Conducting an EAC Certification Testing Project

Michael Santos
SLI Global Solutions, LLC
Question?

What is a Voting System Test Lab (VSTL), and what do they do?
The Short Answer

We do lot’s of “stuff”
The 50,000 Foot Answer

• Review Documentation
• Review/Inspect Manufacturer Practices
• Review Source Code
• Build Official Executables
• Review/Test Hardware
• And Yes, We Functionally Test The System
Review Documentation

- System Overview
- System Security
- System Operations
- System Maintenance
- System Hardware
- System Functionality
- Software Design
- Quality Assurance
- Configuration Management
- Personnel Deployment
- System Test Verification
- System Change Notes (If applicable)
Review/Inspect Practices

• Vendor Testing Review
• Quality Assurance Review
• Configuration Management Review
Review Source Code

• Software Configuration Management
• Source Code Review
Trusted Build

• Review Build Process
• Perform Trusted Build
Review/Test Hardware

- Hardware Configuration Audit
- Develop Hardware Test plan
- Hardware Test Execution
Test Plan

• Review Declared System
• Review Documentation
• Determine Test Suites Content
• Develop Timeline
Test Suite Creation/Validation

Application Level (Software/Firmware)
  Configuration Specific
  Data Import (if applicable)
  Voting Variations
  Error Messaging and Recovery
  Auditing
  Telecommunications
Security (Access Control, Software, Physical, Transmission, Shared OS)
  Usability
  Accessibility
  Maintainability
  Language
  Data Retention
  Accuracy
  Volume
  Stress
  General Election
  Primary Election
Official Test Execution

• Initial Test Execution

• Follow-on Regression Testing
  • (Note that this usually implies source code fixes, additional source code review, as well as another Trusted Build)
Test Complete

• Final Test Report
• Finalized Test Plan
• EAC Review and Potential Certification
Thank You