



Azure 103 Module 6

Hands On - 1

Azure Certification Training

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Azure 103, Module 6, Hands On - 1

Create a custom role for Azure Resources

Problem Statement: Create a custom role using Azure CLI.

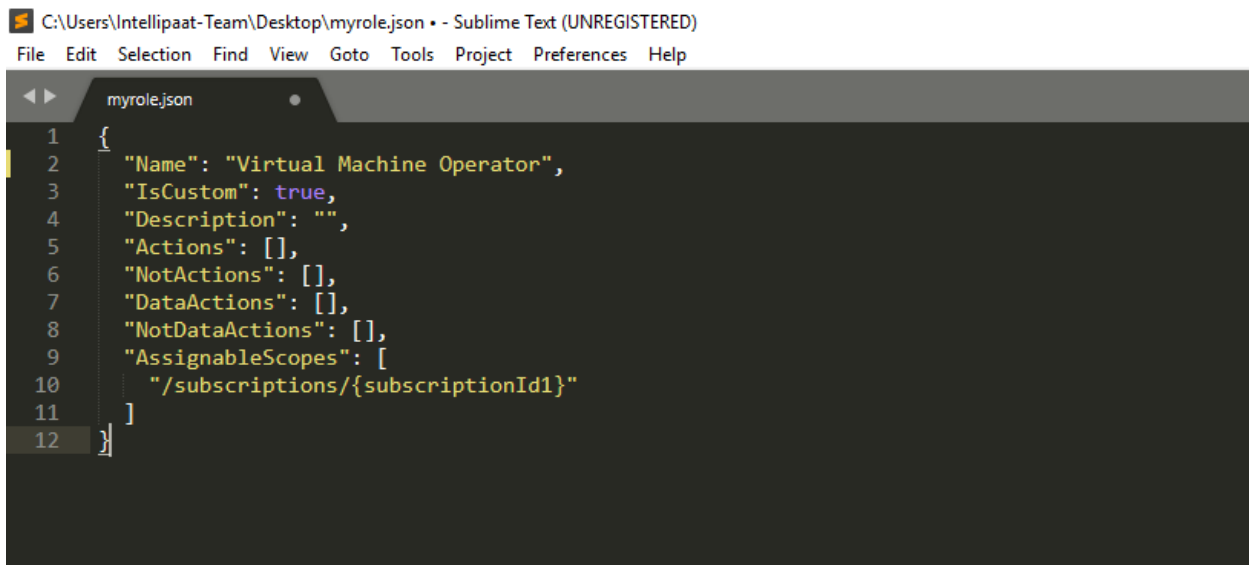
Solution:

Step 1: Go to the following link and copy the custom role example JSON template and create a JSON file with this code. Name this file as myrole.json.

<https://docs.microsoft.com/en-us/azure/role-based-access-control/tutorial-custom-role-cli#create-a-custom-role>

Note: we will edit this JSON template and define our own custom role with its custom permissions. The custom role that we will create will be called Virtual Machine operator. This role will allow the user to start, stop or monitor VMs.

Step 2: Open your JSON file in an editor, in name field, provide the name of your custom role that is "Virtual machine Operator" in our demo.



```
C:\Users\Intellipaat-Team\Desktop\myrole.json - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

myrole.json
1 {
2   "Name": "Virtual Machine Operator",
3   "IsCustom": true,
4   "Description": "",
5   "Actions": [],
6   "NotActions": [],
7   "DataActions": [],
8   "NotDataActions": [],
9   "AssignableScopes": [
10    "/subscriptions/{subscriptionId}"
11  ]
12 }
```

Step 3: In Description field, give the description for your custom role, which is in our demo is, can monitor and restart virtual machines.

```
C:\Users\Intellipaat-Team\Desktop\myrole.json - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

myrole.json
1 {
2   "Name": "Virtual Machine Operator",
3   "IsCustom": true,
4   "Description": "Can monitor and restart virtual machines",
5   "Actions": [],
6   "NotActions": [],
7   "DataActions": [],
8   "NotDataActions": [],
9   "AssignableScopes": [
10    "/subscriptions/{subscriptionId}"
11  ]
12 }
```

