

# Die Azure Arc Show



Alexander Ortha



19. September 2022 # 13 Uhr

Azure Arc und Windows Server



Manfred Helber



Willkommen



News Ecke





## Wüstenrot & Württembergische reduces patching time by 35 percent, leans into hybrid cloud management with Azure Arc

August 25, 2022

 Print



Based in Kornwestheim, Germany, Wüstenrot & Württembergische (W&W) is home to around 13,000 people who are dedicated to delivering industry-leading insurance and banking services to customers across Germany. As companies like W&W increasingly digitize and transform their financial services, including how their customers manage bank accounts, transfer money, and purchase insurance, technology flexibility has become key to enabling business growth. This recently led W&W to seek new ways to optimize its infrastructure as it reached the contract end date for its legacy on-premises software and better support its employees working on the field and in W&W offices.

### Learn More

[Microsoft Azure Arc](#) ➔

[Azure Arc-enabled servers](#) ➔

[Hybrid and multicloud solutions](#) ➔

[Azure migration and modernization center](#) ➔

[Microsoft Customer Story-Wüstenrot & Württembergische reduces patching time by 35 percent, leans into hybrid cloud management with Azure Arc](#)

# Automate your patching using Azure Arc and Azure Automation!

By  Andy Jaw

Published Feb 25 2022 08:47 AM

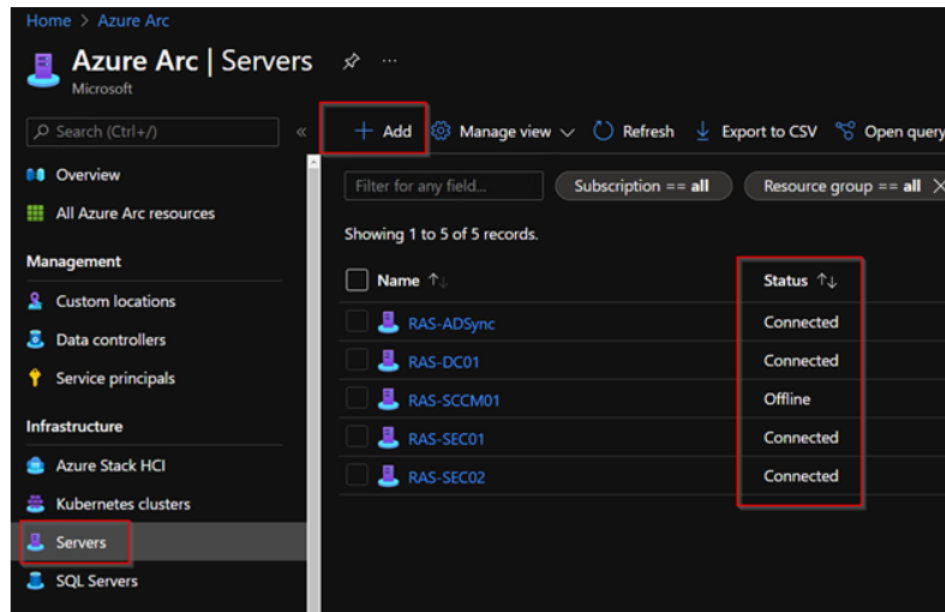
👁 1,537 Views

Patching can be a struggle for a lot of organizations. However, it is one of the most basic security tasks that security defenders must ensure happens regularly. If you're still manually patching your servers, you need to look into Azure Arc and Azure Automation to automate this.

[Azure Arc](#) extends management from Azure to on-prem or 3rd party cloud infrastructure. By installing the Azure Arc agent on an on-prem or 3rd party cloud server, it allows you to manage and gain insight on that server in your Azure tenant along side your other Azure servers.

Azure automation is an extremely powerful tool. In this blog, I will go over how to use it to automate patching but there are a lot more things Azure automation can do.

The first thing you need to do is install the Arc agent on your servers. You can do this via a script either manually or deployed through management. Go to Azure Arc --> Servers --> Add.



[Automate your patching using Azure Arc and Azure Automation! - Microsoft Tech Community](#)



OFFICIAL WEBSITE OF  
THOMAS MAURER



HOME BLOG ABOUT SPEAKING SHOP LINKS SUBSCRIBE CONTACT ▾



## Run PowerShell Scripts with Azure Automation Hybrid Workers on-premises using Azure Arc

HOME → MICROSOFT AZURE, POWERSHELL → RUN POWERSHELL SCRIPTS WITH AZURE AUTOMATION HYBRID WORKERS ON-PREMISES USING AZURE ARC

[Click here to add tags](#)

