



IoT Security Technician Skill Zone – CSSIA.ORG

## 2. Information Communication Technologies

### 2.10 Modeling and Simulation

1. Describe the role of modeling and simulation in planning and implementing an IoT environment.
2. Explain the concept of design modeling.
3. Demonstrate the use of mathematical and statistical models in designing an IoT environment.
4. Develop data models to aid in the design, planning and implementation of an IoT environment.

### Modeling and Simulation

---

*System Modeling and Simulation refers to the process of building model environments that replicate an organization’s actual infrastructure. This process is performed in order to analyze and measure the impact of failures, attacks and natural and manmade disasters. Modeling and simulation is a critical aspect of managing disaster recovery and business continuity. Modeling and simulation can range from building exact replicas of existing systems, creating virtual replicas or performing tabletop exercises.*

---

---

*The IoT security technician is responsible for using modeling and simulation to identify system weaknesses, vulnerabilities and impact on critical operations. One form of modeling and simulation would involve penetration testing. This process is used to identify potential holes and weaknesses within the organizations security management plan.*

---

## 2.10 INFORMATION COMMUNICATION TECHNOLOGIES – MODELING AND SIMULATION



### Existing Course Cross Reference

#### Cisco Networking Academy Courses

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

#### Cisco Partner Courses

[Ethical Hacking and Penetration Testing \(NDG/CSSIA\)](#)

[Python Programming for Security Technicians \(CSSIA.ORG\)](#)

### 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

Internet of Things

Chapter 8, 9

Enterprise IoT

Chapter 3, 4, 5, 6

### Assessment Resources

#### Labs

None

#### Quizzes/Exams

[CSSIA CISSP Course](#)

Security Operations – Chapter Exam

#### Quizlet.com

[Configuration Management Flashcards](#)

[Configuration Planning and Management flashcards](#)