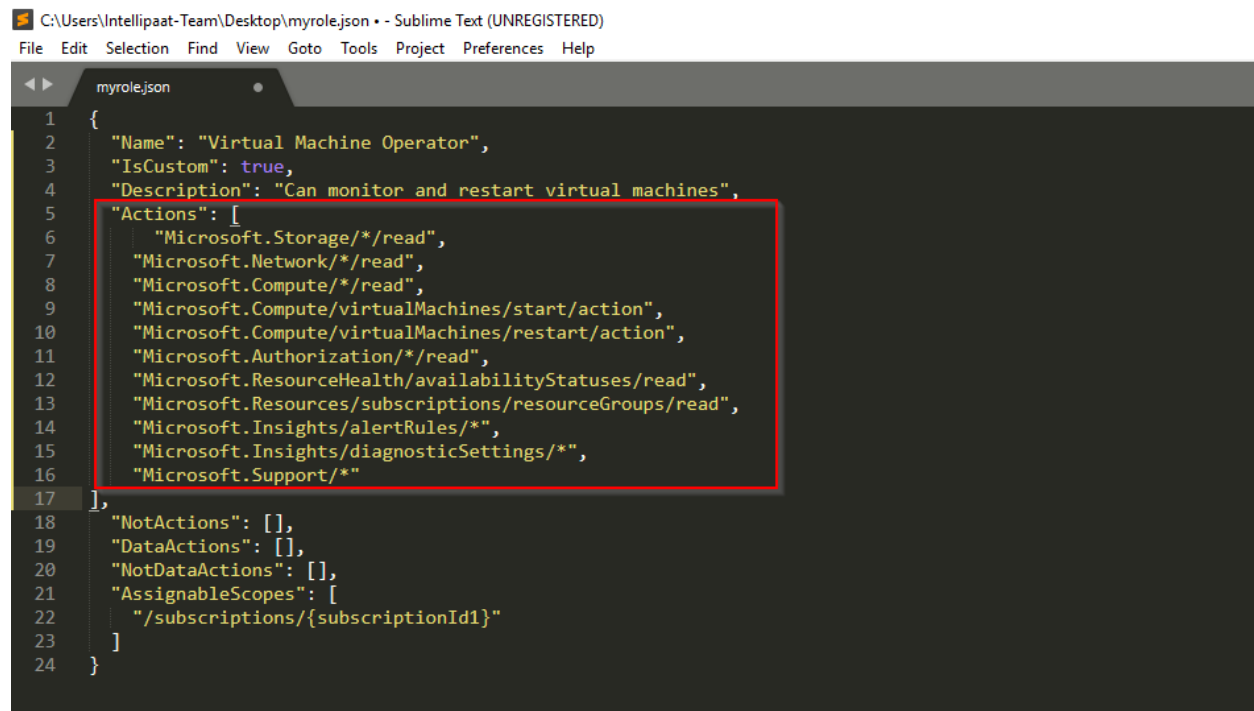
Step 4: In Actions field you define the operations that this role is allowed to do. Add the

```
"Microsoft.Storage/*/read",
"Microsoft.Network/*/read",
"Microsoft.Compute/*/read",
"Microsoft.Compute/virtualMachines/start/action",
"Microsoft.Compute/virtualMachines/restart/action",
"Microsoft.Authorization/*/read",
"Microsoft.ResourceHealth/availabilityStatuses/read",
"Microsoft.Resources/subscriptions/resourceGroups/read",
"Microsoft.Insights/alertRules/*",
"Microsoft.Insights/diagnosticSettings/*",
"Microsoft.Support/*"
```

following information in your actions field.

