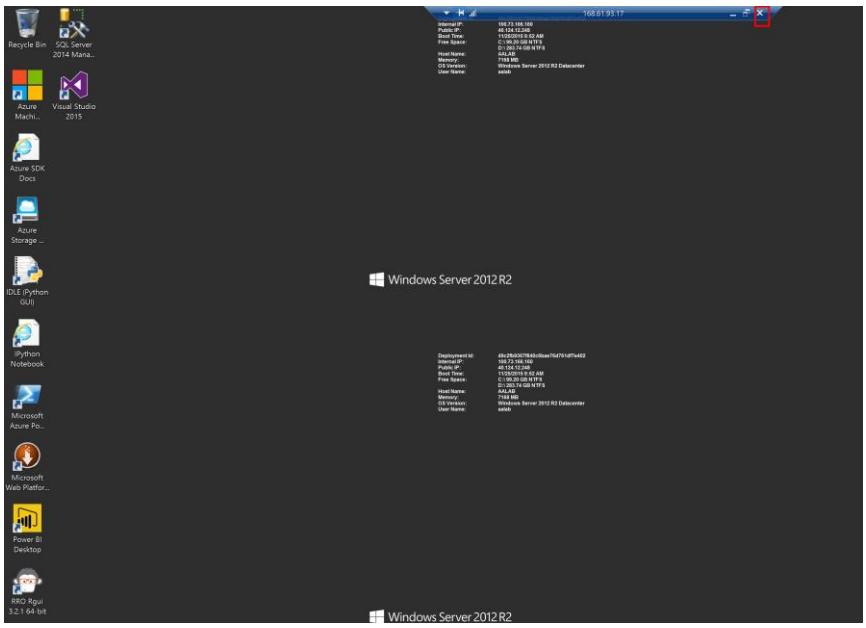



Run through the installer ensuring that at the additional tasks stage the following checkbox is ticked:

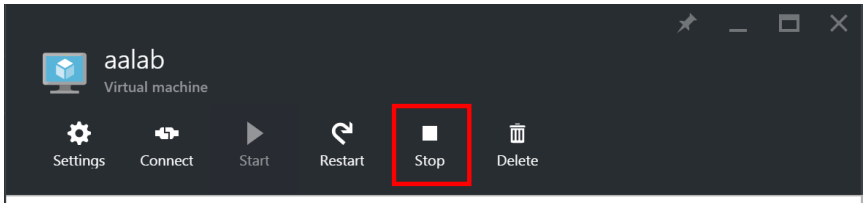


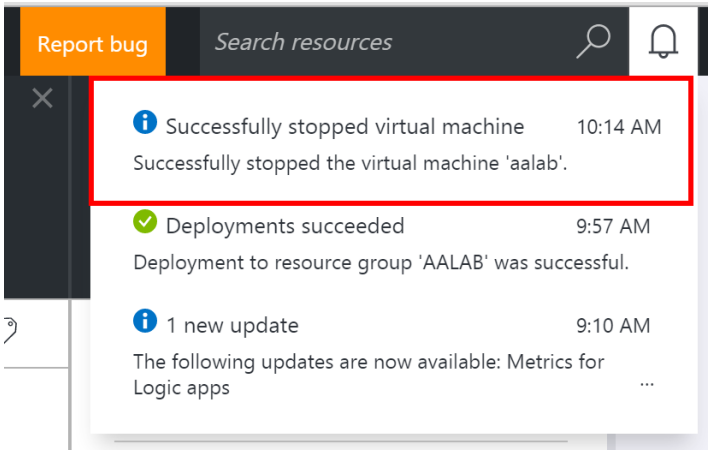
This updates the PATH environment variable so that various R Tooling is available.

18. Close the VM by clicking the **X** on the blue bar highlighted below:




19. Shutdown the VM by clicking on the **Stop** button on the VM blade in the Azure preview portal (this will take a couple of minutes).



