# mlvpn Documentation

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MLVPN is Open Source software, licensed under the BSD License.

Source code is available on github https://github.com/zehome/MLVPN/

CHAPTER 1

# User guide

## What is mlvpn

mlvpn is a piece of software, similar to OpenVPN, which can create a network tunnel between two computers.

mlvpn encapsulates network packets, using UDP and send them encrypted over the internet to another location.

The primary use of mlvpn is to create bonded/aggregated network links in order to benefit from the bandwidth of multiple links.

Still, mlvpn can be used as a regular secure tunnel daemon, capable of handling failover scenarios.

### Features

- Bandwidth aggregation of multiple internet connections
- Automatic failover, without changing IP addresses or interrupting TCP connections in case of a failure
- Encrypt and authenticate connections using libsodium.
- Hot configuration reload (by signaling SIGHUP)
- Scriptable monitoring
- Remote monitoring through UNIX socket or TCP/HTTP socket. (JSON API)

### Limitations

### Non equivalent links (3G/4G and *DSL or WIFI and *DSL)

mlvpn can aggregate very different links if reordering is enabled.

If you have a high latency 3G/4G link and a DSL connection, then adjust reorder_buffer_size to a reasonable value to get good performance.

Note that the created aggregated link will have the WORST latency of all the links. ie: the 3G/4G link.

Re-ordering is important because packets are not sent at the same speed on every path. Packets would come of order which confuses a LOT TCP. Without re-ordering enabled, expect to have the bandwidth of the slowest link.

# Getting started in mlvpn

## Introduction

If you haven't, read *What is mlvpn*.

## Installation

### Debian wheezy

If you trust me, you can use the mlvpn debian repository for Debian wheezy:

```
# Add the mlvpn repository signature
sudo apt-key adv --keyserver pgp.mit.edu --recv 3324C952
echo "deb http://debian.mlvpn.fr wheezy/" >/etc/apt/sources.list.d/mlvpn.list
sudo apt-get update
sudo apt-get install mlvpn
```

**Warning:** PLEASE DO NOT USE THIS REPOSITORY YET.

### Debian jessie/sid

If you trust me, you can use the mlvpn debian repository for Debian sid:

```
# Add the mlvpn repository signature
sudo apt-key adv --keyserver pgp.mit.edu --recv 3324C952
echo "deb http://debian.mlvpn.fr unstable/" >/etc/apt/sources.list.d/mlvpn.list
sudo apt-get update
sudo apt-get install mlvpn
```

### OpenBSD

Refer to the README.OpenBSD file inside the mlvpn repository for OpenBSD build instructions.

### FreeBSD

```
pkg install git libev libsodium
git clone --branch freebsd https://github.com/zehome/MLVPN mlvpn
cd mlvpn
make
```

**Note:** This port is not tested often and may break.

### Install from source

Please refer to the README.md file inside the mlvpn repository for source build instructions.

## Configuration

mlvpn is using two configuration files for every tunnel you want to make.

### mlvpn.conf

mlvpn.conf(5) is an ini-style configuration. It's used to set the interface name, the secret-key, network configuration of the multiple links and path to the second configration script.

Please refer the the mlvpn.conf(5) manpage for further informations.

---

**Note:** access the manpage using: **man mlvpn.conf**

---

### mlvpn_updown.sh

**mlvpn_updown.sh** is a script called by mlvpn when status change occurs in mlvpn.

For example, when mlvpn is launched and a link is activated, mlvpn_updown.sh is called in order to bring the tunnel device up and ready for communication.

## Checking mlvpn status using ps

You can check what mlvpn is doing at any time by using standard unix command **ps**.

mlvpn spawns two process. One privileged running as root with [priv] in it's name.

The other running as the user you have selected with running mlvpn –user.

Example:

```
root     30222 30221  0 23:17 pts/8    00:00:00 mlvpn: adsl3g [priv]
ed       30223 30222  0 23:17 pts/8    00:00:00 mlvpn: adsl3g !3g @adsl
```

This output means tunnel 3g is down, and adsl is up.

