Teradata Certification – Architecture Exam

Exam Objectives The Architecture Exam covers the features and functionality of Vantage 2.3 including the Advanced SQL Engine through release 17.10.

Architecture Concepts – 19%
Identify the purposes of different types of metadata (business, technical, and operational).
Identify the characteristics of conceptual modeling.
Given a scenario, identify the logical model that should be created.
Given a scenario, identify how to use an extended logical data model.
Identify the uses and benefits of logical and physical models.
Given a scenario, identify strategies to extend application deployment.
Given a scenario, identify how to architect a non-production environment.
Identify the components of an analytic ecosystem.
Identify the capabilities of cloud architecture.
Given a scenario, identify the benefits and trade offs of cloud compared to on-premises architectures.
Information Management and Data Governance – 12%
Given a scenario, identify which loading strategy should be used.
Given a scenario, identify how to prepare data for a non-production environment.
Given a scenario, identify the data retention, placement, and archive strategies that should be used.
Identify the benefits of effective master data management.
Given a scenario about data sovereignty governance and regulatory requirements, identify the considerations that impact architecture.
Identify management and monitoring options for Teradata Vantage.
Identify the benefits of the Teradata Vantage temporal, geospatial, or time series capabilities
Performance Design – 17%
Given a scenario, identify physical design choices for indexes (PI, SI, NoPI, and JI) for optimal performance (response time, maintainability, or resource consumption).
Given a scenario, identify physical design choices for partitioning for optimal performance (response time or resource consumption).
Given a scenario, identify physical design choices for data types, statistics, or data compression for optimal performance (response time or resource consumption).
Given a scenario, identify strategies for managing system capacity in the cloud.
Given a scenario about complex workloads, identify features that should be used to manage business priorities.
Identify the capabilities and benefits of workload management.
Given a scenario about business critical applications, identify how to meet strict SLAs and SLGs.

Data Integration – 14%
Given a scenario, identify the appropriate data transformation strategy(ies).
Given a scenario, identify the appropriate method/level to organize tightly, loosely, and non-coupled data.
Given a scenario, identify when or why surrogate keys should be generated, or when natural keys should be used.
Given a scenario, identify the strategy that should be used to achieve the correct level of data granularity.
Given a scenario including a data modeling method (for example: snowflake, star, normalized), identify the benefits and tradeoffs.
Given a scenario, identify the design considerations when using complex data types and sources, such as JSON, XML, AVRO, PARQUET, and CSV.
Data Security – 11%
Identify the security considerations for multi-system environments.
Given a scenario, identify which user authentication mechanism should be used.
Given a scenario, identify database mechanisms for controlling access to data.
Identify encryption options for different deployments.
Given a scenario, identify the impact of encryption options.
Resiliency and Portability – 13%
Given a scenario, identify design considerations for data replication.
Identify features that provide system protection
Given a scenario, identify strategies for achieving business continuity and high availability.
Given a scenario, identify how Teradata Vantage should be deployed.
Given a scenario, identify the considerations for connectivity and data latency for multiple platforms.
Identify considerations when moving data between platforms.
Information Delivery - 14%
Identify use cases where QueryGrid is beneficial.
Given a scenario with data access requirements, identify the solution that should be used.
Given a scenario with data availability requirements, identify the solution that should be used.
Identify use cases for different access layers.
Given a scenario, identify the appropriate business intelligence (BI) architectures.
Given a scenario about data placement, identify the solution that should be used.
Given a scenario with advanced analytic requirements, identify the solution that should be used.