To learn about more actions that can be used, visit the following link:

<https://docs.microsoft.com/en-us/azure/role-based-access-control/resource-provider-operations#microsoftcompute>



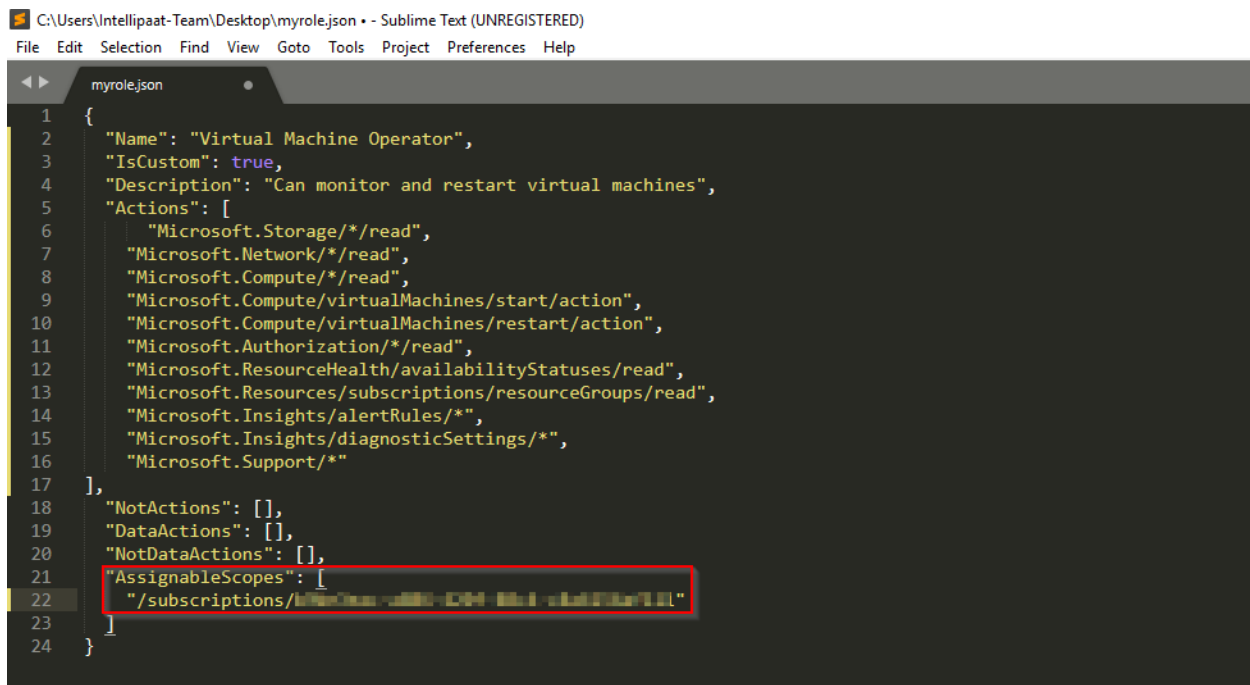
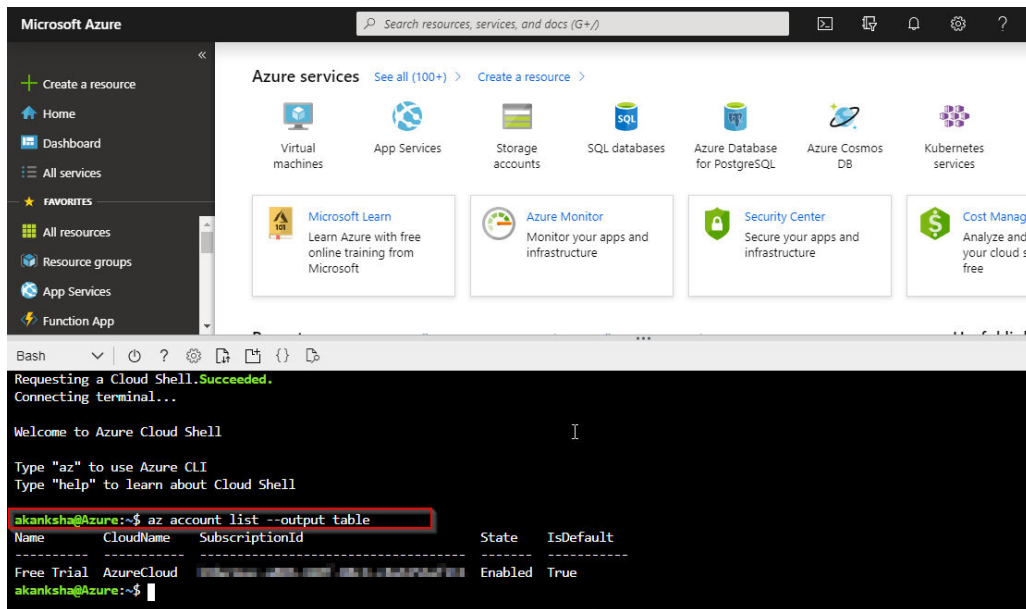
```
C:\Users\IntelliPaat-Team\Desktop\myrole.json - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

myrole.json
1 {
2   "Name": "Virtual Machine Operator",
3   "IsCustom": true,
4   "Description": "Can monitor and restart virtual machines",
5   "Actions": [
6     "Microsoft.Storage/*/read",
7     "Microsoft.Network/*/read",
8     "Microsoft.Compute/*/read",
9     "Microsoft.Compute/virtualMachines/start/action",
10    "Microsoft.Compute/virtualMachines/restart/action",
11    "Microsoft.Authorization/*/read",
12    "Microsoft.ResourceHealth/availabilityStatuses/read",
13    "Microsoft.Resources/subscriptions/resourceGroups/read",
14    "Microsoft.Insights/alertRules/*",
15    "Microsoft.Insights/diagnosticSettings/*",
16    "Microsoft.Support/*"
17  ],
18  "NotActions": [],
19  "DataActions": [],
20  "NotDataActions": [],
21  "AssignableScopes": [
22    "/subscriptions/{subscriptionId}"
23  ]
24 }
```

