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Azure Blob training

2 days (14 hours)

Overview

Azure Blob Storage is a highly scalable cloud storage service from Microsoft Azure. Designed to host files, unstructured data and application artifacts, it has become a central component of modern DevOps and cloud-native architectures.

Our Azure Blob Storage training course will enable you to master object storage management in a DevOps environment: automation via CLI, CI/CD integration, security, access control, infrastructure as code and cost optimization.

You'll learn how to store, secure, monitor and version application data in CI/CD pipelines, while implementing intelligent lifecycle policies.

At the end of the course, you'll be able to develop a secure, automated and supervised Blob environment, integrate Blob into your DevOps workflows, manage access and governance on a large scale, and optimize your costs through tiering and lifecycle policies.

Like all our training courses, this one is based on the latest stable version of Azure, and takes a resolutely practical and operational approach.

Objectives

- Understand the fundamental concepts of Azure object storage
- Automate blob management with CLI, PowerShell and Terraform
- Secure access with Azure AD, RBAC and SAS
- Integrate Azure Blob Storage into CI/CD pipelines
- Implement lifecycle and monitoring strategies
- Reduce costs and industrialize DevOps best practices

Target audience

- DevOps engineers
- Cloud / SRE administrators

Prerequisites

- Basic knowledge of Azure
- Notions of DevOps
- General knowledge of the cloud ecosystem

Understanding Azure Blob Storage

- Introduction to object storage on Azure
- Concepts of storage accounts, containers and blobs
- Blob types: Block, Append, Page
- Storage tiers: Hot, Cool, Archive
- DevOps use cases: artifacts, logs, backups, data lake
- Differences with Azure Files, Disks and Data Lake

Securing access and data

- Encryption at rest: managed keys and customer-managed keys
- Access control via Azure AD and RBAC
- SAS generation and use
- Network policy management: firewall, private endpoint, VNet
- Good governance practices for DevOps
- Workshop: Setting up a secure container with RBAC and SAS access control

Automating management with CLI and PowerShell

- Using the Azure CLI to manipulate blobs
- PowerShell scripts for upload, tagging and deletion
- Automating log rotation in a container
- Adding metadata and tags
- Integration into scheduled tasks or maintenance jobs

Deploy and integrate via CI/CD

- Using Blob Storage in Azure DevOps pipelines / GitHub Actions
- Store build artifacts (archives, binaries, packages)
- Deploy a static webapp with blobs
- Integration with Azure Functions or Logic Apps
- Best practices for multi-environment management (DEV/QA/PROD)
- Workshop: Creation of a CI/CD pipeline storing artifacts in a Blob container and triggering processing

Industrialization with Infrastructure as Code (IaC)

- Deploying a storage account with Terraform
- Container creation, network rules, encryption
- Application of lifecycle policies (archiving, deletion)
- Blob versioning management
- Use of tags to automate processing

Monitoring, optimization and best practices

- Track metrics via Azure Monitor and Log Analytics
- Configure alerts on access or quota overruns
- Cost estimation and reduction (third-party pricing, lifecycle strategy)
- Error diagnosis and access audit (activity logs)
- Summary: DevOps checklist for industrializing Azure Blob Storage
- Workshop: Deploying a complete blob environment with security, lifecycle, CI pipeline and monitoring

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming training course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Certification

A certificate will be awarded to each trainee who has completed the entire course.