

# Taurus Software Test Plan

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# 1 Unit Tests

## CipherSaber2

The encryption module `ciphersaber2.py` provides its own unit tests, which can be run by calling it with the `--test` flag. These demonstrate internal consistency but not actually algorithmic accuracy, which is done by the module tests.

# 2 Module Tests

## CipherSaber2

The directory `cs2-tests/` contains the ciphertext and cleartext of several sample messages, and a short bash script for encrypting them and ensuring a match.

## Taurus

A small portion of the client's functionality can be tested using the file `test_messages/long_lorem.txt`. If that file is pasted into an outgoing message, it should be truncated to a maximum TauNet message size.

## TaurusD

The file `test_messages/tnm.txt` is a well-formatted TauNet message which can be piped into netcat to test the receiving, decryption, and storage functions of the listening daemon.

# 3 Soak Tests

Both parts of the system were left running overnight without incident. The daemon collected some messages and the UI continued to be responsive. Longer and more active sessions would verify that there are no problems associated with long Taurus sessions.

## 4 System Tests

The only part of the system complex enough to warrant a high level of manual testing is the user interface (including the networking components it calls). Here are some paths through that interface whose results warrant verification, all starting from the main menu:

- Keypresses other than those suggested
- View user list
  - Keypresses other than those suggested
  - Return to the main menu
- Update node status
  - Any keypresses while it's running<sup>1</sup>
  - Return to the user list, and observe possible changes
- Send a message
  - Type a nonexistent username
  - Type no username
  - Type the username of a disconnected user
  - Type the username of a connected user
    - Type an empty message
    - Type a message
- Read messages
  - Just hit enter
  - Type something which doesn't match any conversations
  - Type something which matches more than one conversation
  - Type a conversation name which is an initial substring of another one
  - Type a unique initial substring of a conversation name
    - Watch new messages appear
    - Reply
      - To a user who's currently connected
      - To a user who's disconnected
    - Return to the main menu
- Quit Taurus
- Any path that returns to the main menu, followed by one that begins there

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<sup>1</sup>Currently fails; a q typed while the update is running will quit the client after it finishes instead of being discarded.