Die Azure Arc Show

Alexander Ortha

Manfred Helber

12. Juni 2023 # 16 Uhr

Azure Arc & VMware

Willkommen

News Ecke

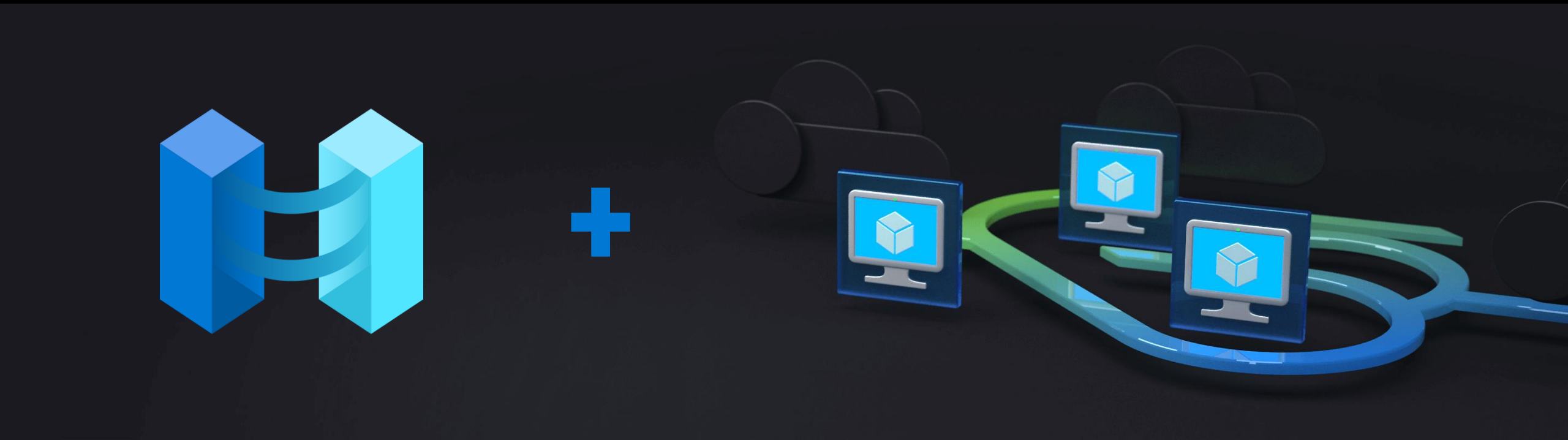
Lernkurve rund um Azure Arc

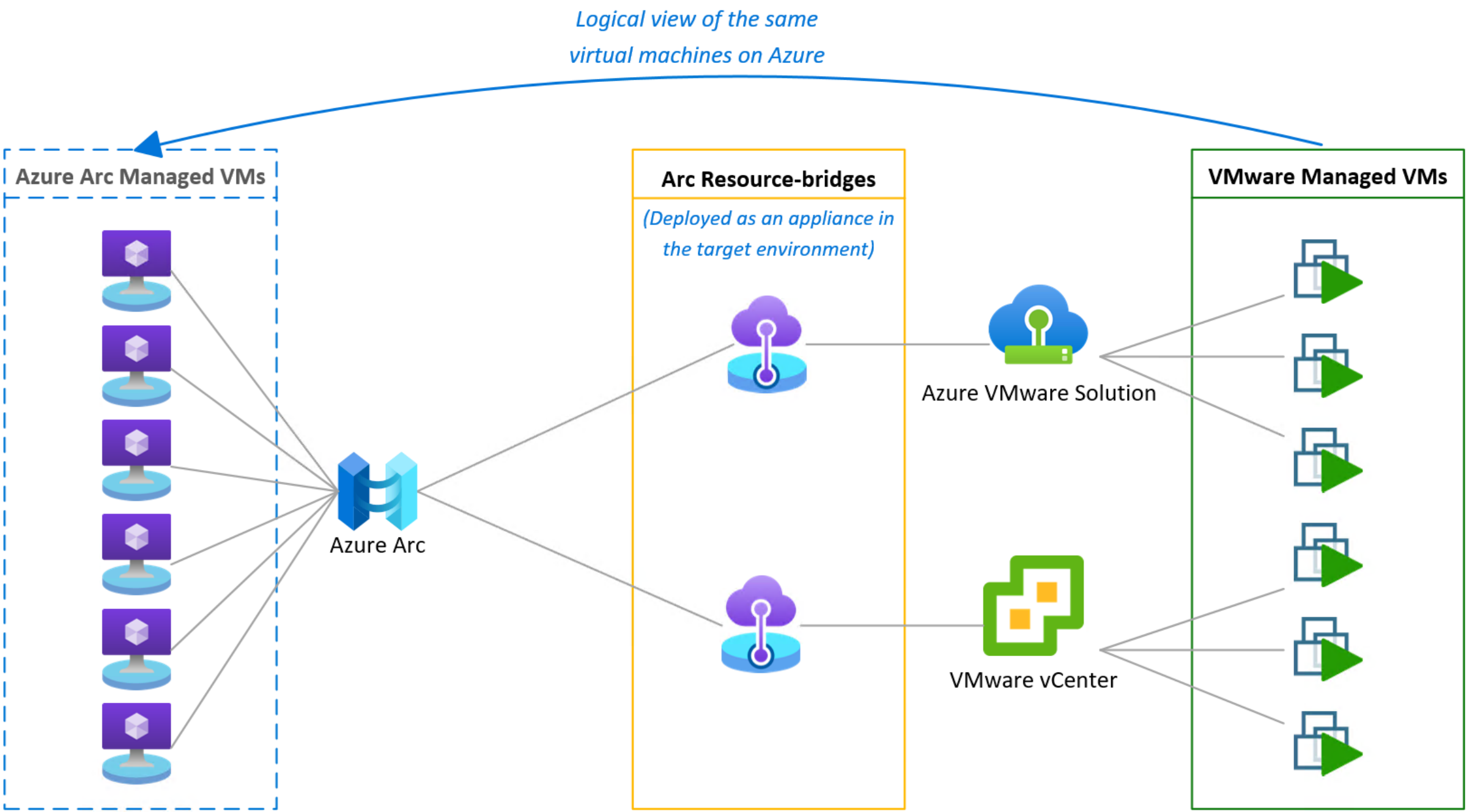
Azure
Arc

vmware® | Microsoft Azure

Azure VMware Solution (AVS)

VMware vSphere




Logical view of the same
virtual machines on Azure
Azure Arc Managed VMs
Azure Arc
Arc Resource-bridges
(Deployed as an appliance in the target environment)
Azure VMware Solution
VMware vCenter
VMware Managed VMs

