

IBM Db2 Federation Developer: Federated Query Writing and Optimization

OEM: IBM • Duration: 2 Days (16 hrs) • Code: V010025G

COURSE MODULES & TOPICS

Objectives

- Learn to write simple to complex federated SQL queries across heterogeneous data sources and monitor their execution performance.
- Gain hands-on skills in troubleshooting query issues and applying best practices for efficient federation query design.

Day 1: Writing and Monitoring DB2 Federation Queries

Understanding DB2 Federation Query Architecture

- Overview of federation components: wrappers, servers, nicknames, user mappings
- How DB2 processes federated queries
- Pushdown operations and their impact on performance
- Supported data sources and interoperability

Writing Simple to Complex Federated Queries

- Writing basic federated SELECT queries
- Multi-source joins and subqueries
- Union and filtering operations across remote systems
- Data type compatibility and conversion handling

Monitoring and Analyzing Query Performance

- Using EXPLAIN, db2exfmt, and monitoring tables
- Interpreting query execution plans
- Identifying bottlenecks in federated queries
- Metrics for query response and resource usage

Day 2: Troubleshooting and Optimizing Queries

Troubleshooting Federated Query Issues

- Common query errors and root causes
- Resolving connection, authentication, and mapping issues
- Debugging SQL compatibility and syntax problems
- Diagnostic logs and tracing techniques

Best Practices for Writing Efficient Federated Queries

- Structuring queries for minimal data transfer
- Using filters and projections efficiently
- Reducing complexity in multi-source joins
- Reusable query patterns and maintainable syntax

Advanced Query Optimization Techniques for Federation

- Managing nickname and remote object statistics
- Understanding and leveraging pushdown optimization
- Tuning DB2 federation settings and configuration parameters
- Using optimizer hints and plan adjustments