

Azure Maintenance Mode Scheduler

Installation Guide

Server Requirements:

- The Azure Maintenance Mode Scheduler must be installed on a **Windows Server 2016, 2019, or 2022 server**. This can be **on-prem** or in **Azure**.

Accounts Required:

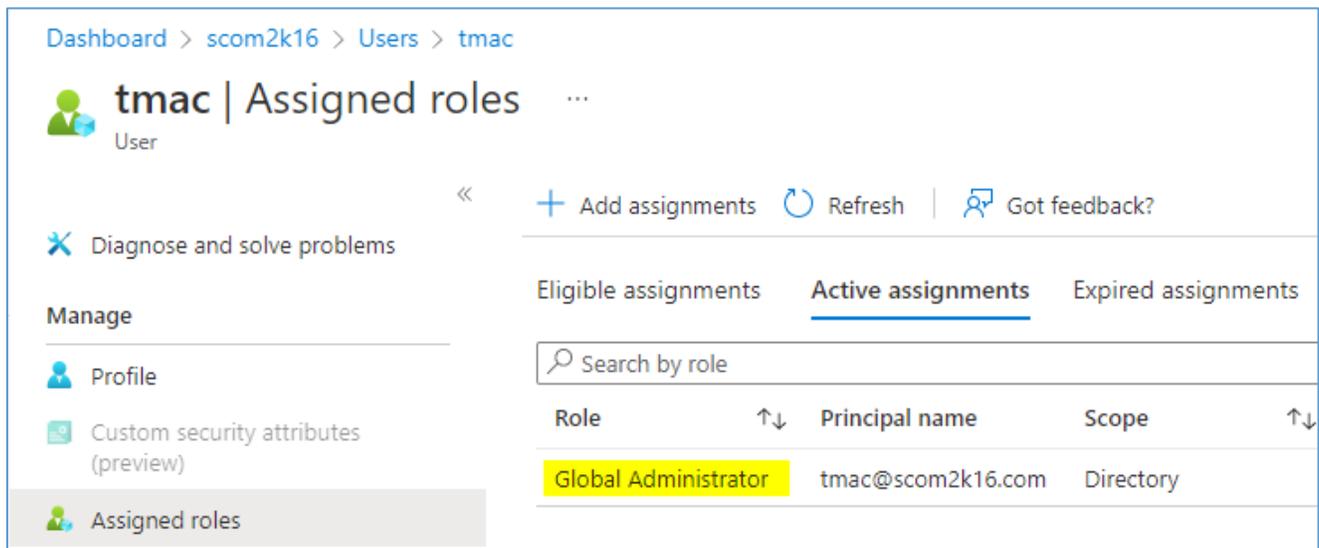
- **Application ID** (Client ID) created in Azure Active Directory with Client Secret. (Instructions below on how to create this account)
- **Local User Account or Domain User Account** with local admin rights to the Window Server.

Create the Application ID in Azure AD with PowerShell or Manually

- **Option 1: PowerShell (Recommended)**

1. Make sure you have an account with **Azure AD Global Admin Rights** and has **Owner or User Access Admin rights** to either your **Azure Management Group** or **one Azure Subscription**.

Azure Active Directory



The screenshot shows the Azure Active Directory user interface for a user named 'tmac'. The breadcrumb path is 'Dashboard > scom2k16 > Users > tmac'. The user's profile is shown as 'tmac | Assigned roles' with a 'User' role. On the left, there are navigation options: 'Diagnose and solve problems', 'Manage' (with sub-options: Profile, Custom security attributes (preview), and Assigned roles), and 'Assigned roles'. On the right, there are controls for 'Assigned roles': '+ Add assignments', 'Refresh', and 'Got feedback?'. Below these are tabs for 'Eligible assignments', 'Active assignments' (selected), and 'Expired assignments'. A search bar 'Search by role' is present. A table lists the assigned roles:

Role	Principal name	Scope
Global Administrator	tmac@scom2k16.com	Directory

All services > Management groups > Tenant Root Group

Tenant Root Group | Access control (IAM) ...

Management group

Search (Ctrl+/) << + Add ↓ Download role assignments ≡ Edit columns ↻ Refr

Overview Subscriptions Activity Log Access control (IAM) Governance Get started

Check access Role assignments Roles Deny assignments

2 items (2 Users)

<input type="checkbox"/>	Name	Type	Role
<input type="checkbox"/>	User Access Administrator		
<input type="checkbox"/>	tmac tmac@scm2k16.com	User	User Access Administrator

