Our Countermeasures

Dale Meredith
AUTHOR/TRAINER/SECURITY DUDE

@dalemeredith www.daledumbsitdown.com

What We'll Cover

- Some Basics
- Manufacture Guidelines
- Quick 10 From OWASP

Some Basics

Some Basics

Deal with the defaults

Implement lock-outs

Use strong authentication

Some Basics

Isolate and protect

Deploy IPS and/or IDS

Encrypt (PKI / End-2-End)

Some Basics

VPN

White list IPs

Watch the telnet service and port 48101

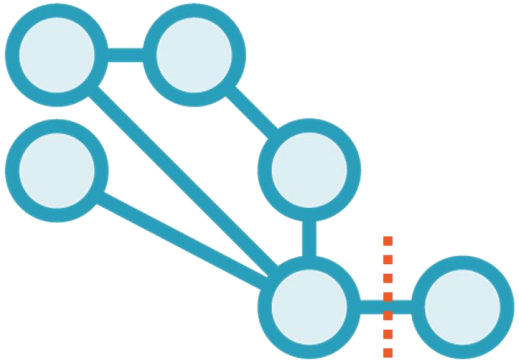
Some Basics

Turn off UPnP

Stop physical access

Patch/Update

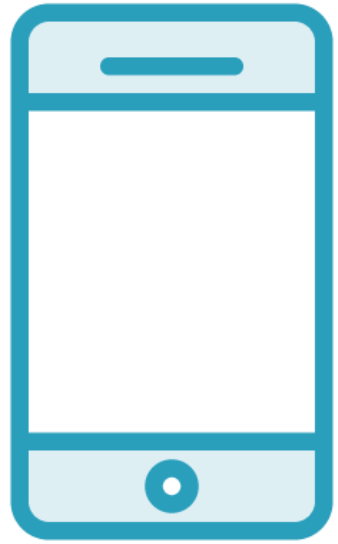
What to Watch at Each Level



Edge

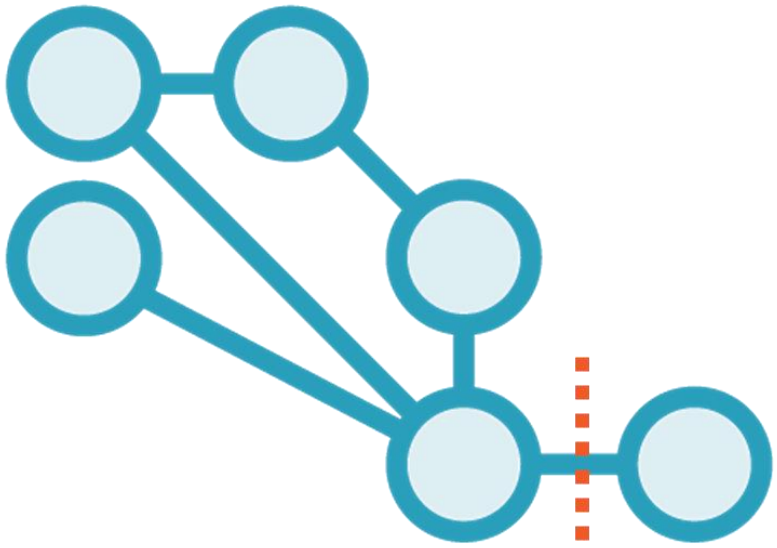
Gateway

Cloud



Mobile

What to Watch at Each Level

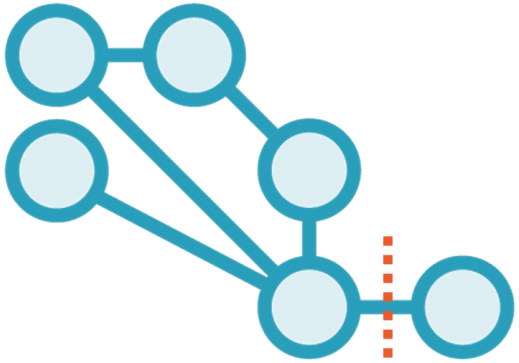


Default accounts and passwords

Encryptions (communication and storage)

Updates

What to Watch at Each Level



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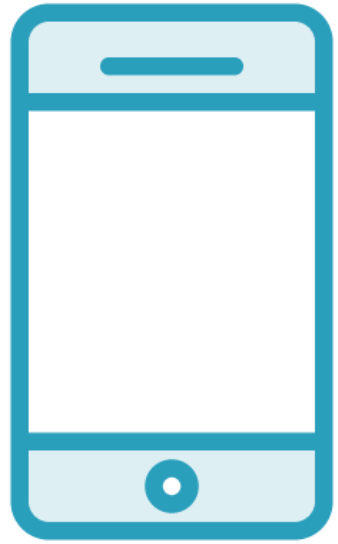
Gateway

