



mpd

Multi-link PPP daemon

mpd

- ❑ <http://mpd.sourceforge.net/>
- ❑ An implementation of the multi-link PPP protocol for FreeBSD.
- ❑ Support PPP over PPTP or L2TP.
- ❑ PAP, CHAP, MS-CHAP or EAP authentication.

- ❑ /usr/ports/net/mpd5
- ❑ pkg install mpd5

mpd

❑ /etc/rc.conf

```
gateway_enable="YES"  
mpd_flags="-b"  
mpd_enable="YES"
```

❑ startup

```
sysctl net.inet.ip.forwarding=1  
/usr/local/etc/rc.d/mpd5 {start|stop|restart|rcvar|status}
```

mpd.secret

❑ /usr/local/etc/mpd/mpd.secret

- Syntax: **username password ip_address**

| | | |
|----------|----------------|-----------------|
| hlku | "5566neverdie" | |
| darkgerm | "lolisoul" | 192.168.55.66 |
| gluecrow | "yacwu" | 192.168.99.0/24 |

- plain text
- `chmod 600 mpd.secret`

mpd.conf

❑ /usr/local/etc/mpd/mpd.conf

- Consists of a *label* followed by a sequence of **mpd commands**.
- A label begins at the first column and ends with a colon character.
- Commands are indented with a tab character and follow the label on the next and subsequent lines.

client:

```
create bundle template B1
create link static L1 modem
set modem device /dev/cuad0
set modem speed 115200
set modem script DialPeer
set modem idle-script AnswerCall
set modem var $DialPrefix "DT"
```

```
set modem var $Telephone "1234567"
set link no pap chap eap
set link accept pap
set auth authname "MyLogin"
set auth password "MyPassword"
set link max-redial 0
set link action bundle B1
open
```

mpd.conf

❑ startup section

- Added a new startup section to the config-file, which is loaded once at startup.

```
startup:  
    # configure mpd users  
    set user hiku 123456  
    # configure the console  
    set console self 127.0.0.1 4567  
    set console open  
    # configure the web server  
    set web self 0.0.0.0 5566  
    set web open
```

mpd.conf

❑ default section

- Set interface
 - ip range
- Set bundle name
- Link layer configuration

mpd layers

interface -> ipcp -> compression
-> encryption -> bundle -> links

```
default:
```

```
    load pptp_server
```

```
pptp_server:
```

```
    # Define dynamic IP address pool.
```

```
    set ippool add pool123 192.168.1.30 192.168.1.110
```

```
    # Create clonable bundle template
```

```
    create bundle template VPN
```

mpd.conf

❑ default section

...(cont'd)

```
set iface enable proxy-arp
```

```
set iface idle 1800
```

```
# adjust incoming and outgoing TCP SYN segments (MTU)
```

```
set iface enable tcpmssfix
```

```
# Van Jacobson TCP header compression
```

```
set ipcp yes vjcomp
```

```
# Specify IP address pool for dynamic assignment.
```

```
set ipcp ranges 192.168.1.1/32 ippool pool123
```


mpd.conf

❑ default section

...(cont'd)

Create clonable link template named L

create link template VPNLINK ptp

Set bundle template to use

set link action bundle VPN

Multilink adds some overhead, but gives full 1500 MTU.

set link enable multilink

Address and control field compression, save 2 bytes,

Protocol field compression, save 1 byte

set link yes acfcomp protocomp

set link keep-alive 10 60

Configure PPTP

set ptp self 140.113.x.x

set link enable incoming

mpd.conf - encryption

- ❑ Microsoft Point-to-point compression (MPPC) CCP subprotol
 - 'mppc' option should be enabled at the CCP layer

```
# The five lines below enable Microsoft Point-to-Point encryption
# (MPPE) using the ng_mppc(8) netgraph node type.
set bundle enable compression
set ccp yes mppc
set mppc yes e40
set mppc yes e128
set mppc yes stateless
```

mpd.conf

❑ Minimum configuration

```
startup:
```

```
default:
```

```
set ippool add pool123 192.168.1.31 192.168.1.35
create bundle template NAVPN
set ipcp ranges 192.168.1.1/32 ippool VPNPOOL
create link template VPNLINK pptp
set link action bundle NAVPN
set link no pap chap eap
set link enable chap-msv2
set pptp self 140.113.x.x
set link enable incoming
```

mpd

- ❑ /etc/syslog.conf

```
!mpd
*.* /var/log/mpd.log
```

- ❑ touch /var/log/mpd.log
- ❑ /etc/rc.d/syslogd reload
- ❑ Maybe firewall need some configuration.
 - Allow 1723 port, and GRE packets.