PowerShell Conference Europe

Azure Arc Unleashed: Engage, Learn, and Master

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Antwerp 24

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```
PS /> Get-Speaker

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Agenda

- What is Azure Arc and what problems does it solve ? 🤔
- Enter the Arc Jumpstart universe ⚡
  - 5 minutes break
- Hands-on labs ⌨️
  - 10 minutes break

Introduction

Azure Arc overview

Customer challenges when hybrid

Complexity

"I need to have health visibility in a single pane of glass to all my existing and future infrastructure and applications."

Compliance

"I need to manage security and incident management across my public cloud and datacenter assets."

Inconsistency

"I want my on-prem skills to work in the cloud, and my cloud skills to work on-prem."

Regulation

"Our DB layer must remain on-premises due to sensitive patient data and data availability needs."

Latency

"We can't take a dependency on the internet. If we lose connectivity, we still want to be able to access the data."

Legacy

"Our older systems take too much maintenance. We want evergreen technology and to pay for it like a utility."


Multi-cloud


Datacenter


Edge

Customer environments and application requirements are evolving

Single control plane with Azure Arc

How to govern and operate across disparate environments?

How to ensure security across the entire organization?

How to best enable innovation and developer agility?

How to meet regulatory requirements and overcome technical hurdles?

100's–1,000's of apps