2. In the AzureMaintenanceModeScheduler.zip file there are two PowerShell scripts. You only need to run one of them.

AzMMforManagementGroup.ps1

AzMMforSubscription.ps1

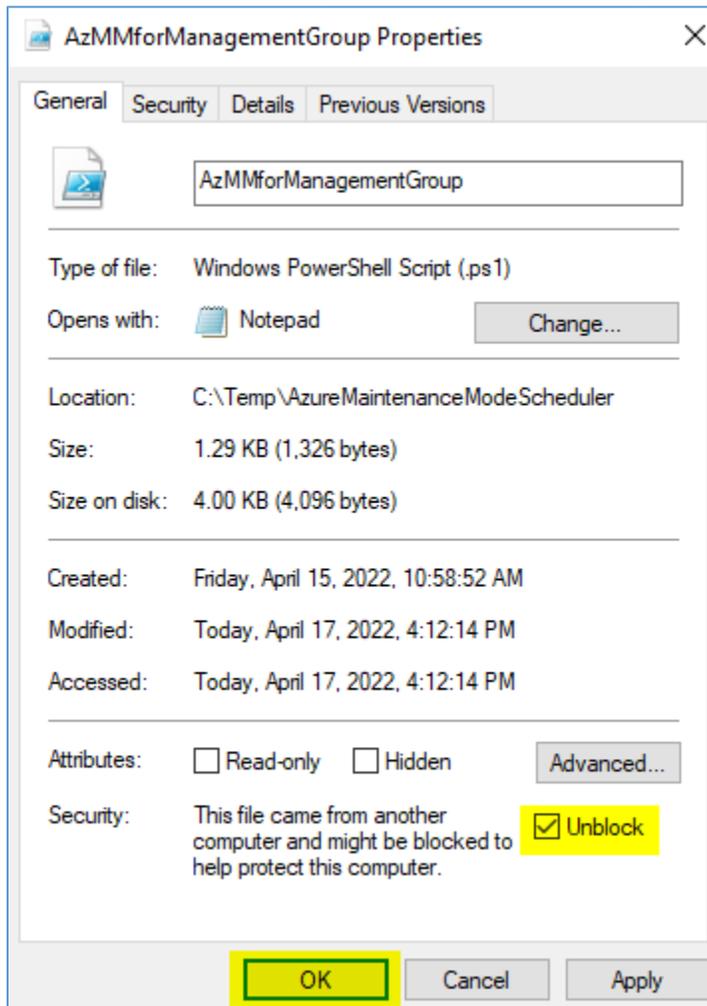
Run **AzMMforManagementGroup.ps1** if you have **alert rules** in **multiple subscriptions** and have an Azure Management Group that contains all the subscriptions.

Run **AzMMforSubscription.ps1** if you have all your **alert rules** in **one subscription** or if you only have access to one Subscription.

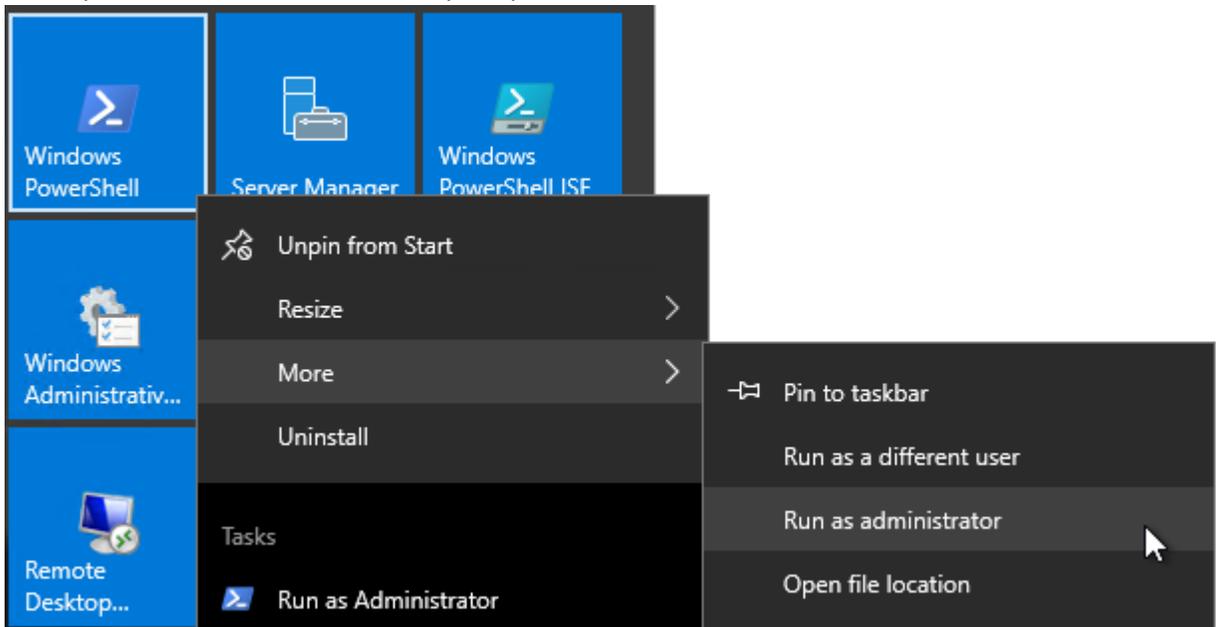
PowerShell Script Overview:

The script connects to azure. It creates an App Registration (AD Service Principal). It then creates an Azure Role Definition and sets minimal permissions. Then it assigns the App Registration to the role definition.

