

Practical 1: Creating a Virtual Machine

Objectives

In this first practical lab, we will:

- Explore the Azure portal
- Create a Virtual Machine
- Install and configure the Hortonworks Sandbox
- Test it works via a Web browser
- Confirm access to the Zeppelin Notebook server

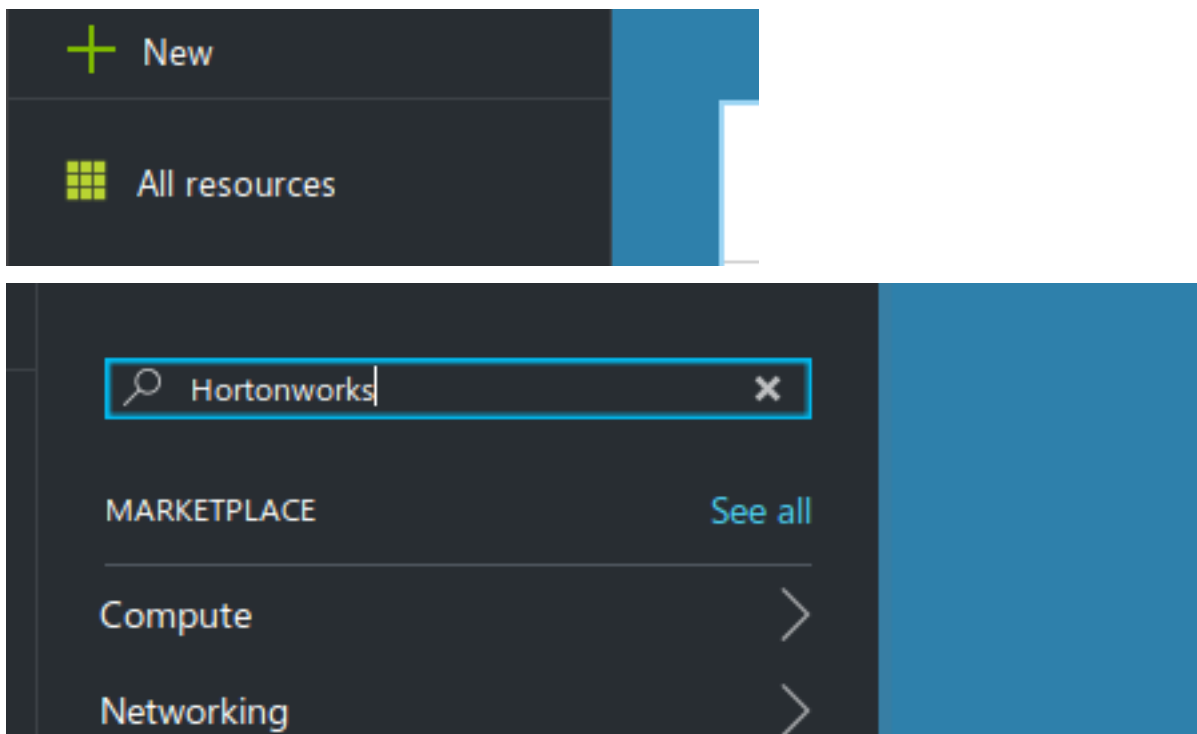
Exercise 1: Creating the VM

Access the Azure portal at: <http://portal.azure.com> and sign in using the account details you have configured with your promotional code.



We are going to create a virtual machine based on a template- the Hortonworks Sandbox. This will preconfigure a Linux virtual machine, Apache Hadoop and Apache Spark big data tools and a range of other components including **Zeppelin Notebook** which makes interacting with Spark quite straightforward.

To create a Virtual Machine, follow these steps:

1.From the portal, click [+ NEW] then choose **Search the marketplace** and then enter **Hortonworks Sandbox**:



2.At the next screen, you will be prompted to choose the correct Hortonworks template. Select **Hortonworks Sandbox with HDP 2.4**

NAME	PUBLISHER	CATEGORY
 Hortonworks Sandbox with HDP 2.4	Hortonworks	Compute
 Hortonworks Data Platform Standard	Hortonworks	Compute

and at the bottom right hand of the page, choose **Resource Manager** from the *Select a deployment model* section.