- VMs
- Databases
- Containers
- Serverless

.NET, JS, Java, GO, php

Diverse infrastructure

- Datacenters
- Hosters
- Branch offices
- OEM hardware
- IoT devices
- Edge

Hybrid & Multi-Cloud

Microsoft Azure

aws

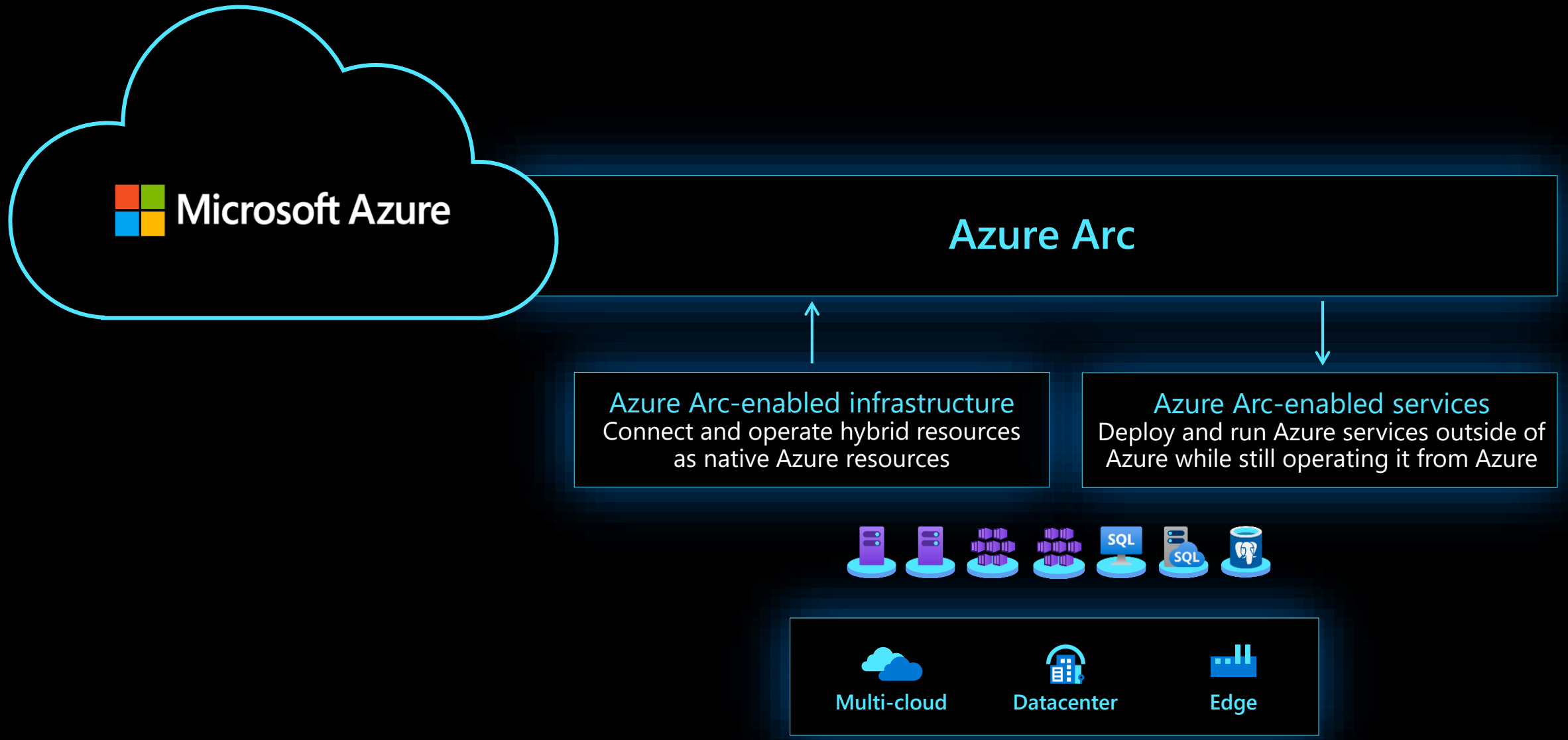
Google Cloud

Alibaba Cloud

vmware

ORACLE

IBM Cloud


Microsoft Azure
Azure Arc
Azure Arc-enabled infrastructure
Connect and operate hybrid resources as native Azure resources
Azure Arc-enabled services
Deploy and run Azure services outside of Azure while still operating it from Azure
SQL
SQL
Multi-cloud
Datacenter
Edge

Arc-enabled Infrastructure

Consistent governance, security, and visibility for your hybrid and multi-cloud compute.

Microsoft Defender

Azure Monitor

Microsoft Sentinel

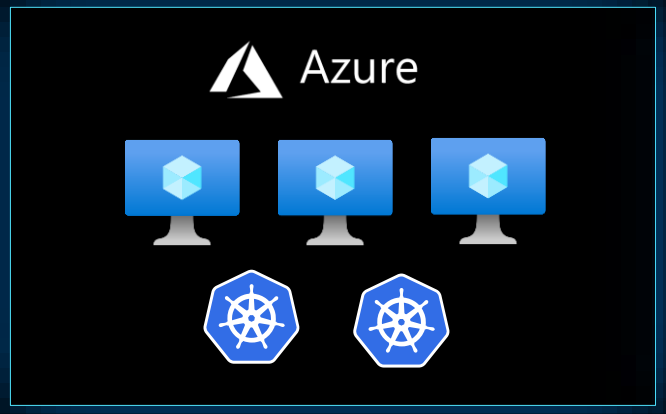
Azure Policy

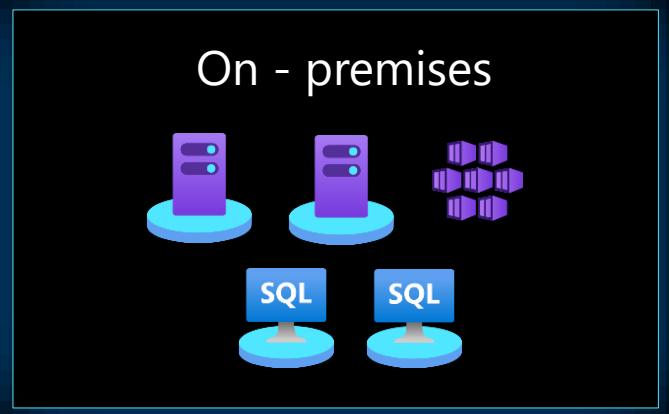
Update Management

Inventory Management

Azure Automanage

Azure Services across your infrastructure





What are we deploying?

ArcBox Deployment

- If you haven't already deployed ArcBox, use the instructions in this repo : https://aka.ms/arc-follow-along
  - You need an active Azure Subscription
  - Owner role on the subscription
  - Enough vCPUs ~ 10
  - A cup of coffee

- Make sure to deallocate the Virtual Machine or delete the resource group after the lab

Jumpstart

ArcBox

Break

Arc Jumpstart

Extensive. Automated. Open-Source. Community Driven.

aka.ms/ArcJumpstart

Arc Jumpstart mission

The Arc Jumpstart is designed to provide a "zero to hero" experience so you can start working with Azure Arc right away!