### Tunnel prefix reference

- '!' means down
- '@' means up & running
- '~' means up but lossy (above the configured threshold)

### Hot reloading mlvpn configuration

mlvpn supports hot configuration reloading. You can reload the configuration by sending the **SIGHUP** signal to any process.

```
kill -HUP $(pidof mlvpn)
# or pkill -HUP mlvpn
```

**Warning:** Hot reloading the configuration forces every established link to be disconnected and reconnected.

## Security in mlvpn

Security is a very strong focus for the mlvpn project.

mlvpn tries it's best to protect your systems and your datas by using *privilege separation*, strong cryptography, and continuous integration.

### Privilege separation

mlvpn needs to access the kernel in order to create a tunnel device, and in order to configure the device. (needs root)

In order to limit the scope of privileges, mlvpn spawns a small process, called the [priv] process, then another one.

**The priv process only performs the tasks where it needs privileges:**

- tunnel interface creation
- tunnel interface configuration
- open the mlvpn configuration file
- name resolution (requires to be out of the chroot)

The other process is run as an unprivileged user (usually _mlvpn or mlvpn), in a chroot. It handles all the hard work exposed to the outside world.

This is the same technique used in OpenSSH.

### Cryptography

mlvpn uses libsodium for all the cryptographic needs.

In particular, mlvpn uses secret-key authenticated encryption.

**Cryptography is used for two purposes:**

- Authentication
- Data protection

### Authentication

mlvpn just uses a very simple protocol in order to make sure it communicates only if the two sides share the same secret key.

The secret key is stored as plain text in the mlvpn configuration file.

This configuration file must be owned by root, and chmoded to 0600 to prevent any other user from reading / writing to it.

Every control packet sent by mlvpn is encrypted and authenticated by both sides.

Authentication is done using Poly1305 MAC.

### Encryption

Data packets can be encrypted/authenticated as well, but this can be disabled by using the *cleartext_data* configuration flag.

This can be usefull if your on a budget, with lack of CPU.

If your data are going to the internet anyway, there is no point in trying to cipher them another time using mlvpn. (encrypting an ssh or https connections does not give you much benefit)

Encryption is done using the XSalsa20 algorithm.

# Fequently Asked Questions

## How much mlvpn costs

Free. mlvpn is licenced under the open source BSD licence.

## Troubleshooting

### mlvpn does not launch

Launch mlvpn manually in debug mode: .. code-block:: sh

    mlvpn –user _mlvpn -c /etc/mlvpn.conf –debug -Dprotocol -v

Check your permissions: .. code-block:: sh

    chmod 0600 /etc/mlvpn/mlvpn.conf chmod 0700 /etc/mlvpn/mlvpn_updown.sh chown root /etc/mlvpn/mlvpn.conf /etc/mlvpn/mlvpn_updown.sh

### mlvpn does not create the tunnel interface

Follow *mlvpn does not launch*.

