

# MetaVPN

CMULab at Carnegie Mellon University

Developed by Pat Gunn

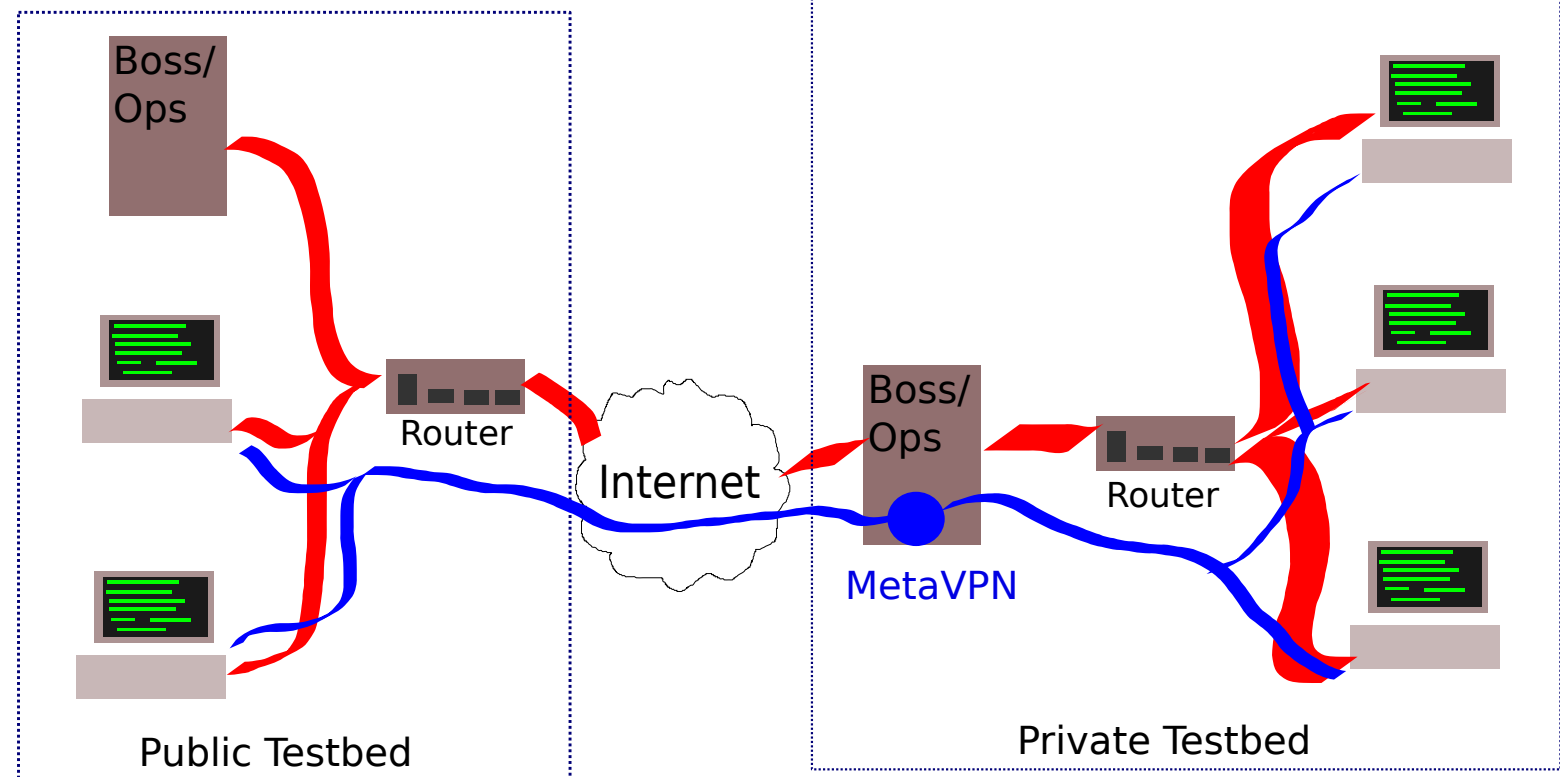
Available as "cmu-metavpn" in  
git://git-public.flux.utah.edu/emulab-contrib.git

Automatically connect nodes

\*Across testbeds

\*Behind NATs

\*L2 or L3 connectivity



## Features:

- \*L2 or L3 connectivity: Use non-IP protocols, set private IP addresses across testbeds
- \*Scriptable: Integrates with experiment setup/teardown, external integration possible
- \*Direct or indirect: Can connect non-routable networks via intermediary
- \*Standalone or integrated: Automated ProtoGENI use, also usable in other testbeds or on generic systems

## Details:

- \*Open source, cross-platform, built on OpenVPN
- \*Generates OpenSSL keys, config files, prepares/distributes configuration package to nodes
- \*Supports more than one isolated VPN per node or per experiment
- \*Simple commandline interface for external scripting
- \*In ProtoGENI control framework, invoked automatically through RSpec[1]
- \*Written in Perl, easily extended
- \*Uses Emulab's database and a CGI for protogeni-based configuration distribution
- \*Uses scripts to generate configuration tarballs for standalone use

## Simple Interface:

```
metavpn show
metavpn add port=2048 exp=mytest expnwk=mynwk type=tap
metavpn nodeadd 1 node001
metavpn up 1
```

[1] This functionality is not yet complete