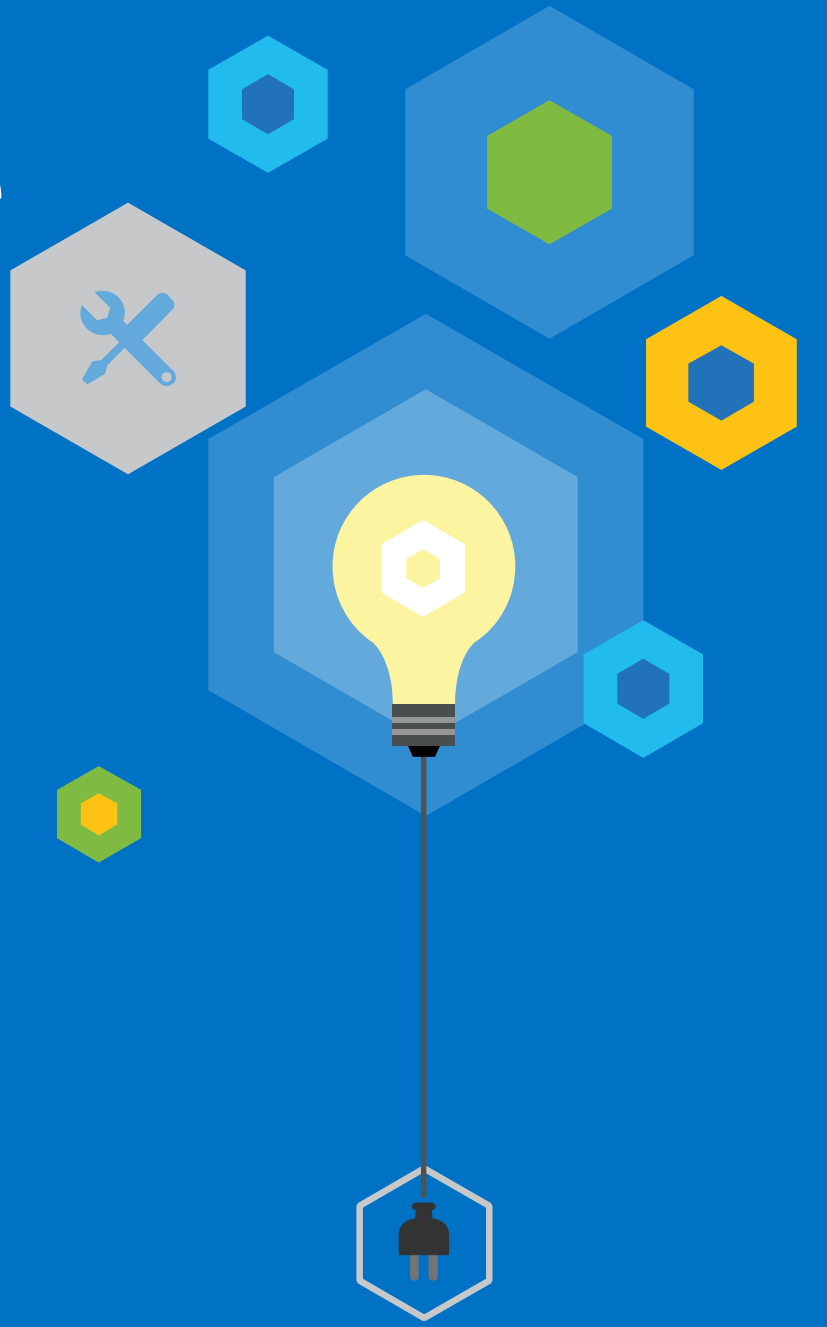
Azure Planned Maintenance for Virtual Machines

Agenda

- Planned Maintenance in Azure - ARM
- Planned Maintenance Experience
  - Introduction
  - Create Alert in UI (portal.azure.com)
- PowerShell samples
- Summary
- Q & A

