

MOC 40563 G: Microsoft Cloud Workshop: Real-time data with Azure Database for PostgreSQL Hyperscale

Course Summary

Description

In this workshop, you will learn how to use advanced features of the managed PostgreSQL PaaS service on Azure to make your database more scalable and able to handle the rapid ingest of streaming data while simultaneously generating and serving pre-aggregated data for reports. You will design a resilient stream processing pipeline to ingest, process, and save real-time data to Postgres. Next, you will learn how to explore and gain insights from flat files at scale, perform aggregates, and save the valuable information to your database. Finally, you will create complex reports containing advanced visualizations, using a drag-and-drop interface, and use them to build a customizable dashboard that gets updated in real-time.

Objectives

By the end of this course, students will be able to:

- Implement a highly scalable, managed open source database solution.
- Ensure that it can handle real-time, roll-up and serve data for advanced visualizations.

Topics

- Whiteboard Design Session - Real-time data with Azure Database for PostgreSQL Hyperscale
- Hands-on Lab - Real-time data with Azure Database for PostgreSQL Hyperscale

Audience

This workshop is intended for Cloud Architects and IT professionals who have architectural expertise of infrastructure and solutions design in cloud technologies and want to learn more about Azure and Azure services as described in the 'About this Course' and 'At Course Completion' areas. Those attending this workshop should also be experienced in other non-Microsoft cloud technologies, meet the course prerequisites, and want to cross-train on Azure.

Duration

One Day

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Course Outline

- I. *Whiteboard Design Session - Real-time data with Azure Database for PostgreSQL Hyperscale*
 - A. Review the customer case study
 - B. Design a proof of concept solution
 - C. Present the solution

- II. *Hands-on Lab - Real-time data with Azure Database for PostgreSQL Hyperscale*
 - A. Connect to and set up your database
 - B. Add secrets to Key Vault and configure Azure Databricks
 - C. Send clickstream data to Kafka and process it in real time
 - D. Rollup real-time data in PostgreSQL
 - E. Create advanced visualizations in Power BI