Lab-03: key Exchange Application
Tor Network and Tor Browser

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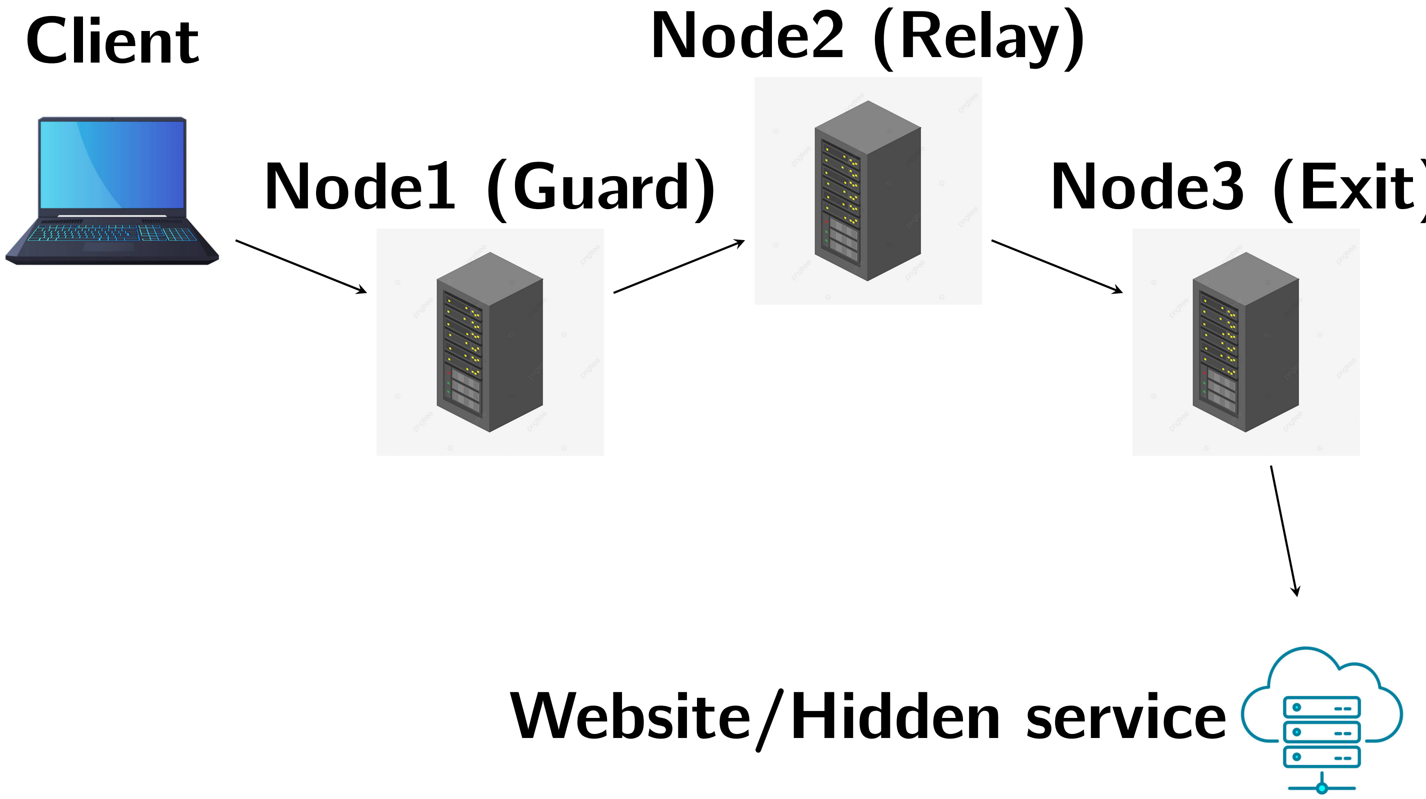
1 Section 5.1 Tor network Diagram



The tor network is a collection of nodes, clients and servers. The difference between the Tor network and the internet is in the way the Tor network routes traffic. clients connect to the to network using an entry node (guard node) their traffic is then passed onto a middle relay node and then an exit node. Finally it reaches the server or hidden service. Tor provides increased anonimity and privacy because a device on the network only knows who sent a packet and who is receiving it. But not necessarily who the sender or receiver is. For example in the diagram above, Node2 (relay) does not know who the Client is nor who or where the website/hidden service is. It does however know who the node1 (Guard) and Node3 (Exit) is. Tor provides increased security and privacy through encryption and anonimized relays.

2 Section 5.2 Summary of log files

autogen.log

This log file contains the output of the `./autogen.sh` command which prepares the Tor source code for building.

configure.log

This log contains the output of the `./configure` command, which checks the system for dependencies required to build Tor.

make.log

This log file contains the output of the `make` command, which compiles the source code into executable binaries.

make_install.log

This log contains the output of `sudo make install`, which installs the compiled binaries onto the system.

tor.log

This log file captures the output of the `tor` command, showing Tor's connection to relay nodes.

wiresharkcapture_tor_connection.log

This Wireshark capture log shows the network traffic during Tor's connection to a relay. Including the TCP/IP handhsake

wiresharkcapture_tor_keyexchange.log

This log captures the key exchange packets during Tor connection setup.

wiresharkcapture_tor_browser_connection.log

This log captures the traffic when the Tor Browser connects to a relay. Including the TCP/IP handhsake

wiresharkcapture_tor_browser_keyexchange.lo

This log captures the key exchange between the client and the entry node using the tor browser.

build_torbrowser_nightly_linux_x86_64.log

This log captures the output of the command to build Tor Browser from source.