Splunk And Control Systems Enabling A Secure Iot Strategy

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Who are we?

- **Terry McCorkle** – Global IoT Architect, Splunk
- **Menno Vanderlist** – Sales Engineer, Splunk

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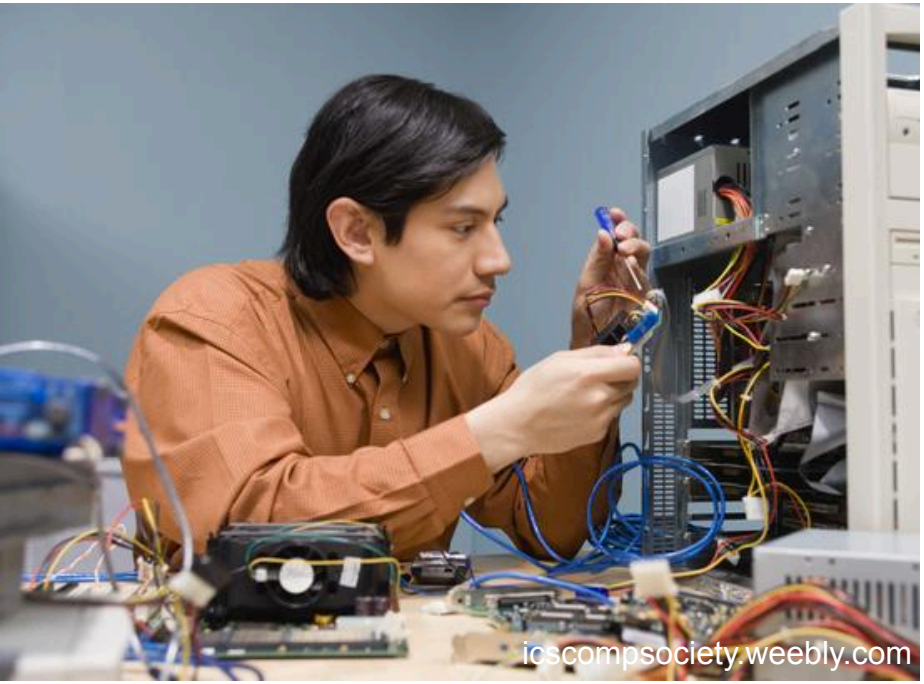
the biggest challenge

Systems Created and Managed by **IT teams** vs Systems Created and Managed by **Engineers**



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Agenda

- Getting Control System data into Splunk
- Other important data for Operations and Security
- Creating security communication