The Jumpstart provides step-by-step guides for independent Azure Arc scenarios that incorporate as much automation as possible, detailed screenshots and code samples, and a rich and comprehensive experience while getting started with the Azure Arc platform.

Our mission is for you to have a working Azure Arc environment spun-up in no time so the user can focus on the core values of the platform, regardless of where your infrastructure may be, either on-premises or in the cloud.

The Jumpstart universe

Jumpstart Scenarios

Jumpstart ArcBox

Jumpstart HCIBox

Jumpstart Agora

Jumpstart Drops

Docs

YouTube

Open source

Demos

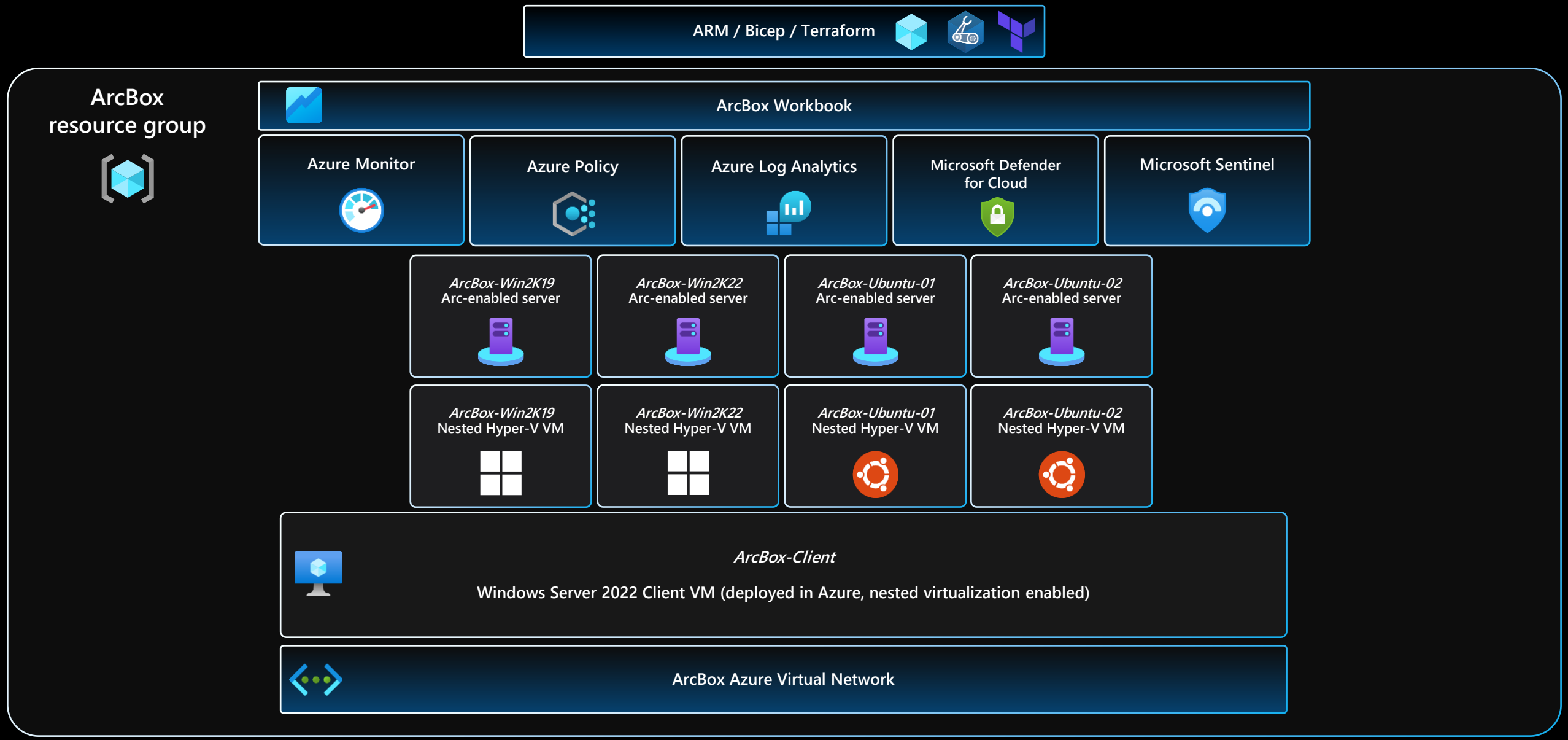
Diagrams

Community

Jumpstart ArcBox

Fully automated Azure Arc sandbox

Arc Jumpstart – ArcBox ITPros architecture



Under the hood

C: > ArcBox > ! configuration.dsc.yml

```yaml
# yaml-language-server: $schema=https://aka.ms/configuration-dsc-schema/0.2
properties:

  resources:
    - resource: Microsoft.WinGet.DSC/WinGetPackage
      id: git
      directives:
        description: Install Git
        allowPrerelease: true
      settings:
        id: Git.Git
        source: winget
    - resource: Microsoft.WinGet.DSC/WinGetPackage
      id: vscode
      directives:
        description: Install Visual Studio Code
        allowPrerelease: true
      settings:
        id: Microsoft.VisualStudioCode
        source: winget
    - resource: Microsoft.WinGet.DSC/WinGetPackage
      id: AzureCLI
      directives:
        description: Install Azure CLI
        allowPrerelease: true
      settings:
        id: Microsoft.AzureCLI
        source: winget
    - resource: Microsoft.WinGet.DSC/WinGetPackage
      id: PowerShell7
      directives:
        description: Install PowerShell 7
        allowPrerelease: true
      settings:
        id: Microsoft.PowerShell
        source: winget
    - resource: Microsoft.WinGet.DSC/WinGetPackage
      id: kubectl
      directives:
        description: Install kubectl
        allowPrerelease: true
```

```
PS C:\ArcBox\Logs> Invoke-Pester -Path "$Env:ArcBoxDir\tests\ArcBox.tests.ps1" -Output Detailed
Pester v5.5.0