CHAPTER 2

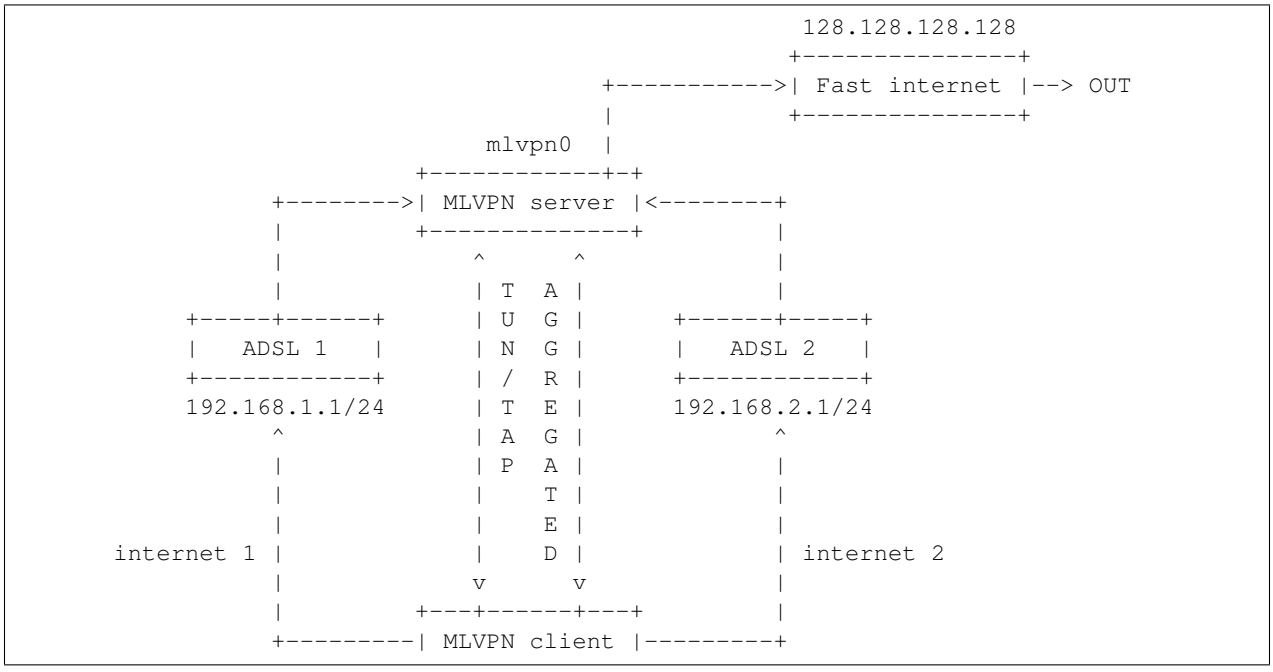
# Example scenarios

## Linux with two ADSL uplinks for agregation and failover

### Introduction

This short guide will try to help you configure linux for policyrouting in order to automatically use the two adsl links at the same time.

### Example case



```
                          +---------------+
                      mlvpn0 ; eth0: 192.168.0.1
                                    ^
   +------+                         |
   | LAN  |-------------------------+
   +------+
192.168.0.0/24
```

In this setup we have multiple machines:

- MLVPN server which has a fast internet connection (100Mbps)
  - Public IP Address: 128.128.128.128/32
- ADSL 1 router LOCAL IP address 192.168.1.1/24
- ADSL 2 router LOCAL IP address 192.168.2.1/24
- Local AREA network (where your standard "clients" are) on 192.168.0.0/24
- And finally our MLVPN client router:
  - Private IP address 192.168.1.2/24 to join ADSL1
  - Private IP address 192.168.2.2/24 to join ADSL2
  - Private IP address 192.168.0.1/24 for LAN clients

Yeah seems a bit complicated, but that's not that hard after all, we just have 4 routers.

## Testing the basic configuration

At this time from "MLVPN client" you should be able to ping 192.168.2.1 and 192.168.1.1.

You should be able to access the internet using both links.

You can test it using standard routing.

Before we do anything: (Note: you may require installing iproute2)

```
root@mlvpnclient:~# ip route show
default via 192.168.1.1 dev eth0
192.168.0.0/24 dev eth0  proto kernel  scope link  src 192.168.0.1
192.168.1.0/24 dev eth0  proto kernel  scope link  src 192.168.1.2
192.168.2.0/24 dev eth0  proto kernel  scope link  src 192.168.2.2
```

This routing table means every packet to the internet will go thru 192.168.1.1. We can test it:

```
root@mlvpnclient:~# ping -n -c2 -I192.168.1.2 ping.ovh.net
PING ping.ovh.net (213.186.33.13) 56(84) bytes of data.
64 bytes from 213.186.33.13: icmp_req=1 ttl=51 time=42.1 ms
64 bytes from 213.186.33.13: icmp_req=2 ttl=51 time=41.7 ms
```

Ok I started to use "-I192.168.1.2" here. That's not mandatory in this example, but this will become handy later.

"-I" means we tell the ping command to use 192.168.1.2 as source address of the packets we are sending to ping.ovh.net.

Now, we know our ADSL1 link is working properly.

