

## Lab 08 - Manage Virtual Machines

Microsoft Azure is one of the leading cloud computing platforms that provides a vast range of services and solutions for various applications, including storage, computing, networking, and analytics. As an IT professional, it's essential to know how to manage virtual machines in Azure to leverage the benefits of cloud computing fully. In this lab, we will explore the basics of creating and managing virtual machines in Azure. The lab will cover how to create virtual machines, configure virtual networks, attach data disks, and troubleshoot common issues in a virtual machine environment. Throughout the lab, we will use the Azure portal to complete the tasks and ensure that we have a functional virtual machine environment. The following report includes screenshots of some of the key steps in the lab to illustrate the process of managing virtual machines in Azure.

### Task 1: Deploy zone-resilient Azure virtual machines by using the Azure portal and an Azure Resource Manager template.

In this task the virtual machine is just created and deployed so there is no need for a screenshot because in the next task we configure the already created virtual machine and the screenshot will be shown there.

### Task 2: Configure Azure virtual machines by using virtual machine extensions.

This task focuses on configuring virtual machines in Azure by using the Custom Script virtual machine extension, which enable the installation of additional scripts on the virtual machine to enhance its functionality.

The screenshot displays the Microsoft Azure portal interface. On the left, the 'Virtual machines' section shows a list of VMs, including 'az104-08-vm0' and 'az104-08-vm1'. The main area shows the 'Run Command Script' window for 'az104-08-vm1'. The window title is 'Run Command Script' and it indicates 'Script execution complete'. The 'Output' section shows the following details:

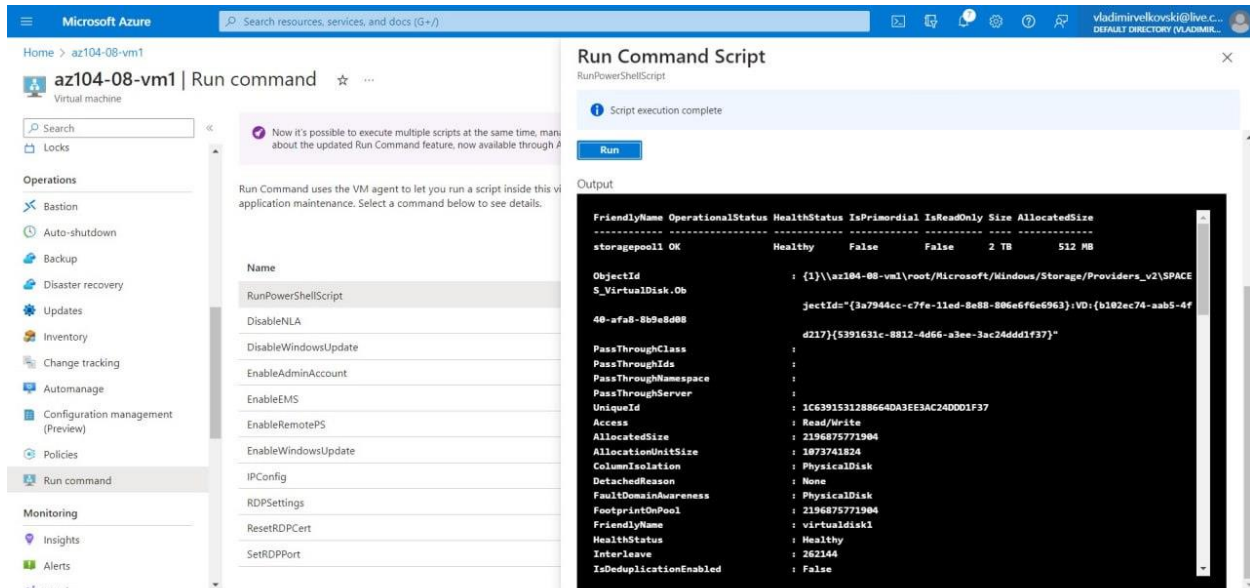
```
StatusCode : 200
StatusDescription : OK
Content : az104-08-vm0

RawContent : HTTP/1.1 200 OK
              Accept-Ranges: bytes
              Content-Length: 14
              Content-Type: text/html
              Date: Tue, 21 Mar 2023 16:01:34 GMT
              ETag: "a4642c19d5cd9116"
              Last-Modified: Tue, 21 Mar 2023 15:52:37 GMT
              Server: ...

Forms : {}
Headers : [[Accept-Ranges, bytes], [Content-Length, 14], [Content-Type, text/html], [Date, Tue, 21 Mar 2023 16:01:34 GMT]...]
Images : {}
InputFields : {}
Links : {}
ParsedHtml : {}
RawContentLength : 14
```

