To discuss this course and customizations:
Call: 434-509-5680 or Email: sales@cloudcontraptions.com

Application Management with Azure Arc

Duration

3 days

Description

The Application Management with Azure Arc course is designed for IT professionals interested in overcoming the challenges of multi-cloud, on-premise, hybrid, and edge application management. Participants will learn how Azure Arc integrates and manages resources across multiple clouds, on-premise, hybrid, and edge environments. The curriculum includes viewing and managing non-Azure and on-premise resources with Azure Resource Manager, including virtual machines, Kubernetes clusters, and databases. Learners will also gain insights into leveraging common Azure services and management tools for all resources connected through Azure Arc. The course concludes with a transition to DevOps practices to support cloud-native development and deployment patterns, equipping learners with the skills to navigate and optimize cloud-based platforms.

Objectives

- Understand the challenges of multi-cloud, on-premise, hybrid, and edge application management
- Learn how Azure Arc helps to integrate and manage resources across multiple clouds, on-premise, hybrid, and edge with Azure
- Explore how Azure Arc helps to integrate and manage resources across multiple clouds and on-premise with Azure
- View non-Azure and on-premise resources with Azure Resource Manager
- Manage non-Azure and on-premise virtual machines, Kubernetes clusters, and databases in Azure
- Leverage common Azure services and management tools for all resources connected through Azure Arc
- Transition to DevOps practices to support cloud-native development and deployment patterns

Prerequisites

- Students will need a basic knowledge of cloud computing, cloud-native application development, and DevOps practices. Also, students should know Azure fundamentals.

To discuss this course and customizations:
Call: 434-509-5680 or Email: sales@cloudcontraptions.com

Training Materials

All students receive comprehensive courseware covering all topics in the course. Students will access the courseware through GitHub. The courseware is a collection of documents. Students practice the topics covered through challenging hands-on lab exercises.

Software Requirements

Students will need a free, personal GitHub account to access the courseware. Students will need a modern web browser. Also, students will need an Azure Subscription.

Outline

- Introduction
    - What is Azure Arc?
    - Challenges of Multiple Environment Application Management
    - Azure & Multiple Clouds
    - On-Premises & Hybrid
    - Edge Computing
    - Azure Arc Use Cases
    - Azure Arc Architecture
    - Azure Arc Jumpstarts
- Services Outside Azure managed by Arc
    - Windows and Linux Servers
    - Kubernetes Clusters
    - SQL Managed Instances
    - PostgreSQL Server
    - SQL Server
    - Virtual Machines managed by VMware vSphere
    - Virtual Machines managed by Azure Stack HCI
- Custom Locations
    - What is a Custom Location?
    - Custom Location Architecture
    - Configure Custom Locations
- Resource Bridge
    - What is the Resource Bridge?
    - Resource Bridge Architecture
    - Resource Bridge within Azure

- – Resource Bridge Projection for On-Premises Resources
- – Configure Custom Locations
- – Integration with vSphere VMs
- – Integration with Azure Stack HCI VMs
- – Integration with System Center Virtual Machine Manager (SCVMM)
- Resource Bridge Management
  - – Deploying the Resource Bridge
  - – Managing the Resource Bridge
  - – Secure the Resource Bridge
  - – Troubleshooting the Resource Bridge
- Resource Bridge Tasks
  - – Start, stop, and restart a virtual machine
  - – Control access and add Azure tags
  - – Add, remove, and update network interfaces
  - – Add, remove, and update disks and update VM size (CPU cores and memory)
  - – Enable guest management
  - – Install extensions
- Arc-enabled Servers
  - – What is an Arc-enabled Server?
  - – Install the Azure Connected Machine Agent
  - – Connect and Disconnect a Server to/from Azure Arc
  - – Manage Arc-enabled Servers
  - – Governance
  - – Threat Protection
  - – Configuration
  - – Monitoring
- Arc-enabled Kubernetes
  - – What is an Arc-enabled Kubernetes Cluster?
  - – Compatibility with CNCF-certified K8s clusters
  - – Google Cloud and AWS K8s clusters
  - – On-premises K8s clusters running on vSphere or Azure Stack HCI
  - – Install the Azure Connected Machine Agent
  - – Connect and Disconnect a Kubernetes Cluster to/from Azure Arc
  - – Manage Arc-enabled Kubernetes Clusters
  - – Governance

- – Threat Protection
- – Configuration
- – Monitoring
- Arc-enabled Data Services
    - – Run Azure Data Services Anywhere
    - – Azure SQL Managed Instance
    - – Azure Arc-enabled PostgreSQL
    - – Connectivity Modes
    - – Storage Configuration
    - – Sizing of Compute, Memory, and Storage
    - – Security and Permissions
    - – Automated Validation Testing
- SQL Server enabled by Arc
    - – What is SQL Server enabled by Arc?
    - – Install the Azure Connected Machine Agent
    - – Azure extensions for SQL Server
    - – Connect and Disconnect a SQL Server to/from Azure Arc
    - – Manage SQL Server enabled by Arc
    - – Governance
    - – Threat Protection
    - – Configuration
    - – Monitoring
- Deploy Applications to Azure Arc Services
    - – Integrate with DevOps, Git, and GitOps
    - – Azure App Service
    - – Azure Functions
    - – Azure Logic Apps
    - – Azure Event Grid
    - – Azure API Management
- Conclusion