3. To Run the PowerShell Script, unblock the script by right clicking on the script and check Unblock.



4. Next open the PowerShell command prompt as administrator.



5. Type in: `Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser`

```
Administrator: Windows PowerShell
PS C:\> Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser

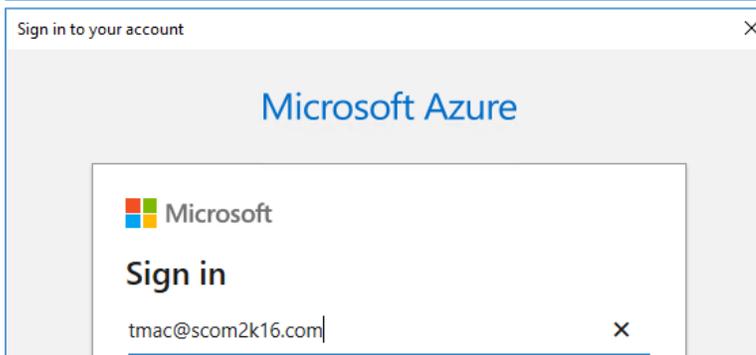
Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the exe
you to the security risks described in the about_Execution_Policies help topic at
https://go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): Y
PS C:\>
```

6. `cd` (change directory) to the extracted zip files.
7. Run **one** of the PowerShell scripts (**Not Both**).

For Management Group: Type in: `.\AzMMforManagementGroup.ps1`

For Subscription: Type in: `.\AzMMforSubscription.ps1`

```
PS C:\Users\siteadmin> cd\
PS C:\> cd .\Temp\
PS C:\Temp> cd '.\Azure Maintenance Mode Scheduler\'
PS C:\Temp\Azure Maintenance Mode Scheduler> .\AzMMforManagementGroup.ps1
```



8. A window will pop up. Log on with your Azure Account with the rights described in step 1.

```
Please save the following information for the install
-----
Directory (tenant) ID: 016073f7-695b-4902-80a5-0846301c94db
Application (client) ID: 16727185-8259-4492-9925-ab3111342f69
Client Secret: ytF8Q~AHPZmRaPCFNFiIDEzZ6uQV_N1kBC4Uucrw
-----
```

Do not close the PowerShell window. Copy the Directory ID, Application ID, and Client Secret to a safe place. You will need to supply this information during the Installation of the Azure Maintenance Mode Scheduler.

If you get an error during this process. Please contact support@scom2k7.com and we will be happy to help you resolve any issues

- a. Option 2: **Manually** (See [Appendix 1](#) Below)

- 2.) Next Double click on **Azure Maintenance Mode Scheduler.msi** file from the zip.
- 3.) Click **Next**
- 4.) **Read** and **Accept** the License Agreement, then click **Next**
- 5.) **Select** the location you want to install the application.
- 6.) On the **Ready to Install** screen click **Install**
- 7.) Click **Yes** on the next screen.
- 8.) Setup will take some time as it needs to install IIS.
- 9.) On the **Completing Setup Page** leave the Launch Azure Maintenance Mode Scheduler **checkbox checked** and **Click Finish**
- 10.) If you unchecked the Launch box on the last screen, you can also run it from the **Desktop** with the gear Icon



called **Azure Maintenance Mode Configuration**.

- 11.) **Copy and paste** the information generated from the PowerShell script into the dialog box **if it isn't automatically populated**.

The screenshot shows the 'Azure Maintenance Mode Configuration' dialog box on the left and a PowerShell terminal window on the right. The dialog box contains the following fields:

- Directory (Tenant) ID:** 016073f7-695b-4902-80a5-0846301c94db
- Application (Client) ID:** 16727185-8259-4492-9925-ab3111342f69
- Client Secret:** ytF8Q~AHPZmRaPCFNFIiDEzZ6uQV_N1kBC4Uucrw

The PowerShell terminal window displays the following output:

```
Please Sign Into Azure with Admin Account... Dialog Box may be hid
Don't Close Powershell Window

Please save the following infomation for the install
-----
Directory (tenant) ID: 016073f7-695b-4902-80a5-0846301c94db
Application (client) ID: 16727185-8259-4492-9925-ab3111342f69
Client Secret: ytF8Q~AHPZmRaPCFNFIiDEzZ6uQV_N1kBC4Uucrw
-----
```

Red arrows indicate that the values from the PowerShell output are being copied into the dialog box fields.

- 12.) Type in the name and password of a **Local User Account or Domain User Account with local admin rights to the Window Server** you are installing on.
- 13.) Choose the **Date Format** you would like to use.
- 14.) Click **OK**
- 15.) On the complete screen click **Start** to Launch the Maintenance Mode Scheduler Application

The screenshot shows a 'Complete' dialog box with the following text:

Azure Maintenance Mode Scheduler Successfully Configured

Click Start to Launch the App:

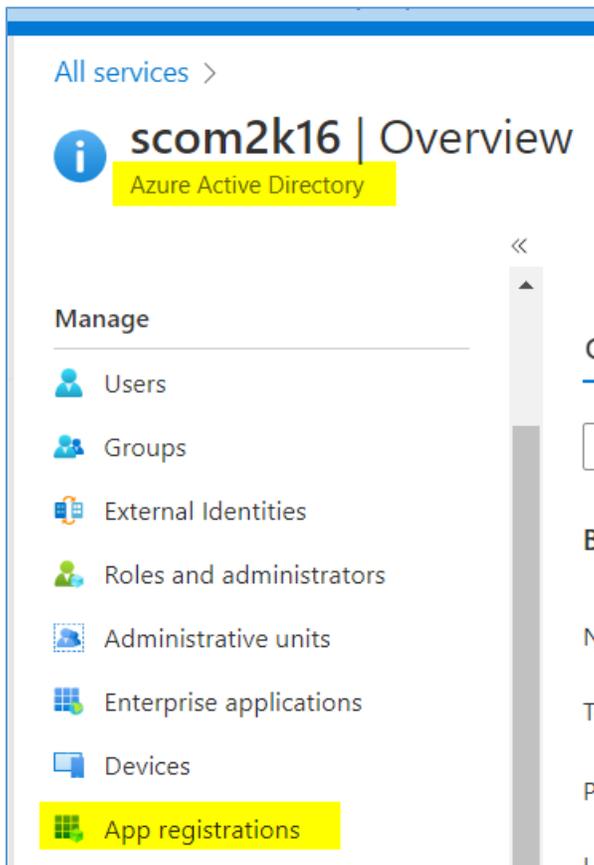
Close Start

Appendix:

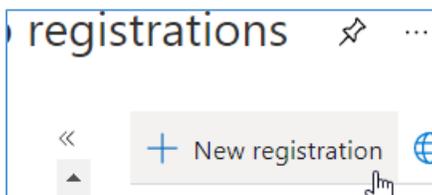
Option 2 - Manually creating an Application ID and assigning permissions:

In your Azure Subscription. Go to **Azure Active Directory**.

Under Manage click **App registrations**.



Click **New Registration**.



Under Name Type: **Azure Maintenance Mode Scheduler**

Register an application ...

* Name

The user-facing display name for this application (this can be changed later).

Azure Maintenance Mode Scheduler ✓

Supported account types

Who can use this application or access this API?

- Accounts in this organizational directory only (scom2k16 only - Single tenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- Personal Microsoft accounts only

[Help me choose...](#)

Redirect URI (optional)

We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

Select a platform ▼

e.g. https://example.com/auth

Leave all the rest the defaults.

Register

Then **Click Register**

On the next page. Under Essentials

Copy the Application (client) ID and the Directory (tenant) ID for use later in a text file.

Azure Maintenance Mode Scheduler ✨ ...

Search (Ctrl+/) << Delete Endpoints Preview features

Overview Quickstart Integration assistant

Manage

- Branding & properties
- Authentication
- Certificates & secrets
- Token configuration

Essentials

Display name	Client credentials
Azure Maintenance Mode Scheduler	0 certificate, 1 secret
Application (client) ID	Redirect URIs
f4e1c243-4cee-4312-b3b8-1ffe3cb219d2	Add a Redirect URI
Object ID	Application ID URI
5f8aaf99-cc0d-4760-9df0-b01e4cef3087	Add an Application ID URI
Directory (tenant) ID	Managed application in local directory
016073f7-695b-4902-80a5-0846301c94db	Azure Maintenance Mode Scheduler

Now under **Manage** Click **Certificates & secrets**

All services > scom2k16 >

Azure Maintenance Mode Scheduler

Search (Ctrl+/) << Delete Endpoints Preview fea

- Overview
- Quickstart
- Integration assistant
- Manage**
- Branding & properties
- Authentication
- Certificates & secrets**

Got a second? We would love your feedback

Essentials

Display name
[Azure Maintenance Mode Scheduler](#)

Application (client) ID
f4e1c243-4cee-4312-b3b8-1ffe3cb219d2

Object ID
5f8aaf99-cc0d-4760-9df0-b01e4cef3087

Under Client secrets. Click **New client secret**.

Certificates (0) **Client secrets (0)** Federated credentials (0)

A secret string that the application uses to prove its identity when requesting a token.

+ New client secret

Description	Expires	Value ⓘ
-------------	---------	---------

Type in **Azure Maintenance Mode**.

Select **Expires 12 months**

Add a client secret

Description

Expires

Click **Add** at the bottom.

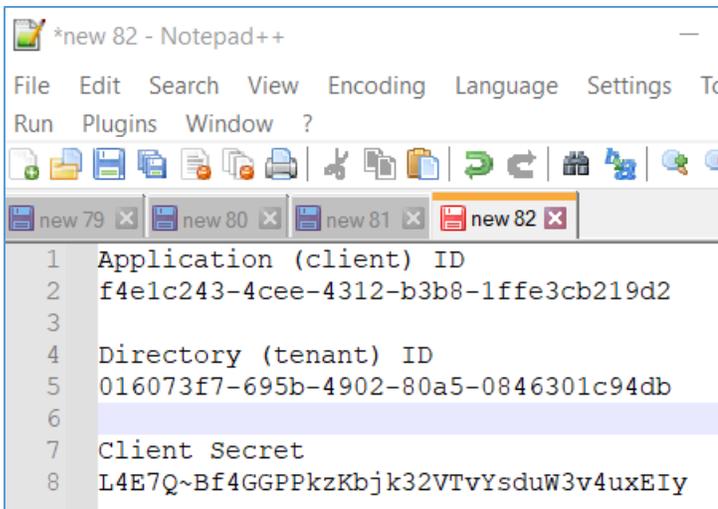
Add

Now on the next page. Don't leave this page until you copy the Value. If you leave you will have to create a new secret.

Description	Expires	Value ⓘ	Secret ID
Azure Maintenance Mode	3/10/2023	L4E7Q~Bf4GGPPkzKbjk32VTvYs...	8a4fea5b-8a28-4abe-af76-8975...  