### Start Runbook

HybridRunBook

Parameters

No input parameters

Run Settings

### HybridRunBook (tt-automation007/HybridRunBook)

Runbook

Search (Ctrl+/) << Start </> View Edit Link to schedule Add webhook

Overview

Activity log

Tags

Diagnose and solve problems

Resources

Jobs

Schedules

Webhooks

Runbook settings

Properties

Essentials

Resource group

tt-management-rg

WRITTEN BY THOMAS MAURER • SEPTEMBER 6, 2022 • 10:08 AM • MICROSOFT AZURE

Account

tt-automation007

Location

West Europe

Region

PowerShell

ms-cxa-thmaure-demo-test

Version

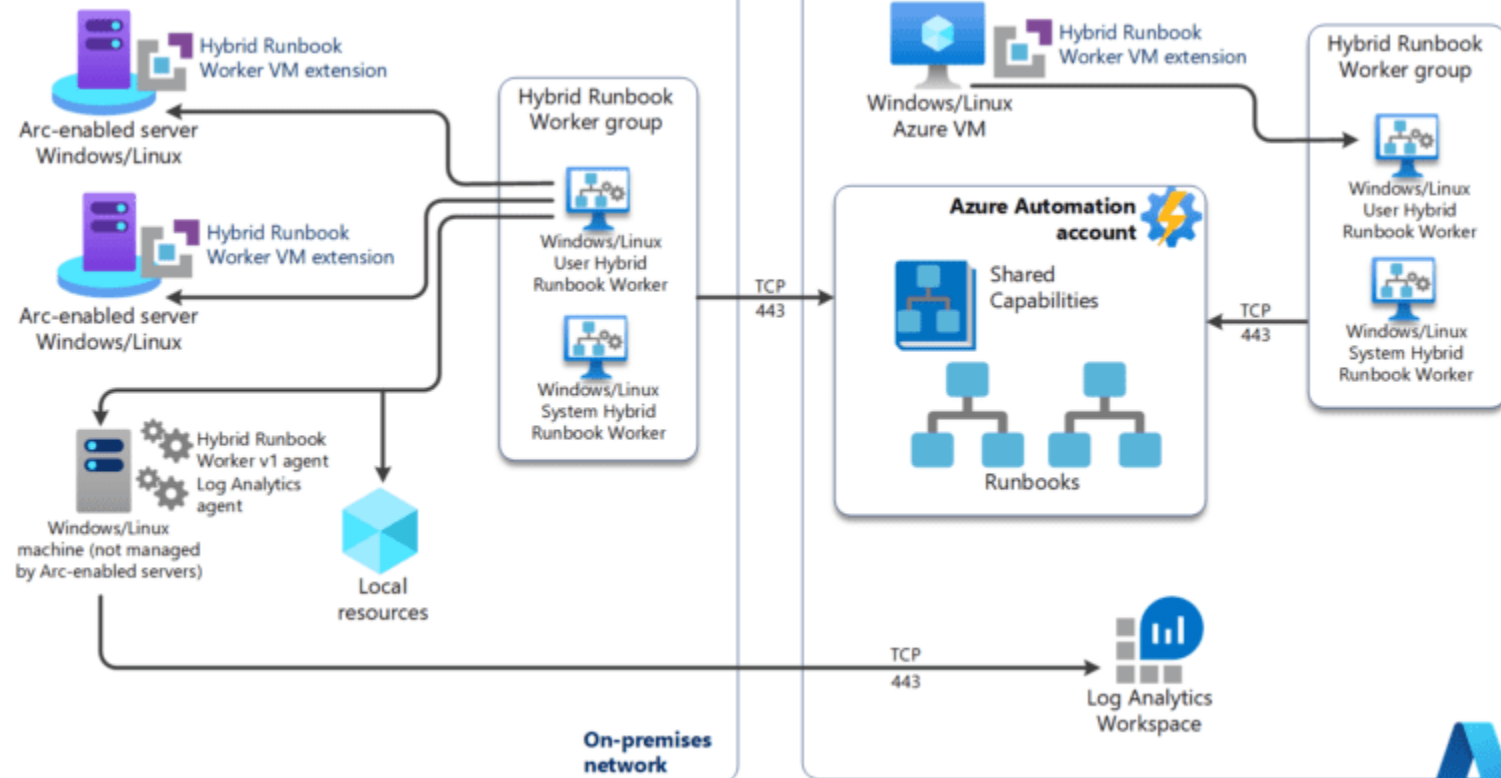
5.1

8/8/2

Tags

[\(edit\)](#)

[Click here to add tags](#)



Run PowerShell Scripts with Azure Automation Hybrid Workers on-premises using Azure Arc - Thomas Maurer