Testing the second link will need us to modify the routing table.

```
root@mlvpnclient:~# ip route add 213.186.33.13 via 192.168.2.1
root@mlvpnclient:~# ip route show
default via 192.168.1.1 dev eth0
213.186.33.13 via 192.168.2.2 dev eth0
192.168.0.0/24 dev eth0  proto kernel  scope link  src 192.168.0.1
192.168.1.0/24 dev eth0  proto kernel  scope link  src 192.168.1.2
192.168.2.0/24 dev eth0  proto kernel  scope link  src 192.168.2.2
```

Notice the new 213.186.33.13 (ping.ovh.net) added to the routing table.

Again, we can test the link:

```
root@mlvpnclient:~# ping -n -c2 -I192.168.2.2 ping.ovh.net
PING ping.ovh.net (213.186.33.13) 56(84) bytes of data.
64 bytes from 213.186.33.13: icmp_req=1 ttl=51 time=62.4 ms
64 bytes from 213.186.33.13: icmp_req=2 ttl=51 time=61.1 ms
```

Noticed we changed the source address.

Everything is fine, let's cleanup the routing table:

```
root@mlvpnclient:~# ip route del 213.186.33.13
```

## Configuring the source routing

### Concepts

Now you have two internet access, one fast internet access on the server side, but you have only one IP address on this server... How can you use your multiple ADSL links at the same time ?

That's fairly simple, but a bit complicated to setup. It's called "source routing".

Source routing means the kernel will take the decision to route a packet not only based on it's destination (like we have done just before), but also from where it came.

In our example, we want a packet coming from 192.168.2.2 to go thru ADSL 2 and a packet from 192.168.1.2 to go thru ADSL1. Simple yah?

### Let's configure it

First, you need to create multiple routing tables in the kernel.

That's better to name them, so yo do it by modifing **/etc/iproute2/rt_tables**.

```
root@mlvpnclient:~# echo 101 adsl1 >> /etc/iproute2/rt_tables
root@mlvpnclient:~# echo 102 adsl2 >> /etc/iproute2/rt_tables
```

Your configuration file should now look like this

```
root@mlvpnclient:~# cat /etc/iproute2/rt_tables
#
# reserved values
#
255 local
254 main
253 default
```

```
0   unspec
#
# local
#
#1  inr.ruhep
101 adsl1
102 adsl2
```

We have "named" two new routing tables, but we did not create them. /etc/iproute2/rt_tables file is optional.

We must add some routes to each table to activate them.

```
# Inserting routes in the adsl1 table
ip route add 192.168.1.0/24 dev eth0 scope link table adsl1
ip route add default via 192.168.1.1 dev eth0 table adsl1

# Inserting routes in the adsl2 table
ip route add 192.168.2.0/24 dev eth0 scope link table adsl2
ip route add default via 192.168.2.1 dev eth0 table adsl2

# ip rule is the source routing magic. This will redirect
# packets coming from source "X" to table "adsl1", "adsl2" or "default".
ip rule add from 192.168.1.0/24 table adsl1
ip rule add from 192.168.2.0/24 table adsl2
```

I've stripped root@machine for you, so you can copy paste ;-)

### Testing

First, show me your configuration! The first thing you should always do is displaying ip rules. (Which routing table will be used when ?)

(Please note rules are applied in order from 0 to 32767)

```
root@mlvpnclient:~# ip rule list
  0:      from all lookup local
  32764:  from 192.168.1.0/24 lookup adsl1
  32765:  from 192.168.2.0/24 lookup adsl2
  32766:  from all lookup main
  32767:  from all lookup default
```

Then the routing tables:

```
root@mlvpnclient:~# ip route show table adsl1
  192.168.1.0/24 dev eth0  scope link
  default via 192.168.1.1 dev eth0
root@mlvpnclient:~# ip route show table adsl2
  192.168.2.0/24 dev eth0  scope link
  default via 192.168.2.1 dev eth0
root@mlvpnclient:~# ip route show table main
  default via 192.168.1.1 dev eth0
  213.186.33.13 via 192.168.2.2 dev eth0
  192.168.0.0/24 dev eth0  proto kernel  scope link  src 192.168.0.1
  192.168.1.0/24 dev eth0  proto kernel  scope link  src 192.168.1.2
  192.168.2.0/24 dev eth0  proto kernel  scope link  src 192.168.2.2
```