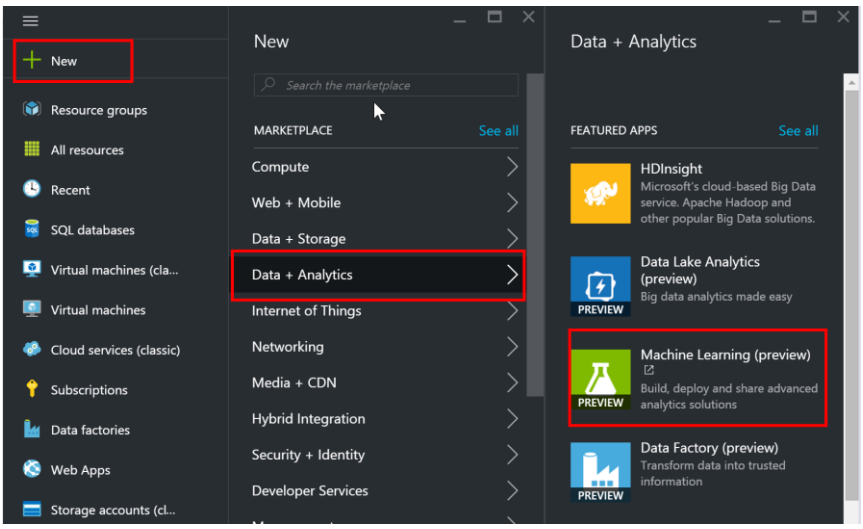




20. If you managed to successfully complete all these steps, then you are ready for the Advanced Analytics lab!

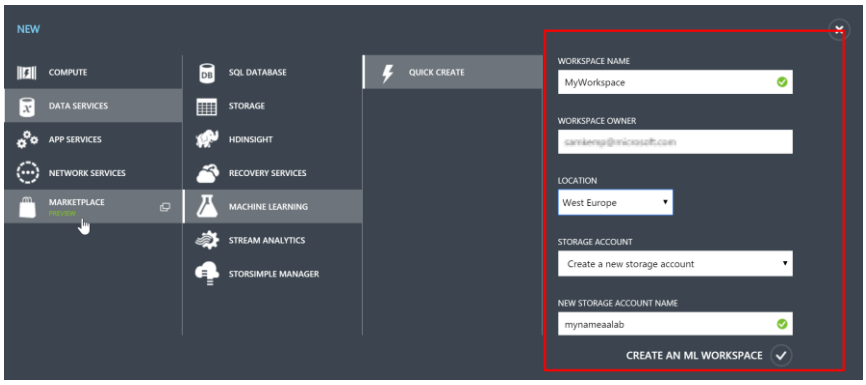
# Create an Azure ML Workspace

1. Sign in to the Azure preview portal - https://ms.portal.azure.com/

2. Click on **+ New** > **Data + Analytics** > **Machine Learning**

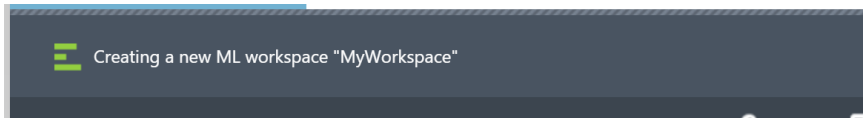



3. This will take you to the **Management Portal**

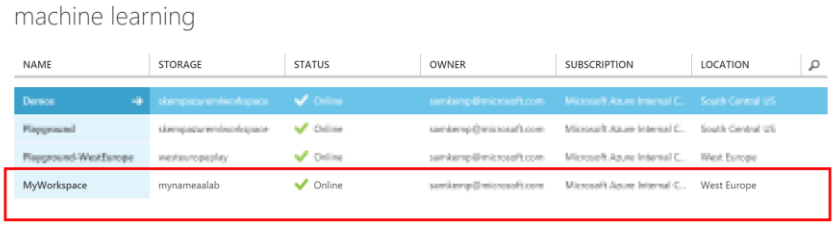



4. Enter a Workspace name, the workspace owner will be prepopulated, select a location closest to you, select **create a new storage account** and enter a valid name for the account.

