

3.1 INFORMATION/DATA ASSURANCE – DATABASE ADMINISTRATION



IoT Security Technician Skill Zone – CSSIA.ORG

3. Information/Data Assurance

3.1 Database Administration

1. Demonstrate understanding of data administration in IoT and industrial control systems.
2. Define IoT and industrial control data requirements and specifications.
3. Design IoT and industrial control database systems.
4. Implement IoT and industrial control database systems.
5. Describe the installation requirements for IoT and industrial control database systems.
6. Describe the methods to maintain and backup IoT and industrial control database systems.

Database Administration

Database Administration refers to the design, creation and management of databases used to collect and control devices in an IoT or ICS environment. The IoT security technician must have an understanding of database creation and structures. These technicians are also responsible for securing both the databases and the servers that host them. Modern database management also includes intrusion detection and data access control. The content in this area includes basic database design, system architecture and the protocols used to collect and store IoT data.

Databases may include SQL, Oracle and other commercial products. Other databases may be based on open standard products.

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Existing Course Cross Reference

Cisco Networking Academy Courses

[CPA: Programming Essentials in C++](#)
[CCNA Security](#)

Cisco Partner Courses

[Security+ \(CSSIA.ORG\)](#)
[Python Programming for Security Technicians \(CSSIA.ORG\)](#)
[CISSP \(CSSIA.ORG\)](#)
[Application and Database Security](#)

Curriculum Resources

Videos

[YouTube.com – Configuration Management](#)
[YouTube.com – Cisco Nessus Configuration Management](#)

Web Links

[Configuration Management: Best Practices White Paper](#)
[SANS Institute InfoSec Reading Room, Secure Configuration Management Demystified](#)
[NIST Special Publication 800-82 Section 6.2](#)

Textbooks

[Oracle's Database 12c OU Courses](#)
[Oracle Learning Library](#)
[Oracle Database 12c Security Cookbook](#) By: Pavlovic, Veselica, Packt June 2016, ISBN:978-1-78217-213-0, ISBN 10:1-78217-213-0
[Database Security, 1st Edition](#) by Basta, Zgola Cengage 2012, ISBN-10: 1435453905, ISBN-13: 9781435453906
[NIST Special Publication 800-8](#)
[Security Issues in the Database Language SQL](#)
[NIST Special Publication 800-53](#)
[Database Security Controls](#)
[NIST SPECIAL PUBLICATION 800-70 Revision 3](#)
[Guidelines for Checklist Users and Developers](#)
12/11/2015

Assessment Resources

Labs

None

Quizzes/Exams

[CSSIA CISSP Course](#)
[Security Operations – Chapter Exam](#)

Quizlet.com

[Configuration Management Flashcards](#)
[Configuration Planning and Management flashcards](#)