Azure Arc for VMware Admins

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By Seif Bassem

Published May 24 2022 08:00 AM 4,741 Views

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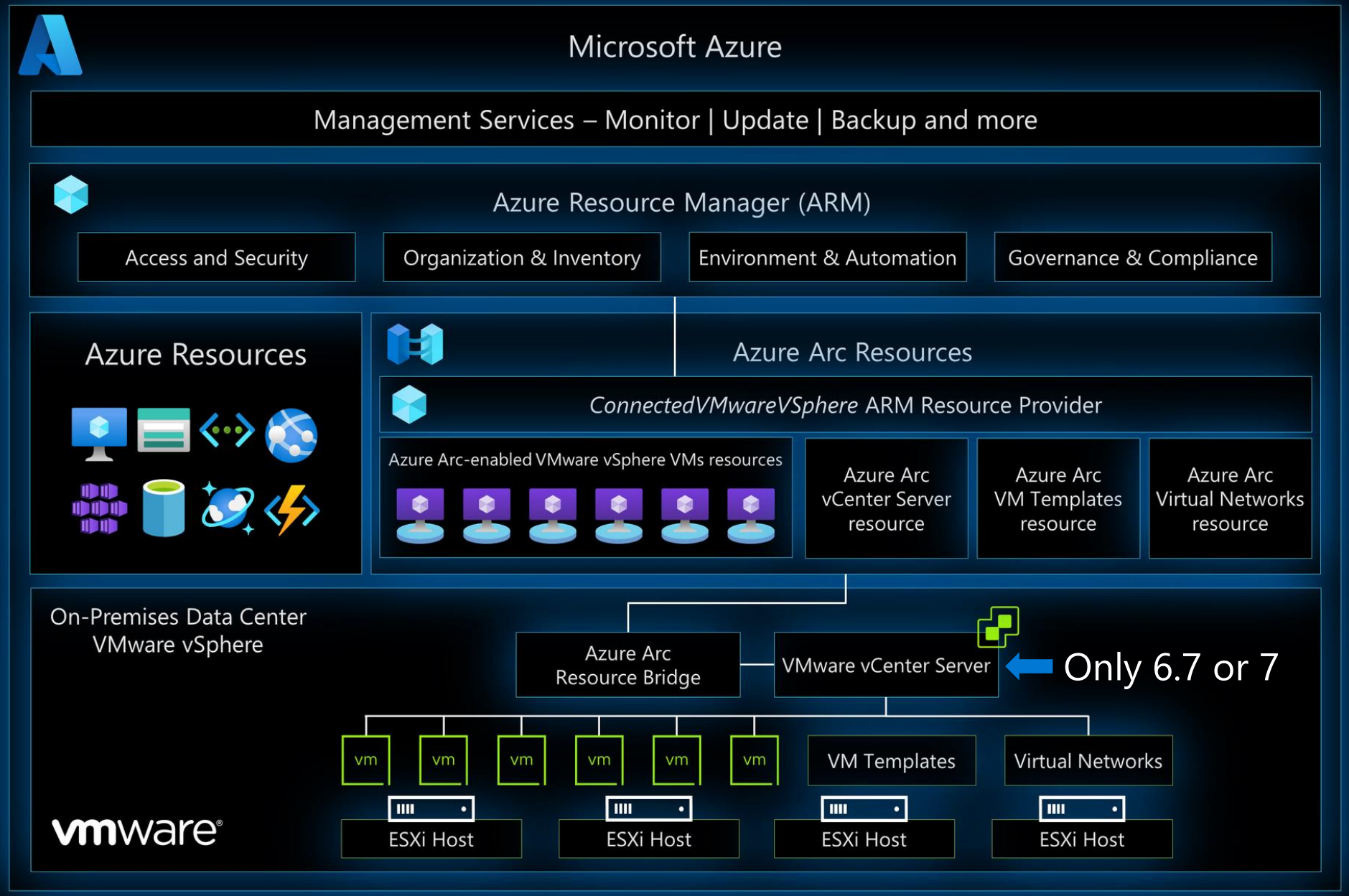
Enterprises nowadays manage a very diverse and complex IT infrastructure that expands from on-premises to edge and multi-cloud. Navigating these distributed hybrid and multi-cloud scenarios becomes a challenge when managing business-critical applications and building cloud-native software.

In these types of environments, it is very important to have a consistent approach to operations and select the proper tools that allows you to have greater cross-visibility and work at scale. That is why customers have taken advantage of Azure to enable the flexibility and agility IT professionals and developers are seeking. With Azure Arc, customers can now extend the rich Azure management and services offerings to any infrastructure, including their VMware deployments on-premises or in the cloud.

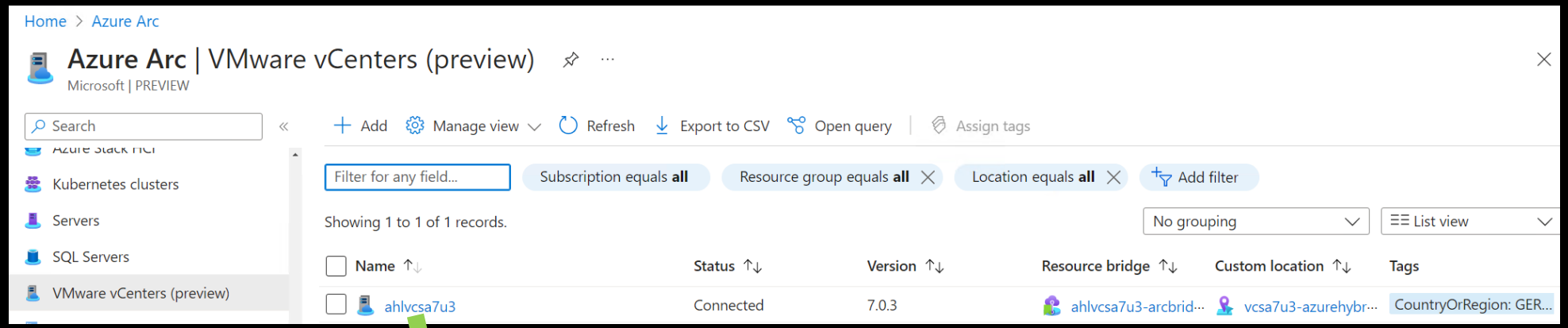
Whether you are migrating your VMware virtual machine workloads to Azure or building a hybrid architecture, there is an Azure Arc solution that allows you to leverage your existing investments in VMware-based infrastructure and continue to innovate and enhance your experience in Azure.

