Manage Azure resources using Locks

Use Case:

In this walkthrough task we will create Azure resources to allow us to create a lock against them, then you will add a Delete Lock to prevent deletion of a resource group. You will then verify that deletion of the resource group is indeed blocked, and also that any resources within the resource group are also blocked from being deleted by the parent Lock. You will then remove the lock and verify it has been removed by deleting the resource group.

Prerequisites:

You require need an Azure subscription to perform these steps. If you don't have one you can create one by following the steps outlined on the [Create your Azure free account today](#) webpage.

Steps:
Create Azure resources to allow us to create a lock against them

1. Sign into the Azure Portal and click on the **Cloud Shell** icon in the top right hand corner
2. The **Cloud Shell** is launched in the bottom of the browser window.
3. Create a resource group into which we will place our resources by running the following Azure CLI command. You can copy and paste the command from the below directly into the Cloud Shell console, then press **Enter** to run the command. This command will run fine in either **powershell** *or* **bash** console.
   - ```cli
   - az group create `
   - --name lockscrg `
   - --location westeurope
   - ```

```
PS Azure:\> az group create --name lockscrg --location westeurope
{
  "id": "/subscriptions/                              /resourceGroups/lockscrg",
  "location": "westeurope",
  "managedBy": null,
  "name": "lockscrg",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
Azure:/
```

4. Run the below Azure CLI command to create a virtual machine. Again, you can copy and paste the command from below directly into the Cloud Shell console and press **Enter** to run it.
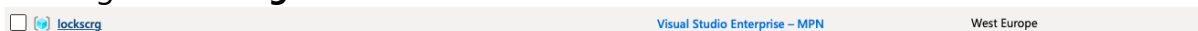   - ```cli
   - az vm create `
   - --name vmlocks1 `
   - --resource-group lockscrg `
   - --image Win2019Datacenter `
   - --location westeurope `
   - --admin-username demouser `
   - --admin-password demo@pass123
   - ```

Note: The command will take 2 to 3 minutes to complete. The command will create a virtual machine and various resources associated with it such as storage, networking and security resources. You can close the Azure Cloud Shell once it is complete.

