



WelTec

Te Whare Wānanga o te Awakairangi



西安科技大学高新学院
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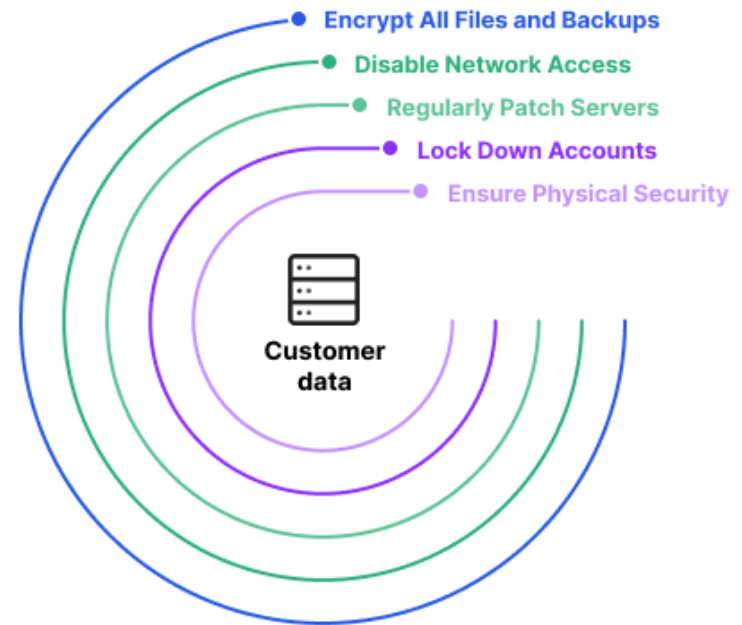
IT5507 Fundamentals of Data Science

Chapter 16 Database Administration and Security



Database Administration and Security

- 1. Read the Article:** Begin by thoroughly reading the two articles 1 and 2 of Database Administration on Moodle for Day 10. Take your time to understand the various aspects discussed, including tasks, importance, use cases, related technologies, and why it's relevant for Dremio users.
- 2. Identify Key Concepts:** Identify key concepts mentioned in the article, such as database design, performance optimization, data security, backup and recovery, scalability, and related technologies like DBMS, data warehousing, and data governance.





Database Administration and Security

Answering the Questions: After reading the article, answer the following basic questions to ensure comprehension:

- a. What are the main activities involved in database administration?
- b. Why is database administration important for businesses?
- c. What are some common use cases of database administration?
- d. Can you name some related technologies or terms associated with database administration?



Database Connectivity and Web Technologies

Discussion and Reflection: Once you've answered the questions, we'll have a class discussion. Discuss your findings with your peers or instructor. Share insights, clarify doubts, and exchange perspectives to deepen your understanding of the topic.

Reflect on how the knowledge gained about database administration can be applied in real-world scenarios. Consider how you can utilize this knowledge to optimize data management, enhance security measures, and improve overall database performance.



Reflection

a. What are the main activities involved in database administration?

The main activities involved in database administration include database design, installation, configuration, monitoring, optimization, backup and recovery, security management, and performance tuning.

b. Why is database administration important for businesses?

Database administration is important for businesses because it ensures data integrity, performance optimization, data security, backup and recovery, and scalability, which are essential for effective decision-making, operational efficiency, regulatory compliance, and maintaining competitive advantage.

c. What are some common use cases of database administration?

Some common use cases of database administration include supporting business intelligence and analytics, facilitating e-commerce and online transactions, managing customer relationship management (CRM) databases, maintaining enterprise resource planning (ERP) systems, and managing healthcare information systems.



Reflection

- d. Can you name some related technologies or terms associated with database administration?
- Related technologies or terms associated with database administration include Database Management System (DBMS), data warehousing, data governance, data integration, and data migration.



Database Security!!!

- **1. Read the Article:** Begin by thoroughly reading the article 3 on Moodle Day 10 about database security provided by IBM. Take your time to understand the various aspects discussed, including the definition of database security, its importance, common threats and challenges, best practices, and related technologies.
- **2. Answer Basic Questions:** After reading the article, answer the following basic questions to ensure comprehension:
 - a. What does database security encompass, and why is it important for businesses?
 - b. What are some common threats and challenges associated with database security?
 - c. What are the best practices recommended for ensuring database security, and what controls and policies should be established?