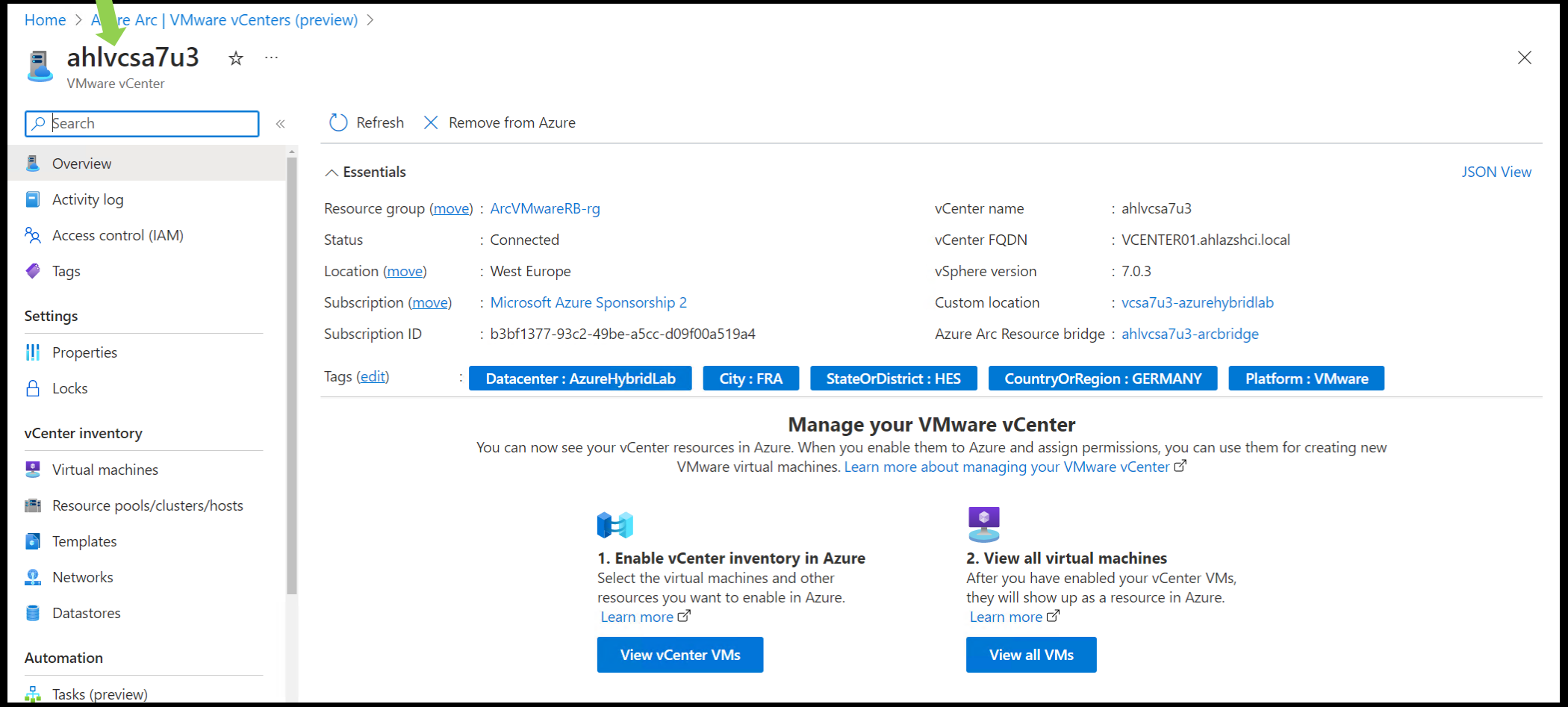
Azure Arc for VMware Admins (microsoft.com)

Azure Arc-enabled VMware vSphere Architecture



[What is Azure Arc-enabled VMware vSphere (preview)? - Azure Arc | Microsoft Learn]


Home > Azure Arc
Azure Arc | VMware vCenters (preview)
Microsoft | PREVIEW
Search
Add
Manage view
Refresh
Export to CSV
Open query
Assign tags
Kubernetes clusters
Servers
SQL Servers
VMware vCenters (preview)
Filter for any field...
Subscription equals all
Resource group equals all
Location equals all
Add filter
Showing 1 to 1 of 1 records.
No grouping
List view
Name
Status
Version
Resource bridge
Custom location
Tags
ahlvcsa7u3
Connected
7.0.3
ahlvcsa7u3-arcbrid...
vcsa7u3-azurehybr...
CountryOrRegion: GER...


Home > Azure Arc | VMware vCenters (preview) >
ahlvcsa7u3
VMware vCenter
Search
Refresh
Remove from Azure
Overview
Activity log
Access control (IAM)
Tags
Settings
Properties
Locks
vCenter inventory
Virtual machines
Resource pools/clusters/hosts
Templates
Networks
Datastores
Automation
Tasks (preview)
Essentials
JSON View
Resource group (move) : ArcVMwareRB-rg
Status : Connected
Location (move) : West Europe
Subscription (move) : Microsoft Azure Sponsorship 2
Subscription ID : b3bf1377-93c2-49be-a5cc-d09f00a519a4
vCenter name : ahlvcsa7u3
vCenter FQDN : VCENTER01.ahlazshci.local
vSphere version : 7.0.3
Custom location : vcsa7u3-azurehybridlab
Azure Arc Resource bridge : ahlvcsa7u3-arcbridge
Tags (edit) :
Datacenter : AzureHybridLab
City : FRA
StateOrDistrict : HES
CountryOrRegion : GERMANY
Platform : VMware
Manage your VMware vCenter
You can now see your vCenter resources in Azure. When you enable them to Azure and assign permissions, you can use them for creating new VMware virtual machines. Learn more about managing your VMware vCenter
1. Enable vCenter inventory in Azure
Select the virtual machines and other resources you want to enable in Azure.
Learn more
View vCenter VMs
2. View all virtual machines
After you have enabled your vCenter VMs, they will show up as a resource in Azure.
Learn more
View all VMs

ahlvcsa7u3 | Virtual machines

VMware vCenter

Search

Overview
Activity log
Access control (IAM)
Tags

Settings

Properties
Locks

vCenter inventory

Virtual machines
Resource pools/clusters/hosts
Templates
Networks
Datastores

Automation

Add | Refresh | Enable in Azure | Remove from Azure | Enable guest management

Before you can set permissions for these resources, you will need to enable them in Azure. You can see the resources that we discovered on-prem that have not been enabled yet. Learn more

Search | Add filter

Showing 1 to 8 of 8 records.

Items per page 10

Name	Azure enabled	Guest management enabled	Status	VMware tools	IP address	Host
vcsa-7U3	No	No	poweredOn	Running, Version...	10.101.0.14	
vCLS-086ec1cf-db8e-4c...	No	No	poweredOn	Running, Version...		
vSAN-Witness01	No	No	poweredOn	Running, Version...	10.101.0.15, fe80:...	
vCLS-fff93c2f-c049-4db...	No	No	poweredOn	Running, Version...		
WS2022-Template	No	No	poweredOff	Not running, Ver...		
ArcVMWDemoVM01	No	No	poweredOn	Running, Version...	fe80::1b08:72b3:...	
ArcVMWDemoVM02	No	No	poweredOn	Running, Version...	fe80::6015:4e13:f...	
1847ed14faac6ac91a86...	No	No	poweredOn	Running, Version...	10.101.0.17, 10.1...	

ahlvcsa7u3 | Resource pools/clusters/hosts

VMware vCenter

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vCenter inventory

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Automation

Tasks (preview)
Export template

Refresh | Enable in Azure | Remove from Azure

Before you can set permissions for these resources, you will need to enable them in Azure. You can see the resources that we discovered on-prem that have not been enabled yet. Learn more

Search | Add filter

Showing 1 to 10 of 10 records.