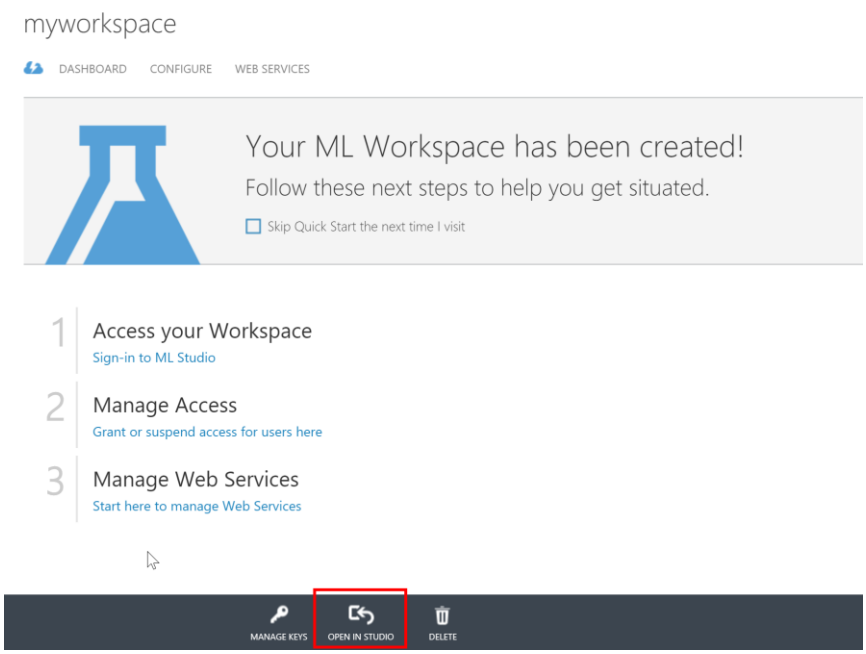
5. Click **Create an ML Workspace**. This will start to be provisioned.



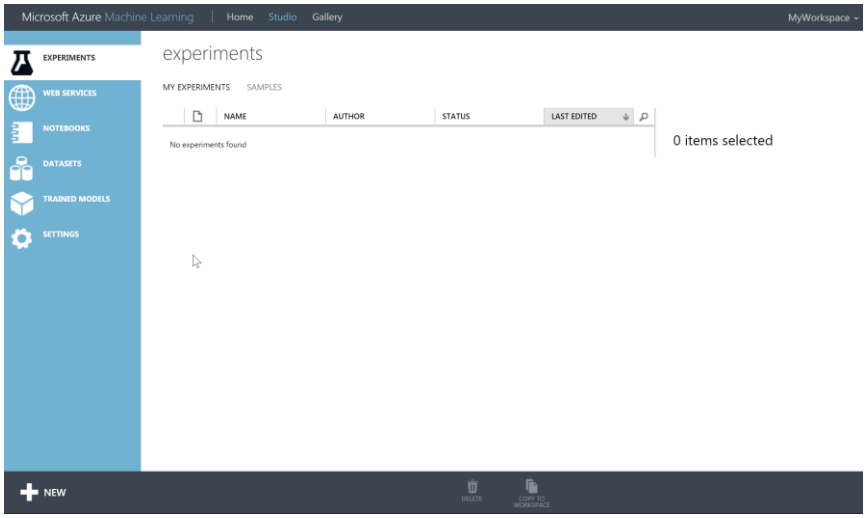

6. Once the workspace has been provisioned you will see it appear:



7. Select the workspace, which takes you to the dashboard below. Click on **OPEN IN STUDIO**:




8. You should now be in Azure ML Studio – Bookmark the web page!




9. If you are eager to explore Azure ML before the lab then the following link has videocasts, webinars and documentation links:

   - https://europewest.studio.azureml.net/#

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