# Generally Available: Azure Arc-enabled servers support for private endpoints

By  Ryan Willis

Published May 09 2022 12:00 PM

👁 2,718 Views

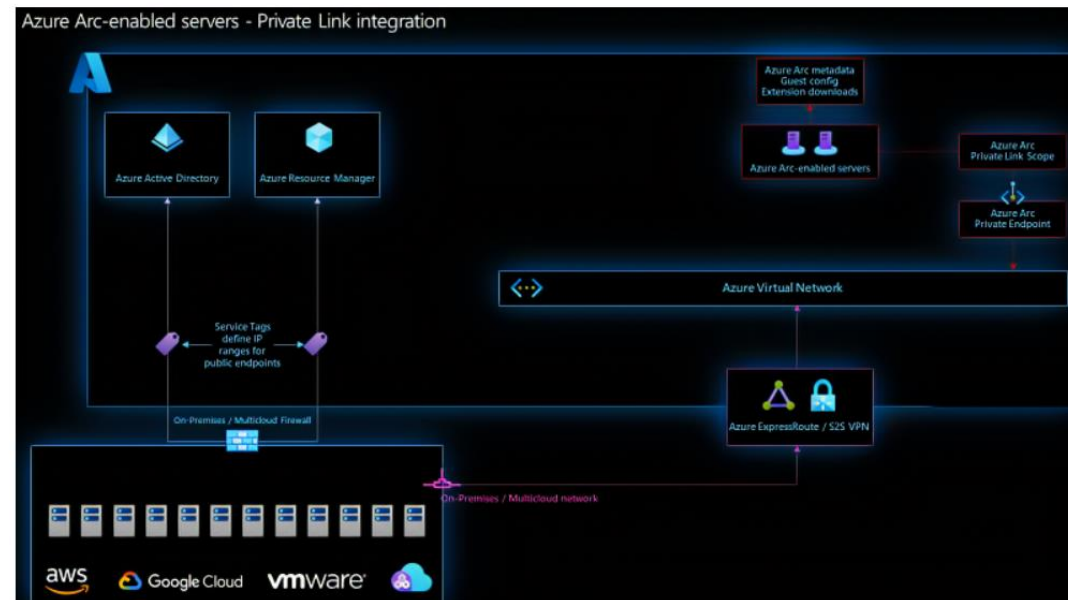
The Azure Arc team is excited to announce that Azure Arc-enabled servers' support for private endpoints is now generally available! With private endpoints, you can send traffic from the Azure Connected Machine Agent to Azure over a site-to-site VPN or Express Route circuit instead of the public internet or proxy server. This can help you reduce network exposure and improve security while still allowing you to use Azure Arc to secure, monitor and govern your servers running outside of Azure.

## How does it work?

Private endpoints allow you to connect an Azure service to an Azure virtual network using private IP addresses. Servers and other resources in that virtual network can then communicate with the Azure service using the private IP address and instead of sending data over the internet.

Azure Arc uses a Private Link Scope resource to associate a private endpoint with the non-Azure servers that will use the private endpoint. You'll also need to set up a site-to-site VPN or Express Route circuit to connect your Azure virtual network with the network where your non-Azure servers are connected.

Once configured, the Connected Machine agent on your Arc-enabled servers will send all metadata updates, extension operations, and guest configuration package downloads over the private endpoint. Network traffic between extensions you've installed and the Azure services that support them will also route through the internet unless you've configured private endpoints for each of those services. Additionally, the Connected Machine agent will still require access to Azure Active Directory and Azure Resource Manager over the internet.



[Generally Available: Azure Arc-enabled servers support for private endpoints - Microsoft Tech Community](#)

# In preview: SSH access to Azure Arc-enabled servers

By  Danny Maertens

Published Apr 19 2022 09:00 AM

4,521 Views

Remote server management is a critical tool for server administrators. Whether you are running automation or using interactively, SSH based remoting is to connect to your remote server. Starting today, you can now securely [SSH into your Arc enabled servers](#) without a public IP address or additional inbound ports!

SSH access to Arc enabled servers allows you to SSH into your Arc onboarded servers with a simple Azure CLI command (Azure PowerShell coming soon)! Leverage your existing local SSH keys, username/passwords to connect to either [Windows](#) or Linux servers. Additionally, you can SSH using your [Azure AD credentials](#) (currently available on Linux-only).

Using Arc enabled servers and SSH access you can now access any of your machines, in any network, with one command without exposing a public IP address or opening additional inbound firewall ports. SSH traffic is sent over the existing connection between the Azure Arc agent and Azure, no extra configuration is required. Additionally, we are committed to providing a secure and consistent experience across operating systems, Arc servers & Azure VMs, and authentication types. This means that the same command, `az ssh vm`, can be used to access any of your machines. Providing a consistent, easy to understand, automatable solution for accessing your machines with SSH.

```
PS C:\Users\[redacted] > az ssh vm --resource-group Resource --name VM name --local-user user
[redacted]@[redacted]'s password:
group
Welcome to Ubuntu 20.04 LTS (GNU/Linux 5.4.0-26-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

 * Super-optimized for small spaces - read how we shrank the memory
   footprint of MicroK8s to make it the smallest full K8s around.

   https://ubuntu.com/blog/microk8s-memory-optimisation

336 updates can be installed immediately.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

Your Hardware Enablement Stack (HWE) is supported until April 2025.
*** System restart required ***
Last login: Fri Apr 15 11:00:22 2022 from 127.0.0.1
user@[redacted] VM name:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.27.112.106 netmask 255.255.240.0 broadcast 172.27.127.255
    inet6 fe80::1533:ff22:5465:eb5f prefixlen 64 scopeid 0x20<link>
    ether 00:15:5d:7b:11:04 txqueuelen 1000 (Ethernet)
    RX packets 1353925 bytes 2020296849 (2.0 GB)
    RX errors 0 dropped 1 overruns 0 frame 0
```

[In preview: SSH access to Azure Arc-enabled servers - Microsoft Tech Community](#)





Lernkurve rund um Azure Arc

# Thema: Arc enabled Servers - Onboarding

# Azure Arc-enabled infrastructure

Bring on-premises and multi-cloud infrastructure to Azure



Azure Arc-enabled servers



GENERALLY AVAILABLE



SQL Server on Arc-enabled servers



GENERALLY AVAILABLE



Azure Arc-enabled Kubernetes



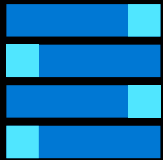
AKS on Azure Stack HCI

GENERALLY AVAILABLE



# Azure Arc-enabled servers

Bring on-premises and multi-cloud servers to Azure with Azure Arc



## Reach

Linux and Windows  
VM and Bare-Metal  
Domain agnostic



## Organize and Inventory

At scale searchable inventory  
Unify management experience  
Consistent VM extensions  
Integrate with Azure Lighthouse



