

Zen Data Shastra Azure Data Engineer Interview Guide – Experienced 7+

Interview Rounds Overview

1. Round 1 – Technical (Coding & Verbal)

- Focus: Advanced SQL, intermediate PySpark, data warehousing, and data modeling concepts.

2. Round 2 – Technical (Coding & Verbal)

- Focus: PySpark, SparkSQL, Apache Spark architecture, and database creation scenarios.

3. Round 3 – Techno-Managerial

- Focus: Azure tech stack, pipeline creation, team management, and guesstimates.

4. Round 4 – Client Interview

- Focus: Database optimization, batch vs. incremental loading, SCDs, normalization, and CI/CD.

5. Round 5 – Leadership with CTO

- Focus: Project handling, Azure Data Engineering, and team fitment.

6. Round 6 – HR Discussion

- Focus: Salary negotiations, work culture, and leave policies.

Detailed Breakdown of Rounds

Round 1 – Technical (Coding & Verbal)

Coding Topics:

- **SQL (Advanced):**
 - Joins, subqueries, CTEs, window functions, and handling nulls effectively.
- **PySpark (Intermediate):**
 - Operations such as joins, window functions, aggregations, filtering, and mounting scripts.

Verbal Questions:

- **Data Warehousing:** Concepts like dimensional modeling and ETL processes.
- **Data Modeling:** Designing schemas for analytics use cases.
- **Stored Procedures:** Use cases and optimization techniques.

Round 2 – Technical (Coding & Verbal)

Coding Topics:

- **PySpark (Intermediate):**
 - Tasks such as merge operations, implementing loops (for/while), and writing simple streaming scripts.
- **SparkSQL (Advanced):**
 - Complex queries involving joins, subqueries, CTEs, window functions, limit statements, and null handling.

Verbal Questions:

- **Scenario-Based:**
 - How to create a database from scratch and architect it for scalability and performance?
- **Apache Spark Architecture:**
 - Key components like RDD, DAG, cluster manager, driver node, worker node.
 - Transformations: Wide vs. narrow transformations.
 - Spark optimizations: Partitioning, caching, and tuning parallelism.

Round 3 – Techno-Managerial

Key Topics:

- **Azure Tech Stack:**
 - ADF, ADB, Azure SQL DB, Azure Synapse, pipelines, and parameterization.
- **Pipeline Design:**
 - Explain an end-to-end data pipeline using Azure tools.
- **Guesstimates:**
 - Solving 2 estimation problems to test analytical thinking.
- **Team Management:**
 - Managing resources, aligning goals, and resolving conflicts.

Round 4 – Client Interview

Key Database Questions:

- **Optimization:** Performance tuning strategies and the use of temporal tables.
- **Loading Mechanisms:** Differences and error handling in batch vs. incremental loading (e.g., try-catch, rollback).
- **SCDs:** Types of Slowly Changing Dimensions and their use cases.

- **Normalization:** Various forms and their impact on query performance.
- **Schema Design:** Star vs. Snowflake schema differences.

Pipeline and Data Handling:

- Handling pipeline bugs and differentiating between pipeline parameters and global parameters.
- Data masking scenarios for secure data handling.

Spark Streaming:

- Streaming data handling and file mounting techniques in Spark.

Power BI and Azure Fabric:

- Basic understanding of NLQ (Natural Language Queries) and GenAI features in Power BI.
- Knowledge of Azure Fabric features.

DevOps:

- CI/CD implementation across environments (DEV, QA, UAT, PreProd, PROD).
- Release cycle management and deployment strategies.

Round 5 – Leadership with CTO

Key Focus Areas:

- **Project Experience:**
 - Discussing past projects, technical implementations, challenges, and edge cases.
- **Azure Expertise:**
 - In-depth knowledge of Azure Data Engineering stack and its application in real-world use cases.
- **Team Fitment:**
 - Assessing my ability to integrate with the existing team and contribute effectively.

Round 6 – HR Discussion

Key Topics:

- Team culture and work-life balance.
- Leave and holiday policies.
- Salary structure, variable components, and negotiation.

Glassdoor Zen Data Shastra Review –

<https://www.glassdoor.co.in/Overview/Working-at-Zen-Data-Shastra-EI IE9941292.11,27.htm>

Zen Data Shastra Careers –

<https://www.naukri.com/zen-data-shastra-jobs-careers-123460033>

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