

Program Akademii Database Engineer

AZURE CLOUD INTRODUCTION & IDENTITY

AZURE CLOUD INTRODUCTION

- › What is cloud and how it works?
- › Why Cloud? Benefits and drawbacks.
- › Definiton of IaaS, PaaS and SaaS.

IDENTITY

- › Azure Active Directory
- › Users and Groups

GOVERNANCE AND COMPLIANCE

- › Azure Active Directory
- › Users and Groups

ADMINISTRATION & COMPLIANCE

AZURE ADMINISTRATION

- › Azure Resource Manager
- › Azure Portal and Cloud Shell
- › Azure PowerShell and CLI

AZURE STORAGE & AZURE VIRTUAL MACHINES

AZURE STORAGE

- › Storage Accounts
- › Blob Storage
- › Storage Security
- › Azure Files and File Sync
- › Managing Storage

AZURE VIRTUAL MACHINES

- › Virtual Machine Planning
- › Creating Virtual Machines
- › Virtual Machine Availability
- › Virtual Machine Extensions

SERVELESS, DATA PROTECTION, MONITORING

SERVERLESS COMPUTING

- › Azure App Service Plans
- › Azure App Service
- › Container Services
- › Azure Kubernetes Service

DATA PROTECTION

- › File and Folder Backups
- › Virtual Machine Backups

MONITORING

- › Azure Monitor
- › Azure Alerts
- › Log Analytics
- › Network Watcher

AZURE SQL INTRODUCTION

AZURE SQL FAMILY BACKGROUND

- › History
- › Core data concepts
- › Relational Data in Azure
- › Non-relational Data in Azure

AZURE SQL DEPLOYMENT OPTIONS

- IaaS vs. PaaS
- SQL Server on Azure Virtual Machines
- Azure SQL Database
- Azure SQL Managed Instance

DEPLOYMENT, CONFIGURATION & MANAGEMENT OF AZURE SQL

DEPLOY, CONFIGURE AND MANAGE AZURE SQL DATABASE

- Plan for a deployment of Azure SQL
- Deploy and verify Azure SQL by using common tools and interfaces
- Configure Azure SQL after deployment
- Load data into Azure SQL

DEPLOY, CONFIGURE AND MANAGE AZURE SQL MANAGED INSTANCE

- Manage instance pool
- Create a managed instance inside an instance pool
- Create a database
- Connect to a managed instance in a pool
- Load data into the database

SCALING, SECURITY AND OTHER RELATIONAL DB OPTIONS

DATA SECURITY IN AZURE SQL

SCALING

DEPLOY MARIADB, MYSQL, AND POSTGRES SQL ON AZURE

DWH SOLUTIONS + AZURE SYNAPSE

DATA WAREHOUSE SOLUTIONS IN AZURE WITH FOCUS ON AZURE SYNAPSE ANALYTICS

MONITORING & SCRIPTING

MONITORING AZURE

- › Good practices of server and database monitoring
- › Installation and configuration of Prometheus
- › Grafana - one dashboard to rule them all
- › Azure native monitoring

SHELL SCRIPTS ON THE BASIS OF BASH

- › Variables
- › Loops
- › if then else
- › Error handling
- › Functions
- › Case
- › Graphic interface in scripts
- › Sample script for making a backup – rollback

ANSIBLE & MULTI - ENVIRONMENT

ANSIBLE INTRODUCTION

- › What is Ansible
- › Ways to install Ansible
- › Work with modules launched from the command line
- › Creating the first playbooks
- › Roles
- › Preparation of application deployment from scratch - creating a simple playbook for installation and launch of the application

CONCEPTS FOR WORKING WITH MULTIPLE ENVIRONMENTS

- › DEV, TEST, QA, UAT, PROD - how to connect and maintain