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1 Stress Testing

1.1 Message Size

Testing assigned to: Name

Purpose: We will need to know the extent of how large or small of a message our network will be able to handle. This test wont be conducted specifically to one class but to the whole system.

1.2 Test cases

Cases Being Tested:

1. Maximum Message Size
2. Minimum Message Size

1.2.1 Test case 1:

Test Case Description:

We will be testing the maximum message size that can be used for the network to continue to function normally. This is done to know what happens when a message that is too large is sent and to know the capabilities of the network.

Steps to perform test:

1. Initialize by starting the testing environment using the scripts provided in the repository
2. Once the environment is set up, start by sending a message that is the entire alphabet
3. Once you see that this message was successfully sent, continue by sending increasingly larger messages by copy and pasting the original message multiple times
4. When you finally reach a point where the network stops functioning properly, note down how many time you you put the original message in the current message you sent to cause this event, this will be noted down as message n
5. Restart the environment and send instead the n-1 message along with adding a single additional character

6. If successful, continue adding characters until an error is reached again, the message before the error is the maximum message length that can be used

Test case Number:

STC1

1.2.2 Test case 2:

Test Case Description:

We will be testing the minimum message size that can be used for the network to continue to function normally.

Steps to perform test:

1. Initialize by starting the testing environment using the scripts provided in the repository
2. Once the environment is set up, send an message that uses only one character
3. Once this returns successful send another message with nothing in it

Test case Number:

STC2

1.3 Test Results

1.3.1 Test Summary:

Stress Tests

1. STC1: the maximum message length that can be sent in our network is 834 character. When we reached this length, the entire network stopped functioning and required the entire network to be reset.
2. STC2: the minimum message length that can be sent in our network is 1 character, where is when we send nothing none of the nodes stop working but there is no reply message confirming our message arrived If we decide to send a non empty message after the network still functions properly.

1.3.2 Result Analysis

Failed Test Cases:

1. TC1
2. TC3
3. TC10

Explain the failed test cases and what needs to be done and plans on retesting.