Data AI: Azure Database for PostgreSQL

WorkshopPLUS

Focus Area: Business/IT Alignment

Duration: 3 days

Difficulty: 200 - Intermediate

Overview

This course will provide you with the knowledge necessary to understand the key principles behind Azure Database PostgreSQL which provides fully managed, enterprise-ready PostgreSQL databases as a service. Learn how the built-in high availability and scalability can keep your systems up and running with very little setup.

Benefit from the unparalleled security and compliance, including Azure IP Advantage. The course will also explain the migration methods for Azure database for PostgreSQL. This workshop is targeted at Database Administrators and Developers.

Objectives

After completing this training, students will be able to:

- Describe the basic concept and architecture of Azure Database for PostgreSQL
- Learn provisioning Azure Database for PostgreSQL
- Learn firewall configuration and connectivity to the PostgreSQL Database
- Learn high availability, disaster recovery and scale up and down options
- Review security and compliance from Azure Platform perspective
- Learn the techniques for monitoring and alerting
- Learn the available migration methods
- Learn how to scale out PostgreSQL databases without the need to re-architect existing applications using Citus

Key Takeaways

Course Material

- Topics that provide in-depth expertise, tools, and hands-on experience to manage and monitor Azure Database for PostgreSQL across the enterprise
- Distributing data and queries across multiple nodes using Citus

Hands-on Labs

- Most of the concepts covered above will be supported by hands-on labs and demos
- Access to resources and labs for up to 6 months post class completion.

Agenda

Day 1
- Module 1: Introduction to Azure Database for PostgreSQL
- Module 2: Administration in Azure Database for PostgreSQL

Day 2
- Module 3: Security Management in Azure Database for PostgreSQL
- Module 4: Monitoring and Troubleshooting in Azure Database for PostgreSQL
- Module 5: Development and Integration with Azure Services

Day 3
- Module 6: Migration
- Module 7: Hyperscale (CITUS)

Plan for three full days. Early departure on any day is not recommended.

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Course Details

Module 1: Introduction to Azure Database for PostgreSQL

- Basic Concepts of Azure Database for PostgreSQL Server
- Provisioning Azure Database for PostgreSQL
- Connect to Azure Database for PostgreSQL

Module 2: Administration in Azure Database for PostgreSQL

- High Availability in Azure Database for PostgreSQL
- Business Continuity in Azure Database for PostgreSQL
- Managing an Azure Database for PostgreSQL Server
- Replication

Module 3: Security Management in Azure Database for PostgreSQL

- Introduction to Azure Database for PostgreSQL Security
- Access Control in Azure Database for PostgreSQL
- Authentication and Authorization in Azure Database for PostgreSQL

Module 4: Monitoring, Troubleshooting and Performance Best Practices in Azure Database for PostgreSQL

- Logs in Azure Database for PostgreSQL
- Access Server Logs in PostgreSQL
- Troubleshooting query performance
- Performance Best Practices
- Configuring PgBouncer Service for Connection Pooling

Module 5: Development and Integration with Azure Services

- Azure Data Platform and Application Development
- Business Case in Azure Database for PostgreSQL

Module 6: Migration

- Azure Database for PostgreSQL Migration

Module 7: Hyperscale (CITUS)

- Basic Concepts of Hyperscale (Citus)
- Use cases and best practices with Azure Database for PostgreSQL - Hyperscale (Citus)

Recommended Qualifications

- Experience on database management or development with PostgreSQL
- Basic understanding and hands-on experience with the Microsoft Azure Platform

Hardware Requirements

- An Intel Core-i5-based PC
- USB port
- Microsoft/Windows Live ID to connect to the virtual environment
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps bandwidth per student.

For more information

Contact your Microsoft Account Representative for further details.

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