Items per page 100

Name	Type	Azure enabled	Parent	Resource group
ArcVMW-CLUSTER	Cluster	No		
ahlvmwhost03.ahlazshci.local	Host	No		
ahlvmwhost01.ahlazshci.local	Host	No	ArcVMW-CLUSTER	
ahlvmwhost02.ahlazshci.local	Host	No	ArcVMW-CLUSTER	
vsan-witness01.ahlazshci.local	Host	No		
Resources	ResourcePool	No	ArcVMW-CLUSTER	
Resources	ResourcePool	No	vsan-witness01.ahlazshci.l...	
ArcVMW-RB	ResourcePool	No	Resources	
ArcVMW-VMs	ResourcePool	No	Resources	
Resources	ResourcePool	No	ahlvmwhost03.ahlazshci.lo...	

ahlvcsa7u3 | Templates

VMware vCenter

Search

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

Settings

- Properties
- Locks

vCenter inventory

- Virtual machines
- Resource pools/clusters/hosts
- Templates

Refresh | Enable in Azure | Remove from Azure

Before you can set permissions for these resources, you will need to enable them in Azure. You can see the resources that we discovered on-prem that have not been enabled yet. Learn more

Search | Add filter

Showing 1 to 3 of 3 records.

Items per page 100

Name	Azure enabled	VMware tools	OS type	Image	RAM (MB)	Resource group
WS2019-Template	No	Version: 12...	Windows	Microsoft Windo...	8192	
WS2022-Template-ArcVMW	No	Version: 12...	Windows	Microsoft Windo...	8192	
template-appliance-0.1.17.10315-v1.22.11	No	Not installed	Linux	Other 4.x or later...	16384	

ahlvcsa7u3 | Networks

VMware vCenter

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Virtual machines
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Refresh | Enable in Azure | Remove from Azure

Before you can set permissions for these resources, you will need to enable them in Azure. You can see the resources that we discovered on-prem that have not been enabled yet. Learn more

Search | Add filter

Showing 1 to 4 of 4 records.

Items per page 100

Name	Azure enabled	Resource group
StoragePorts	No	
VM Network	No	
VM Network	No	
StoragePorts	No	

ahlvcsa7u3 | Datastores

VMware vCenter

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Datastores

Refresh | Enable in Azure | Remove from Azure

Before you can set permissions for these resources, you will need to enable them in Azure. You can see the resources that we discovered on-prem that have not been enabled yet. Learn more

Search | Add filter

Showing 1 to 4 of 4 records.

Items per page 100

Name	Azure enabled	Resource group
datastore1 (1)	No	
datastore1 (2)	No	
vsanDatastore	No	
datastore1	No	

Create an Azure Arc virtual machine

Basics

Subscription	Microsoft Azure Sponsorship 2
Resource group	ArcVMware-rg
Virtual machine name	demogbb
Custom location	vcsa7u3-azurehybridlab (West Europe)
Virtual machine kind	VMware
Resource pool/cluster/host	ArcVMW-VMs
Datastore	vsanDatastore
Guest management	Enabled
Username	Administrator
Operating system	Windows Microsoft Windows Server 2016 or later (64-bit)