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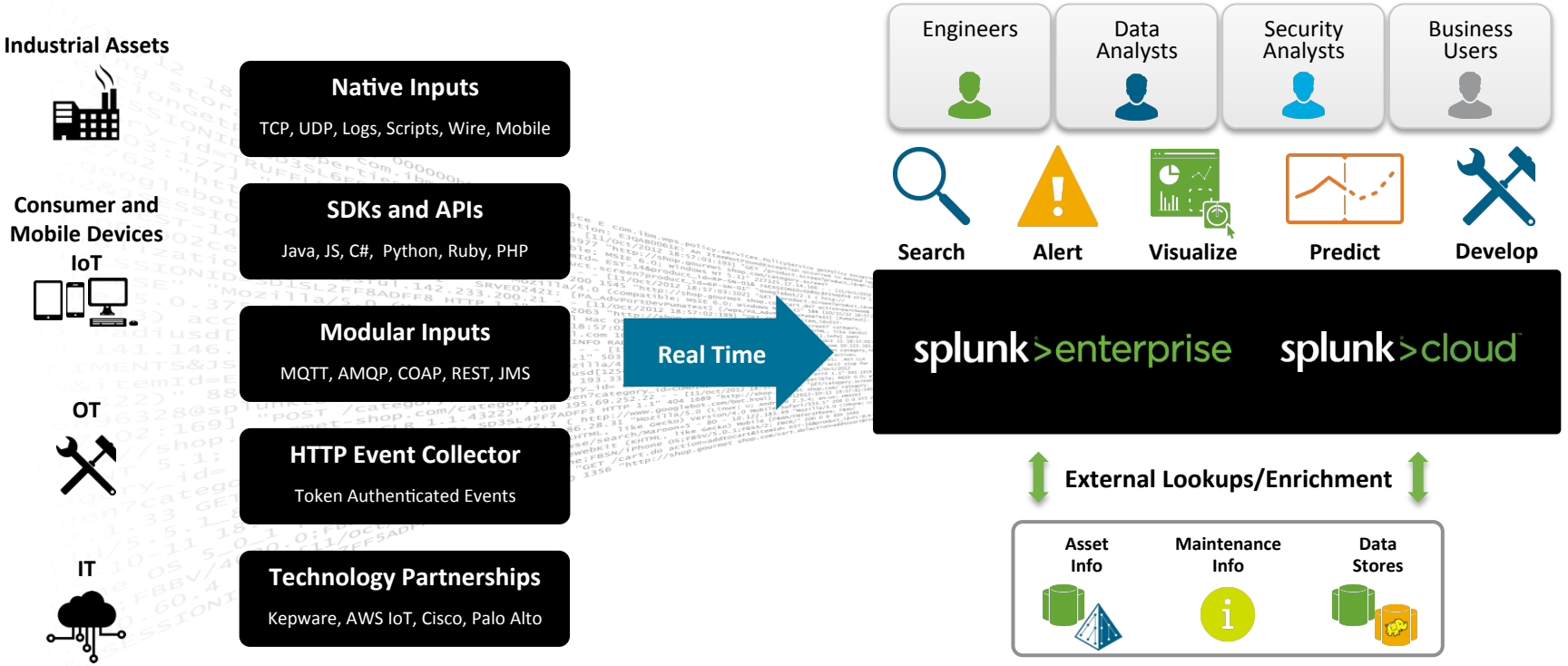
Getting Data In is Easy



Splunk's IoT and Industrial Partner Ecosystem

There is a partner to help bring in your data

Finding the other data sources

Using Splunk across multiple use cases with the same data

IT Operations

- Windows Logs (login issues)
- Network Events (availability)
- Application Logs (HMI issues)
- Windows Updates (patch completion)
- Performance Counters

Security

- Windows Logs (login concerns)
- Network Events (traffic profiles)
- Application Logs (unauthorized apps)
- Windows Updates (missing patches)
- Audit Events
- Access Card Events (entry/exit)
- Unresponsive/Lost Assets (missing data)

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No connectivity?

Air gap between networks?

Restrictive firewalls?

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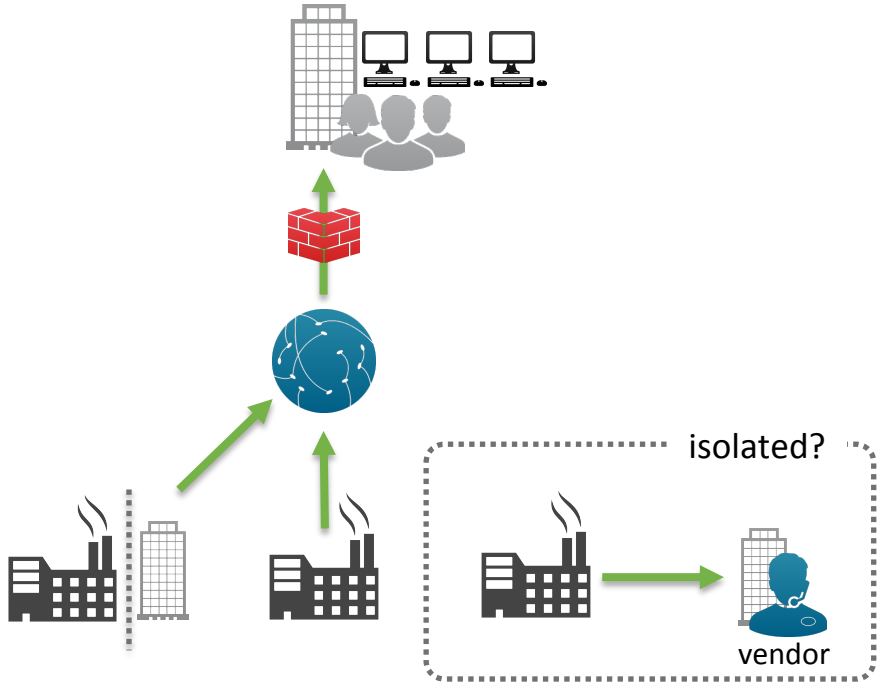
Isolated Process Control Networks

How do we communicate?

