LIBERTY UNIVERSITY

CSIS 481 Cyber Project Status Report

Project	CSIS 485 Cyber Capstone, Central Virginia Liquified Natural Gas Security Development
Report Period	October 24th, 2021

	Previous	Current
Overall Health	G	G
Budget	G	G
Scope	G	G
Timeline	G	G

Legend
Complete
On-Time
Late
Not Started
At Risk

	Key Message
	Learned about SCADA during nuclear simulation facility tour

Key Accomplishments - Reporting Period	
1	Updated OPTO firmware to 10.4c
2	Finished security corrections and iterative test 3
3	Continue ongoing effort of vulnerability research and CVE documentation
4	Began collecting security testing tools and services
5	Attended tour of Liberty University's Center for Engineering Research and Education

Key Activities Planned for Next Reporting Period	
1	Submit Phase 3 Version 4 of PMO Project Status Report
2	Format OPTO data for database storage
3	Complete Security Vulnerabilities Corrections Test 4
4	Begin Initial research into Prometheus software (possibly on Docker containers)
5	Attend second weekly all hands meeting with program manager

Key Deliverables / Milestone Progress (Next Reporting Period)

	Deliverable / Milestones	Comments	Resp Party	Due Date	% Comp	Previous	Current
1	P3-V4 PMO PSR		Team 1	31OCT21	0%	N/A	On-Time
2	Security Vulnerabilities Test 4		Team 1	31OCT21	40%	N/A	On-Time

Risks and Mitigation Plans						
	Risk	Mitigation Plan	Owner	Target	Status	Comments
1	Unforeseen restrictions	Maintain agile planning models	Team 1	N/A	N/A	No deadline for agile posture

Issues & Action Plans						
	Issue	Action Plan	Owner	Target	Status	Comments
1	COVID impact to team	Adapt university recommendations	Team 1	N/A	N/A	Unforeseeable event timeline. Resolved naturally

Current Phase Milestones		
Milestone	Dates	Status
Ninth Project Manager Meeting/ LU engineering facility tour	20OCT21	Complete
Ninth Client Update Meeting	22OCT21	Complete
Tenth Project Manager Meeting	27OCT21	On-Time
second weekly all hands meeting	29OCT21	On-Time
Accessible Test Environment	25SEP21	Complete
Access Opto Snap PAC data	11OCT21	Complete
Establish Flow of data from OPTO R1 to database	29OCT21	On-Time

Major Phases (proactive timeline)	Date	Status
Initiation	4SEP21	Complete
Planning	11SEP21	Complete
Building	07DEC21	On-Time
Testing	21NOV21	On-Time
Training	TBD	Not Started
Go-Live	TBD	Not Started

Executive Summary
The trip to the engineering complex and the tour of the simulated nuclear reactor training environment has led the team to two main understandings. The first is that SCADA systems are amazingly complex and thusly need to be designed with security in mind from the ground up in each step of development. Engineers need to ensure that security focused people are included through the process. The second realization is that the building was wildly unsecure to those who know the SOPs of students, faculty, or allied clients. There were many holes in security where a simple attack could provide an initial foothold to pivot to more critical systems or gain access to unauthorized information. Social engineering and mild physical testing could seriously compromise the infrastructure. On a final note, we have learned that bees are keen to living in nuclear focused environments.