2. You will be prompted to enter the password. Ambari server will restart.

Select a deployment model ⓘ

Resource Manager



Create

3. At the next screen you will start the configuration process :

On **Tab 1: Basics**

<div>1 Basics Configure basic settings ></div> <div>2 Size Choose virtual machine size ></div> <div>3 Settings Configure optional features ></div> <div>4 Summary Hortonworks Sandbox with HD... ></div> <div>5 Buy ></div>	<div><div>* Name</div><div>HortonworksTest ✓</div></div> <div><div>VM disk type ⓘ</div><div>HDD ▼</div></div> <div><div>* User name</div><div>sparkuser</div></div> <div><div>* Authentication type</div><div>SSH public key Password</div></div> <div><div>* Password</div><div>.....</div></div> <div><div>* Confirm password</div><div>.....</div></div> <div><div>Subscription</div><div>Free Trial ▼</div></div> <div><div>* Resource group ⓘ</div><div><div><input checked="" type="radio"/> Create new <input type="radio"/> Use existing</div><div>HortonWorksTestRG ✓</div></div></div> <div><div>Location</div><div>East US ▼</div></div> <div>OK</div>
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You will need to:

- enter a suitable name for the sandbox
- change **VM disk type** to SSD (it's a bit cheaper)
- set username to **sparkuser** and enter a suitable password
- make sure that you select **Create New** in the Resource group section and give it a suitable name
- Click [OK]

Make sure you remember the username and password. Keep them somewhere safe

On tab 2: Size

software costs, as well as any discounts for the subscription and location.

DS1_V2 Standard		DS2_V2 Standard		DS11_V2 Standard	
1	Core	2	Cores	2	Cores
3.5	GB	7	GB	14	GB
	2 Data disks		4 Data disks		4 Data disks
	3200 Max IOPS		6400 Max IOPS		6400 Max IOPS
	7 GB Local SSD		14 GB Local SSD		28 GB Local SSD
	Load balancing		Load balancing		Load balancing
	Premium disk support		Premium disk support		Premium disk support
33.18		66.36		84.08	
GBP/MONTH (ESTIMATED)		GBP/MONTH (ESTIMATED)		GBP/MONTH (ESTIMATED)	
DS1 Standard		DS2 Standard		DS11 Standard	
1	Core	2	Cores	2	Cores
3.5	GB	7	GB	14	GB
	2 Data disks		4 Data disks		4 Data disks
	3200 Max IOPS		6400 Max IOPS		6400 Max IOPS
	7 GB Local SSD		14 GB Local SSD		28 GB Local SSD

Select

Choose the option **DS2_V2 standard** and click [Select]

Finally, on **tab 5: Buy** click [Purchase]. All the options are covered by your credits.

5.The final screen will start to create your VM. The process usually takes around 5 minutes.

After the process has completed, you will be presented with a confirmation screen like this one:

The screenshot displays the Azure portal interface for a virtual machine named 'HortonworksTest'. The top navigation bar includes the VM name and a 'Virtual machine' label, along with action buttons: Connect, Start, Restart, Stop, and Delete. A left-hand sidebar contains a search bar and a list of navigation options: Overview (selected), Activity log, Access control (IAM), Tags, Diagnose and solve problems, and a SETTINGS section with Availability set and Disks. The main content area is titled 'Essentials' and shows the following details:

Property	Value
Resource group	HortonWorksTestRG
Status	Running
Location	East US
Subscription name	Free Trial
Subscription ID	5112c6ad-c84f-42e0-aacf-e8829f34ab55
Computer name	HortonworksTest
Operating system	Linux
Size	Standard A5 (2 cores, 14 GB memory)
Public IP address/DNS name label	23.96.94.44/<none>
Virtual network/subnet	HortonWorksTestRG-vnet/default

Below the details, a 'Monitoring' section shows a 'CPU percentage' graph with an 'Edit' link.

Make sure you note the **Public IP address**. You will need this to access features of the Hortonworks Sandbox.

Exercise 2: Logging into the Zeppelin Notebook for the first time

After the VM has been created, it will have been given a unique IP address.

For example, if your ip address is **123.12.121.14**

You can access your Zeppelin Notebook through your browser at **http://123.12.121.14:9995**