Ping test

```
root@mlvpnclient:~# ping -c2 -n -I192.168.1.1 ping.ovh.net
PING ping.ovh.net (213.186.33.13) 56(84) bytes of data.
64 bytes from 213.186.33.13: icmp_req=1 ttl=51 time=40.6 ms
64 bytes from 213.186.33.13: icmp_req=2 ttl=51 time=41.5 ms

root@mlvpnclient:~# ping -c2 -n -I192.168.2.1 ping.ovh.net
PING ping.ovh.net (213.186.33.13) 56(84) bytes of data.
64 bytes from 213.186.33.13: icmp_req=1 ttl=51 time=62.0 ms
64 bytes from 213.186.33.13: icmp_req=2 ttl=51 time=64.1 ms
```

Hey that's working fine !

### Scripting for startup ?

On Debian GNU/Linux that's pretty easy, just copy this script to /usr/local/sbin/source_routing:

```
#!/bin/sh

# Inserting routes in the adsl1 table
/sbin/ip route add 192.168.1.0/24 dev eth0 scope link table adsl1
/sbin/ip route add default via 192.168.1.1 dev eth0 table adsl1

# Inserting routes in the adsl2 table
/sbin/ip route add 192.168.2.0/24 dev eth0 scope link table adsl2
/sbin/ip route add default via 192.168.2.1 dev eth0 table adsl2

# ip rule is the source routing magic. This will redirect
# packets coming from source "X" to table "adsl1", "adsl2" or "default".
/sbin/ip rule add from 192.168.1.0/24 table adsl1
/sbin/ip rule add from 192.168.2.0/24 table adsl2
```

Verify permissions: **chmod +x /usr/local/sbin/source_routing**

You can use post-up scripts of /etc/network/interfaces to run this script.

/etc/network/interfaces

```
auto eth0
iface eth0 inet static
    address 192.168.0.1
    netmask 255.255.255.0
    post-up /usr/local/sbin/source_routing

auto eth0:adsl1
iface eth0:adsl1 inet static
    address 192.168.1.2
    netmask 255.255.255.0
    gateway 192.168.1.1

auto eth0:adsl2
iface eth0:adsl2 inet static
    address 192.168.2.2
    netmask 255.255.255.0
```

Don't forget to execute the script once by hand or thru **service networking restart**.

## Configuring MLVPN

MLVPN have two configuration files on each side.

### Client side

#### mlvpn0.conf

I've made the configuration file as small as possible to have a good overview.

Take a look at example config files for more details. (**man mlvpn.conf** can be usefull)

*/etc/mlvpn/mlvpn0.conf*

```
[general]
statuscommand = "/etc/mlvpn/mlvpn0_updown.sh"
tuntap = "tun"
mode = "client"
interface_name = "mlvpn0"
timeout = 30
password = "you have not changed me yet?"
reorder_buffer_size = 64
loss_tolerence = 50

[filters]

[adsl1]
bindhost = "192.168.1.2"
remotehost = "128.128.128.128"
remoteport = 5080

[adsl2]
bindhost = "192.168.2.2"
remotehost = "128.128.128.128"
remoteport = 5081
```

#### mlvpn0_updown.sh

This file *MUST* be chmod 700 (rwx——) owned by *root*.

```
chmod 700 /etc/mlvpn/mlvpn0_updown.sh; chown root:root /etc/mlvpn/mlvpn0_updown.sh
```

Again I stripped the script to the minimum.

*/etc/mlvpn/mlvpn0_updown.sh*

```
#!/bin/bash

error=0; trap "error=$((error|1))" ERR

tuntap_intf="$1"
newstatus="$2"
rtun="$3"

[ -z "$newstatus" ] && exit 1
```

```
(
if [ "$newstatus" = "tuntap_up" ]; then
    echo "$tuntap_intf setup"
    /sbin/ip link set dev $tuntap_intf mtu 1400 up
    /sbin/route add proof.ovh.net dev $tuntap_intf
elif [ "$newstatus" = "tuntap_down" ]; then
    echo "$tuntap_intf shutdown"
    /sbin/route del proof.ovh.net dev $tuntap_intf
elif [ "$newstatus" = "rtun_up" ]; then
    echo "rtun [${rtun}] is up"
elif [ "$newstatus" = "rtun_down" ]; then
    echo "rtun [${rtun}] is down"
fi
) >> /var/log/mlvpn_commands.log 2>&1

exit $errors
```

Again ensure permissions are correct or mlvpn will *NOT* execute the script.

