

DP-3021: Configure and migrate to Azure Database for PostgreSQL

Course Outline

1) Explore PostgreSQL architecture

- Describe the architecture of PostgreSQL
- Describe the options for creating an Azure Database for PostgreSQL server
- Understand PostgreSQL shared memory
- Lab: Explore Azure Database for PostgreSQL

2) Understand clientserver communication in PostgreSQL

- Understand connection handling
- Understand the PostgreSQL client tools
- Lab: Explore PostgreSQL with client tools

3) Understand PostgreSQL query processing

- Identify the query processing components
- Understand EXPLAIN
- Lab: Execute the EXPLAIN statement

4) Secure Azure Database for PostgreSQL

- Describe the security features of Azure Database for PostgreSQL
- Create database users and grant permissions
- Understand encryption in Azure Database for PostgreSQL
- Lab: Configure permissions in Azure Database for PostgreSQL

5) Procedures and functions in PostgreSQL

- Create a stored procedure in Azure Database for PostgreSQL
- Call a stored procedure in Azure Database for PostgreSQL
- Create and use a function in Azure Database for PostgreSQL
- Lab: Create a stored procedure in Azure Database for PostgreSQL

6) Understand writeahead logging

- Describe write-ahead logging
- Describe replication and logical decoding
- Lab: List table changes with logical decoding

7) Configure and manage Azure Database for PostgreSQL

- Describe system catalogs and system views in Azure Database for PostgreSQL
- Investigate metadata in Azure Database for PostgreSQL
- Explain the purpose of the vacuum process
- Configure vacuum server parameters
- Lab: Configure system parameters and explore metadata with system catalogs and views

8) Understand concurrency in PostgreSQL

- Describe Multi-Version Content Control and snapshots in Azure Database for PostgreSQL
- Describe isolation levels in Azure Database for PostgreSQL
- Describe locking in Azure Database for PostgreSQL
- Lab: Understand locking

9) Tune queries in Azure Database for PostgreSQL

- Describe statistics in Azure Database for PostgreSQL
- Assess query performance with the Query Store
- Lab: Assess query performance using Query Store

10) Migrate to Azure Database for PostgreSQL flexible server

- Understand the different online and offline migration options
- Identify the different migration tools available
- Select the appropriate migration tool for your specific scenario
- Lab: Offline PostgreSQL database migration
- Lab: Online PostgreSQL database migration