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TRAINING SHEET

DEPLOYING AND SCALING CLOUDERA ENTERPRISE ON MICROSOFT AZURE

Take your knowledge to the next level

> "The Cloudera instructor's depth of knowledge and ability to address all our questions really kept us engaged. This was definitely one of the best, if not the best, course I have ever attended."
>
> Syncsort

This OnDemand training course delivers the key concepts and expertise needed to deploy Cloudera Enterprise, Cloudera's modern analytic platform for machine learning and analytics, on Microsoft Azure. The benefit to you is a secure cloud service that scales according to your requirements, while providing a secure, highly-available Cloudera Enterprise cloud deployment for long-running and transient data engineering, machine learning, and analytic workloads.

The training course discusses the Microsoft Azure services critical to a secure, elastic, Cloudera Enterprise deployment from the over 600 options Microsoft Azure offers. These core services include security, networking, virtual machine management, storage, and APIs. Step-by-step, you gain the skills needed to prepare and configure core Microsoft Azure services for a Cloudera Enterprise deployment.

Also covered are the architectural best practices for deploying Cloudera Enterprise on Microsoft Azure as well as the use of Cloudera Manager, the unified interface for managing Cloudera Enterprise deployments and configurations, customizable monitoring and reporting, troubleshooting, and maintenance.

Grow your skills by learning how to automate Cloudera Enterprise deployments on Microsoft Azure using Cloudera Director, which provides a web UI, an API, and a command line to deploy production environments across multiple public cloud vendors.

And finally, by using Cloudera Altus PaaS (Platform-as-a-service) and Cloudera Altus Data Engineering on Microsoft Azure, you can quickly stand up data pipeline operations, run jobs, analyze and troubleshoot those jobs, provision users, and securely scale your data engineering workloads.

Get Real-World Experience

This course includes demonstrations of each step and downloadable project code to run in your own Microsoft Azure environment.

Participants will learn how to:

- Prepare your Microsoft Azure environment for a Cloudera Enterprise deployment
- Deploy Cloudera Enterprise manually using Cloudera Manager
- Automate deployments of Cloudera Enterprise with Cloudera Director
- Deploy data engineering workloads using Cloudera Altus, Cloudera's self-service PaaS (Platform-as-a-service)

What To Expect

Participants need no prior experience with Cloudera Enterprise, Cloudera Director, Cloudera Altus, Microsoft Azure, or the cloud.

This course is designed for administrators and database administrators, developers, or those with similar operational backgrounds interested in:

- Configuring and planning for Azure deployments;
- Manually building clusters on Azure;
- Automating deployments;
- Deploying Altus Data Engineering.

Course Details:

Deploying & Scaling Cloudera on Microsoft Azure

- The Case for Cloudera Enterprise on Microsoft Azure
- Why Microsoft Azure for Your Cloudera Deployment
- A High Level Course Overview

Building Blocks of Microsoft Azure for Deploying Cloudera Enterprise

- Introduction to Microsoft Azure services
- Getting a Microsoft Azure Account
- Understanding & Managing Costs on the Cloud
- Microsoft Azure's Security Model Azure Active Directory & SSH Keys
- Azure Regions & Availability Zones
- Resource Groups
- Virtual Network (VNet) & Subnets
- Network Security Groups
- Availability Sets for Master Nodes & Worker Nodes
- Virtual Machines & Disk Storage
- Cloud Storage: Microsoft Azure Data Lake Store
- Dynamic DNS
- Managed Services: Azure Database for MySQL and PostgreSQL
- Hosting Your Own Cluster
- Databases on Microsoft Azure
- Cloud Storage: Microsoft Azure Data Lake Store
- Automation with Azure Resource Manager
- Cloud Shell

Best Practices & Recommended Topologies for Cloudera Enterprise on Microsoft Azure

- Cloudera Enterprise on Azure: Cloud Deployment Best Practices
- Deployment Options: Supported & Recommended

- Adopting the Cloud: Use Cases & Patterns
- Workloads: Data Engineering, Analytic DB, & Operational DB
- Security in the Cloud
- Recommendations & Caveats

Deployments on Microsoft Azure Using Cloudera Manager

- Deploying Using Cloudera Manager & Marketplace
- Prerequisites: The Environment You Need for Your Cluster
- Path A: Deploying a Development Cluster
- Installing Java Development Kit 8 (JDK 8)
- Configuring the Database for Your Environment
- Path B: Deploying Cloudera Manager for a Production Grade Cluster
- Deploying CDH on Microsoft Azure with Cloudera Manager
- Elasticity in the Cloud: Adding & Removing Nodes
- The Power of the Cloud: Changing Size of Virtual Machines
- Managing Multiple Clusters with Cloudera Manager
- Enterprise Data Hub (EDH) One-click Deployment with Azure Marketplace

Automating Deployments in Microsoft Azure with Cloudera Director

- Introduction to Automating Deployments in Microsoft Azure
- Using Cloudera Director
- Understanding Cloudera Director & the Available Interfaces
- Understanding Usage-Based Billing
- Preparing Microsoft Azure for Cloudera Director
- Manual Installation of Cloudera Director
- Creating an Environment

- Deploying Cloudera Director Using Azure Marketplace Image
- Deploying Cloudera Manager with Director – One or Many Instances
- Adding a Cluster
- Cloudera Director Dashboard
- Cloning Clusters
- Right Sizing Clusters: Adding & Removing Nodes
- Resiliency: Repair Instance & Auto Repair
- Adding More Environments, Cloudera Managers & Clusters
- Terminating Clusters, Cloudera Manager Instances & Environments
- Automating Cluster Operations Using Director Client & Server via Command Line Interface
- Automating Cluster Operations Using the API

Cloudera Altus in Azure Cloud: Machine Learning & Analytics as Platform-as-a-Service

- Cloudera Altus in Azure: Machine Learning & Analytics as Platform-as-a-Service
- Altus Overview: Features, Architecture, and Interfaces
- Getting Access to Cloudera Altus
- Getting Started with Altus on Azure: Subscription, Requirements, Limits, & Configuration
- Identity & Access Management
- Altus Environments
- Data Engineering
- Creating, Accessing, & Managing Data Engineering Clusters
- Submitting Jobs
- Using the Altus CLI
- Workload Analytics
- Getting Support
- What's Next?

Conclusion

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