### Server side

#### mlvpn0.conf

```
[general]
statuscommand = "/etc/mlvpn/mlvpn0_updown.sh"
tuntap = "tun"
mode = "server"
interface_name = "mlvpn0"
timeout = 30
password = "pleasechangeme!"
reorder_buffer_size = 64
loss_tolerence = 50

[filters]

[adsl1]
bindport = 5080

[adsl2]
bindport = 5081
```

#### mlvpn0_updown.sh

```
#!/bin/bash

error=0; trap "error=$((error|1))" ERR
tuntap_intf="$1"
newstatus="$2"
rtun="$3"
[ -z "$newstatus" ] && exit 1
(
if [ "$newstatus" = "tuntap_up" ]; then
    echo "$tuntap_intf setup"
    /sbin/ip link set dev $tuntap_intf mtu 1400 up
```

```
    # NAT thru our server (eth0 is our output interface on the server)
    # LAN 192.168.0.0/24 from "client"
    /sbin/ip route add 192.168.0.0/24 dev $tuntap_intf
    /sbin/iptables -t nat -A POSTROUTING -o eth0 -s 192.168.0.0/24 -j MASQUERADE
elif [ "$newstatus" = "tuntap_down" ]; then
    /sbin/iptables -t nat -D POSTROUTING -o eth0 -s 192.168.0.0/24 -j MASQUERADE
fi
) >> /var/log/mlvpn_commands.log 2>&1
exit $errors
```

### Testing

Double check permissions of /etc/mlvpn/*.sh (chmod 700 owned by root)

Don't forget to accept UDP 5080 and 5081 on your firewall, server side.

```
root@server:~ # iptables -I INPUT -i eth0 -p udp --dport 5080 -s [ADSL1_PUBLICIP] -j␣
↪ACCEPT
root@server:~ # iptables -I INPUT -i eth0 -p udp --dport 5081 -s [ADSL2_PUBLICIP] -j␣
↪ACCEPT
```

Start mlvpn on server side manually

```
root@server:~ # mlvpn --user mlvpn -c /etc/mlvpn/mlvpn0.conf
```

Start mlvpn on client side manually

```
root@client:~ # mlvpn --user mlvpn -c /etc/mlvpn/mlvpn0.conf
```

Check logfiles on client

```
root@client:~ # cat /var/log/mlvpn_commands.log
mlvpn0 setup
rtun [adsl1] is up
rtun [adsl2] is up
```

Seems good. Let's test the ICMP echo reply. (ping)

```
# Testing connectivity to the internet
root@client:~ # ping -n -c1 -I192.168.0.1 proof.ovh.net
# Download speed testing
root@client:~ # wget -4 -O/dev/null http://proof.ovh.net/files/10Gio.dat
```

## Filtering

The filtering system in mlvpn can be used when you use mlvpn in an aggregated scenario.

Some protocols will suffer a lot from packets received out-of-order, or from packet loss, like VoIP systems.

In order to avoid that problem, mlvpn includes a system called "filters".

In **mlvpn.conf**, the **[filters]** section defines static paths for the matched expression.

Expressions are standard BPF expressions. (like in tcpdump or any other libpcap program)

Filters are order sensitive.

# ADSL and SDSL with reordering enabled and VoIP

In such a scenario, we want to aggregate the traffic from every protocol except for SIP UDP port 5060.

