



IoT Security Technician Skill Zone – CSSIA.ORG

### 2. Information Communication Technologies

#### 2.7 Information Security Principles

1. Demonstrate understanding of the relationship between IoT and industrial control systems IS security and system availability.
2. Explain the concept of high availability.
3. Explain how five nines relates to high availability.
4. Describe the use of security controls to increase system availability, integrity and confidentiality.
5. Identify possible security violations that can decrease system availability, integrity and confidentiality.

6. Describe how an incident response plan improves high availability in IoT and industrial control environments.

#### Information Security Principles

*Information Security Principles are the overriding philosophies that guide an organization's information security management plan. These principles include availability, integrity and confidentiality of the organization's information systems. The principle of availability deals with the continuous and reliable access to the organization's critical information and information collection systems.*

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*Data integrity is the concept of protecting the integrity of critical information during transmission, storage and processing.*

*Confidentiality is the concept of controlling access to sensitive information for individuals authorized based on their assigned responsibilities. IoT security technicians are responsible to implement these three principles through the use of policies, controls, procedures, technologies and products.*

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### Existing Course Cross Reference

#### Cisco Networking Academy Courses

[Introduction to Cybersecurity](#)

[Cisco Cybersecurity Essentials](#)

[CCNA Security](#)

#### Cisco Partner Courses

[Security+ \(CSSIA.ORG\)](#)

[IoT and ICS Security Controls \(CSSIA.ORG\)](#)

[ICS and SCADA Security \(CSSIA.ORG\)](#)

[CISSP \(CSSIA.ORG\)](#)

### Curriculum Resources

#### Videos

[YouTube.com – Information Security Principles](#)

[YouTube.com – Principles of Information Security](#)

#### Web Links

[NIST Special Publication 800-12](#)

An Introduction to Computer Security: the NIST Handbook

#### Textbooks

[RIoT Control: Understanding and Managing Risks and the Internet of Things](#) Kindle 1st Edition Publisher: Morgan Kaufmann; 2016  
ISBN-10: 0124199712 ISBN-13: 978-0124199712

[Calder-Watkins, IT Governance: A Manager's Guide to Data Security and ISO 27001 / ISO 27002: Kogan Page, 4th Edition \(2008\), ISBN: 978-0-7494-5271-1](#)

### Assessment Resources

#### Labs

None

#### Quizzes/Exams

[CSSIA CISSP Course](#)

Security Operations – Chapter Exam

#### Quizlet.com

[Information Security Principles](#)