Wifi Browser Quarter Testing Plan

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1 API Testing

The testing of the Wifi Browser API will utilize white box testing to ensure correctness at each step.

- Configuration Manipulation Testing
  - Create configuration file at correct location: /home/$USER/TBD
  - Add new network config to configuration file
  - Populate a network config in the configuration file with data
  - Populate the desired network config (out of many) in the configuration file with data
  - `edit_configured()` modifies an existing network configuration
  - `delete_configured()` removes a specified network config from the configuration file
  - Create a new configuration file in a specified location
  - Use a specified configuration (not the default location's)
  - Set the default configuration location
- Wifi Network Information Gathering
  - `list_available()` returns a list of networks[1]
  - `list_configured()` returns a list of configured networks
  - `function` grabs correct key management protocol for a specified network[1]
  - `function` hashes passkeys (hash against SSID and verify in testing)
  - `function` grabs correct EAP network information (pairwise, group, eap, phase2, etc.)[1]
  - `function` hashes EAP passwords (check if password in configuration file different than provided, verify connection)
- `wpa_supplicant` Communication
  - Detect running `wpa_supplicant` process
  - Detect no `wpa_supplicant` process
  - Kill `wpa_supplicant`[2]
  - Start `wpa_supplicant` with a specified configuration file (and driver and interface)[2]
  - `wpa_supplicant` connects to a specified network using the API generated configuration file

[1] testing that requires a preconfigured wifi router in order to complete with consistency
[2] requires sudo privileges

2 CLI Testing

3 TUI Testing