### Task 3: Scale compute and storage for Azure virtual machines.

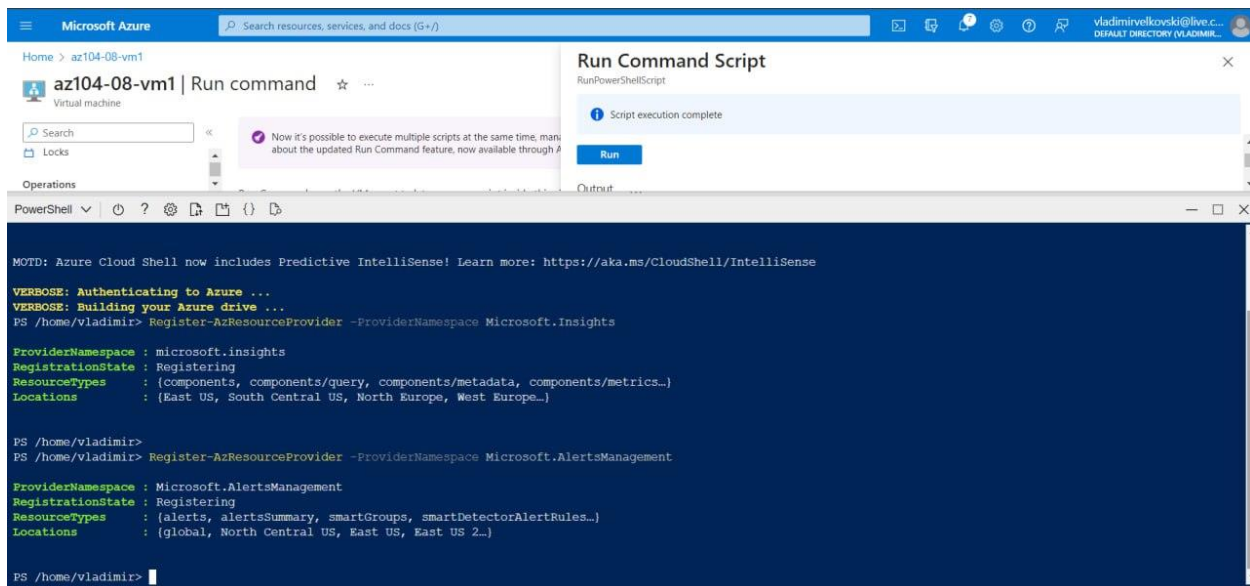
In Task 3, we will learn how to scale compute and storage resources for virtual machines in Azure, allowing us to optimize performance and cost-efficiency based on our workload requirements.



The screenshot displays the Microsoft Azure portal interface. On the left, the navigation pane shows the 'Run command' option selected under the 'Operations' section. The main area shows the 'Run Command' window for the virtual machine 'az104-08-vm1'. The 'Run PowerShellScript' command is chosen. The output of the script is displayed in a black box with white text, showing the properties of a virtual disk. The output includes a table with columns: FriendlyName, OperationalStatus, HealthStatus, IsPrimordial, IsReadOnly, Size, and AllocatedSize. The table shows a single row for 'storagepool1' with a size of 2 TB and an allocated size of 512 MB. Below the table, the script output shows the details of the virtual disk, including its object ID, GUID, and various properties like PassThroughClass, PassThroughIds, PassThroughNamespace, PassThroughServer, UniqueId, Access, AllocatedSize, AllocationUnitSize, ColumnIsolation, DetachedReason, FaultDomainAwareness, FootprintOnPool, FriendlyName, HealthStatus, Interleave, and IsDeduplicationEnabled.

### Task 4: Register the Microsoft.Insights and Microsoft.AlertsManagement resource providers.

Task 4 focuses on registering the Microsoft.Insights and Microsoft.AlertsManagement resource providers, which enable the collection of monitoring and diagnostic data for virtual machines in Azure and provide alerts based on predefined rules.



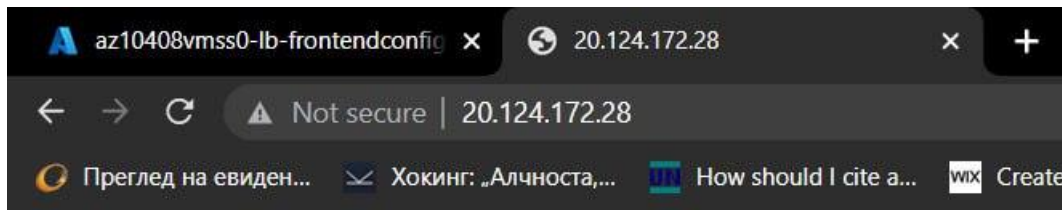
The screenshot displays the Microsoft Azure portal interface. On the left, the navigation pane shows the 'Run command' option selected under the 'Operations' section. The main area shows the 'Run Command' window for the virtual machine 'az104-08-vm1'. The 'Run PowerShellScript' command is chosen. The output of the script is displayed in a black box with white text, showing the execution of a script that registers the Microsoft.Insights and Microsoft.AlertsManagement resource providers. The output includes the command 'Register-AzResourceProvider -ProviderNamespace Microsoft.Insights' and the command 'Register-AzResourceProvider -ProviderNamespace Microsoft.AlertsManagement'. The output also shows the details of the registered providers, including their names, registration states, resource types, and locations.