## Governance

Built-in Azure policies  
Compliance across environments  
Centralized agent management –  
Monitoring, Security, Update  
Management



## Security

Azure Active Directory  
Managed Identity integration  
Server security baselines  
Role-Based Access control



Any infrastructure, familiar tools



[Overview](#)[Quickstarts](#)[Tutorials](#)[Samples](#)[Concepts](#)[How-to guides](#)[Deploy](#)[Plan for deployment](#)[Prerequisites](#)[Network requirements](#)[Deployment options](#)[Connect machines interactively](#)[Connect machines using a deployment script](#)[Connect machines from Windows Admin Center](#)[Connect machines to Azure Arc with PowerShell](#)[Connect machines to Azure Arc with PowerShell DSC](#)[Connect machines at scale](#)[Connect machines using a service principal](#)[Connect machines using Configuration Manager script](#)[Connect machines using Configuration Manager custom task sequence](#)[Connect machines using group policy](#)[Connect machines using group policy with service principal encryption](#)[Connect machines using Ansible playbooks](#)[Connect machines from Automation Update Management](#)[Migrate](#)[Manage](#)

# Azure Connected Machine agent deployment options

Article • 04/29/2022 • 6 minutes to read • 2 contributors



Connecting machines in your hybrid environment directly with Azure can be accomplished using different methods, depending on your requirements and the tools you prefer to use.

## Onboarding methods

The following table highlights each method so that you can determine which works best for your deployment. For detailed information, follow the links to view the steps for each topic.

Method	Description
Interactively	Manually install the agent on a single or small number of machines by connecting machines using a deployment script. From the Azure portal, you can generate a script and execute it on the machine to automate the install and configuration steps of the agent.
Interactively	<a href="#">Connect machines from Windows Admin Center</a>
Interactively or at scale	<a href="#">Connect machines using PowerShell</a>
Interactively or at scale	<a href="#">Connect machines using Windows PowerShell Desired State Configuration (DSC)</a>
At scale	<a href="#">Connect machines using a service principal to install the agent at scale non-interactively.</a>
At scale	<a href="#">Connect machines by running PowerShell scripts with Configuration Manager</a>
At scale	<a href="#">Connect machines with a Configuration Manager custom task sequence</a>
At scale	<a href="#">Connect Windows machines using Group Policy</a>
At scale	<a href="#">Connect machines from Automation Update Management to create a service principal that installs and configures the agent for multiple machines managed with Azure Automation Update Management to connect machines non-interactively.</a>