Template details

Template	WS2022-Template-ArcVMW
CPU cores	2
Memory	8.192 MB

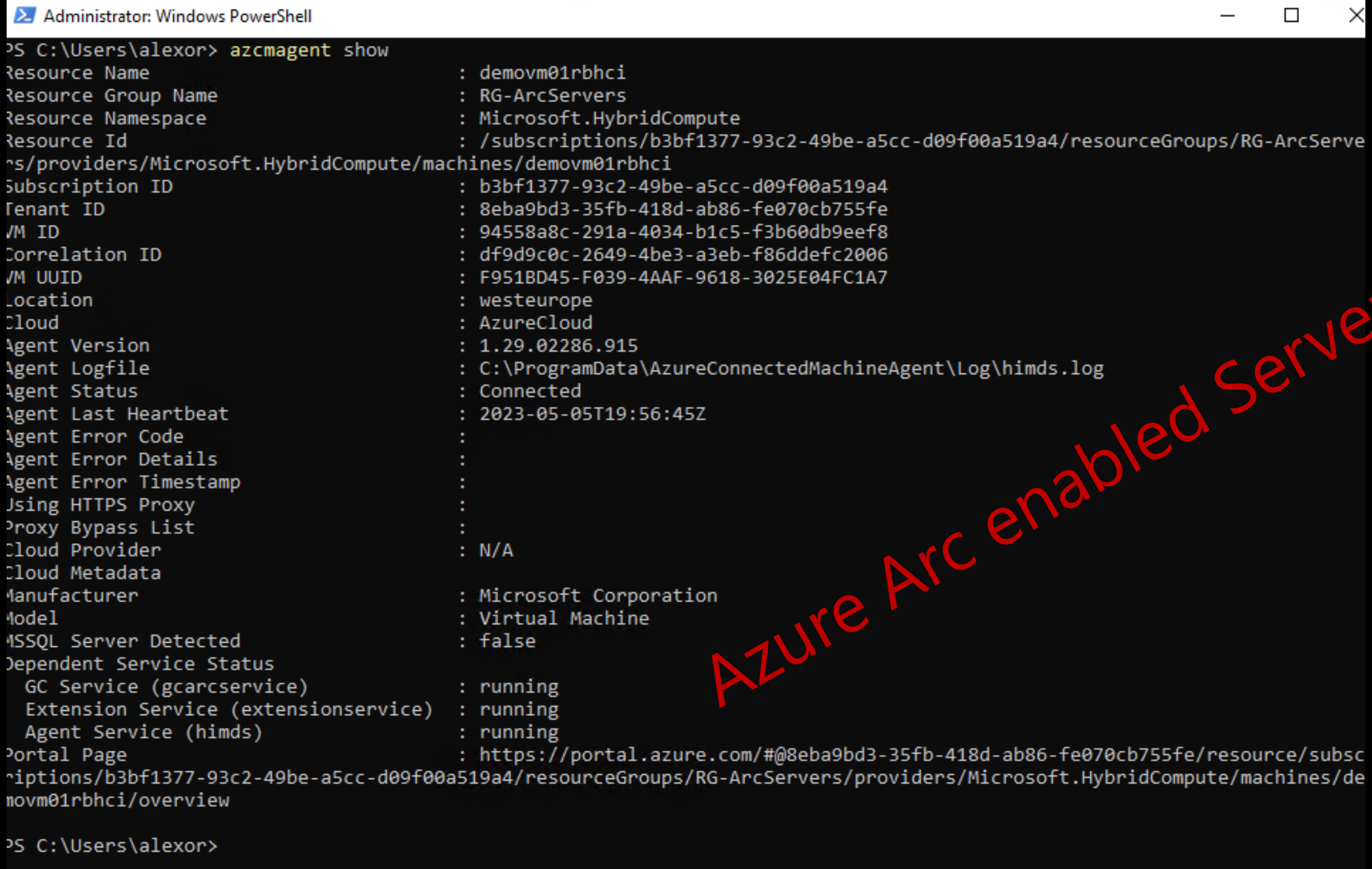
Disks

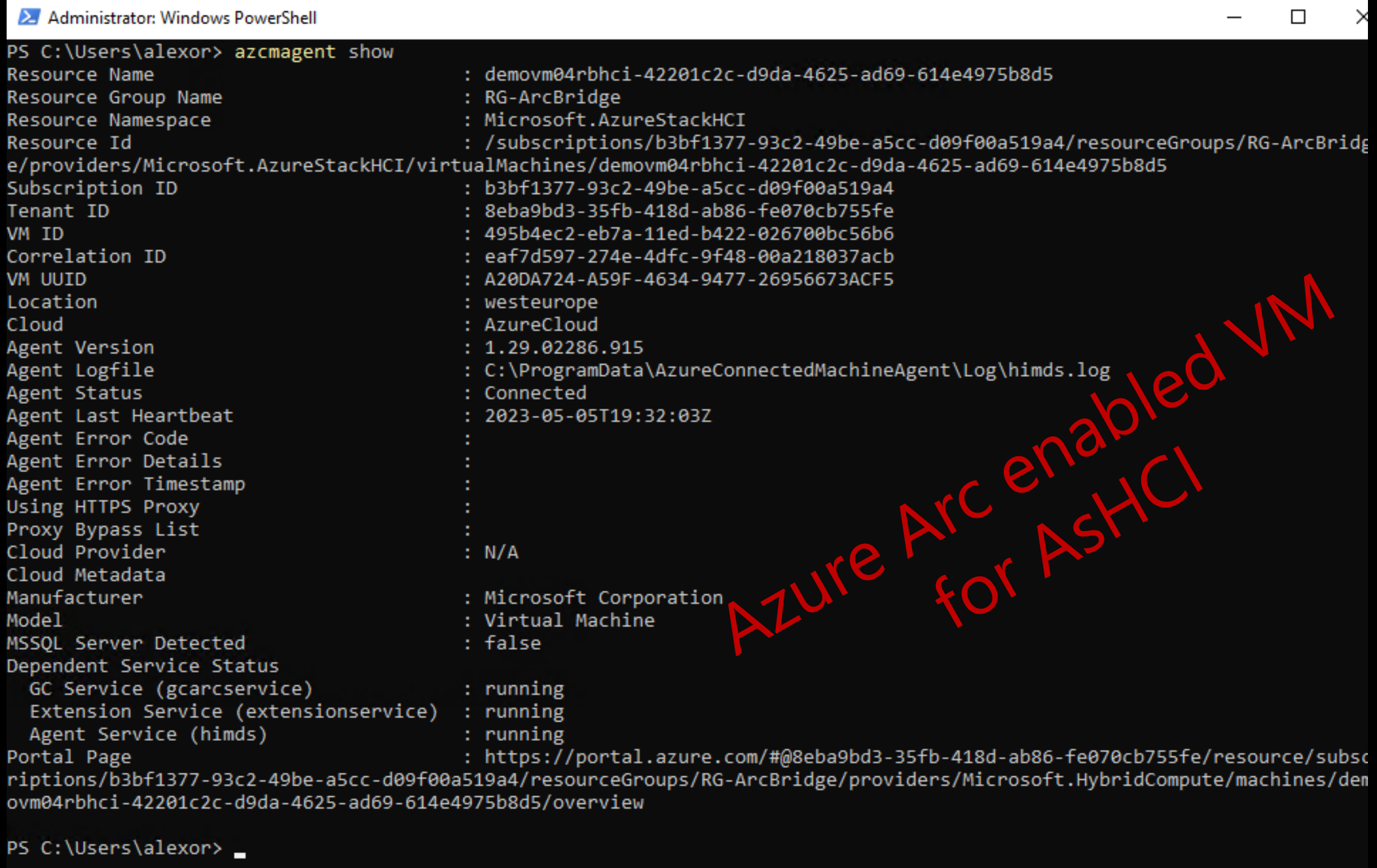
Disk count	1

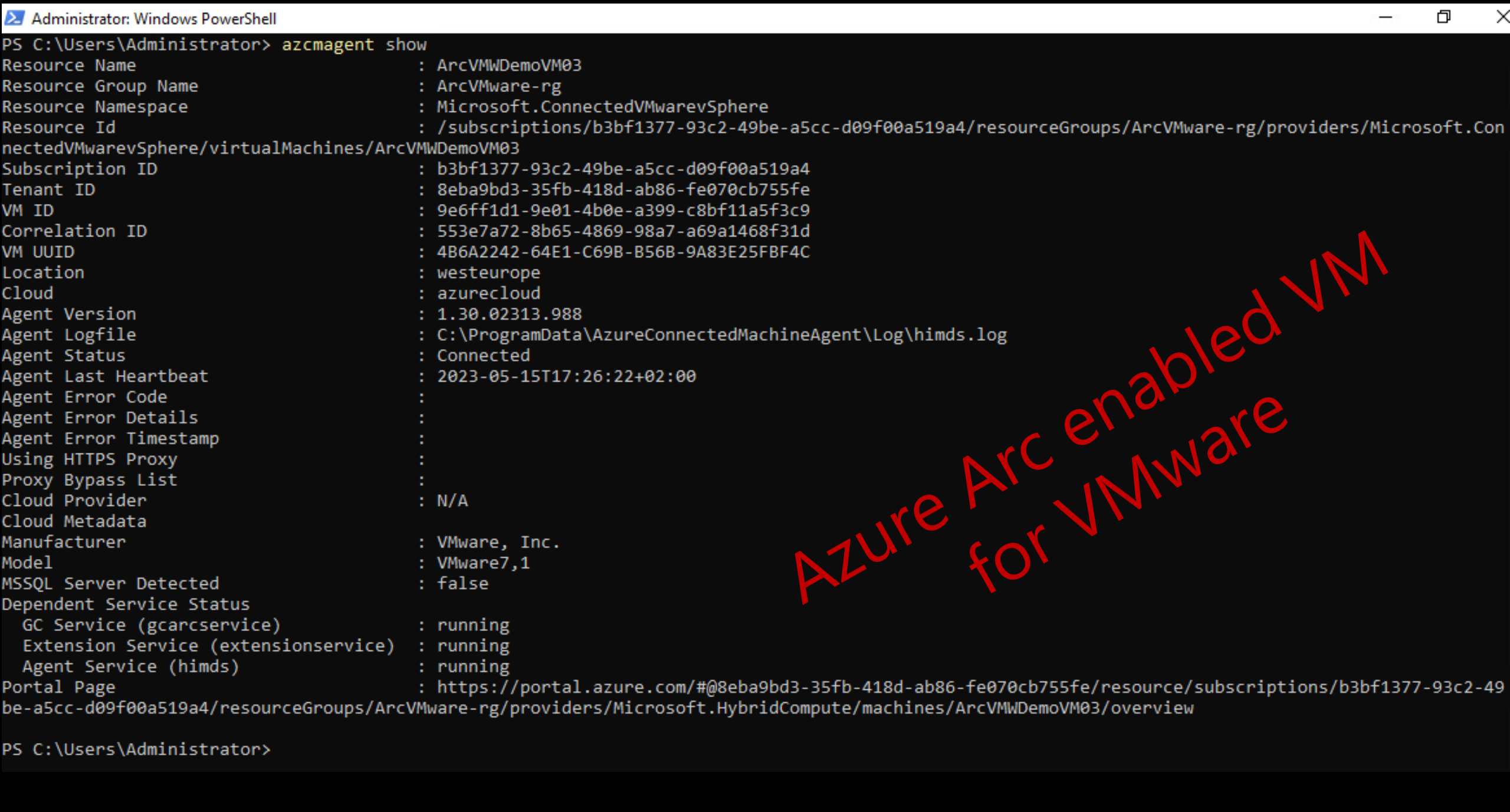
Networking

Network interface count	1

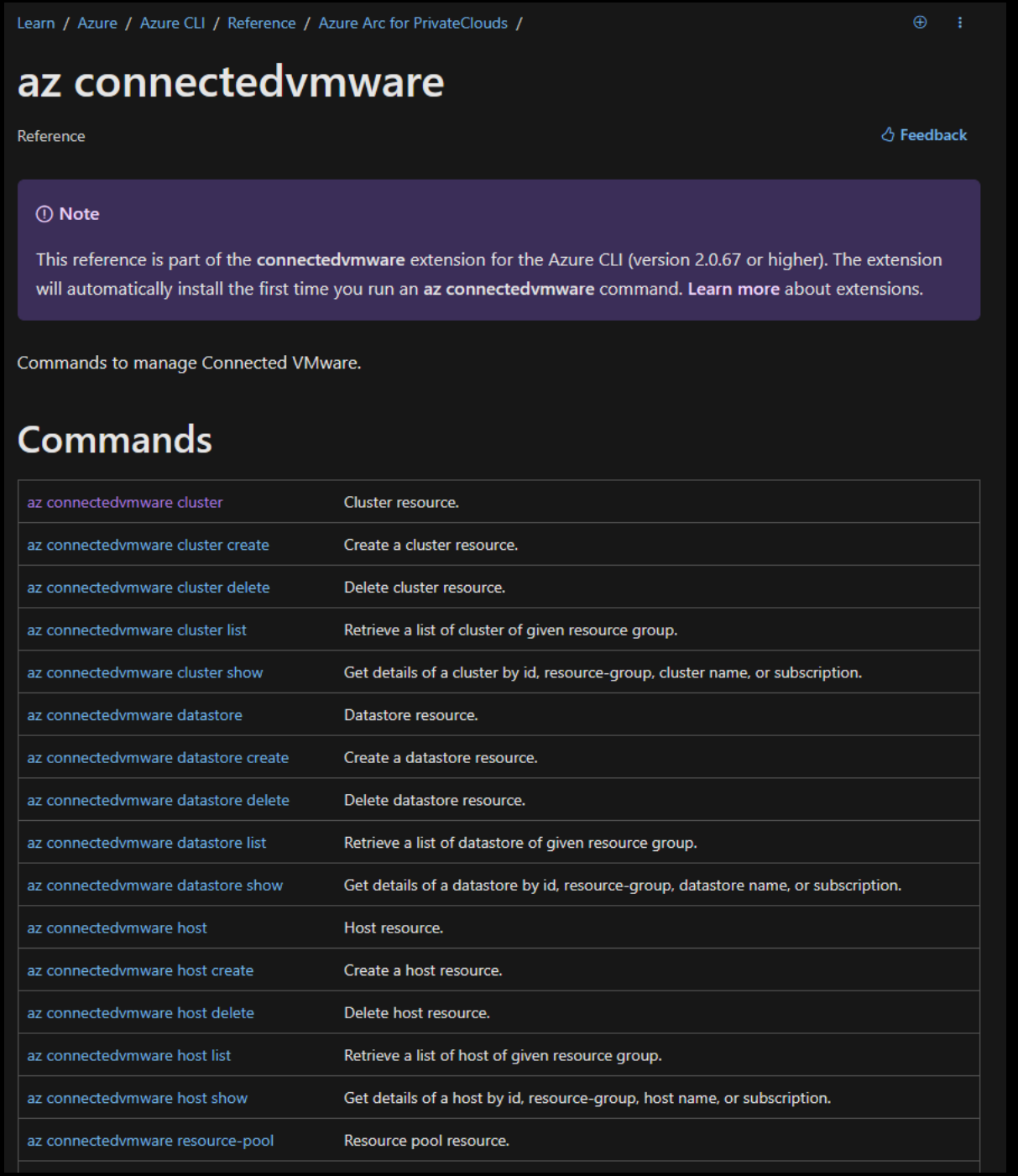
Tags


Administrator: Windows PowerShell
PS C:\Users\alexor> azcmagent show
Resource Name : demovm01rbhci
Resource Group Name : RG-ArcServers
Resource Namespace : Microsoft.HybridCompute
Resource Id : /subscriptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/RG-ArcServe
rs/providers/Microsoft.HybridCompute/machines/demovm01rbhci
Subscription ID : b3bf1377-93c2-49be-a5cc-d09f00a519a4
Tenant ID : 8eba9bd3-35fb-418d-ab86-fe070cb755fe
VM ID : 94558a8c-291a-4034-b1c5-f3b60db9eef8
Correlation ID : df9d9c0c-2649-4be3-a3eb-f86ddefc2006
VM UUID : F951BD45-F039-4AAF-9618-3025E04FC1A7
Location : westeurope
Cloud : AzureCloud
Agent Version : 1.29.02286.915
Agent Logfile : C:\ProgramData\AzureConnectedMachineAgent\Log\himds.log
Agent Status : Connected
Agent Last Heartbeat : 2023-05-05T19:56:45Z
Agent Error Code :
Agent Error Details :
Agent Error Timestamp :
Using HTTPS Proxy :
Proxy Bypass List :
Cloud Provider : N/A
Cloud Metadata
Manufacturer : Microsoft Corporation
Model : Virtual Machine
MSSQL Server Detected : false
Dependent Service Status
GC Service (gcarcservice) : running
Extension Service (extensionservice) : running
Agent Service (himds) : running
Portal Page : https://portal.azure.com/#@8eba9bd3-35fb-418d-ab86-fe070cb755fe/resource/subsc
riptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/RG-ArcServers/providers/Microsoft.HybridCompute/machines/de