Cloud



Mobile

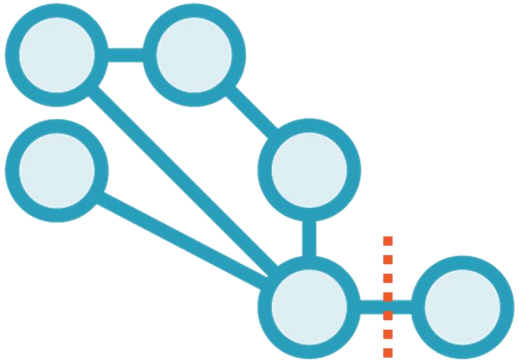
What to Watch at Each Level

Strong authentication

Encryption of communications

Updates

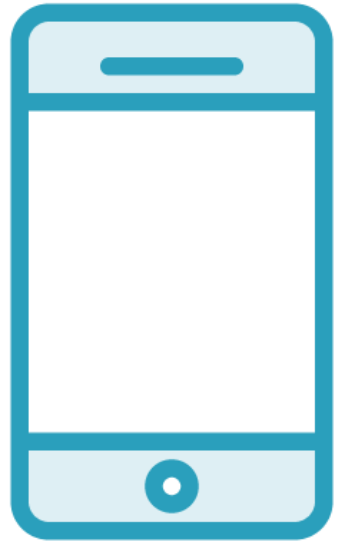
What to Watch at Each Level



Edge

Gateway

Cloud

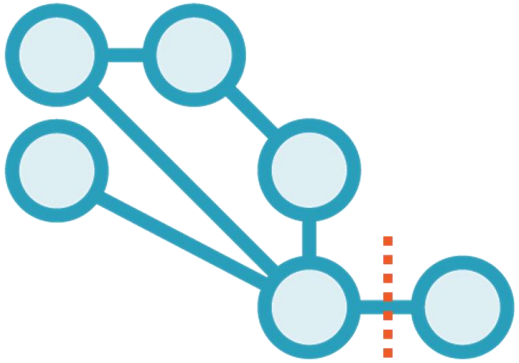


Mobile

What to Watch at Each Level

- Secure Web UI
- Authentication
- Updates
- Encryptions (communication and storage)

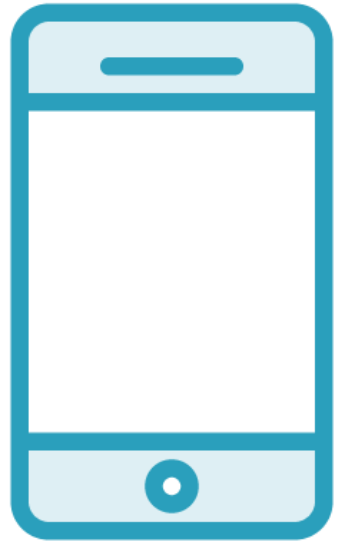
What to Watch at Each Level



Edge

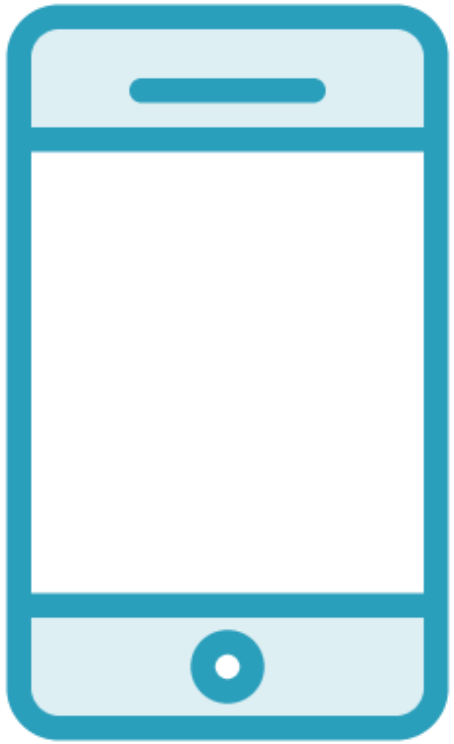
Gateway

Cloud



Mobile

What to Watch at Each Level

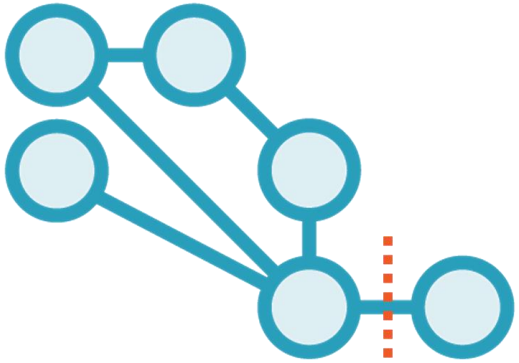


Lock-out features

Encryptions (communication and storage)