Planned Maintenance in Azure



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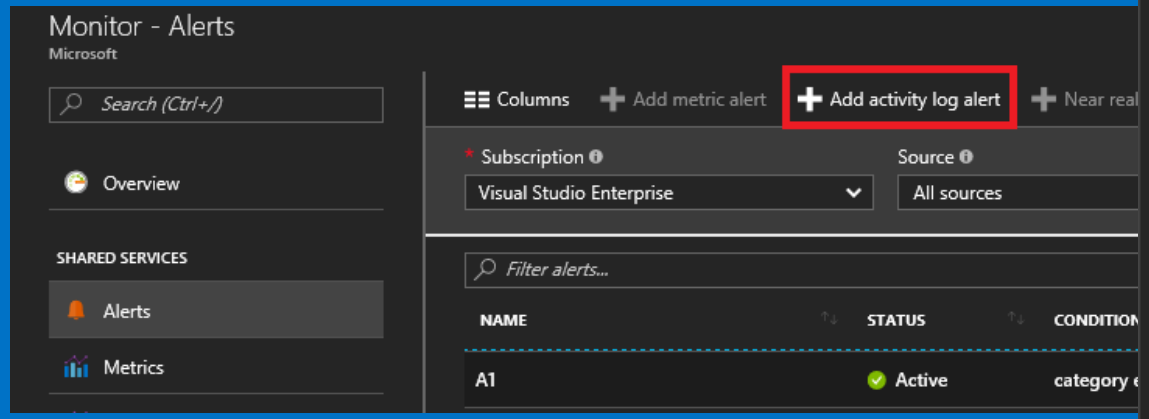
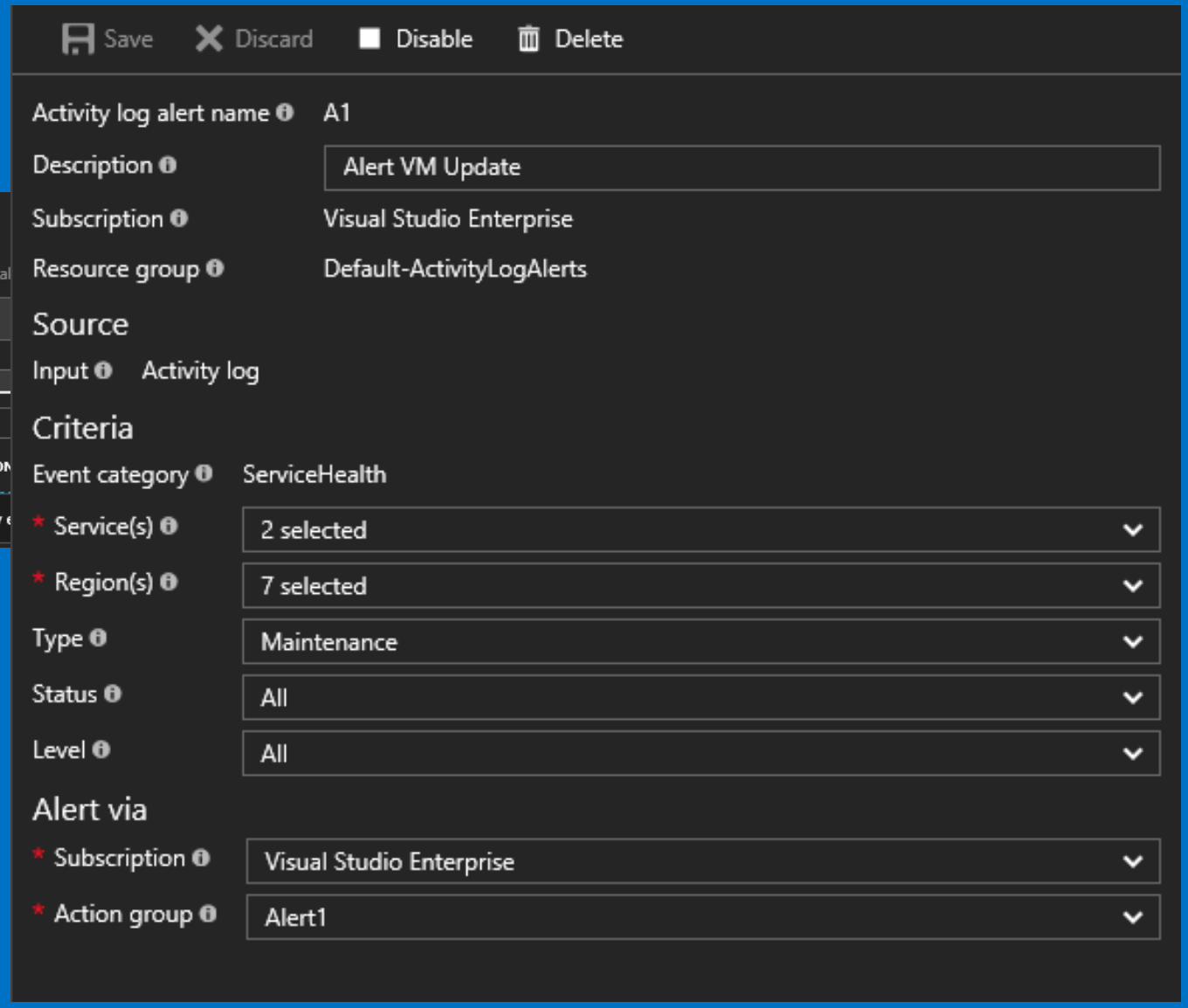
Introduction