# DEMO

Onboarding via Azure SP







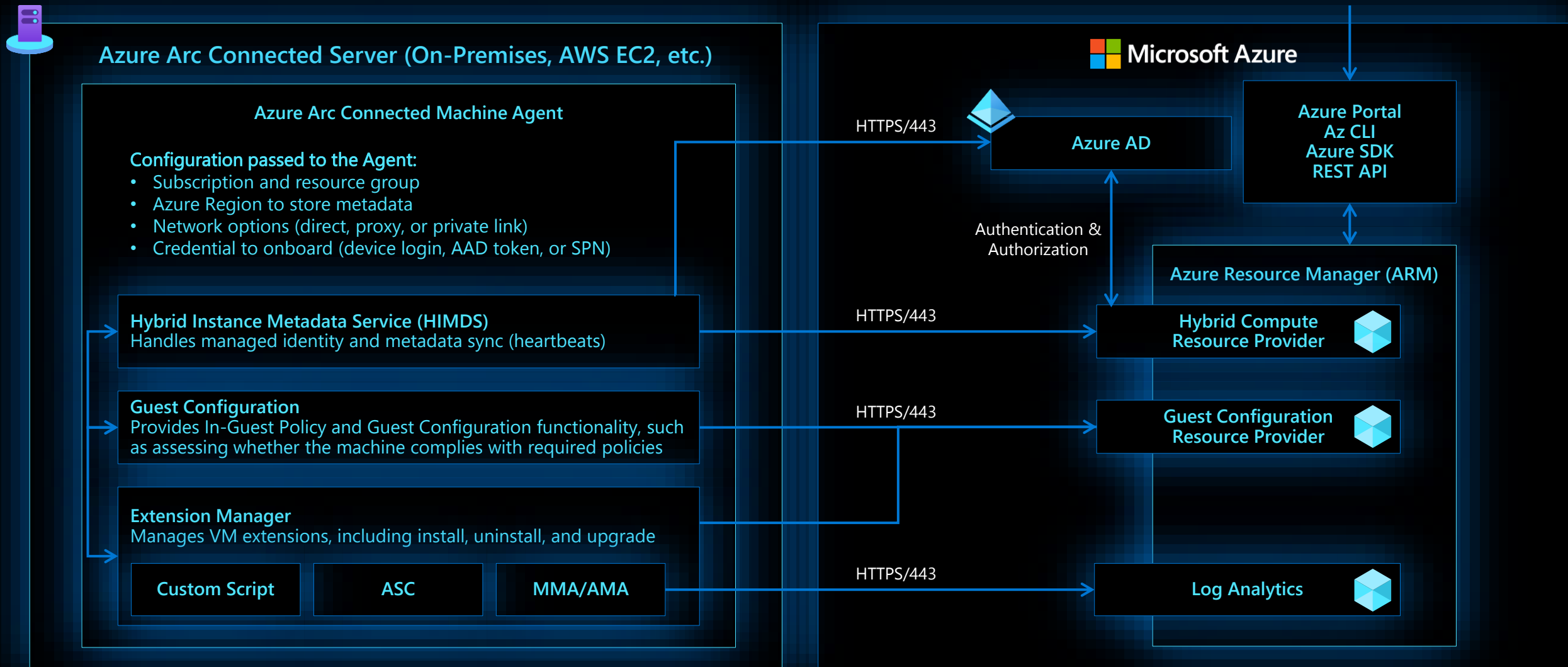
# DEMO

Onboarding via WAC



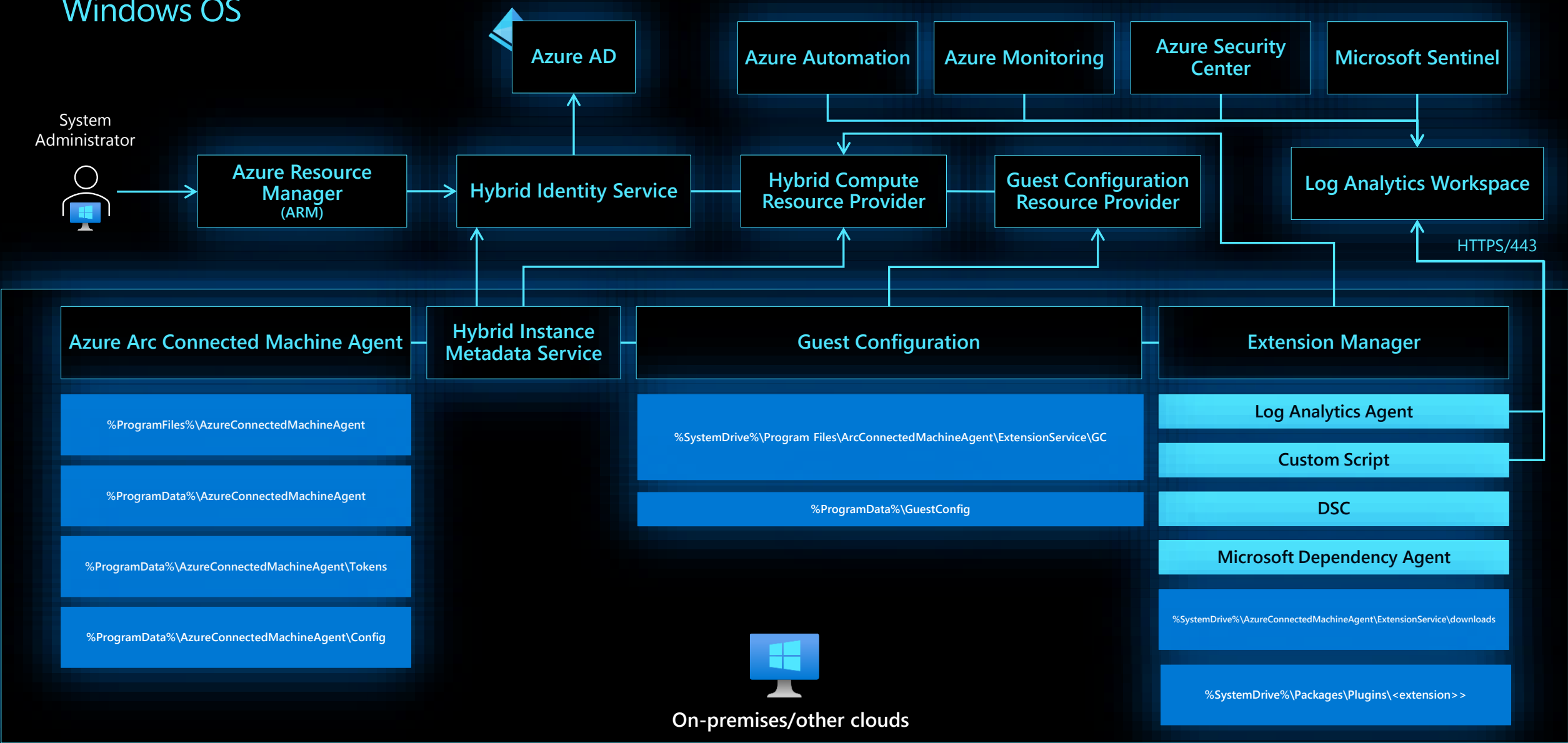
# Azure Arc-enabled servers

## Connected Machine Agent



# Azure Arc-enabled servers architecture

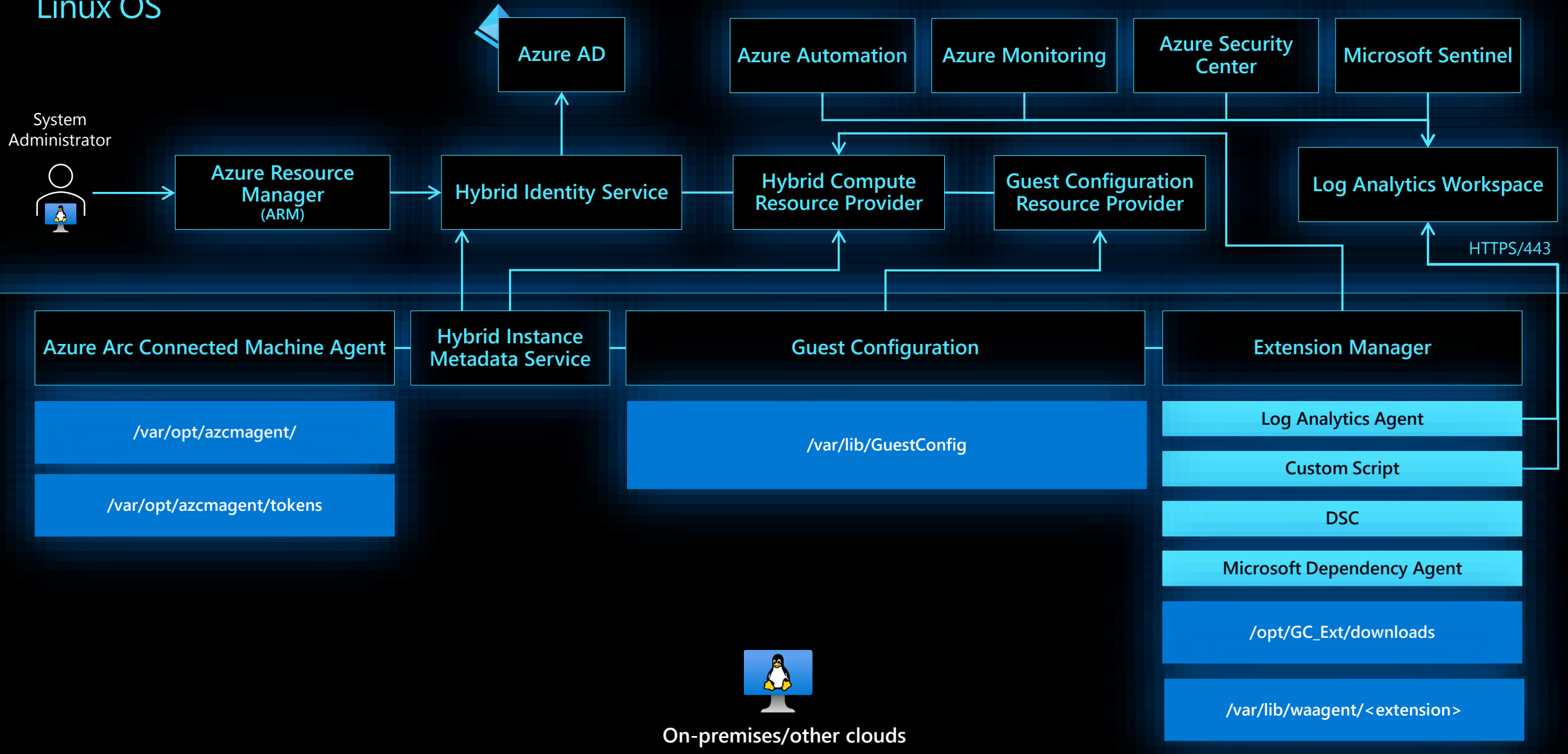
Windows OS