Click the **copy** button and **save** the secret for later in your text file.

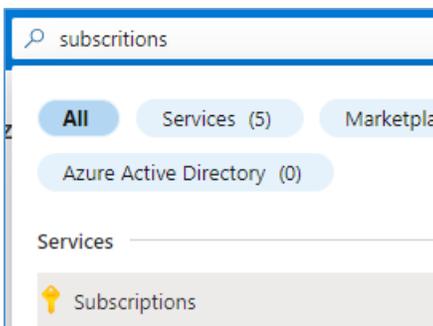
Now in my text file I have my **Application (client) ID, Directory (tenant) ID, and Client Secret** all saved for later.



```
*new 82 - Notepad++
File Edit Search View Encoding Language Settings To
Run Plugins Window ?
new 79 x new 80 x new 81 x new 82 x
1 Application (client) ID
2 f4e1c243-4cee-4312-b3b8-1ffe3cb219d2
3
4 Directory (tenant) ID
5 016073f7-695b-4902-80a5-0846301c94db
6
7 Client Secret
8 L4E7Q~Bf4GGPPkzKbjk32VTvYsduW3v4uxEIy
```

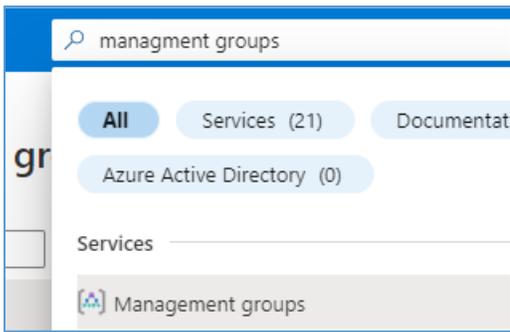
Now that we have an Application Account we now need to Assign it permissions to schedule the Alert Rules in Azure.

If you have one subscription in your tenant you can go to Subscriptions.

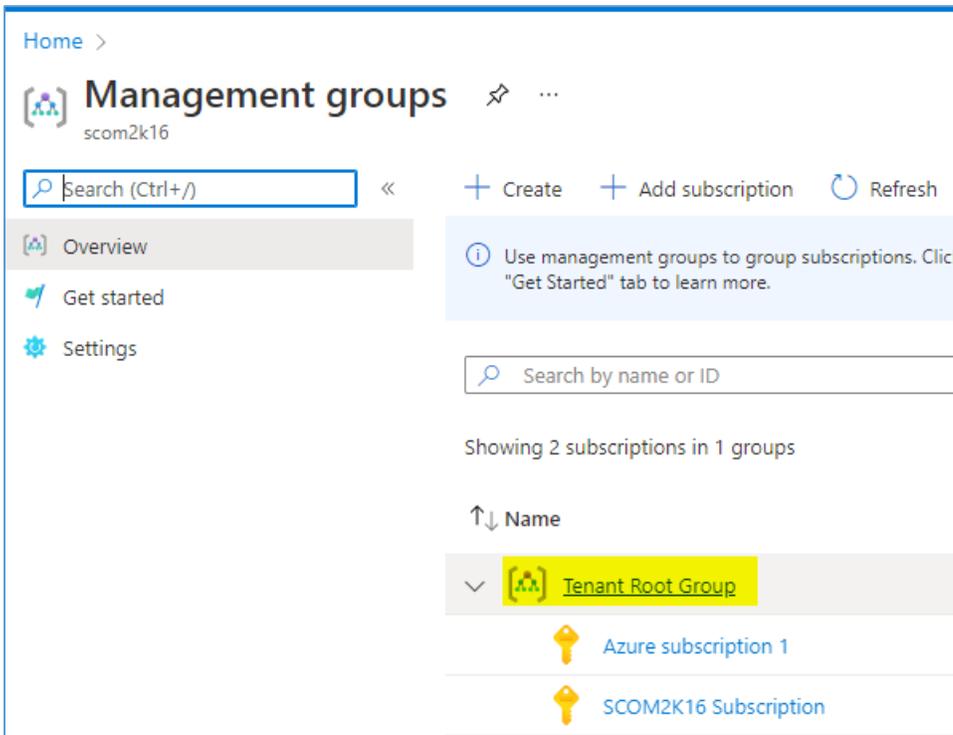


Most customers will have multiple subscriptions.

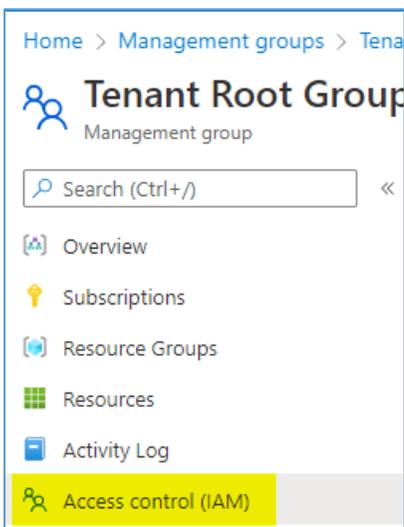
In that case go to Management Groups.



