



IT/OT Cyber Security

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Panel



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IT/OT = IOT

IT *vis-a-vis* OT



Similarities:

1. **Live in same building**
2. **Not enough people to do job**
3. **Not enough budget**
4. **Use Data and Processes**
5. **Need security**
6. **Must keep C-Level happy**
7. **Do not talk with one another**



IT *vis-a-vis* OT



Difference in Degree:

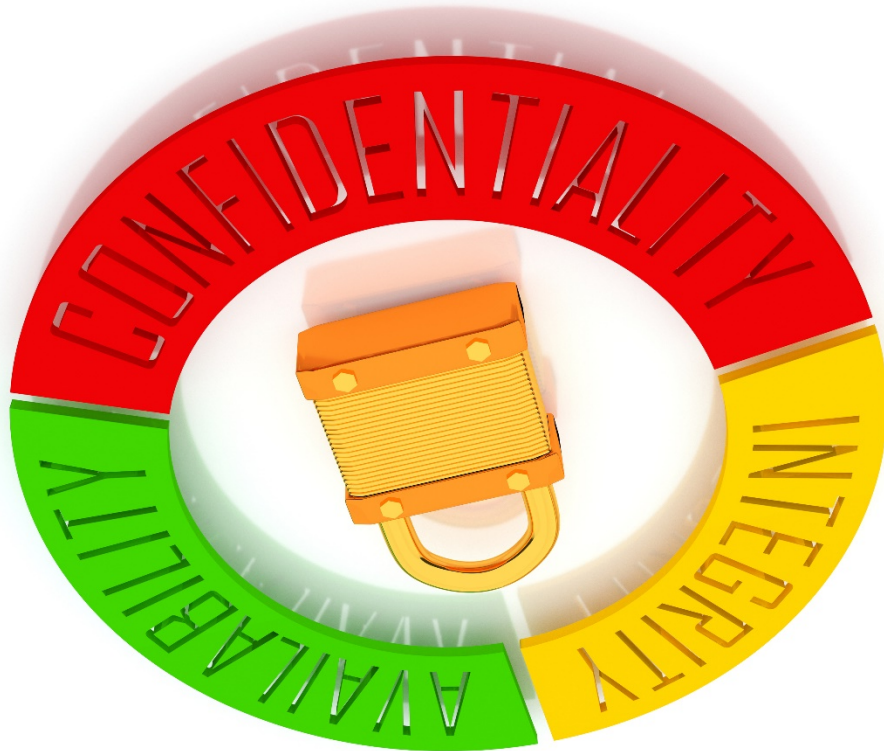
- 1. IT Data vs OT Processes**
- 2. IT Fast vs OT Slow**
- 3. IT CIA vs OT AIC**



Security Triad



IT Focus



OT Focus



IT/OT Questions



- 1. When does IT get involved with OT project?**
- 2. Are security requirements clearly written in spec?**
- 3. How to get OT out of IT blind spot?**
- 4. Does OT know IT patch schedule?**
- 5. What IT project can OT help with?**
- 6. How much Mountain Dew does your IT drink? What beer does your OT like?**





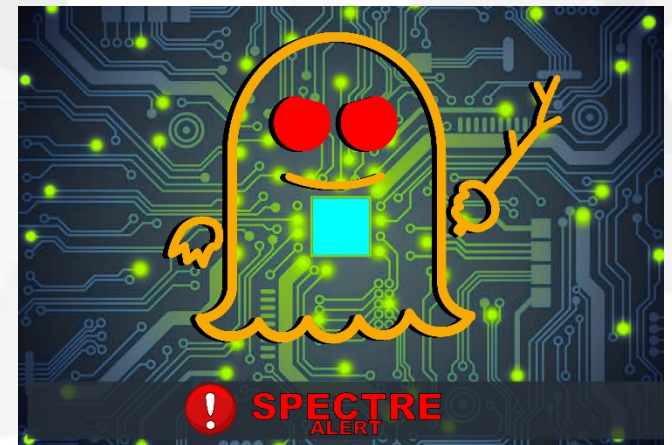
Security Culture

“Vulnerabilities”