```
PS Azure:\> az vm create --name vmlocks1 --resource-group lockscrg --image Win2019DataCenter --location westeurope --admin-username demouser --admin-password
demo@pass123
{
  "fqdns": "",
  "id": "/subscriptions/                              /resourceGroups/lockscrg/providers/Microsoft.Compute/virtualMachines/vmlocks1",
  "location": "westeurope",
  "macAddress": "00-0D-3A-A8-20-21",
  "powerState": "VM running",
  "privateIpAddress": "10.0.0.4",
  "publicIpAddress": "52.236.168.227",
  "resourceGroup": "lockscrg",
  "zones": ""
}
```

Add a Lock to prevent deletion of a resource

1. In the Azure Portal go to the resource group you just created i.e. **lockscrg**, then go to **Settings** > **Locks**

☐ 🔲 lockscrg	Visual Studio Enterprise – MPN	West Europe

2. To add a lock, select **Add** and then enter the following values, clicking **OK** when finished.
   - **Lock name**: resource group lock
   - **Lock Type**: Delete (the other lock type available to us here is *Read-only*)

lockscrg - Locks
Resource group

Search (Cmd+/)

+ Add   Subscription   Refresh

Lock name   **Add**   Lock type

This resource has no locks.

- Overview
- Activity log
- Access control (IAM)
- Tags
- Events

Settings

- Quickstart
- Deployments
- Policies
- Properties
- Locks
- Export template

3. Now let us try delete the resource group we just created the **Delete** lock for, by going to the resource group i.e. **lockscrg**, then the clicking on **Overview** and selecting **Delete resource group**

+ Add   Subscription   Refresh

Add lock

Lock name	Lock type
resource group lock ✓	Delete ∨

N **OK**

OK   **Cancel**

4. In the **Are you sure you want to delete "lockscrg"?** blade, type the name of the resource group i.e.**lockscrg** and click the **Delete** button.

5. You receive an error message stating the resource group is locked and can't be deleted

Delete resource group lockscrg failed

The resource group lockscrg is locked and can't be deleted. Click here to manage locks for this resource group.

a few seconds ago

6. Within the same resource group open the virtual machine i.e.**vmlocks1**, go to the **Overview** pane and select **Delete**

Are you sure you want to delete "lockscrg"?   ✕

⚠️ Warning! Deleting the "lockscrg" resource group is irreversible. The action you're about to take can't be undone. Going further will delete this resource group and all the resources in it permanently.

TYPE THE RESOURCE GROUP NAME:

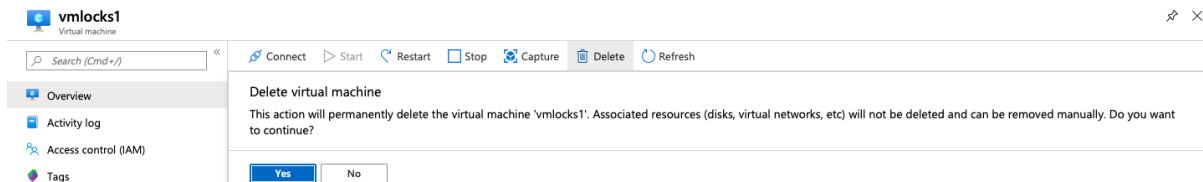| lockscrg	✓

AFFECTED RESOURCES
There are 6 resources in this resource group that will be deleted.

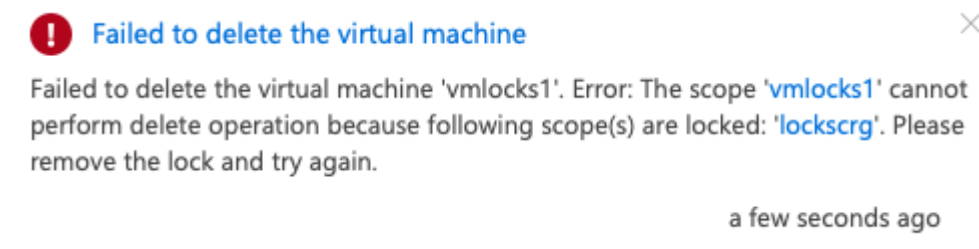| Name	Type	Location
vmlocks1	Virtual machine	West Europe
vmlocks1_OsDisk_1_e4ef8d39726a...	Disk	West Europe