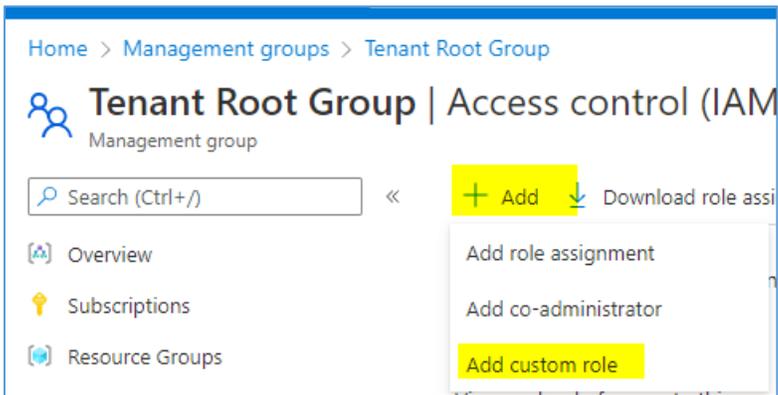
Click on the highest management group you want to schedule alerts for.



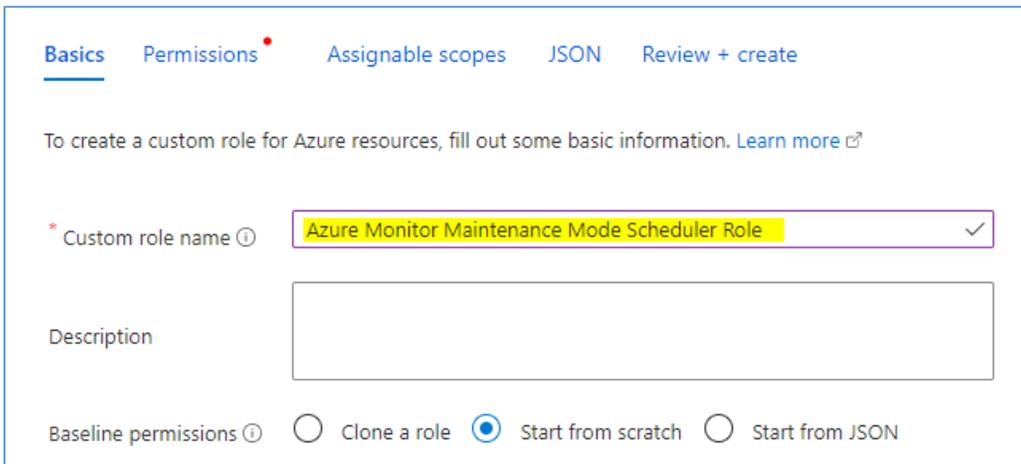
Now click **Access Control (IAM)**



Now click **Add**, Then Add custom role.



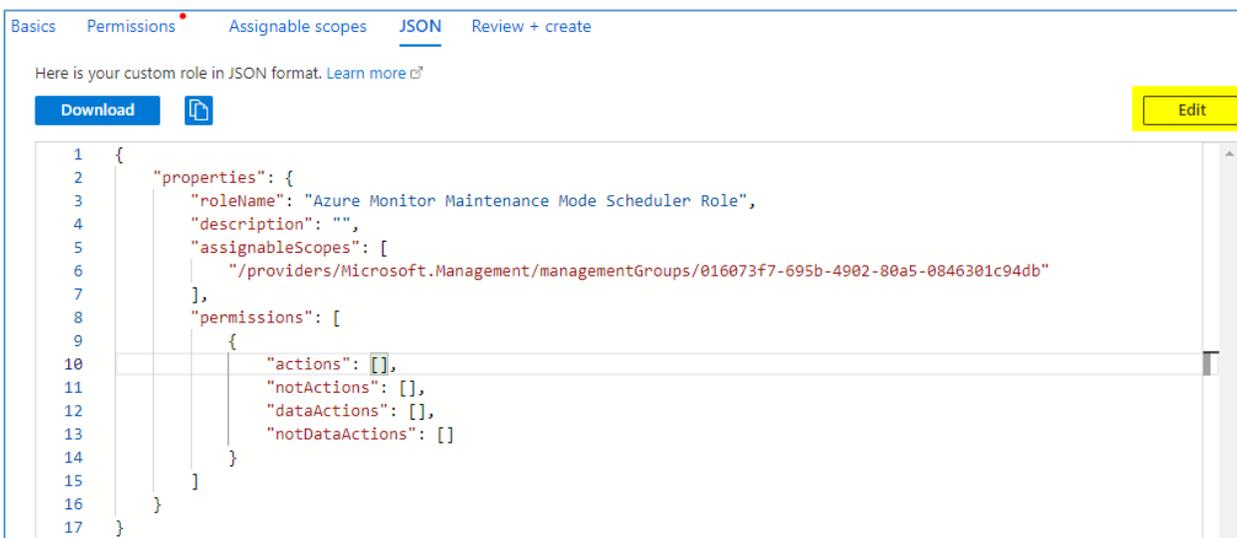
For Custom role name type : **Azure Monitor Maintenance Mode Scheduler**



