

EMERTXE TRAINING PROJECT DOCUMENTATION FRAMEWORK
REQUIREMENTS & DESIGN DOCUMENT

Module – Linux Internals

**Network Packet
Generator**



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1 Abstract

One of the key requirements of network is the ability to handle large volume of data. When traffic goes high, the network should have necessary resilience to handle. During development phase, network packet generators (ex: Smartbits <http://www.spirentfederal.com/IP/Products/SmartBits/Overview/>) are used to test the network. The idea of this project is to develop a network packet generator that generates various packets on behalf of the user with given option. This requires the user to create a RAW socket that sits right on top of the MAC layer, rather than TCP/UDP layer.

2 Requirements

- The packet generator should provide a command prompt to the user upon invocation “PG>”
- It should provide a “help” menu that would display various packets & options supported
- Options to be supported as follows. The user can give one or all options
- Appropriate error handling needs to be done
- Option details:
 - > generate_tcp
 - > generate_udp
 - > generate_ip
 - > generate_icmp
- After packet generation it should be verified using network packet analyzer tool like wireshark

4 Artifacts

Skeleton Code

- www.emertxe.com/content/linux-internals/code/network_packet_generator_src.zip

References

- <http://www.faqs.org/faqs/internet/tcp-ip/raw-ip-faq/>
- <https://www.wireshark.org/>
- <http://www.netresec.com/?page=RawCap>