2-factor authentication

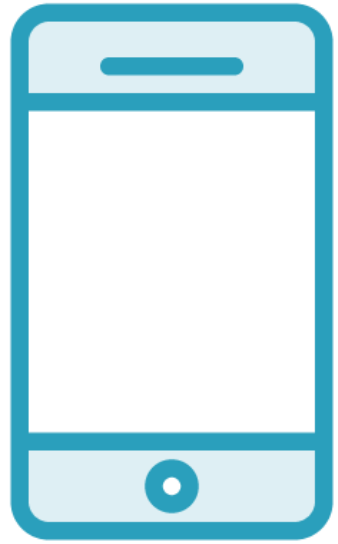
What to Watch at Each Level



Edge

Gateway

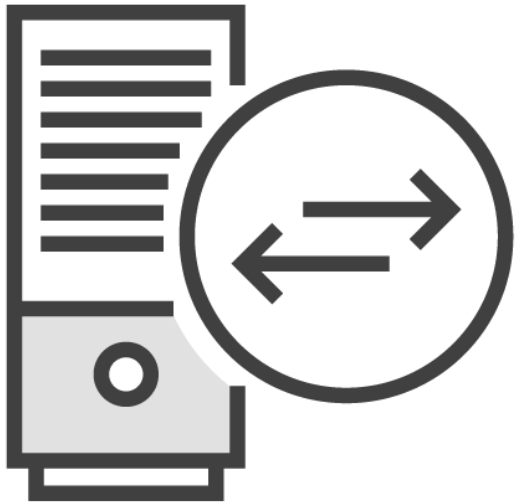
Cloud



Mobile

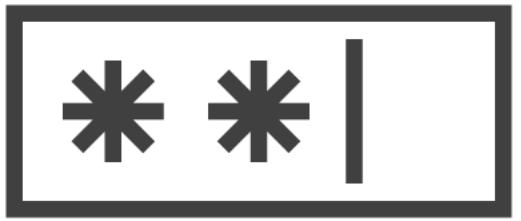
Manufacture Guidelines

Manufacture Guidelines

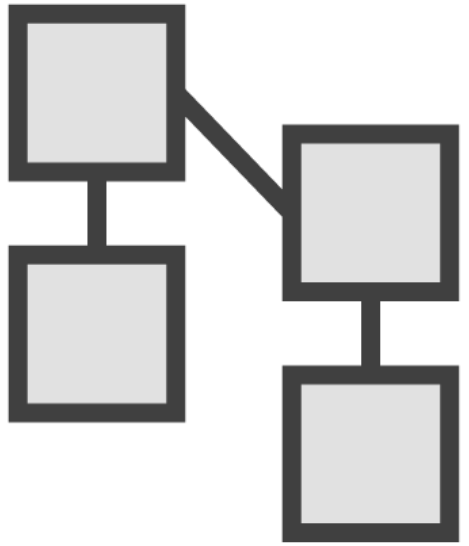


Communication (TLS or SSL)

Certificates and CRLs



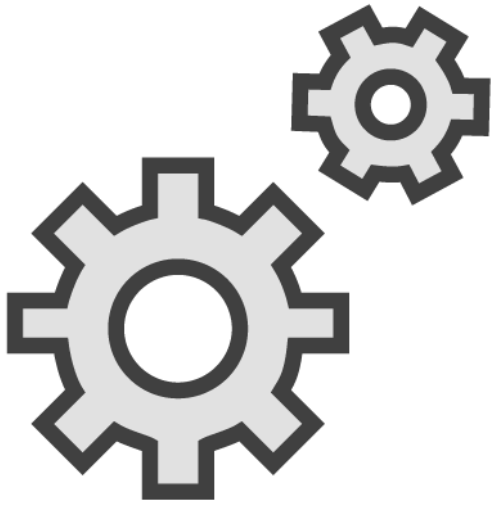
Strong password



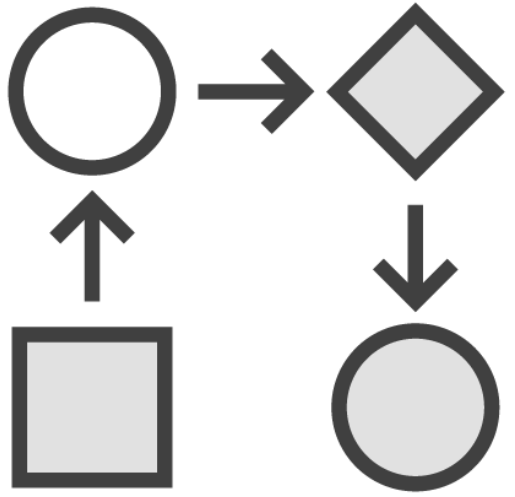
Chain of trust updating

Manufacture Guidelines

Remote locking features



Unused services, ports, and apps



Secure boot chain

Quick 10 From OWASP

What to Do

- Insecure web interface
- Weak authentication/ authorization
- Insecure network services
- No encryption in communications
- Privacy Issues

What to Do

Insecure cloud issues

Insecure mobile issues

Weak security configurability

Insecure software/firmware

Weak physical security

What We Talked About

- Some Basics
- Manufacture Guidelines
- Quick 10 From OWASP

What We've Covered

- IoT Concepts
- IoT Threat Types
- The Method To The Madness of IoT Hacking
- The Tools for IoT Hacking
- Our Countermeasures