

Exam 70-764: Administering a SQL Database Infrastructure – Skills Measured

Audience Profile

This exam is intended for database professionals who perform installation, maintenance, and configuration tasks. Other responsibilities include setting up database systems, making sure those systems operate efficiently, and regularly storing, backing up, and securing data from unauthorized access.

Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Configure data access and auditing (20–25%)

Configure encryption

- implement cell-level encryption, implement Always Encrypted, implement backup encryption, configure transparent data encryption, configure encryption for connections, troubleshoot encryption errors

Configure data access and permissions

- manage database object permissions, create and maintain users, create and maintain custom roles, configure user options for Azure SQL Database, configure row-level security, configure dynamic data masking

Configure auditing

- configure an audit on SQL Server, query the SQL Server audit log, manage a SQL Server audit, configure an Azure SQL Database audit, analyze audit logs and reports from Azure SQL Database

Manage backup and restore of databases (20–25%)

Develop a backup strategy

- back up very large databases, configure alerting for failed backups, back up databases to Azure, manage transaction log backups, configure database recovery models, configure backup automation

Restore databases

- perform piecemeal restores, perform page recovery, perform point-in-time recovery, restore file groups, develop a plan to automate and test restores

Manage database integrity

- implement database consistency checks, identify database corruption, recover from database corruption

Manage and monitor SQL Server instances (35–40%)

Monitor database activity

- monitor current sessions, identify sessions that cause blocking activity, identify sessions that consume tempdb resources, configure the data collector

Monitor queries

- manage the Query Store, configure Extended Events and trace events, identify problematic execution plans, troubleshoot server health using Extended Events

Manage indexes

- identify and repair index fragmentation, identify and create missing indexes, identify and drop underutilized indexes, manage existing columnstore indexes

Manage statistics

- identify and correct outdated statistics, implement Auto Update Statistics, implement statistics for large tables

Monitor SQL Server instances

- create and manage operators, create and manage SQL Agent alerts, define custom alert actions, define failure actions, configure database mail, configure Policy-Based Management, identify available space on data volumes, identify the cause of performance degradation

Manage high availability and disaster recovery (20–25%)

Implement log shipping

- configure log shipping, monitor log shipping

Implement AlwaysOn Availability Groups

- configure Windows clustering, create an availability group, configure read-only routing, manage failover, create distributed availability groups

Implement failover cluster instances

- manage shared disks, configure cluster shared volumes