Starting discovery in 1 files.
Discovery found 20 tests in 400ms.
Running tests.

Running tests from 'C:\ArcBox\tests\ArcBox.tests.ps1'
Describing ArcBox-SQL
  [+] VM exists 36ms (34ms|2ms)
  [+] VM is running 30ms (29ms|1ms)
  [+] Azure Arc Connected Machine exists 270ms (270ms|1ms)
  [+] Azure Arc Connected Machine is connected 194ms (193ms|1ms)

Describing ArcBox-Ubuntu-01
  [+] VM exists 30ms (27ms|3ms)
  [+] VM is running 23ms (23ms|1ms)
  [+] Azure Arc Connected Machine exists 183ms (182ms|1ms)
  [+] Azure Arc Connected Machine is connected 156ms (155ms|1ms)

Describing ArcBox-Ubuntu-02
  [+] VM exists 30ms (27ms|3ms)
  [+] VM is running 22ms (22ms|1ms)
  [+] Azure Arc Connected Machine exists 167ms (166ms|1ms)
  [+] Azure Arc Connected Machine is connected 129ms (128ms|1ms)

Describing ArcBox-Win2K19
  [+] VM exists 30ms (27ms|3ms)
  [+] VM is running 27ms (26ms|1ms)
  [+] Azure Arc Connected Machine exists 149ms (149ms|1ms)
  [+] Azure Arc Connected Machine is connected 147ms (146ms|1ms)

Describing ArcBox-Win2K22
  [+] VM exists 30ms (27ms|3ms)
  [+] VM is running 23ms (22ms|1ms)
  [+] Azure Arc Connected Machine exists 396ms (396ms|1ms)
  [+] Azure Arc Connected Machine is connected 161ms (160ms|1ms)
Tests completed in 2.74s
Tests Passed: 20, Failed: 0, Skipped: 0 NotRun: 0
```

Follow along

Announcing ArcBox 3.0

@JanEgilRing @sebassem

Features & enhancements

- WinGet as Package Manager
- Introduce declarative configurations
  - **DSC & WinGet Configuration**
- Integration tests for infrastructure validation
- Modularize the logon-script
- Logging and Error Handling
- Optimize Performance
  - **PowerShell 7**
  - **Foreach-Object -Parallel**

Next steps

[Explore the Arc Jumpstart project]
[Submit an issue or a feature request] or join our [GitHub Discussions] in our GitHub repository

Related sessions:

- Remotely connect, configure, and secure servers anywhere with Azure Arc and PowerShell – Thursday @ 9:00
- Securely operate your Azure, hybrid, or multi-cloud estate using Azure Policy and more! Tuesday @ 4:00

aka.ms/ArcJumpstart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