# Azure Arc-enabled servers architecture

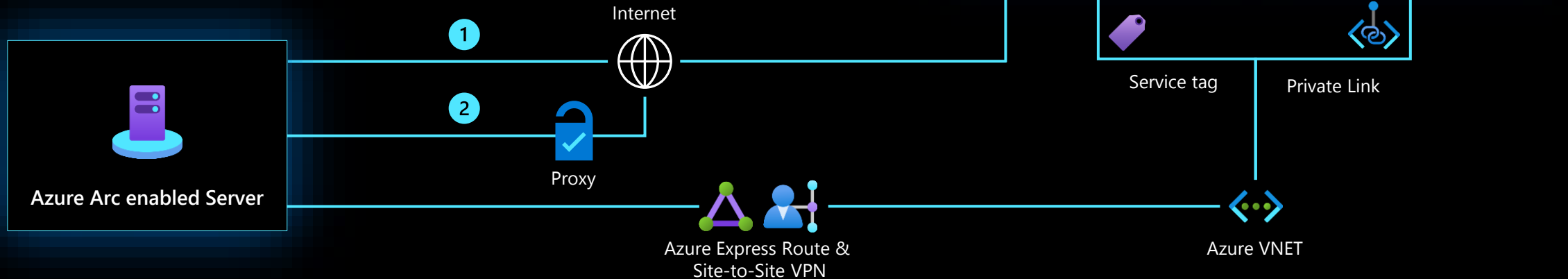
Linux OS



# Azure Arc enabled servers

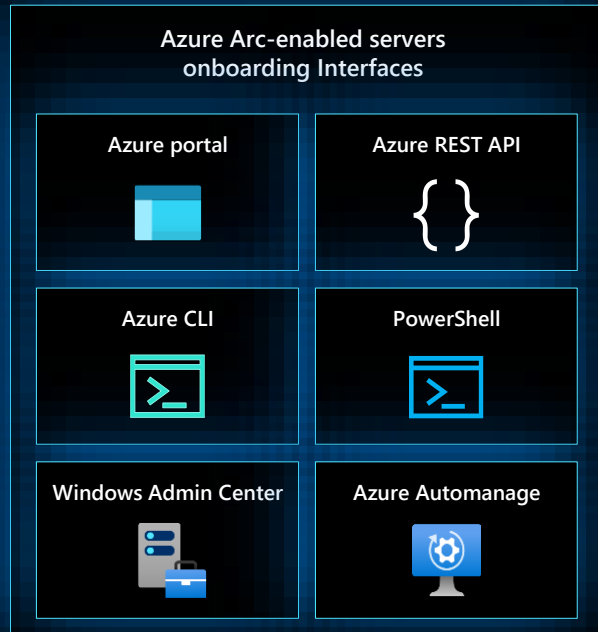
## Connectivity Options

1. Direct connection (Internet)
2. Connection via Proxy (Internet)
3. Service tag (S2S VPN/ER)
4. Private Link (S2S VPN/ER)