movm01rbhci/overview
PS C:\Users\alexor>
Azure Arc enabled Server


Administrator: Windows PowerShell
PS C:\Users\alexor> azcmagent show
Resource Name : demovm04rbhci-42201c2c-d9da-4625-ad69-614e4975b8d5
Resource Group Name : RG-ArcBridge
Resource Namespace : Microsoft.AzureStackHCI
Resource Id : /subscriptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/RG-ArcBridge/providers/Microsoft.AzureStackHCI/virtualMachines/demovm04rbhci-42201c2c-d9da-4625-ad69-614e4975b8d5
Subscription ID : b3bf1377-93c2-49be-a5cc-d09f00a519a4
Tenant ID : 8eba9bd3-35fb-418d-ab86-fe070cb755fe
VM ID : 495b4ec2-eb7a-11ed-b422-026700bc56b6
Correlation ID : eaf7d597-274e-4dfc-9f48-00a218037acb
VM UUID : A20DA724-A59F-4634-9477-26956673ACF5
Location : westeurope
Cloud : AzureCloud
Agent Version : 1.29.02286.915
Agent Logfile : C:\ProgramData\AzureConnectedMachineAgent\Log\himds.log
Agent Status : Connected
Agent Last Heartbeat : 2023-05-05T19:32:03Z
Agent Error Code :
Agent Error Details :
Agent Error Timestamp :
Using HTTPS Proxy :
Proxy Bypass List :
Cloud Provider : N/A
Cloud Metadata
Manufacturer : Microsoft Corporation
Model : Virtual Machine
MSSQL Server Detected : false
Dependent Service Status
GC Service (gcarcservice) : running
Extension Service (extensionservice) : running
Agent Service (himds) : running
Portal Page : https://portal.azure.com/#@8eba9bd3-35fb-418d-ab86-fe070cb755fe/resource/subscriptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/RG-ArcBridge/providers/Microsoft.HybridCompute/machines/demovm04rbhci-42201c2c-d9da-4625-ad69-614e4975b8d5/overview
PS C:\Users\alexor>
Azure Arc enabled VM
for AsHCI