Step 5: In assignable scopes field you have to provide your subscription id. You can get the

```
az account list --output table
```

subscription ID using the following command in your CLI (launch CLI from your portal).



Step 6: Save all the changes made to the JSON file. Go to Azure CLI and run the following

```
az role definition update --role-definition 'JSON script'
```

command to create the custom role.

Note: replace JSN script with your myrole JSON script as shown in the following screenshot.

```
← → ↺ portal.azure.com/#blade/Microsoft_Azure_Storage/FileShareMenuBlade/overview/storageAccountId/%2Fsubscriptions%2Fb9be3eac-a886-420f-88c4-c8a615
Microsoft Azure Search resources, services, and docs (G+)
Bash
akanksha@Azure:~$ az role definition create --role-definition '{
> "Name": "Virtual Machine Operator",
> "IsCustom": true,
> "Description": "Can monitor and restart virtual machines",
> "Actions": [
>   "Microsoft.Storage/*/*read",
>   "Microsoft.Network/*/*read",
>   "Microsoft.Compute/*/*read",
>   "Microsoft.Compute/virtualMachines/start/action",
>   "Microsoft.Compute/virtualMachines/restart/action",
>   "Microsoft.Authorization/*/*read",
>   "Microsoft.ResourceHealth/availabilityStatuses/read",
>   "Microsoft.Resources/subscriptions/resourceGroups/read",
>   "Microsoft.Insights/alertRules/*",
>   "Microsoft.Insights/diagnosticSettings/*",
>   "Microsoft.Support/*"
> ],
> "NotActions": [],
> "DataActions": [],
> "NotDataActions": [],
> "AssignableScopes": [
>   "/subscriptions/12345678-9012-3456-7890-123456789012"
> ]
> }'
{
  "assignableScopes": [
    "/subscriptions/12345678-9012-3456-7890-123456789012"
  ],
  "description": "Can monitor and restart virtual machines",
  "id": "/subscriptions/b9be3eac-a886-420f-88c4-c8a6156af111/providers/Microsoft.Authorization/roleDefinitions/9871b8c9-0a74-4faf-a89a-b7"
```

The new custom role is now available and can be assigned to users, groups, or service principals just like built-in roles.