€TRAINING

Data Server

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Introduction:

This training program is designed to equip participants with comprehensive knowledge and practical skills in managing and optimizing data servers. It focuses on understanding the core principles, technologies, and best practices necessary for efficient data management and server administration.

Program Objectives:

By the end of this program, participants will be able to:

- Understand the fundamentals of data server architecture and technologies.
- Implement data storage and retrieval strategies using server technologies.
- Optimize server performance and scalability for various workloads.
- Implement data security and compliance measures.
- Troubleshoot common issues and perform server maintenance tasks.

Targeted Audience:

- IT Administrators.
- Database Administrators.
- System Engineers.
- IT Managers responsible for data infrastructure.

Program Outline:

Unit 1:

Introduction to Data Server Management:

- Overview of data server technologies and their evolution.
- Key components of a data server architecture.
- Types of data servers relational, NoSQL, hybrid.
- Introduction to data storage and retrieval mechanisms.

- Case studies of effective data server implementations.

Unit 2:

Data Storage and Retrieval Strategies:

- Designing and implementing data storage solutions.
- Understanding database management systems DBMS.
- Data modeling and schema design considerations.
- Query optimization techniques for efficient data retrieval.
- Implementing indexing and partitioning strategies.

Unit 3:

Server Performance Optimization:

- Monitoring and analyzing server performance metrics.
- Capacity planning and resource allocation strategies.
- Implementing caching mechanisms for improved performance.
- Tuning server configurations for specific workloads.
- Scaling strategies for handling increasing data demands.

Unit 4:

Data Security and Compliance:

- Implementing data security measures encryption, access control.
- Compliance requirements for data storage and management.
- Backup and recovery strategies for data protection.
- Auditing and logging practices for regulatory compliance.
- Securing data transmission and remote access.

Unit 5:

Maintenance and Troubleshooting:

- Performing routine maintenance tasks updates, patches.
- Diagnosing and resolving common data server issues.
- Disaster recovery planning and execution.
- Managing server backups and restoration processes.
- Continuous improvement and optimization practices.

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