- **VM preserving maintenance**
  - The virtual machine is placed into a “paused” state
  - RAM, Network connection, open files remain open
  - Virtual machine is then resumed within 30 seconds
- **VM restarting maintenance**
  - VM Reboot – VM is restarted. Memory, open files, network connections are lost
  - VM Redeploy – VM is moved to another host.

Create Alert in UI



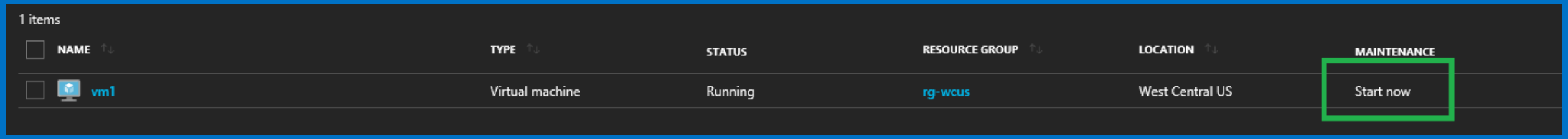


Create Alert in UI

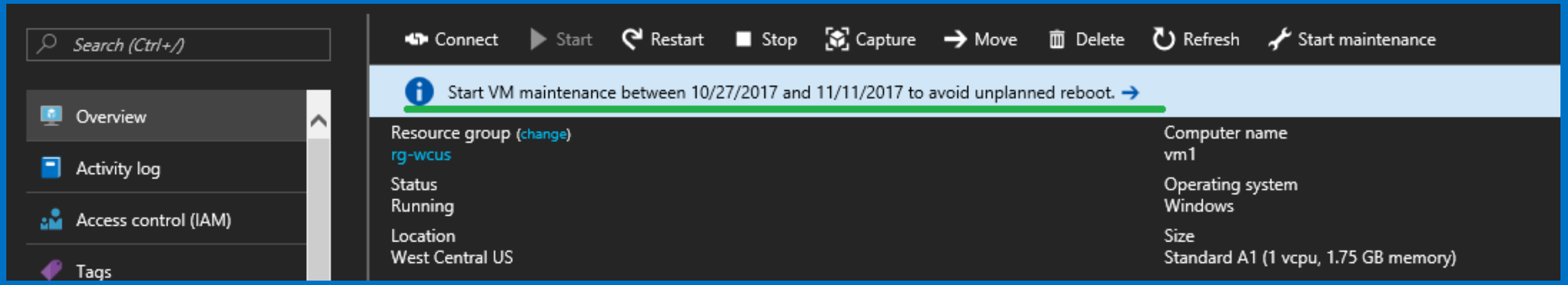
- Sign in to the Azure portal.
- In the menu on the left, select Monitor.
- In the Monitor - Activity log pane, select Alerts.
- In the Monitor - Alerts pane, click + Add activity log alert.
- Complete the information in the Add activity log alert page

and make sure you set the following in
Criteria:
Type:
Maintenance Status: All (Do not set status to Active or Resolved)
Level: All.