Scope of Problem

1. **4/5ths successful penetrations via social engineering**
2. **Avg breach = \$7M; cost to repair = \$100K**
3. **48 States now require some sort of reporting of a breach**
4. **DDOS servers, malware and ransomware readily available for little cost**
5. **Privacy laws quickly getting stricter**

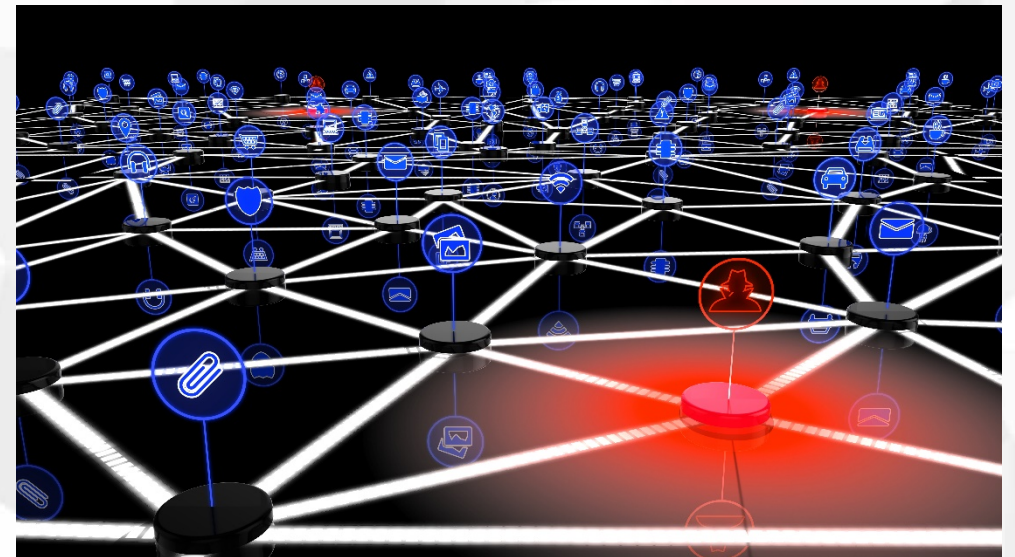


Get Culturized



Sound Bytes

- 1. Security can't be sprinkled on top
– must be baked in**
- 2. Security is basic hygiene**
- 3. 95% of employees seek ways to
bypass security policies**
- 4. SSNs used to be \$30 on dark web;
now are 50¢**
- 5. Most hackers are not ultra smart;
take advantage of basic mistakes**

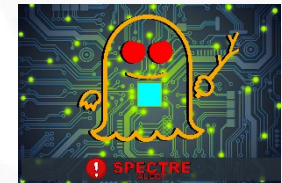


“Remedies”



Be Diligent In

1. Awareness
2. Guardedness
3. Teamwork
4. Planning
5. Testing
6. Learning
7. Diligence



Knowledge Building



Info and Training

www.stopthinkconnect.org

csrc.nist.gov

ics-cert.us-cert.gov

www.iotprivacyforum.org

www.infragard.org

www.isa.org

ncsc.gov/nittf

www.ge.com/digital/cyber-security

www.isc2.org





Commander Highlights

Commander / Snappy



Ubuntu Core / Snappy:

1. OS kernel read-only
2. Code (snaps) 'dockerized'
3. Manual configuration of snap interface with snaps
4. Snaps must be Canonical approved for security
5. Only pre-configured snaps may execute



Commander Messaging



Messages:

1. **Initiates all messaging**
2. **Extensive use of TLS**
3. **Configurable LAN/WAN whitelists**
4. **SSH password different for each box**



Fragen?





Thank you!

Gamification Code: MLA553