Now click **JSON**



Click **Edit**



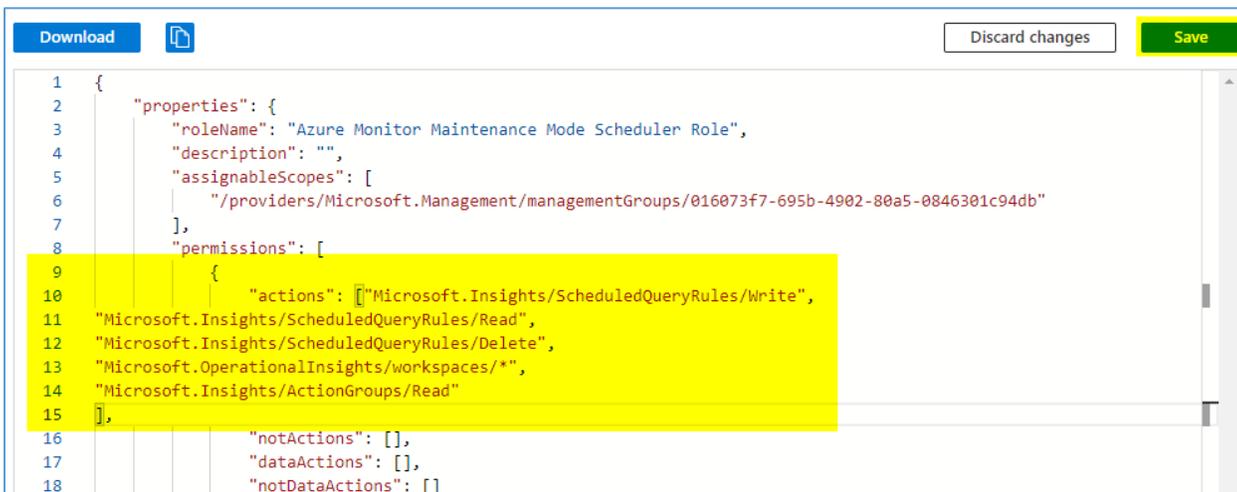
Put your cursor between the [] in actions:

```
1 {
2   "properties": {
3     "roleName": "Azure Monitor Mainte
4     "description": "",
5     "assignableScopes": [
6       "/providers/Microsoft.Managem
7     ],
8     "permissions": [
9       {
10        "actions": [],
11        "notActions": [],
12        "dataActions": [],
13        "notDataActions": []
14      }
15    ]
16  }
17 }
```

Now paste the following.

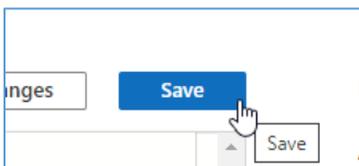
"Microsoft.Insights/ScheduledQueryRules/Write",
"Microsoft.Insights/ScheduledQueryRules/Read",
"Microsoft.Insights/ScheduledQueryRules/Delete",
"Microsoft.OperationalInsights/workspaces/*",
"Microsoft.Insights/ActionGroups/Read"

It should look like this when you are done. Don't worry about the formatting. As long as the text you pasted is between the [] it will work fine.



```
1 {
2   "properties": {
3     "roleName": "Azure Monitor Maintenance Mode Scheduler Role",
4     "description": "",
5     "assignableScopes": [
6       "/providers/Microsoft.Management/managementGroups/016073f7-695b-4902-80a5-0846301c94db"
7     ],
8     "permissions": [
9       {
10        "actions": ["Microsoft.Insights/ScheduledQueryRules/Write",
11        "Microsoft.Insights/ScheduledQueryRules/Read",
12        "Microsoft.Insights/ScheduledQueryRules/Delete",
13        "Microsoft.OperationalInsights/workspaces/*",
14        "Microsoft.Insights/ActionGroups/Read"
15        ],
16        "notActions": [],
17        "dataActions": [],
18        "notDataActions": []
19      }
20    ]
21  }
22 }
```

Make sure you hit **Save** in the top right when you are done.



Then click **Review + create** at the bottom of the page.

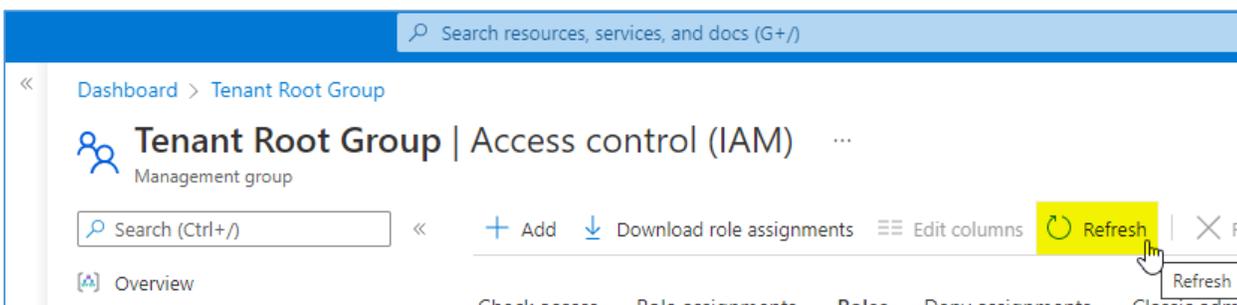


Then click Create



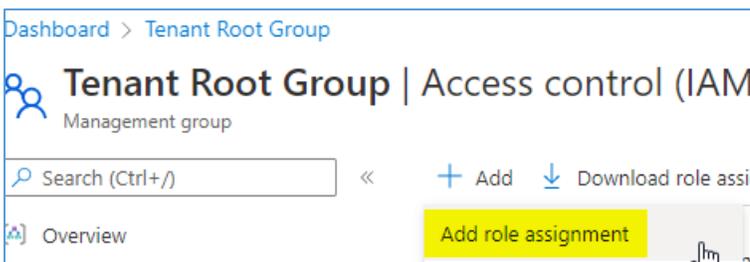
Then **OK**.