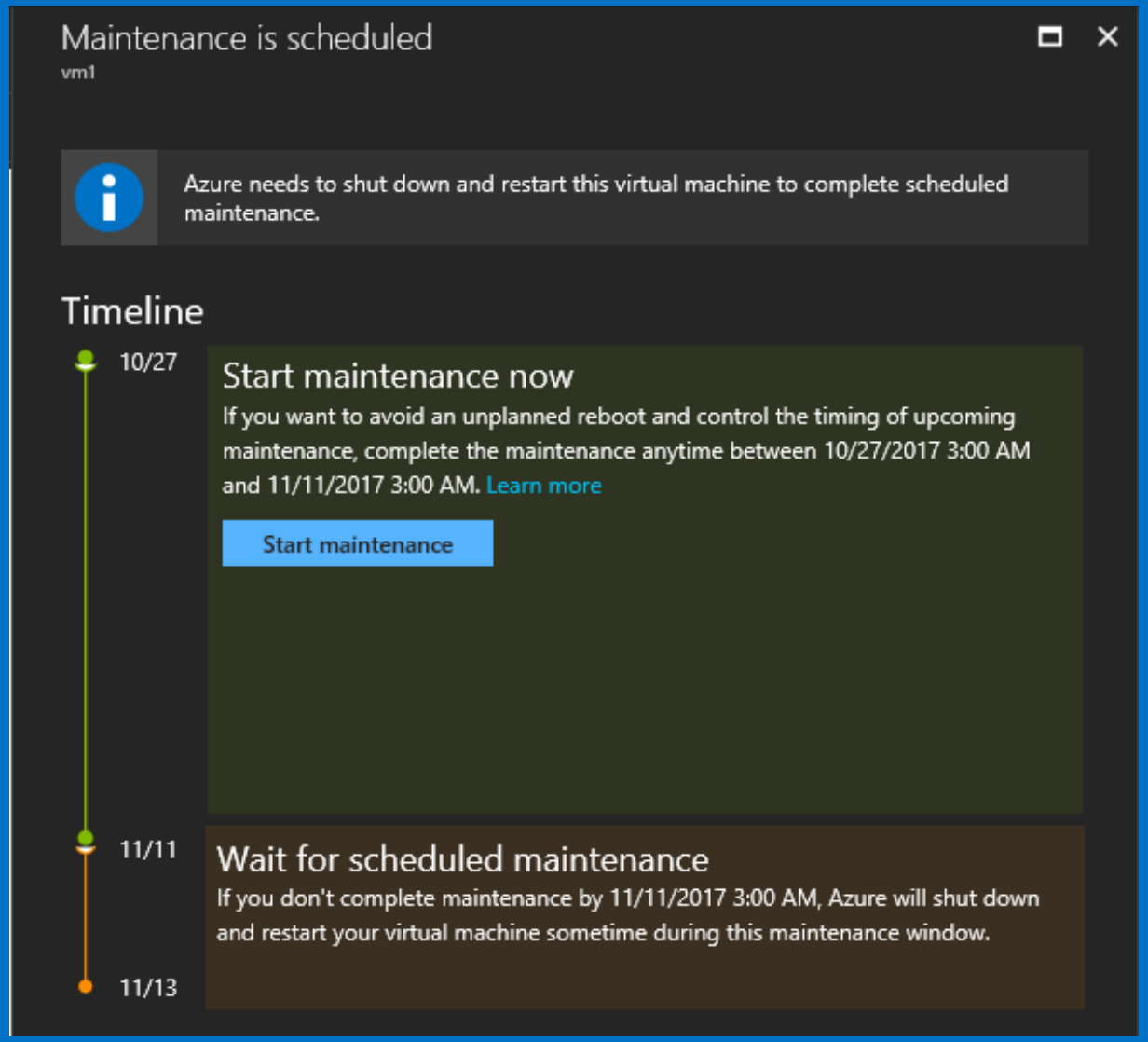
Planned Maintenance in Azure - UI



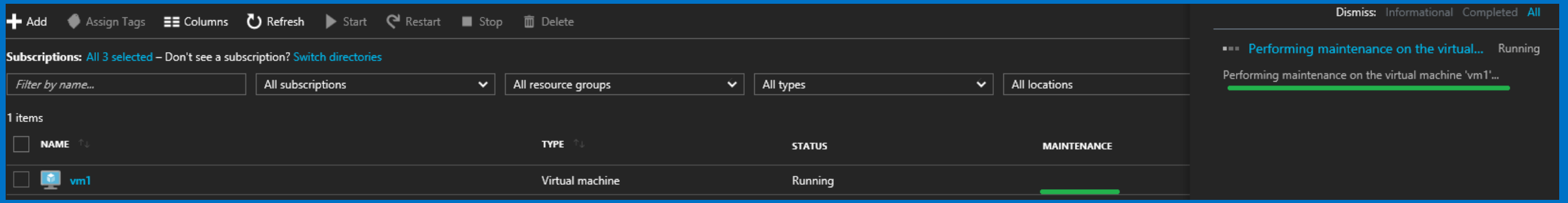
Planned Maintenance in Azure - UI



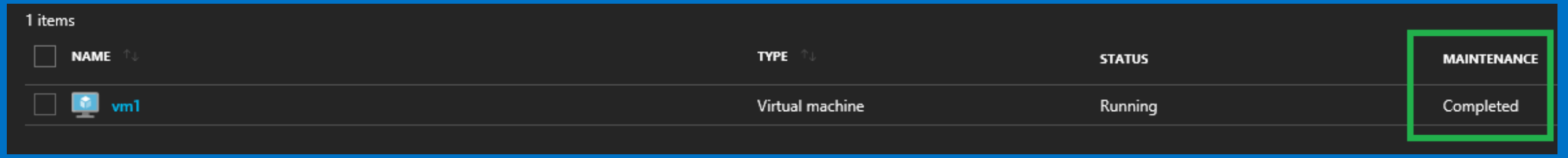
Planned Maintenance in Azure - UI

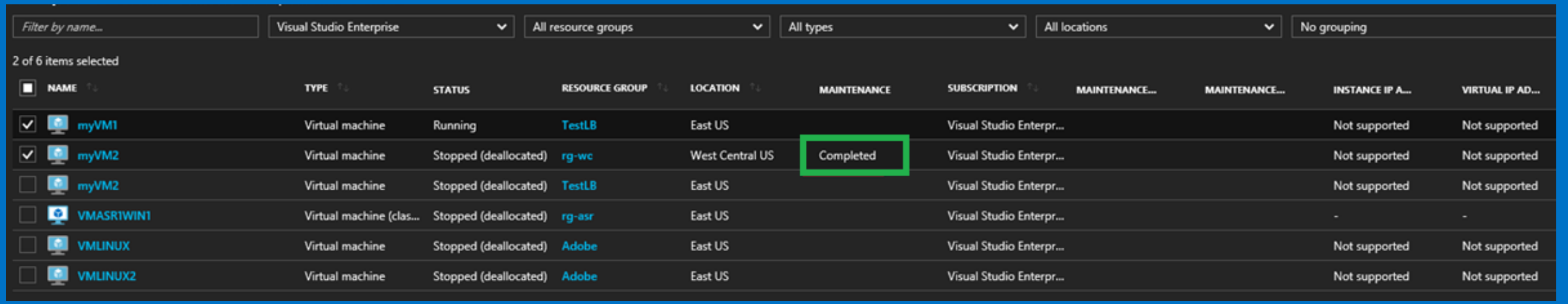


Planned Maintenance in Azure - UI



Planned Maintenance in Azure - UI





Planned Maintenance in Azure

PowerShell

```
ModuleType Version
---------- -------
Manifest   3.4.1
```

```powershell
function MaintenanceIterator
{
    Select-AzureRmSubscription -SubscriptionId $args[0]

    $rgList= Get-AzureRmResourceGroup

