

## 09 - Create a VM with a Template

In this walkthrough, we will deploy a virtual machine with a QuickStart template and examine monitoring capabilities.

### Task 1: Explore the QuickStart gallery and locate a template

In this task, we will browse the Azure QuickStart gallery and deploy a template that creates a virtual machine.

1. Within the lab environment, open a new browser window, and enter <https://azure.microsoft.com/en-us/resources/templates/?azure-portal=true>. In the gallery you will find a number of popular and recently updated templates. These templates automate deployment of Azure resources, including installation of popular software packages. Browse through the many different types of templates that are available.
2. Select the **Deploy a simple Windows VM**
3. Click the **Deploy to Azure** button. Your browser session will be automatically redirected to the [Azure portal](#).

**Note:** The **Deploy to Azure** button enables you to deploy the template via the Azure portal. During such deployment, you will be prompted only for small set of configuration parameters.

5. When prompted, sign into your Azure subscription using the credentials provided earlier in the instructions.
6. Click **Edit template**. The Resource Manager template format uses the JSON format. Review the parameters and variables. Then locate the parameter for virtual machine name. Change the name to **myVMTemplate**. Save your changes.

#### Edit template

Edit your Azure Resource Manager template

+ Add resource   ↑ Quickstart template   ↑ Load file   ↓ Download

```
91  },
92  "vmName": {
93    "type": "string",
94    "defaultValue": "myVMTemplate",
95    "metadata": {
96      "description": "Name of the virtual machine."
97    }
98  },
99  },
100  "variables": {
101    "storageAccountName": "[concat('bootdiags', uniquestring(resourceGroup().id))]",
102    "nicName": "myVMNic",
103    "addressPrefix": "10.0.0.0/16",
104    "subnetName": "Subnet",
105    "subnetPrefix": "10.0.0.0/24",
106    "virtualNetworkName": "MyVNET",
107    "subnetRef": "[resourceId('Microsoft.Network/virtualNetworks/subnets', variables('virtualNetworkName'), variables('subnetName'))]",
108    "networkSecurityGroupName": "default-NSG"
109  },
110  "resources": [
111    ...
```

7. Now configure the parameters required by the template (replace **xxxx** in the DNS label prefix with letters and digits such that the label is globally unique). Leave the defaults for everything else.

Setting	Value
---------	-------

Setting	Value
Subscription	Keep default supplied
Resource group	Create new resource group
Region	Keep default
Admin username	azureuser
Admin password	Pa\$\$w0rd1234
DNS label prefix	myvmtemplatexxxx
OS version	2019-Datacenter

- Click **Review + Create**.
- Monitor your deployment.

## Task 2: Verify and monitor your virtual machine deployment

In this task, we will verify the virtual machine deployed correctly.

- From the **All services** blade, search for and select **Virtual machines**.
- Ensure your new virtual machine was created.


### Virtual machines

Microsoft

[+ Add](#)
[🕒 Reservations](#)
[☰ Edit columns](#)
[🔄 Refresh](#)
[🏷️ Assign tags](#)
[▶ Start](#)
[↺ Restart](#)
[■ Stop](#)
[🗑️ Delete](#)
[☰ Services](#)

