COMP8005 ASSIGNMENT 1
Design Documentation

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Analysis and Critique

Timing

From the standpoint of functionality I believe that it is a weakness to have the covert channel send the data in such a recurrent manner. It is my belief that it would be more appropriate to send that data through the implementation of a random delay between each packet. If the objective is pure stealth and timeliness doesn't matter you could have delways of minutes if you wanted to.

Error Correction

Because we are not establishing a tcp connection, we are just forging and sending a single packet we are not going to have any form of error detection or correction. Honestly it’s like we are sending a TCP packet using UDP Protocol. Fixing this would be an arduous process as we would essentially have to recreate our own custom TCP protocol from the ground up, or build in our own error handling system.

Modification Design

My modifications will include the capability to send packets hidden in the Source Port section of the TCP Packet header

Drawback

The flaw for this approach is twofold in that the server will have to listen to all incoming ports from the client and if there is additional traffic, it may be garbled. Furthermore, if the opposition is looking for traffic leaving their network from wildly varying ports, it may look suspicious. Also this method may result in impossible source port numbers which would be extremely odd.

Benefit

If the opposition are not specifically looking for the aforementioned drawbacks the widely varying ports may serve to obfuscate the leak...

State Diagram