- Gaining visibility
- Corporate vs. Control Networks
- Bringing data back to corporate
- Is the network truly isolated?



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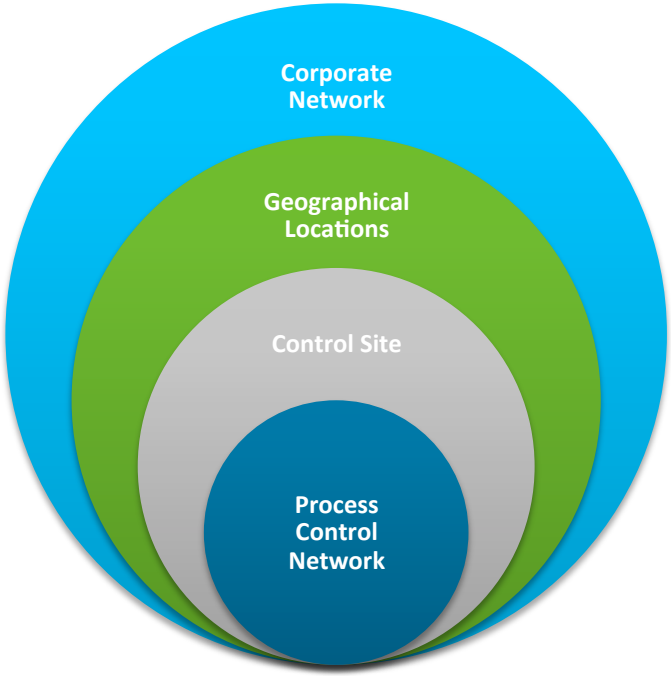
Centralized vs Isolated Networks

How do we gain visibility?

- Geographically separated sites
- Slow links
- Centralizing Data
- What would you collect from?



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Network Communication

Splunk-to-Splunk (S2S) vs. Syslog vs. other

- TCP vs. UDP

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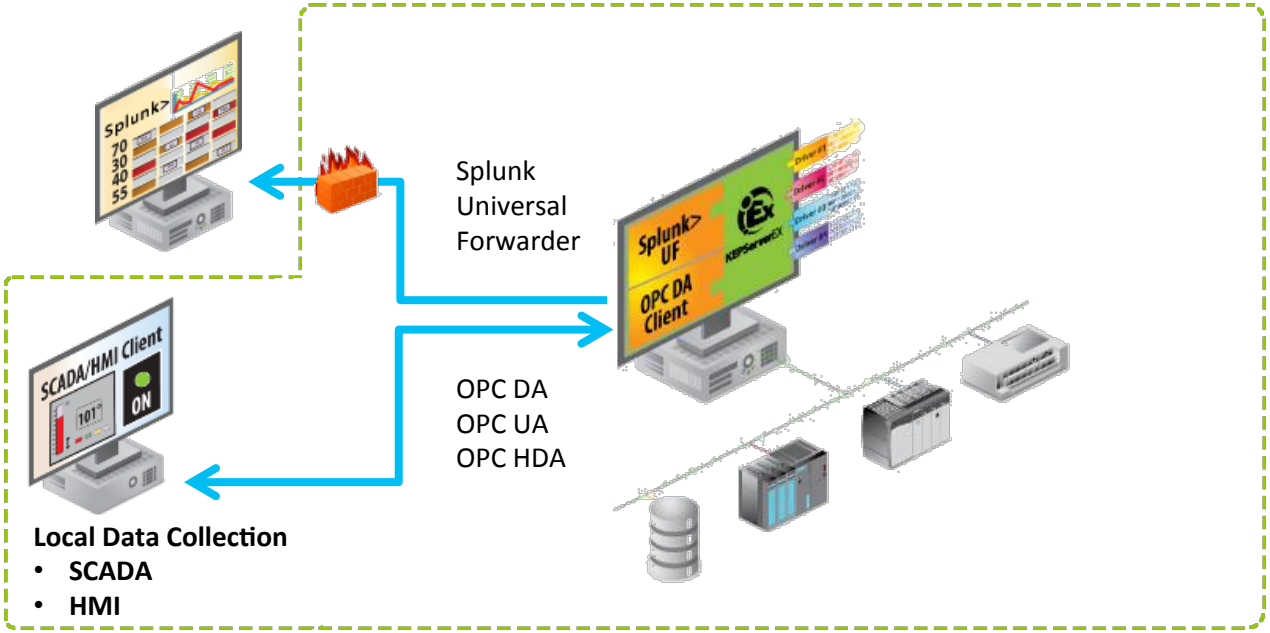
Network Communication

