# PROJECT REQUIREMENT

## Revision 1.1

## 7 May 2014

## Team C

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# Revision History

| Date | Revision | Description |
|---|---|---|
| 3/30/2014 | 1.0 | Initial document |
| 5/7/2014 | 1.1 | Added requirements for the mac address and network interface fields |

# TEAM C ~ PROJECT REQUIREMENT

## 1. Topic

Network security: The mechanics of an amplified and reflected denial of service attack

## 2. Requirement

| Requirement | Description |
|---|---|
| 1 | Shall be written using the Java v7 SDK and jNetPcap API |
| 2 | Shall run on the Oracle JVM (Java virtual machine), hosted on a currently supported version of the Microsoft Windows operating system |
| 3 | Shall provide the user with a graphical user interface |
| 4 | Shall run as a standalone application (neither as a client nor as a server) |
| 5 | Shall allow a source IP (internet protocol) address to be selected by the user as a target address |
| 6 | Shall allow a destination IP address (Open Arena server IP) to be selected by the user |
| 7 | Shall allow the user's MAC address to be entered by the user |
| 8 | Shall allow a destination port (Open Arena server port) to be selected by the user |
| 9 | Shall provide a list of network interfaces for the user to select from. |
| 10 | Shall construct UDP (user datagram protocol) packets containing a message eliciting status from an Open Arena server |
| 11 | Shall construct IP packet headers, containing user selected addresses and ports |
| 12 | Shall combine IP packet headers and UDP packet payloads |
| 13 | Shall calculate complete packet-size, prior to transmission |
| 14 | Shall transmit packets to a selected Open Arena server, following user initiation |
| 15 | Shall receive packets from the selected Open Arena server |
| 16 | Shall calculate the size of received packets |
| 17 | Shall calculate the ratio of transmitted packet-size to received packet-size |

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|---|---|
| 18 | Shall display the packet-size ratio (amplification ratio) |
| 19 | Shall not be operated remotely via any direct form of network control |
| 20 | Shall not be operated by an internal timer |
| 21 | Shall not obfuscate its operation via hidden user interface elements or deliberately opaque code |