

سبر 1213
Network Defense
Lecture #5 Part 3
Securing Hosts and Data

Embedded System

- ✓ Dedicated function with a computer system to perform that function
 - ✓ Compare to desktop PCs, laptops, and servers
 - ✓ All use central processing units (CPUs), operating systems, and applications to perform various functions
- ✓ Embedded systems
 - ✓ Use CPUs, operating systems, and one or more applications to perform specific functions



Embedded System

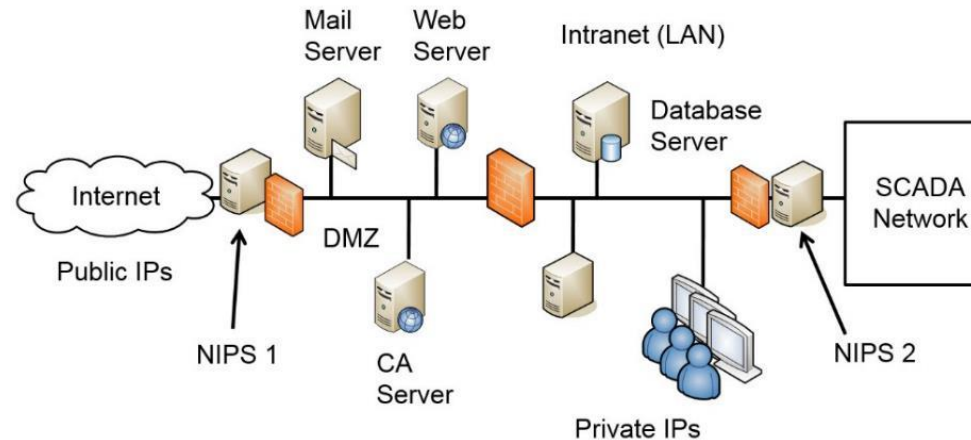
- ✓ Field programmable gate array (FPGA)
 - ✓ Programmable integrated circuit (IC) installed on a circuit board
- ✓ Arduino
 - ✓ Microcontroller board, and the circuit board contains the CPU, RAM, and ROM
- ✓ Raspberry Pi
 - ✓ Microprocessor-based mini-computer, and it uses the Raspberry Pi OS to run

Comparing Embedded Systems

- ✓ RTOS
- ✓ Printers/MFDs
- ✓ Camera systems
- ✓ Special purpose
 - ✓ Medical devices
 - ✓ Vehicles
 - ✓ Aircraft/UAV
- ✓ Smart devices
- ✓ Internet of things (IoT)
 - ✓ Wearable technology
 - ✓ Home automation
- ✓ HVAC
- ✓ SoC

SCADA/ICSs

- ✓ Manufacturing and industrial
- ✓ Facilities
- ✓ Energy
- ✓ Logistics
- ✓ Protect behind NIPS



Chapter 5 Summary

- ✓ Summarize Virtualization Concepts
- ✓ Implementing Secure Systems
- ✓ Summarizing Cloud Concepts
- ✓ Deploying Mobile Devices Securely
- ✓ Exploring Embedded Systems
- ✓ Check out the free online resources

End of Third Lecture