Splunk-to-Splunk (S2S) vs. Syslog vs. other

- TCP vs. UDP
- Encryption
- Acknowledgement
- Compression
- Cloud



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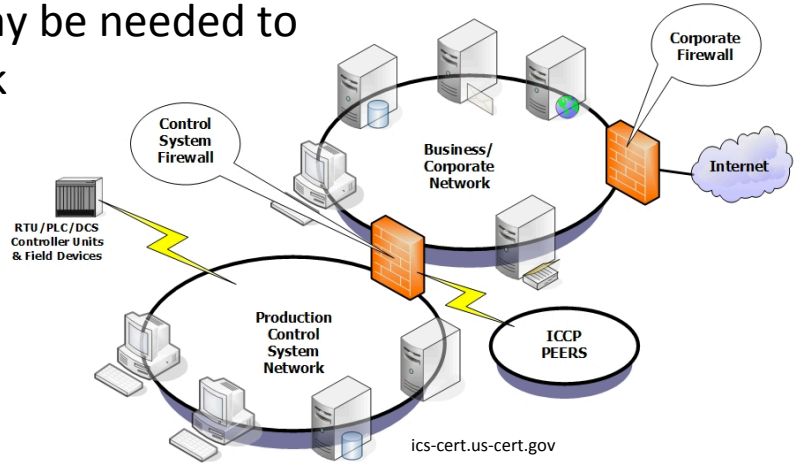
Industrial Firewall

Difference between traditional and industrial firewall

- Similar to Next gen firewall
- Device and protocol awareness
- Protocol Detection and Inspection
- Custom drivers may be needed to communicate back



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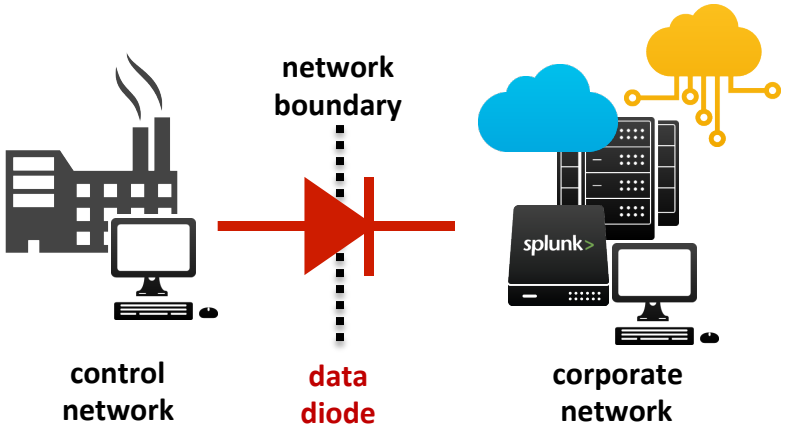
Communicating through a data diode

Data Diode Benefits: **secure one-way communication**

- One-way fiber optics restrict flow
- Sending using Splunk-to-Splunk
- Syslog
- Custom drivers for communication



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Quick Recap

- Valuable data and insights within control systems
  - OT: availability, data consistency, and data insights
  - IT: System Performance and Availability
  - Security: Auditing of System, User and Application events
- Data Diodes facilitate one-way communication
  - Restrictions enable small paths to communicate out
- Access to Data in Splunk for those who need it
  - Operational and Business Analytics use cases
  - Centralizes all data to compare against multiple data sets and environments
  - Reduces requirements for users to log into control systems

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THANK YOU

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