Traditional vs Web Based SCADA

Leveraging Web Based SCADA Deployments in Enterprise Systems

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Overview

• Differences
  • Traditional / Web based
  • Limitation / Advantages

• IS considerations

• Enterprise users
Traditional SCADA Deployment

- SCADA Servers (redundant)

- Development/Runtime only (not view)
- SCADA Specialist access
- Located on premises
Traditional SCADA Deployment

• SCADA Clients
  • View/Control only
Traditional SCADA Deployment

- SCADA clients
  - Local installation/application
    - Patches - Windows/SCADA software (VBA)
    - User Screens
    - Data items
    - Update each individually
  - Hardware
    - Maintenance cost
  - Licenses
Traditional SCADA Deployment

- Web Clients
  - View/Control only
Traditional SCADA Deployment

• Mobility
  • Web Server
    • Separate screens
    • Limited functionality
  • Hardware cost/maintenance
  • IS should be involved
Web Based SCADA Deployment

- SCADA Servers (redundant)

- On or off premises
Web Based SCADA Deployment

- Web browser as clients
Web Based SCADA Deployment

The smartphone industry dwarfs PCs
4bn people buying phones every 2 years instead of 1.6bn buying PCs every 5 years

Quarterly unit shipments (m)

- iOS & Android
- PCs

Source: Gartner, Apple, Google, a16z

BCWWA Annual Conference 2019
Web Based SCADA Deployment

• Platform agnostic
  • Mobile vs web apps
Web Based SCADA Deployment

• Design it 1X
• Design with mobility in mind
Web Based SCADA Deployment

- GPS integration
- RFID tagging
Web Based SCADA Deployment

• Benefits
  • Less hardware
  • No client installations/licenses
  • Easier application updates
  • Not duplicating screens
IS Considerations

• IS integration – new normal
  • Not SCADA specialist strength
  • Set it up correctly

• What does this mean for SCADA???
IS Considerations

- Local isolated network
  - On an island
  - Control everything
    - Good & bad
  - No IS support!
IS Considerations

- Server crash
  - Real time
  - Historical
  - New installation
- Manual backups
IS Considerations

- On or off premises
IS Considerations

• What does this mean for SCADA???
  • No desktop access
  • Manage the system remotely
  • Start/stop application remotely
  • Start/stop services remotely

• HOW?
  • .bat files
IS Considerations

- Have to be able to develop remotely
- Ports
IS Considerations

- Start/Stop services & application
Up Stream Users

• Infrastructure planning
Up Stream Users

- Infrastructure planning
  - Call to SCADA tech
- Mine through data
Up Stream Users

• Infrastructure planning
  • Self service

• Multi user
  • Secure (https, certificate)
Up Stream Users

• Financial

• Water bills paid or discrepancy?
• Parking meters?
• Booking travel...
Questions

THANK YOU

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