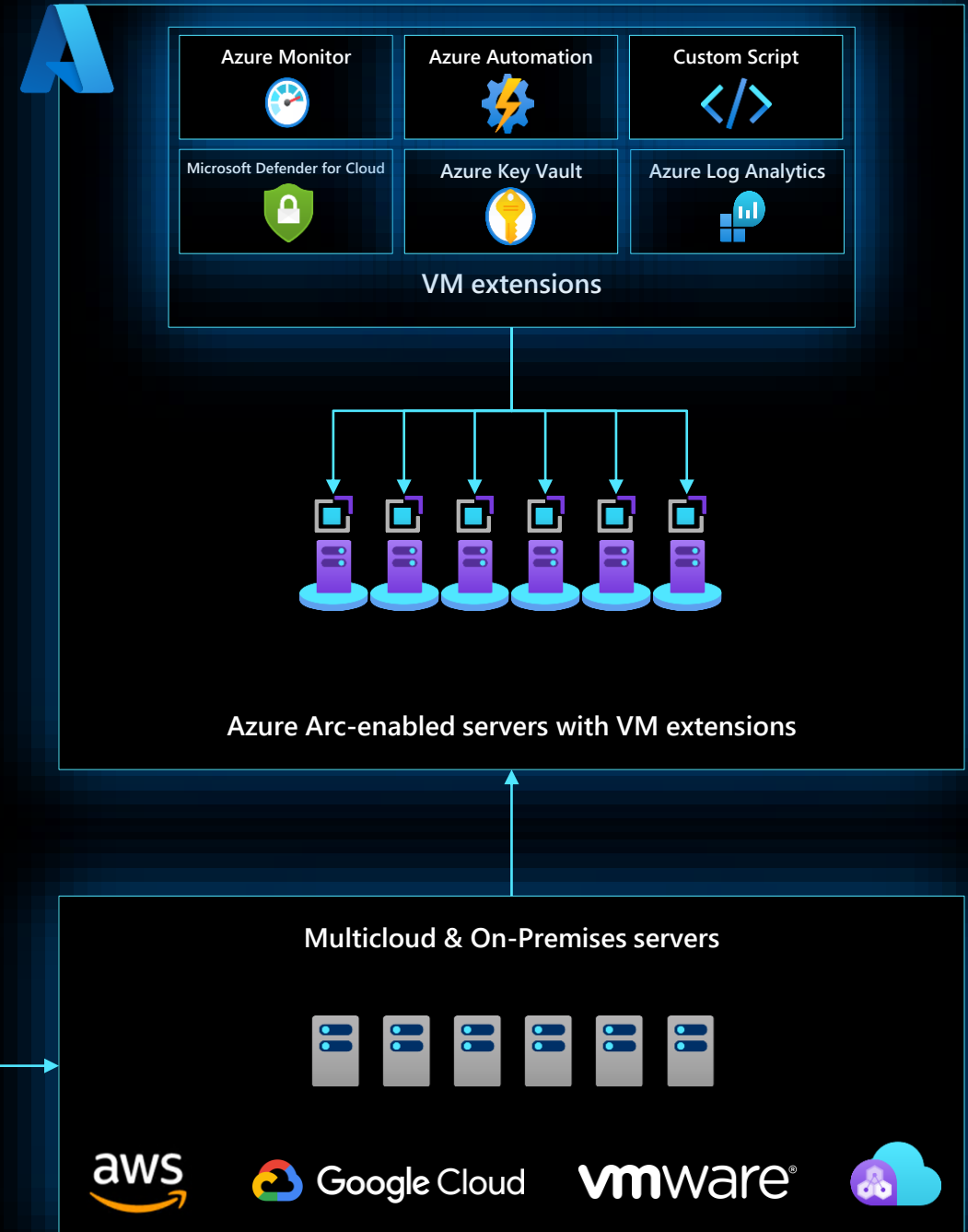


# Azure Arc-enabled servers

## VM extension integration



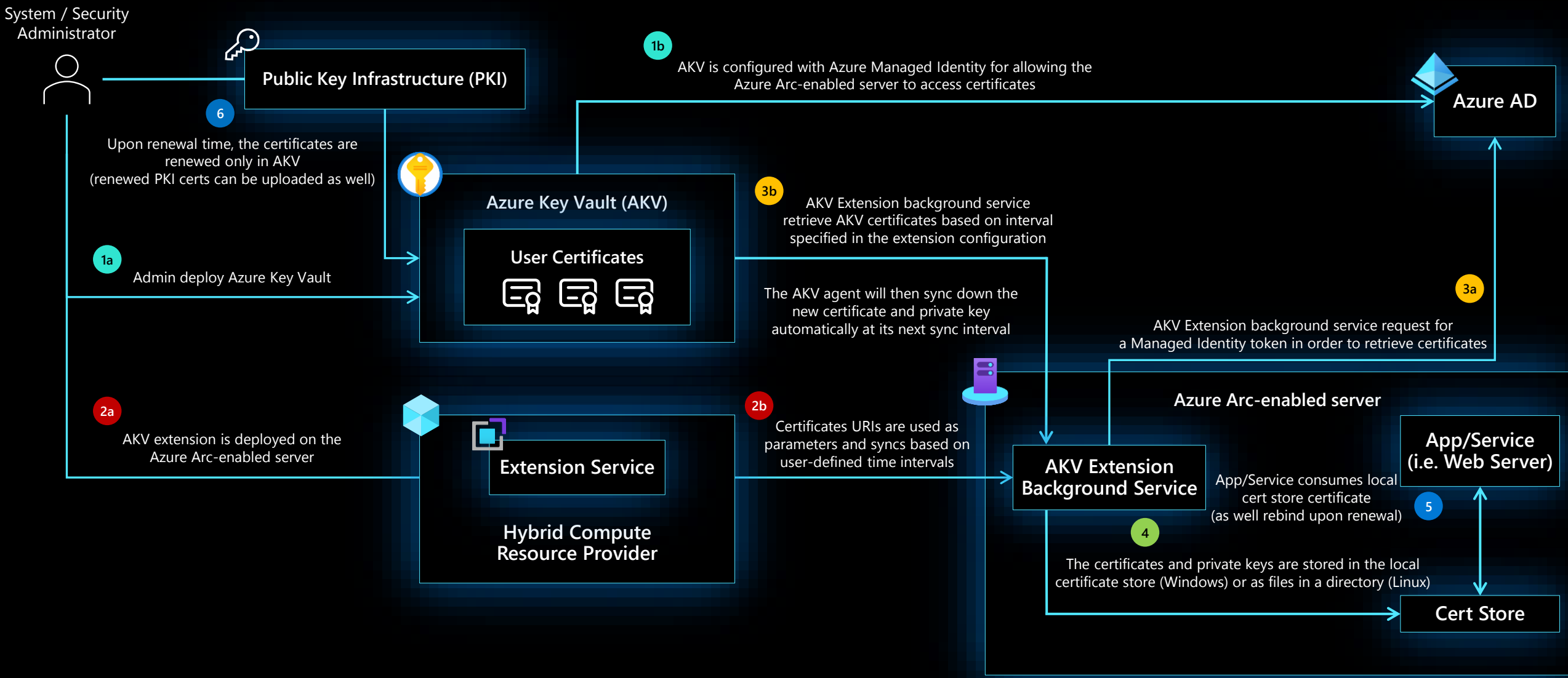
Azure Arc-enabled servers onboarding





# Azure Arc-enabled servers

## Azure Key Vault Integration



# Azure Arc Servers VM Extensions

- Microsoft Defender for Cloud
- Microsoft Antimalware extension
- Custom Script extension
- Log Analytics agent
- Azure Monitor for VMs (insights)
- Azure Key Vault Certificate Sync
- Azure Monitor Agent
- Azure Extension for SQL Server
- Azure Automation Hybrid Runbook Worker extension (preview)
- Windows Admin Center (preview)



Fragen aus der Community



Ausblick & Events



# Upcomming events

- [Azure Architects Connect](#) Serie zum Thema „Hybrid- / Multi Cloud & Security“, Sept. 2022
- [Microsoft Ignite](#), ww/Seattle 12.-14.10. + local in Munich, 13.-14.10.
- [Azure Meetup Wien](#) – Azure Hybrid with Arc, Sept. 14<sup>th</sup>
- Azure Hybrid Cloud Insights Series, Sept. 19th., registration [here](#)