    for ($rgIdx=0; $rgIdx -lt $rgList.Length ; $rgIdx++)
    {
        $rg = $rgList[$rgIdx]
        $vmList = Get-AzureRMVM -ResourceGroupName $rg.ResourceGroupName
        for ($vmIdx=0; $vmIdx -lt $vmList.Length ; $vmIdx++)
        {
            $vm = $vmList[$vmIdx]
            $vmDetails = Get-AzureRMVM -ResourceGroupName $rg.ResourceGroupName -Name $vm.Name -Status
              if ($vmDetails.MaintenanceRedeployStatus )
            {
                Write-Output
                    "VM: $($vmDetails.Name)
                    IsCustomerInitiatedMaintenanceAllowed: $($vmDetails.MaintenanceRedeployStatus.IsCustomerInitiatedMaintenanceAllowed)
                    $($vmDetails.MaintenanceRedeployStatus.LastOperationMessage)"
            }
          }
    }
}
```

Planned Maintenance in Azure

PowerShell samples (West Central US testing)**:**

```
ModuleType Version
---------- -------
Manifest   3.4.1
```

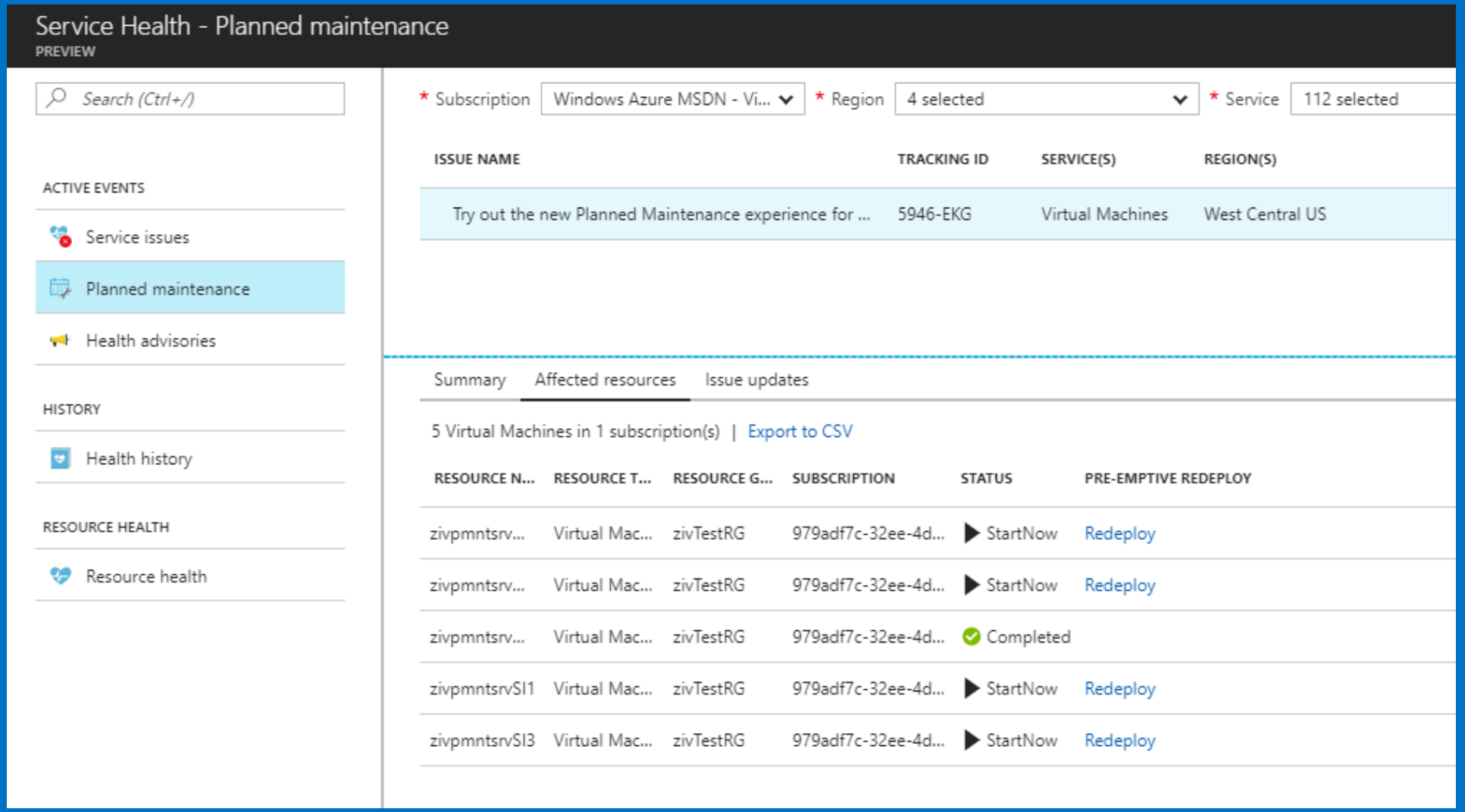
```
PS C:\Users\ovtimpan> Restart-AzureRmVM -PerformMaintenance -Name $vm3.Name -ResourceGroupName $vm3.ResourceGroupName


OperationId :
Status      : Succeeded
StartTime   : 2017-11-07 11:25:40 AM
EndTime     : 2017-11-07 11:32:49 AM
Error       :
```