### ***Task 5: Deploy zone-resilient Azure virtual machine scale sets by using the Azure portal.***

This task covers the deployment of zone-resilient virtual machine scale sets in Azure, which allows us to automatically scale our virtual machine resources based on demand while ensuring high availability. This task is also connected with the next, so the screenshot will be shown in the next task.

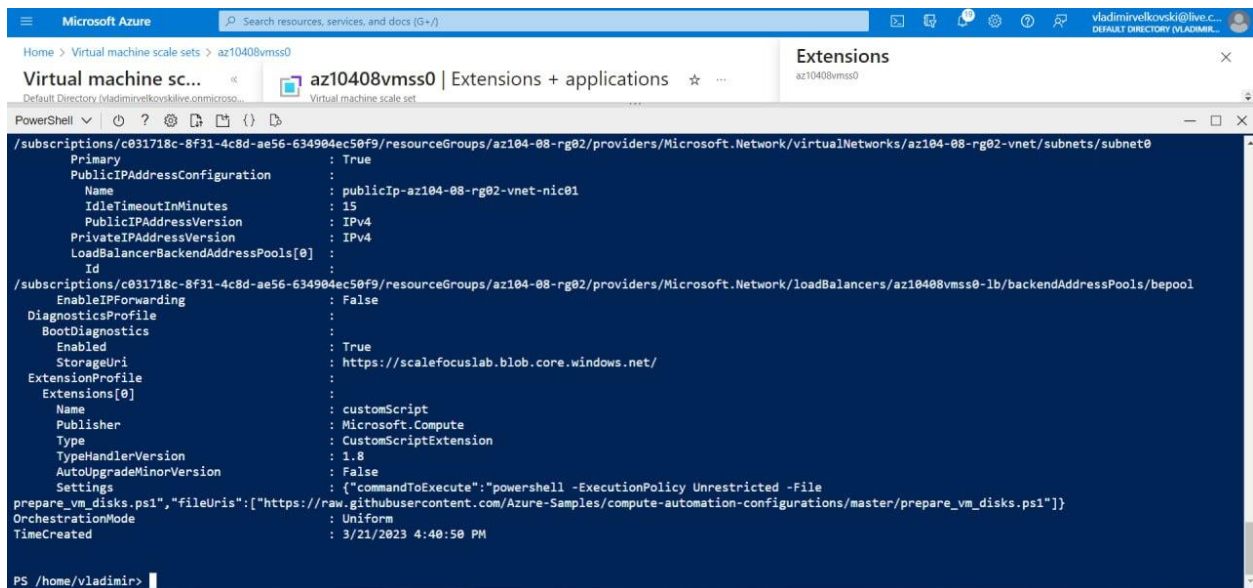
### ***Task 6: Configure Azure virtual machine scale sets by using virtual machine extensions.***

In Task 6, we will learn how to configure virtual machine scale sets in Azure by using the Custom Script virtual machine extension. On the screenshot is shown that the browser page displays the name of one of the instances of the Azure virtual machine scale set az10408vmss0.



### ***Task 7: Scale compute and storage for Azure virtual machine scale sets (optional).***

Task 7 covers scaling compute and storage resources for virtual machine scale sets in Azure, allowing us to optimize performance and cost-efficiency based on our workload requirements.



Microsoft Azure

Search resources, services, and docs (G+)

vladimirvelkovski@live.c...  
DEFAULT DIRECTORY (VLADIMIR...

Home > Virtual machine scale sets > az10408vmss0

Virtual machine scale set

az10408vmss0 | Instances

Create

Edit columns

Filter by name...

Name

az10408vmss0

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Instances

Networking

Scaling

Disks

Operating system

Microsoft Defender for Cloud

Guest + host updates

Size

Extensions + applications

Continuous delivery

Configuration

Start

Restart

Stop

Reimage

Delete

Upgrade

Refresh

Protection Policy

Search virtual machine instances

Instance	Computer name	Status	Protection policy	Provisioning sta...	Health state	Latest
<input type="checkbox"/> az10408vmss0_0	az10408vm000000	Running		Succeeded		Yes
<input type="checkbox"/> az10408vmss0_1	az10408vm000001	Running		Succeeded		Yes
<input type="checkbox"/> az10408vmss0_2	az10408vm000002	Running		Succeeded		Yes

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