# Azure Stack HCI Show



**September  
2022**

14.09.	München
15.09.	Stuttgart
21.09.	Hamburg
22.09.	Berlin
27.09.	Frankfurt

**Strategischer  
Eventpartner**

**intel®**

<https://www.manfredhelber.de/azure-stack-hci-show-on-tour/>

# WBSC # SKILLS

**September 2022:  
Azure Arc**

 **WBSC**  
Windows Business  
Solutions Club



5. September 2022, 10.00 Uhr  
**Grundlagen zu Azure Arc**

12. September 2022, 10.00 Uhr  
**Azure Arc im Zusammenspiel mit Windows Server**

19. September 2022, 10.00 Uhr  
**Azure Arc und Azure Stack HCI**

26. September 2022, 10.00 Uhr  
**Weitere Möglichkeiten mit Azure Arc**

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# Microsoft Ignite

October 12–14, 2022

[www/Seattle](#) 12.-14.10. + local in **Munich**, 13.-14.10.



[Your home for Microsoft Ignite](#)



# Azure Stack HCI Tour

## WBSC Skills

Next Azure Arc Show + call to actions



Vielen Dank!

# Die Azure Arc Show



Alexander Ortha



Manfred Helber

Nächster Termin:

17.10.2022 um 10:00 Uhr