Administrator: Windows PowerShell
PS C:\Users\Administrator> azcmagent show
Resource Name : ArcVMWDemoVM03
Resource Group Name : ArcVMware-rg
Resource Namespace : Microsoft.ConnectedVMwarevSphere
Resource Id : /subscriptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/ArcVMware-rg/providers/Microsoft.ConnectedVMwarevSphere/virtualMachines/ArcVMWDemoVM03
Subscription ID : b3bf1377-93c2-49be-a5cc-d09f00a519a4
Tenant ID : 8eba9bd3-35fb-418d-ab86-fe070cb755fe
VM ID : 9e6ff1d1-9e01-4b0e-a399-c8bf11a5f3c9
Correlation ID : 553e7a72-8b65-4869-98a7-a69a1468f31d
VM UUID : 4B6A2242-64E1-C69B-B56B-9A83E25FBF4C
Location : westeurope
Cloud : azurecloud
Agent Version : 1.30.02313.988
Agent Logfile : C:\ProgramData\AzureConnectedMachineAgent\Log\himds.log
Agent Status : Connected
Agent Last Heartbeat : 2023-05-15T17:26:22+02:00
Agent Error Code :
Agent Error Details :
Agent Error Timestamp :
Using HTTPS Proxy :
Proxy Bypass List :
Cloud Provider : N/A
Cloud Metadata
Manufacturer : VMware, Inc.
Model : VMware7,1
MSSQL Server Detected : false
Dependent Service Status
GC Service (gcarcservice) : running
Extension Service (extensionservice) : running
Agent Service (himds) : running
Portal Page : https://portal.azure.com/#@8eba9bd3-35fb-418d-ab86-fe070cb755fe/resource/subscriptions/b3bf1377-93c2-49be-a5cc-d09f00a519a4/resourceGroups/ArcVMware-rg/providers/Microsoft.HybridCompute/machines/ArcVMWDemoVM03/overview
PS C:\Users\Administrator>
Azure Arc enabled VM for VMware

az connectedvmware | Microsoft Learn



Learn / Azure / Azure CLI / Reference / Azure Arc for PrivateClouds /

az connectedvmware

Reference

Feedback

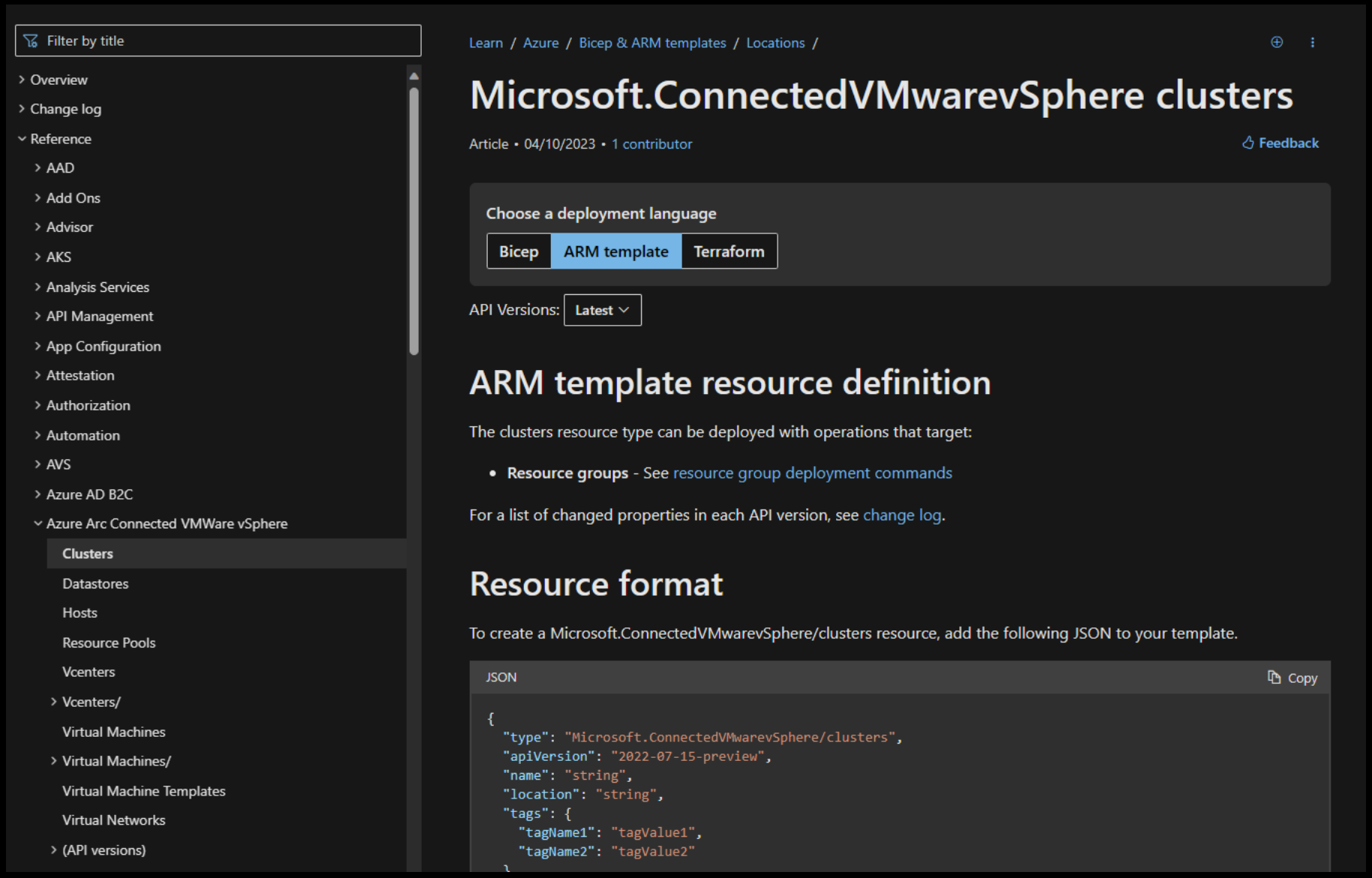
Note

This reference is part of the **connectedvmware** extension for the Azure CLI (version 2.0.67 or higher). The extension will automatically install the first time you run an **az connectedvmware** command. **Learn more** about extensions.

Commands to manage Connected VMware.

