

Unit 2: Cluster Scale Up

In this unit, we will explore how to add another node to an existing MarkLogic cluster. Realize that adding a single node to a three-node cluster would not be ideal. In reality, the cluster should be an odd number of nodes for purposes of high availability. For more details see the [Scalability, Availability, and Failover Guide](#).

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Creating the Node

1. Starting from the [Azure Dashboard](#), launch the *Marketplace*.



2. Search for `MarkLogic`
3. From the list you can choose between developer or bring your own license. For this demonstration we will choose 9.0-4 Developer to match the version was selected in Unit 1.

NAME	PUBLISHER	CATEGORY
 MarkLogic 9.0-4 Developer	MarkLogic	Compute

4. At the bottom of the description screen on the right, click the **Create** button
5. Fill in the following details in the *Basics* panel.
 - **Name** - `mlNode4`
 - **VM disk type** - `SSD`
 - **User name** - `mlwadmin`
 - **Authentication type** - `Password`
 - **Password** - `MarkLogicWorld_2018`
 - **Resource group** - `Use existing` and match what was used in [Unit 1](#)
 - **Location** - Match what was used in [Unit 1](#)

6. Click the **OK** button on the *Basics* panel.
7. For the *Choose a size* panel, we will use the `DS1_v2` to match what was used in [Unit 1](#)

Choose a size

Browse the available sizes and their features

Search

ds1

Compute type

Show all compute types

Disk type

All disk types

vCPUs

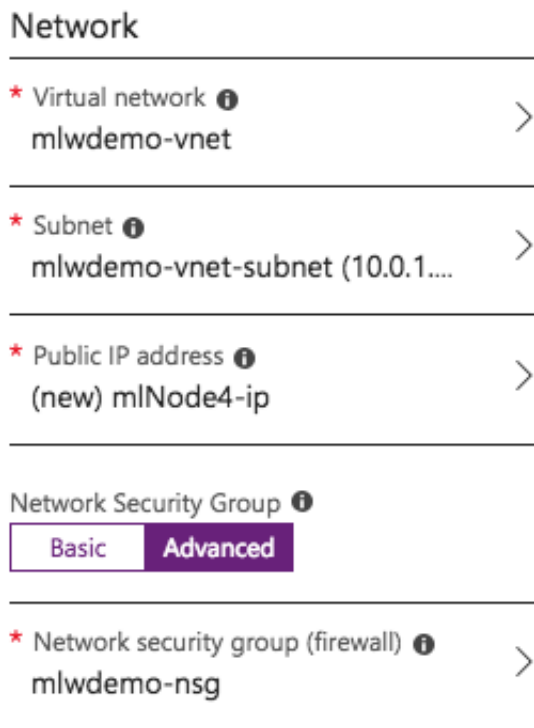
1

RECOMME...	SKU	TYPE	COMPUTE ...	VCPUS	GB RAM	DATA DIS...	MAX IOPS	LOCAL SSD	PREMIUM ...
Available	DS1_v2	Standard	General purpos	1	3.5	4	3200	7 GB	SSD
	DS11_v2	Standard	Memory optimi	2	14	8	6400	28 GB	SSD
	DS12_v2	Standard	Memory optimi	4	28	16	12800	56 GB	SSD
	DS11-1_v2	Standard	Memory optimi	1	14	8	8000	28 GB	SSD
	DS12-1_v2	Standard	Memory optimi	1	28	16	16000	56 GB	SSD
	DS12-2_v2	Standard	Memory optimi	2	28	16	16000	56 GB	SSD
	DS13-4_v2	Standard	Memory optimi	4	56	32	25600	112 GB	SSD

Prices presented are estimates in your local currency that include Azure infrastructure applicable software costs, as well as any discounts for the subscription and locat

Select

8. With the `DS1_v2` configuration selected, click the **Select** button.
9. Fill in the following details in the *Settings* panel
 - **Virtual network** - `RESOURCEGROUP-vnet`
 - **Network security group (firewall)** - `Advanced`
 - **Network security group** - `RESOURCEGROUP-nsg`



10. Click the **OK** button on the *Settings* panel.
11. Verify that `MarkLogic Developer 9` is listed in the *Summary* pane and click the **Create** button.
12. Wait for deployment to finish (watch the bell icon above the dashboard). The machine's **Overview** should appear automatically. But, if needed the machine should appear in the *Virtual machines* list on the left.
13. Find the **Public IP address** and click on it.
14. Set the **DNS name label** to your initials and mlNode4 to create a unique name. For example

`jdwm1node4` .

DNS name label (optional) ⓘ

`jdwm1node4`



`.westus.cloudapp.azure.com`

15. Click **Save** at the top to apply and save the new setting.
16. Make a note of the **DNS name label** you used, and the rest of the path that is listed just below it. For example `.westus.cloudapp.azure.com` .

Adding the Node to the Cluster

1. Use the full DNS name of our new node to bring up the admin interface on port 8001. For example, `jdwm1node4.westus.cloudapp.azure.com:8001`
2. Go ahead and initialize the node by clicking the **OK** button.
3. Once the basic initialization has occurred, we need to add our new node into the cluster. Use the full DNS name for one of the nodes created in Unit 1 for the **Host Name**. This can be found using the *Azure Dashboard*.

Azure Dashboard > All resources > developer-ipv4-node0, copy the **DNS name**

developer-ipv4-node0
Public IP address

Search (Ctrl+/)

Associate Dissociate Move Delete

Essentials ^

Resource group (change)	SKU
developer	Basic
Location	IP address
East US	13.90.143.5
Subscription name (change)	DNS name
Pay-As-You-Go	developer-fqhnxtgeso7y-0.eastus.cloudapp.azure.com
Subscription ID	Associated to
dbfbd259-c18c-4395-a463-17b4f6735cdc	developer-networkInterface-0
	Virtual machine
	developer-vm-0

Click to copy

4. After you have entered the **Host Name**, click the **ok** button.
5. You may now be prompted for credentials. Supply the credentials that were created in *Unit 1*.

Sign in

http://developer-fqhnxtgeso7y-0.eastus.cloudapp.azure.com:8001

Your connection to this site is not private

Username

Password

Cancel Sign In

6. Set the *Host Name* to be the full DNS name of our new node. For example, `jdwm1node4.westus.cloudapp.azure.com`. We will leave the **Zone** empty.
7. Click the **ok** button.
8. Yes, we are sure we want to join the cluster so click the **ok** button to proceed.
9. The next screen alerts us that the cluster configuration will be transferred to the new host. Click the **ok** button.
10. Switch to the *Summary* tab in the *Admin Interface*, and you should now see your new node listed in the **Hosts** panel.

Hosts (4) -- Computers belonging to this cluster

```
Default :: jdwmnode4.westus.cloudapp.azure.com  
Default :: mlwdemo-kqgqheejj3564-0.westus.cloudapp.azure.com  
Default :: mlwdemo-kqgqheejj3564-1.westus.cloudapp.azure.com  
Default :: mlwdemo-kqgqheejj3564-2.westus.cloudapp.azure.com
```

Summary

Adding a node to a cluster on the Azure platform is little different from adding one in your local machine room.