Planned Maintenance in Azure

PowerShell samples (West Central US testing)**:**

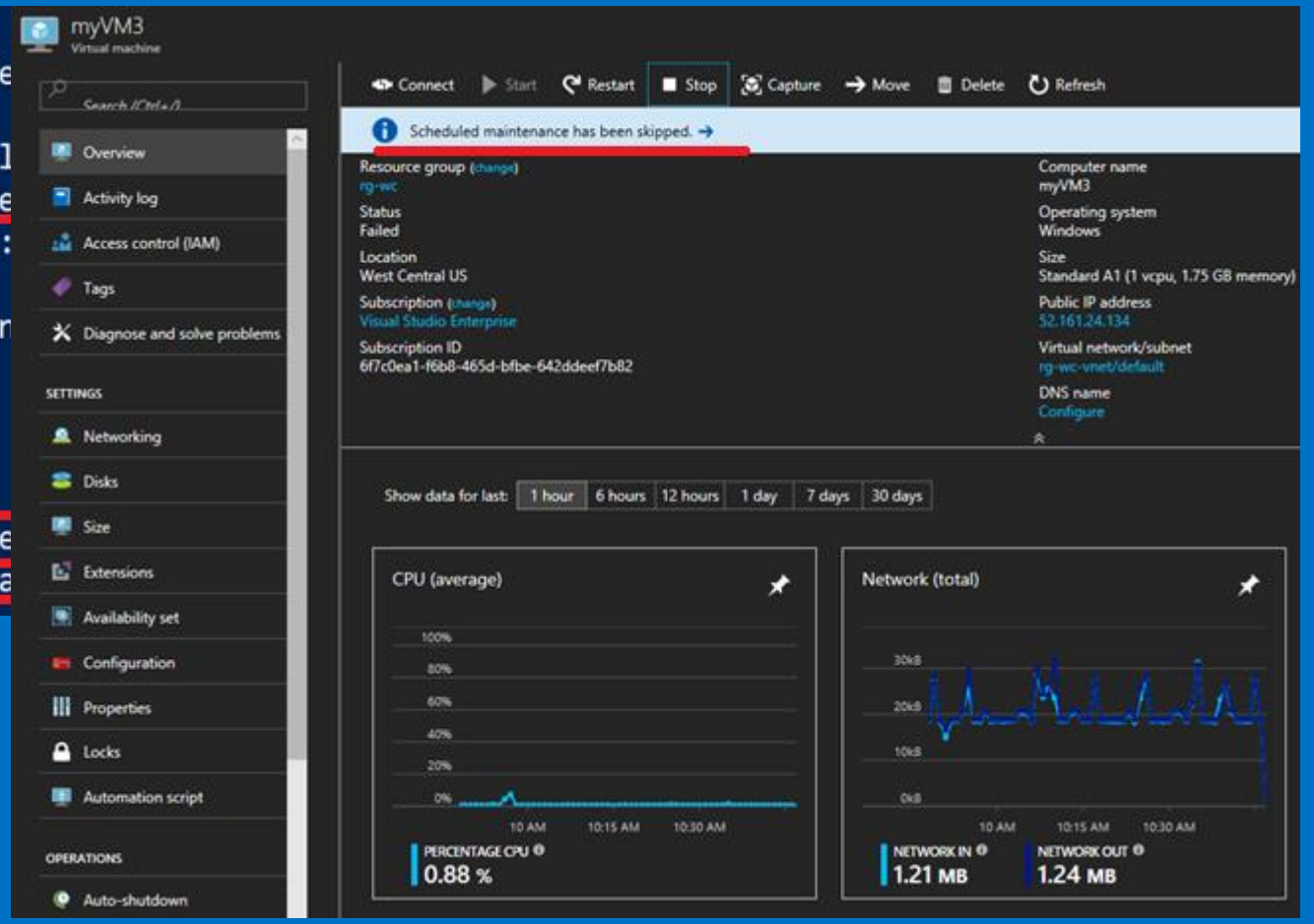
```powershell
function MaintenanceIterator2
{
    Select-AzureRmSubscription -SubscriptionId $args[0]

    $rgList= Get-AzureRmResourceGroup

    for ($rgIdx=0; $rgIdx -lt $rgList.Length ; $rgIdx++)
    {
        $rg = $rgList[$rgIdx]
        $vmList = Get-AzureRMVM -ResourceGroupName $rg.ResourceGroupName
        for ($vmIdx=0; $vmIdx -lt $vmList.Length ; $vmIdx++)
        {
            $vm = $vmList[$vmIdx]
            $vmDetails = Get-AzureRMVM -ResourceGroupName $rg.ResourceGroupName -Name $vm.Name -Status
            if ($vmDetails.MaintenanceRedeployStatus -eq $false )
            {
                if ($vmDetails.MaintenanceRedeployStatus.LastOperationResultCode -eq "MaintenanceCompleted")
                {
                    Write-Output "VM: $($vmDetails.Name) - Completed"
                }
                else
                {
                    Write-Output "VM: $($vmDetails.Name) - Failed Message: $($vmDetails.MaintenanceRedeployStatus.LastOperationMessage)"
                }
            }
        }
    }
}
```

Planned Maintenance in Azure



Planned Maintenance in Azure

```
Statuses[0]                                   :
  Code                                        : ProvisioningState
  Level                                       : Error
  DisplayStatus                               : Provisioning fail
  Message                                     : VM 'myVM3' Mainte
  Time                                        : 2017-11-06 10:48:
Statuses[1]                                   :
  Code                                        : PowerState/runnin
  Level                                       : Info
  DisplayStatus                               : VM running
MaintenanceRedeployStatus                     :
  IsCustomerInitiatedMaintenanceAllowed       : False
  LastOperationResultCode                     : MaintenanceAborte
  LastOperationMessage                        : Your VM was not a
```



Planned Maintenance in Azure

Demo

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Planned Maintenance in Azure

How to

- UI
- PowerShell

Control

REFERENCES

- https://azure.microsoft.com/en-us/blog/a-new-planned-maintenance-experience-for-your-virtual-machines/
- https://docs.microsoft.com/en-us/azure/virtual-machines/windows/maintenance-notifications
- https://docs.microsoft.com/en-us/azure/virtual-machines/windows/scheduled-events
- https://docs.microsoft.com/en-us/azure/virtual-machines/linux/scheduled-events
- https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/virtual-machines/windows/instance-metadata-service.md

Q & A

Contact email:

Microsoft