vmlocks1NSG	Network security gro...	West Europe
vmlocks1PublicIP	Public IP address	West Europe
vmlocks1VMNic	Network interface	West Europe
vmlocks1VNET	Virtual network	West Europe

Delete   Cancel

7. In the resultant **Delete virtual machine** pane, select **Yes** to confirm your wish to delete the virtual machine
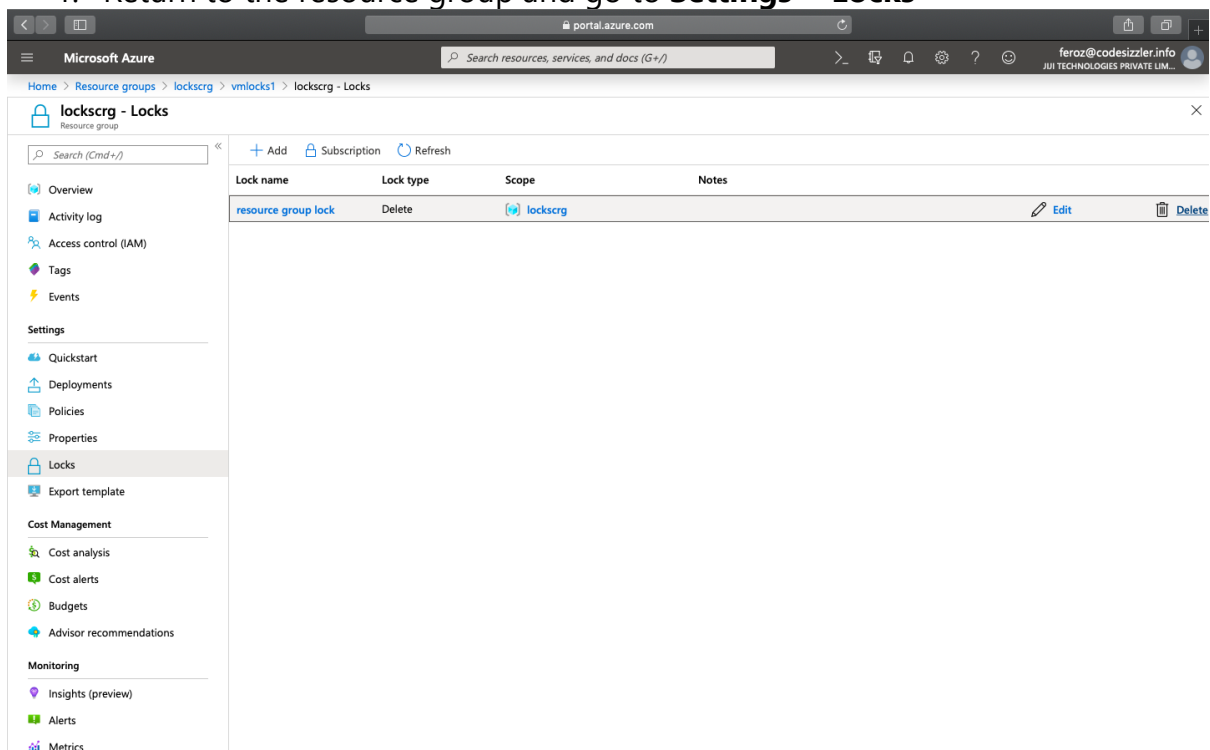
8. You receive an error message stating

Note: Although we did not create a lock specifically for the virtual machine, we did create a lock at the resource group level, which contains the virtual machine resource. As such this *parent* level lock prevents us from deleting the virtual machine, the virtual machine resource inherits the lock from the parent.

Remove a lock

1. Return to the resource group and go to **Settings** > **Locks**

2. Click the ellipsis at the end of the Delete lock that you created earlier and select **Delete** on the resultant menu

3. In the resource group **Overview** pane, click on **Delete resource group** an din the resultant **Are you sure you want to delete "lockscrg"?** pane, type in the name of the resource group and click **Delete** to delete the resource group.

Note: The resource group and all resources within it are successfully deleted now, because the delete lock has been removed.

Microsoft Azure   Search resources, services, and docs (G+/)   feroz@codesizzler.info
JUI TECHNOLOGIES PRIVATE LIM...

Home > Resource groups > lockscrg > vmlocks1 > lockscrg

lockscrg
Resource group

Search (Cmd+/)

Overview	
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+ Add   Edit columns   Delete resource group   Refresh   Move   Export

Subscription (change) : Visual Studio Enterprise – MPN
Subscription ID : 7bd726dd-0a34-4060-9168-b1e496983db8
Tags (change) : Click here to add tags

Filter by name...   Type == **all**   Location == **all**   + Add filter

Showing 1 to 6 of 6 records.   ☐ Show hidden types

Name ↑↓
☐ vmlocks1
☐ vmlocks1_OsDisk_1_e4ef8d39726a400bbcd65b38ca63e583
☐ vmlocks1NSG
☐ vmlocks1PublicIP
☐ vmlocks1VMNic
☐ vmlocks1VNET

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Are you sure you want to delete "lockscrg"? ✕

⚠ Warning! Deleting the "lockscrg" resource group is irreversible. The action you're about to take can't be undone. Going further will delete this resource group and all the resources in it permanently.

TYPE THE RESOURCE GROUP NAME:

lockscrg ✓

AFFECTED RESOURCES
There are 6 resources in this resource group that will be deleted.

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vmlocks1NSG	Network security gro...	West Europe
vmlocks1PublicIP	Public IP address	West Europe
vmlocks1VMNic	Network interface	West Europe
vmlocks1VNET	Virtual network	West Europe

Delete   Cancel