Now Click **Refresh**

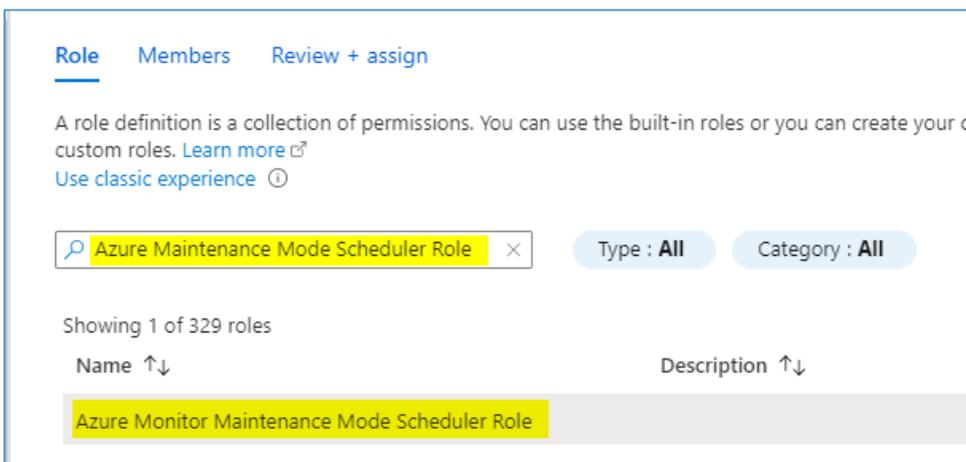


Now that we have a Custom Role called **Azure Maintenance Mode Scheduler Role**, we need to grant the Azure Maintenance Mode Scheduler to that role.

Click **Add role assignment**.



Under the Role Tab. Type in **Azure Maintenance Mode Scheduler Role** and select it



Click The **Member Tab** and **Select +Select Members**

The screenshot shows a configuration page for a role. At the top, there is a 'Role' section with a 'Members' tab highlighted in yellow and a 'Review + assign' link. Below this is the 'Assign access to' section with two radio buttons: 'User, group, or service principal' (selected) and 'Managed identity'. The 'Members' section features a '+ Select members' button highlighted in yellow. Below the button is a table with columns 'Name' and 'Object ID', currently containing the text 'No members selected'. At the bottom, there is a 'Description' field with the text 'Optional'.

Type in **Azure Maintenance Mode Scheduler**.

The screenshot shows a 'Select members' dialog box with a search bar containing 'Azure Maintenance Mode Scheduler'. Below the search bar, a list of search results is shown, with the first result 'Azure Maintenance Mode Scheduler' highlighted in yellow.

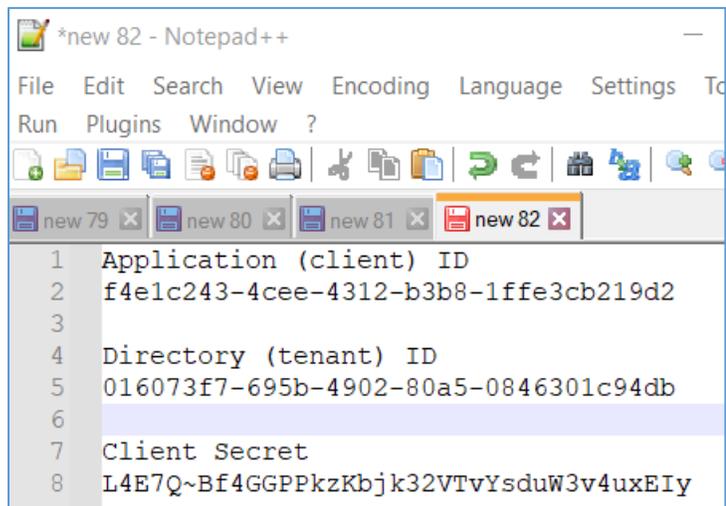
Then select it and then click **Select** at the bottom of the screen.

The screenshot shows the 'Selected members' section of the role configuration. It displays a list of selected members, with 'Azure Maintenance Mode Scheduler' listed and a 'Remove' link next to it. At the bottom of the section, there are two buttons: 'Select' (highlighted in yellow) and 'Close'.

Then Click **Review + assign**  at the bottom of the screen. Then click **Review + assign** again.

Now we have the permission setup.

Make sure you still have your Notepad with the Client ID, Tennant ID and Secret as you will need this for the install.



The image shows a Notepad++ window titled '*new 82 - Notepad++'. The window contains the following text:

```
1 Application (client) ID
2 f4e1c243-4cee-4312-b3b8-1ffe3cb219d2
3
4 Directory (tenant) ID
5 016073f7-695b-4902-80a5-0846301c94db
6
7 Client Secret
8 L4E7Q~Bf4GGPPkzKbjk32VTvYsduW3v4uxEIy
```