Commands

az connectedvmware cluster	Cluster resource.
az connectedvmware cluster create	Create a cluster resource.
az connectedvmware cluster delete	Delete cluster resource.
az connectedvmware cluster list	Retrieve a list of cluster of given resource group.
az connectedvmware cluster show	Get details of a cluster by id, resource-group, cluster name, or subscription.
az connectedvmware datastore	Datastore resource.
az connectedvmware datastore create	Create a datastore resource.
az connectedvmware datastore delete	Delete datastore resource.
az connectedvmware datastore list	Retrieve a list of datastore of given resource group.
az connectedvmware datastore show	Get details of a datastore by id, resource-group, datastore name, or subscription.
az connectedvmware host	Host resource.
az connectedvmware host create	Create a host resource.
az connectedvmware host delete	Delete host resource.
az connectedvmware host list	Retrieve a list of host of given resource group.
az connectedvmware host show	Get details of a host by id, resource-group, host name, or subscription.
az connectedvmware resource-pool	Resource pool resource.



[Microsoft.ConnectedVMwarevSphere/clusters - Bicep, ARM template & Terraform AzAPI reference | Microsoft Learn]

[Manage access to VMware resources through Azure Role-Based Access Control - Azure Arc | Microsoft Learn]

Manage access to VMware resources through Azure Role-Based Access Control

Article • 05/06/2023 • 4 contributors

Feedback

In this article

Once your VMware vCenter resources have been enabled in Azure, the final step in setting up a self-service experience for your teams is to provide them access. This article describes how to use built-in roles to manage granular access to VMware resources through Azure and allow your teams to deploy and manage VMs.

Arc-enabled VMware vSphere built-in roles

There are three built-in roles to meet your access control requirements. You can apply these roles to a whole subscription, resource group, or a single resource.

- **Azure Arc VMware Administrator** role - used by administrators
- **Azure Arc VMware Private Cloud User** role - used by anyone who needs to deploy and manage VMs
- **Azure Arc VMware VM Contributor** role - used by anyone who needs to deploy and manage VMs

Azure Arc VMware Administrator role

The **Azure Arc VMware Administrator** role is a built-in role that provides permissions to perform all possible operations for the `Microsoft.ConnectedVMwarevSphere` resource provider. Assign this role to users or groups that are administrators managing Azure Arc-enabled VMware vSphere deployment.

Azure Arc VMware Private Cloud User role

The **Azure Arc VMware Private Cloud User** role is a built-in role that provides permissions to use the VMware vSphere resources made accessible through Azure. Assign this role to any users or groups that need to deploy, update, or delete VMs.

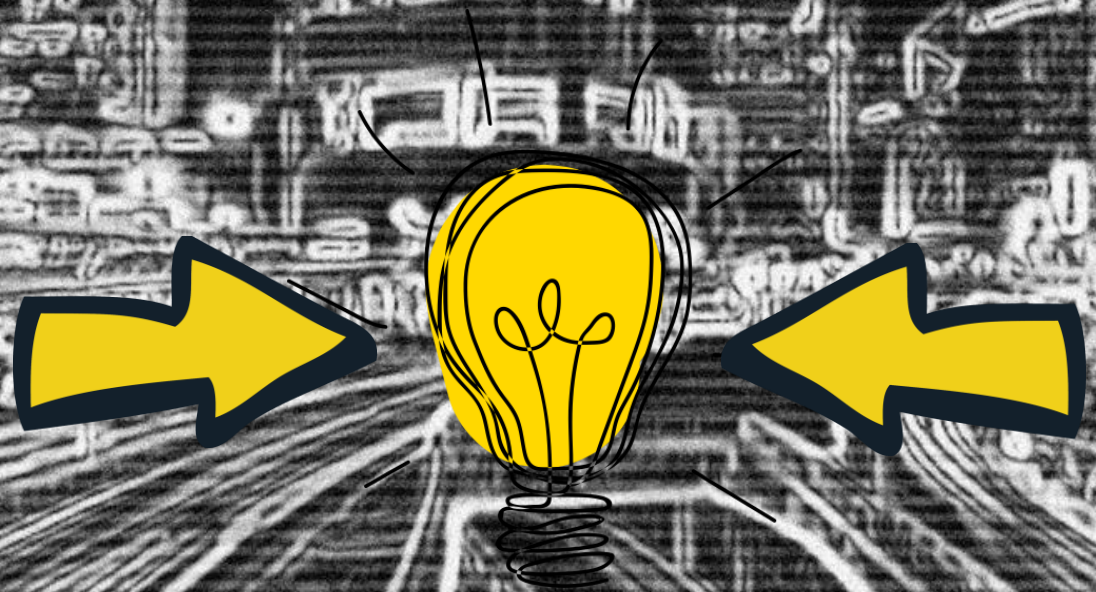
We recommend assigning this role at the individual resource pool (or host or cluster), virtual network, or template with which you want the user to deploy VMs.

Azure Arc VMware VM Contributor

Fragen aus der Community

Ausblick & Events

Azure Stack HCI Show



Manfred Helber
MVP Cloud and Datacenter
Trainer and Consultant
Manfred Helber GmbH

Nächster Termin: 23.06.2023
12:00 bis 13:00 Uhr

Sven Langenfeld
Azure Stack HCI
Commercial Sales Specialist
Microsoft DACH

Microsoft® Most Valuable Professional

Hybrid Show

Microsoft® Most Valuable Professional

PRIVATE

HYBRID

PUBLIC

Nächster Termin am 23.06.2023 um 14:00 Uhr

Hybrid Workshop

Dreitägiger technischer Live-Demo Workshop
13.06.2023 – 15.06.2023

Zweck:

Der Weg in die Cloud ist nicht schwarz-weiß. Nicht alle Workloads passen in die Public Cloud, aber einige Workloads ergeben in einer On-Premises Landschaft keinen Sinn. Daher läuft es in vielen Umgebungen auf eine hybride Infrastruktur hinaus. Doch wie fängt man eine solche Implementierung eigentlich an? Welche Voraussetzungen gilt es zu klären? Wir funktioniert das alles? Ziel dieses Workshops ist es, diese Fragen zu klären und darüber hinaus am praktischen Beispiel die Konfiguration live zu zeigen.

Zielgruppe:

Dieser Workshop richtet sich an alle, die den Weg in die Hybrid Cloud wagen und vom umfangreichen Know-How von Manfred Helber und Eric Berg profitieren wollen.

Durchführung:

Der Workshop wird von den beiden Hybrid Cloud Experten und Microsoft Most Valuable Professionals (MVP) Manfred Helber und Eric Berg durchgeführt – Remote und in deutscher Sprache, inkl. vieler Live-Demos

Ergebnis:

Ziel des Workshops ist es, den Teilnehmenden den Einstieg in die Hybrid Cloud zu ermöglichen. Konzepte sollen verstanden, Services richtig eingeplant werden, unterstützt durch die vielen Live-Demos und umfangreichen Praxistipps der beiden Referenten.

Voraussetzung:

Teilnehmende sollten fundierte Grundkenntnisse im Bereich des Infrastruktur-Managements und ein Grundverständnis von Cloud Computing mitbringen.

Wir informieren Sie gerne: anfrage@manfredhelber.de

Manfred Helber

Eric Berg

https://www.manfredhelber.de/hybrid-workshop/

Die Azure Arc Show

Alexander Ortha

Manfred Helber

Nächster Termin:

26.06.2023 um 16:00 Uhr

Vielen Dank!

Microsoft

BACKUP FOR MAY 22