**Subscriptions:** 1 of 4 selected – Don't see a subscription? [Open Directory + Subscription settings](#)

1 items

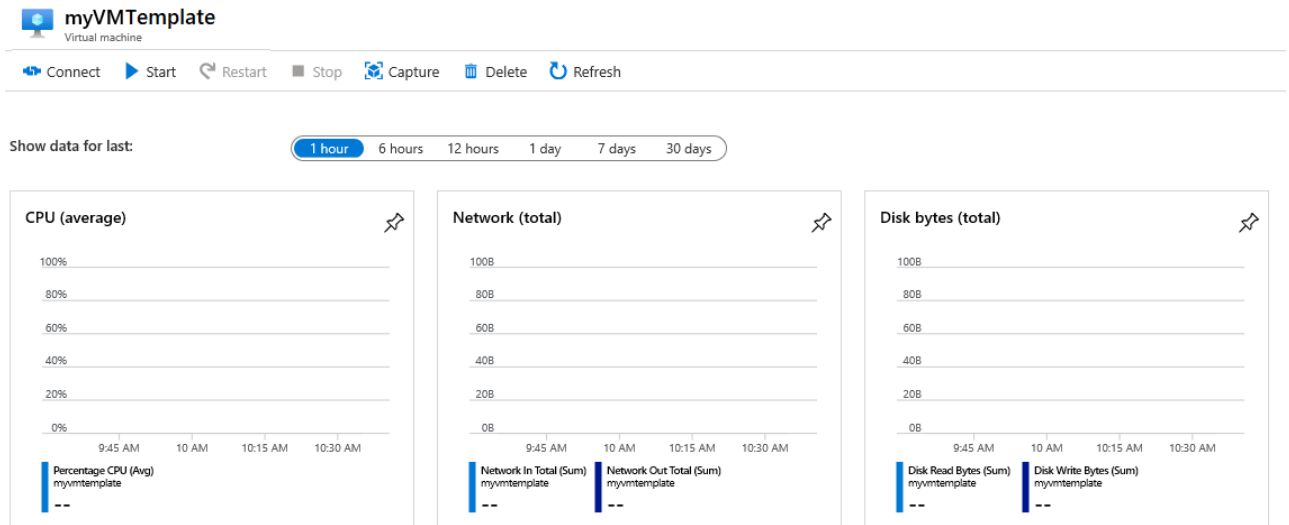
<input type="checkbox"/>	Name ↑↓	Type ↑↓	Private IP address	Resource group ↑↓	Location ↑↓	Status
<input type="checkbox"/>	 myVMTemplate	Virtual machine	10.0.0.4	myRGTemplate	East US	Running

- Select your virtual machine and on the **Overview** pane, select the **Monitoring** tab, scroll down to view monitoring data.

**Note:** The monitoring timeframe can be adjusted from one hour to 30 days.

- Review different charts that are provided including **CPU (average)**, **Network (total)**, and **Disk bytes (total)**.

## 09 - Create a VM with a Template



5. Click on any chart. Note that you can **Add metric** and change the chart type.
6. Return to the **Overview** blade. (slide toggle bar left)
7. Click on the **Activity log** (left pane). Activity logs record such events as creation or modification of resources.
8. Click **Add filter**, and experiment with searching for different event types and operations.

The screenshot shows the 'myVM - Activity log' page. At the top, there are filters for 'Management Group : None', 'Subscription : Visual Studio Enterprise', 'Timespan : Last 6 hours', and 'Event severity : All'. Below these, there is a 'Resource type' dropdown menu with a search icon and a red box around the 'Add Filter' button. The dropdown menu is open, showing the following options:

- Resource type
- Operation  
An action or command, such as create, delete, and write, that affects Azure Resource Manager resources
- Event initiated by  
The user who started an operation
- Event category  
The event type for certain operations

Below the dropdown, there is a table of events:

	Status	Time	Time stamp	Subscription
Succeeded	2 h ago	Mon Oct 14...	Visual Studio Enterprise	
Updated	2 h ago	Mon Oct 14...	Visual Studio Enterprise	
Succeeded	3 h ago	Mon Oct 14...	Visual Studio Enterprise	
> Deallocate Virtual Machine	Succeeded	3 h ago	Mon Oct 14...	Visual Studio Enterprise
Health Event Updated	Updated	3 h ago	Mon Oct 14...	Visual Studio Enterprise
> Create or Update Virtual Machine Extension	Succeeded	3 h ago	Mon Oct 14...	Visual Studio Enterprise
> 'audit' Policy action.	Succeeded	3 h ago	Mon Oct 14...	Visual Studio Enterprise

Congratulations! You have successfully created a resource from a template and deployed that template to Azure.

**Note:** To avoid additional costs, you can optionally remove this resource group. Search for resource groups, click your resource group, and then click **Delete resource group**. Verify the name of the resource group and then click **Delete**. Monitor the **Notifications** to see how the delete is proceeding.