

# Teradata 14 Certification Exams Objectives

*The high level objectives represent the general content areas. The more detailed information below the objective indicates representative topic areas. All Teradata 14 functions and features that fall within the stated objective areas are eligible topics on an exam.*

## **TE0-146 Teradata 14 Enterprise Architecture**

- General Concepts
  - Given a scenario, discuss how to use Teradata workload management to satisfy service level goals.
  - Determine the operational aspects that need to be considered in implementing a data warehouse architecture.
  - Given a scenario, determine how to create and manage a representative test environment.
  - Given a scenario, determine which capacity factors to consider prior to promoting an application into production.
  - Given a scenario to manage excessive history and/or obsolete data, determine the methods for archiving and deleting data from an application.
  - Identify the characteristics of a Teradata Analytic architecture framework (staging, 3NF, and Semantic).
- System Planning and Space Management
  - Given a system planning and space management scenario, including application characteristics, configure a database architecture (e.g., space, performance, and CPU requirements).
  - Given a scenario, determine the appropriate system hardware configuration.
  - Given a scenario, identify the potential system and application availability characteristics including active

- data warehousing that can affect a database architecture.
- Given a scenario, describe the shared resource requirements and their impact on the overall database architecture and its performance.
- Describe the features and function of TVS.
- Optimization
  - Given a scenario, determine which Teradata system resources should be used to assist in analyzing and improving performance tuning.
  - Given a scenario where a query is running slowly, determine improvement options.
  - Given a scenario with a heavily loaded system, describe the process of balancing and reserving system resources.
  - Given a scenario, determine the tools within the Teradata Analyst Pack that are applicable for planning system expansion and workload optimization.
  - Given a scenario, determine the inputs necessary to establish a query management and workload policy.
  - Given a scenario, determine the effects of database optimization techniques (including techniques on tables or indexes).
  - Given a scenario, determine the application characteristics that affect table design and the use of the different types of advanced indexes.
  - Given a scenario, determine optimization techniques that should be used to manage a high-volume tactical workload.
  - Given a scenario, determine the effects of embedded (nested) views.

- Data Integration (Data Source to Database Target)
  - Given a scenario, determine the trade-offs between an ETL or ELT design.
  - Given a scenario, identify data integration requirements that affect a database architecture.
  - Describe how the Logical Data Model (LDM) is valuable in designing an integrated data architecture.
  - Determine the application characteristics and other factors that affect table design, including types of advanced indexes.
  - Given a Logical Data Model (LDM), determine what needs to be added to create an Extended LDM in order to choose the appropriate indexes.
  - Describe how the Physical Data Model (PDM) is valuable in designing an integrated data architecture.
  - Identify the application performance impact of database design when implementing Referential Integrity (RI and soft RI).
  - Describe the roles of client software in a Teradata environment.
  - Describe connectivity options supported by the Teradata environment.
  - Describe the TTU client operating environments supported by the Teradata environment.
  - Given a scenario, identify the appropriate approach for data movement.
  - Given a system restart scenario, identify the impact on data integration jobs.
  - Given a scenario where multiple business subject areas and their supporting applications are being integrated

- in the data warehouse, determine where surrogate keys would be a choice.
  - Given a scenario, determine the appropriate method for integrating data from a real-time source.
- Data Protection
  - Describe the options to secure access to the database.
  - Describe the methods available to meet privacy requirements within an application that contains personally identifiable information.
  - Given a scenario, determine the appropriate backup and recovery approach.
  - Describe options and considerations for single system availability.
  - Given a scenario, determine the security objects and requirements needed to organize the database user environment.
  - Identify the available methods to meet user access auditing requirements.
- Data Governance
  - Define the purpose and benefits of master data management in an enterprise architecture.
  - Identify the benefits of data governance on a growing enterprise data warehouse environment.
  - Identify the benefits of metadata capture on a growing enterprise data warehouse environment.
- Information Delivery Strategies
  - Given a scenario, determine which alternative is the best choice: in-database analytics, external processing, ROLAP technology, or External Cube technology.
  - Given a scenario, determine when summary tables are necessary.

- Identify the objects and characteristics of a semantic layer and/or data model.
- Identify what needs to be considered when developing a data mart solution.
- Describe the functions of exporting data from a Teradata environment.
- Describe the implications of designing and managing an ad-hoc environment.
- Determine options that are available to ensure that business critical reporting requirements are met.
- Determine strategies that are available to migrate applications from an EDW to another system.
- Given a scenario, design a recommended view architecture.