Microsoft MCSA: SQL 2016 BI Development (70-767 & 70-768)

This intermediate Microsoft Business Intelligence training prepares BI professionals to design, implement, and maintain data warehouses, deploy SSIS packages, implement ETL, and develop BI models using SSAS, MDX, and DAX. This Microsoft course maps to the MCSA: SQL 2016 BI Development (70-767 and 70-768) exams, and teaches valuable BI skills.

CBT Nuggets course material →

STUDY PLAN

WEEK 1

Microsoft SQL: Designing a Data Warehouse — 155 min.

Introducing Data Warehousing	6
Selecting a Storage Subsystem	7
Redundant Array of Independent Disks (RAID) Levels	6
Installing and Configuring SQL Server with SSIS	20
Fact and Dimension Tables	10
Star and Snowflake Schemas	11
Designing Dimension Tables	5
Dimension Table Details	10
Slowly Changing Dimensions (SCD)	5
Designing Fact Tables	9
Introducing SQL Indexes	3
Clustered vs Non-Clustered Indexes	16
Rowstore vs. Columnstore Indexes	13
Introducing Data Partitioning	3
Partition Ranges	4
Implementing Partition Functions and Schemes	13
Implementing a Sliding Partition Window	14

WEEK 2

Microsoft SQL: Designing a Data Warehouse — 160 min.

Scale Out Solutions	8

Microsoft SQL: SSIS

Overview	1
Introducing SSIS	12
Introducing Flows	13
Connection Manager	12

Precedence and Expression Constraints	10
SSIS in Action	11
File Tasks	12
Web Service Tasks	11
Variables	14
Transactions	10
Checkpoints	9
Profiling the Source Data	11
Parallelism	11
Basic Transformations	14

WEEK 3

161 min.

Pivot	10
Aggregations	12
Fuzzy Data Transformations	13
Slowly Changing Dimension (SCD) Data Flows	17
SSIS Merge and Lookups	16
Incremental Loading with T-SQL MERGE	16
Enabling Change Data Capture (CDC)	12
Implementing CDC	14
Debugging and Troubleshooting	10
Securing SSIS Packages	10
Deploying a Package to SSIS	5

Microsoft SQL: Data Quality

Overview	1
Installing Data Quality Services (DQS)	11
Data Quality Knowledge Base (DQKB), Domains, and Attributes	13

WEEK 4

157 min.

DQS Data cleaning	9
DQS Data Flow Tasks in SSIS	10
Handling Duplicates in DQS	12
Installing Master Data Services (MDS)	15
Managing Master Data	13
System Administration, MDS Hierarchies, and Business Rules	12
Importing and Exposing Data in MDS	8
Preparing for the 70-767 Exam	1

Microsoft SQL: Data Modeling

Overview	1
Welcome to 70-768 Developing SQL Data Models	2
Introducing SSAS and Data Modeling	6
Getting SSAS (SSDT)	7
Dimensions and Measures	4
Multidimensional Data Sources and Views	13
Designing Dimensions for Multidimensional Models	10
Building a Cube	6
Using Your Cube in Power BI	4
Fact Dimensions	11
Parent-Child Dimensions	5
Referenced Dimensions	7

WEEK 5

152 min.

Slowly Changing Dimensions	8
Introducing Hierarchies (Attribute Relationships)	7

Implementing Attribute Relationships	9
Multidimensional Dimension Types	9
Multidimensional Measures and Measure Groups	8
Multidimensional Calculations and Aggregations	7
Introducing Tabular Modeling	9
Introducing Tabular Measures and DAX	6
Tabular Relationships	8
Hierarchies	4
Tabular Partitions	3
Implementing Tabular Partitions	5
Perspectives	5
Calculated Columns	5
Tabular DirectQuery vs. In-Memory	6
Automating Scheduled Refreshes	9
Managing Users and Permissions	4
Row Level Security	3

Microsoft SQL: MDX and DAX

Overview	1
Introducing Multidimensional Expressions (MDX)	6
MDX Rows, Columns, Members, and Sets	9
Understanding Tuples	4
Tuple Sets	5
Introducing MDX Functions with MEMBER	5
ORDER and HEAD Functions	6

WEEK 6 **146 min.**

Handling Nulls in MDX	2
MDX FILTER Function	3
Navigation with DESCENDANTS	5
Time Functions	3
WITH Clause	4
MDX AGGREGATE Function	3
Logical Functions in MDX	3
Introducing Data Analysis Expressions (DAX)	3
DAX Studio and EVALUATE	9
Formatting Results with ORDER and FILTER	5
Grouping Aggregations with SUMMARIZECOLUMNS	9
Basic DAX Calculations	6
Custom Measures, Variables, and Tables Using DEFINE	4
Introducing Iterator (X) Calculations	4
Implementing Iterator (X) Functions	3
Basic Logical Functions in DAX	6
SWITCH Logical Function	2
Variables (VAR)	3
CALCULATE Function	4
Date and Time Functions	4
Ranking Data with RANKX	3

Microsoft SQL: SSAS Tuning

Overview	1
File and Disk Layouts	4
Multidimensional Memory Limits	5
Configuring Multidimensional Memory Limits	3
Tabular Memory Limits	4
Understanding NUMA	4
Configuring Affinity	3

Understanding SSAS Clustering	4
Multidimensional Query Plans	3
Tracing a Multidimensional Query	6
Tabular Query Plans	3
Tracing a Tabular Query	5
Performance Monitoring	7
KPIs	4

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