## mlvpn.conf

```
[general]
# This configuration is not complete, please refer to the example
# configuration file provided with your distribution package.
#
reorder_buffer_size 64
loss_tolerence = 50

[filters]
sdsl = udp port 5060
adsl = udp port 5060

[sdsl]
remotehost = sdslgw.mlvpn.fr
remoteport = 5080

[adsl]
remotehost = adslgw.mlvpn.fr
remoteport = 5081
```

## Explanation

This configuration, when all links are up forces packets matching the "udp port 5060" BPF expression to be sent only on the *sdsl* link.

If the **sdsl** link is not available, then the second matching interface will be choosen.

Filters are EXCLUSIVE FIRST MATCH. That means if a packet matches an expression, and the interface is ready to receive data, filtering STOPS and the packet is sent.

Order is VERY important is that situation in order to let you choose the prefered path.

CHAPTER 3

# Developer guide

## Building debian packages for mlvpn

### Requirements

```
sudo apt-get install pbuilder cowbuilder git-buildpackage
```

### Prepare build environments

#### Configure pbuilder

.pbuilderrc:

```
# Template loosely taken from http://www.kirya.net/articles/build-i386-packages-on-
↪amd64/
# do not specify variables when running cowbuilder --create or --update
if [ -f debian/changelog ]; then
        [ -z "$ARCH" ] && ARCH=$(dpkg --print-architecture)
        [ -z "$DIST" ] && DIST=$(dpkg-parsechangelog | sed -n 's/^Distribution: //p')
fi
PDEBUILD_PBUILDER="cowbuilder --build --basepath /var/cache/pbuilder/base-${DIST}_$
↪{ARCH}.cow"
DEBBUILDOPTS="-d ${OPTS}"
ARCHITECTURE=${ARCH}
BUILDRESULT=~/build-area
MIRRORSITE=http://ftp.fr.debian.org/debian
EXTRAPACKAGES="$EXTRAPACKAGES lintian apt-utils"
AUTO_DEBSIGN=yes
HOOKDIR=${HOME}/.pbuilder/hooks/
PKGNAME_LOGFILE_EXTENTION="_${ARCH}.build"
# Allow a local repository for external backported dependencies.
```

```
OTHERMIRROR="deb [trusted=yes] file://${HOME}/build-area ./"
BINDMOUNTS="${HOME}/build-area"
```

#### Generate base images for pbuilder

```
for arch in i386 amd64; do
    sudo cowbuilder --config ~/.pbuilderrc --create --distribution wheezy --
↪architecture $arch --basepath /var/cache/pbuilder/base-wheezy_$arch.cow
    sudo cowbuilder --config ~/.pbuilderrc --update --distribution wheezy --
↪architecture $arch --basepath /var/cache/pbuilder/base-wheezy_$arch.cow
done
```

### Build packages

#### libsodium13 (for wheezy)

```
dget -x http://ftp.fr.debian.org/debian/pool/main/libs/libsodium/libsodium_1.0.0-1.dsc
cd libsodium_1.0.0
for dist in wheezy; do
    for arch in amd64 i386; do
        DIST=$dist ARCH=$arch pdebuild --debbuildopts -b
    done
done
```

#### mlvpn

```
git clone git@github.com:zehome/MLVPN.git mlvpn
cd mlvpn
git checkout debian-unstable
for dist in wheezy; do
    for arch in amd64 i386; do
        DIST=$dist ARCH=$arch git-buildpackage --git-builder="pdebuild --debbuildopts␣
↪-b"
    done
done
```

## Building mlvpn on OpenBSD

### Install since OpenBSD 5.9

mlvpn is part of OpenBSD port system since OpenBSD 5.9. You can install it as a package:

```
pkg_add mlvpn
```

### Installing requirements

```
pkg_add git autoconf automake libev libsodium
```

### Building mlvpn

```
export AUTOCONF_VERSION=2.69
export AUTOMAKE_VERSION=1.14
export CPPFLAGS="-I/usr/local/include $CPPFLAGS"
export LDFLAGS="-L/usr/local/lib $LDFLAGS"
git clone https://github.com/zehome/MLVPN mlvpn
cd mlvpn
./autogen.sh
./configure
make
```

### Configuration

Example configuration files for OpenBSD are located in **/usr/local/share/examples/mlvpn/**.

## Indices and tables

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