

Bi-weekly Update 4 (Final)

Between the previous update and now, I have mostly been deciding on what network security concepts to test, and attempting to set up and familiarize myself with GNS3.

Date	Deliverable	Status
February 7 th	Deliver Project Website & Proposal	<i>Completed</i>
February 21 st	Compile list of the current major issues and weaknesses of residential LAN networks, in addition to any notable emerging risks.	<i>Completed</i>
	Additionally present preliminary research into existing or emerging protocols and practices that may be applied.	
March 7 th	Finalize and report what plans for security system(s) and test cases.	<i>Completed</i>
March 21 st	Finalize construction of test system(s) (physical and/or simulated). Evaluate and potentially update requirements/testing based on any preliminary testing or restrictions found.	<i>Completed</i>
April 4 th	Present Project Presentation	<i>Completed</i>
April 11 th	Submit Final Report	<i>In Progress</i>

Progress:

GNS3 Simulations:

GNS3 simulations are complete. I was able to successfully get the network segmentation working after spending a few hours trying to troubleshoot further dependency issues and configuring the VLAN incorrectly.

In addition, I created and ran the tests using a ‘generic’ network using a star topology to represent the average network with everything connected to the same WiFi router/modem combo.

Results:

See the demo video (or later the final report) for more detailed information. Basically, the results indicated that the network segmentation was successful in segregating the network and preventing the devices from communicating in between.

One additional observation I made was that the VLAN was not as straightforward to get working and segmenting correctly as I originally expected. This indicated that the average user might not have the technical background or patience to get set up. As a result, I suggested in the video demo that people maybe should stick with using the guest network option within the router.

Next Steps:

Compile all research and results into final project report and submit.