

Milestone 2 Evaluation Document

Project: Home Network Solutions

Team Members:

- Bryan Bermudez (bbermudez2023@my.fit.edu)
- Joshua Revels (jrevels2023@my.fit.edu)
- Brennan Ramsey (bramsey2023@my.fit.edu)
- Nick Bleeker (nbleeker2024@my.fit.edu)

Faculty Advisor & Client: Dr. Mohan, FIT Department of EE and CS

Date: October 25, 2026

Milestone 2 Progress Matrix:

Task	Completion %	Joshua	Brennan	Bryan	Nick	To-do
Finish setting up infrastructure	100%	50%	50%	0%	0%	
Install each tool with tests	100%	25%	0%	75%	0%	
Create an install script	100%	10%	45%	45%	0%	
Create login page	100%	0%	0%	25%	75%	

Task Discussion:

1. Finish setting up infrastructure
 - We fixed hardware and networking issues that prevented team access to our Raspberry Pi testbed.

2. Install each tool with tests
 - We installed multiple services to the testbed to demo their installation process and any necessary configuration. Such services include Samba, Tailscale, Matter, Jellyfin, Pihole, and more. For modularity, an install script was also made for each tool that will be used for the initial setup process. Guidelines were created for the scripts' functions, input, and output to ensure organization.
3. Create an install script
 - A core install script was created that sets the foundation for the Home Network Solutions software, spinning up the web application. A Docker environment mirroring the Raspberry Pi's environment was created to test functionality of these scripts while our physical testbed was down. Due to the investment in the Docker environment, this may speed up dynamic testing processes in future milestones.
4. Create login page
 - A styled login and account creation page was created as an entry point for accessing the web application, which is the user's interface to the server. Password encryption via hashing was implemented with Python. These passwords are to be stored in our SQLite database, however more implementation is needed to store them there.

Team Member Discussion:

Joshua Revels:

- I focused on ensuring everyone could connect to the test server, but I also worked on the install scripts and setting up the programs on the server.

Brennan Ramsey:

- I focused my efforts on writing the core install script, creating a Docker environment for testing, getting familiar with the Flask web framework, and general project organization.

Bryan Bermudez:

- The server was down for a while due to hardware issues, leaving me unable to work directly on the server. So, I focused my time on other tasks that don't need direct access to the server such as creating a password hash py file for use in the login page. I also created several install scripts for the tools we will be using, and guidelines that define the functions, input, and output of each script.

Nick Bleeker:

- Created both the login and sign-up page for the web application, researched SQLite database integration, and started implementing the Python code written by Bryan to synchronize with the database.

Milestone 2 Client/Faculty Advisor Meetings:

1. 10/26/26 - 12 PM

Client/Faculty Advisor Feedback:

- See Faculty Advisor Feedback below.

Milestone 2 Faculty Advisor Feedback

1. Finish setting up infrastructure

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2. Install each tool with tests

-

3. Create an install script

-

4. Create login page

-

Milestone 3 Task Matrix:

Task	Joshua	Brennan	Bryan	Nick
Dashboard page with widgets	0%	0%	50%	50%
Server status/settings page	25%	0%	50%	25%
VPN/Forward home network traffic demos	50%	50%	0%	0%
Helper program demos	25%	50%	0%	25%

Milestone 3 Task Discussion:

1. Dashboard page with widgets
 - Create a working demo of the dashboard page including links to other important pages on the server, a logout button, and functional, customizable widgets. We will create guidelines for the widget's display and code interface.
2. Server status/settings page
 - Create a page for viewing important details about the server, such as current resource usage, installed programs, among other details.
3. VPN/Forward home network traffic demos
 - Research and test functionality of home network-wide VPN enabled. Ensure compatibility with subnets, notably for local devices with Tailscale, as well as VPN protocols like WireGuard and OpenVPN.
4. Helper program demos
 - In order for core features to exist, like file synchronization and passkey management, the HNS software will need to access client devices outside the scope of the browser; notably, to run in the background and access the local filesystem. We will implement the foundation of this helper program across multiple desktop platforms, and demo some basic data transfers.

Faculty Advisor Signature: _____

Date: _____

Evaluation by Faculty Advisor:

Joshua Revels	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Brennan Ramsey	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Bryan Bermudez	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Nick Bleeker	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Faculty Advisor Signature: _____

Date: _____