

*Mikro***Tik**



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# L2TP/IPsec Configuration with RouterOS to work with Android

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# About Me

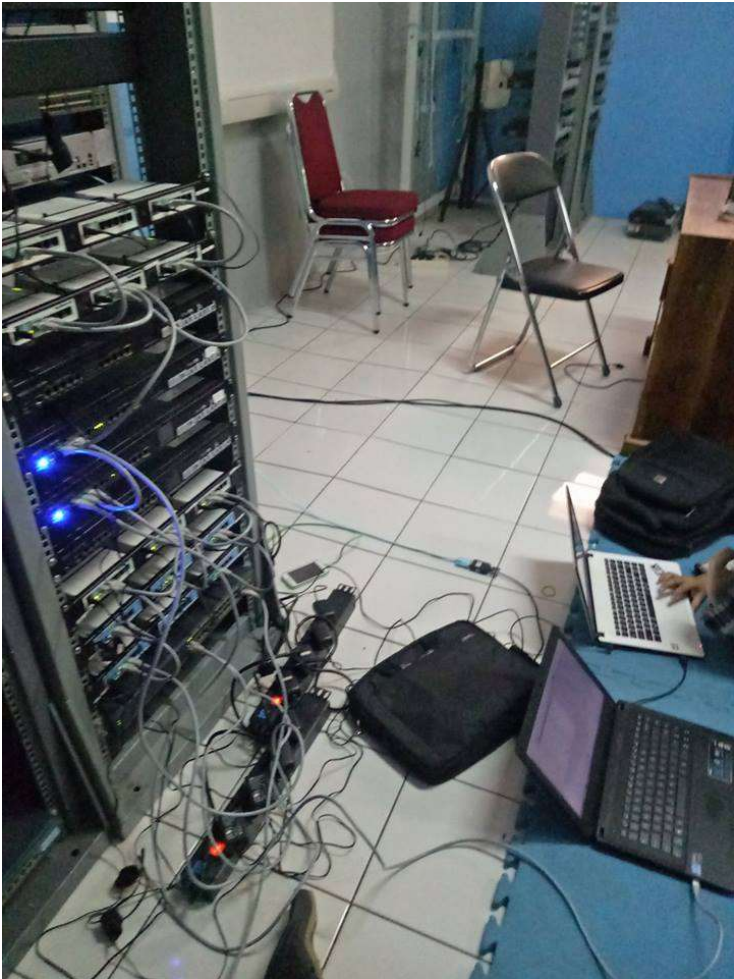
- Rafi Naufal
- State Vocational High School 1
- Pesantren Networkers
- MTCNA, MTCRE, MTCINE
- Mikrotik Certified Consultant
- Network Trainer at INTRA Training Centre

# About State Vocational High School





# Networking Class





# RumahNgoprek



# About Pesantren Networkers

## PESANTREN SYSADMIN IDN



## PESANTREN NETWORKERS IDN





# What is Virtual Private Networking

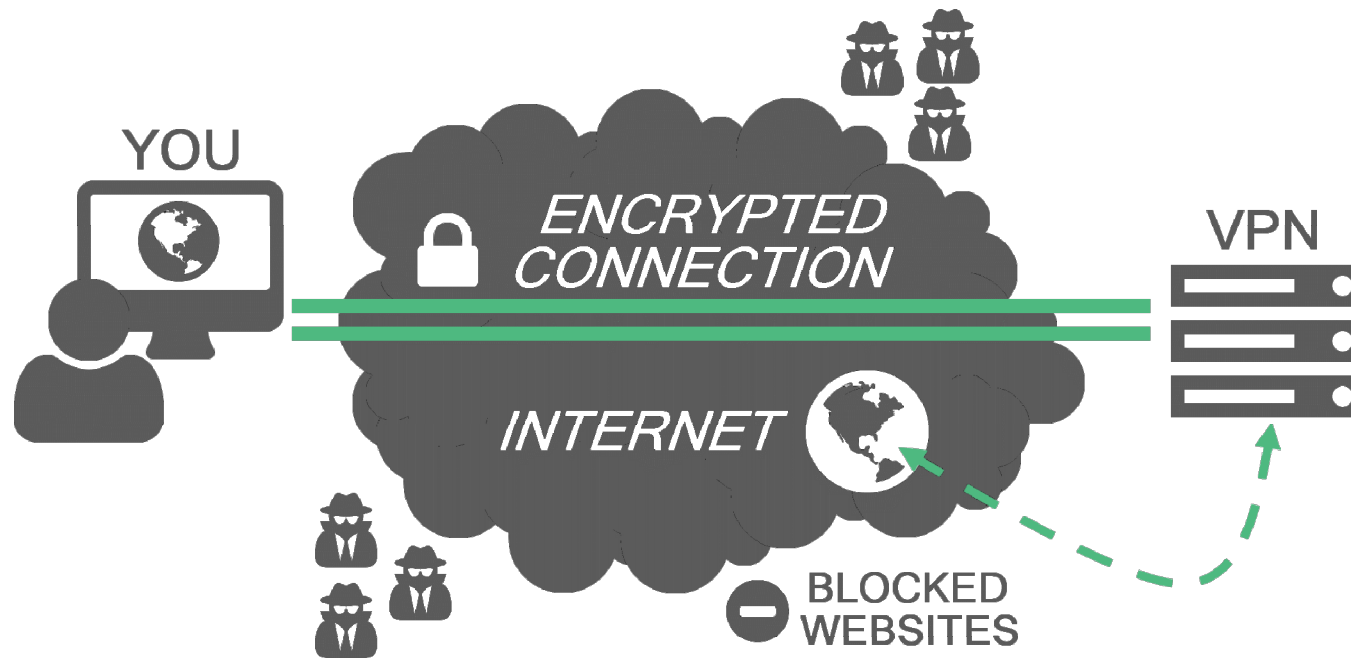


# What is VPN



Virtual Private Network is a network technology that allow you to make a secure private network in public network.

# How VPN Work?



VPN will make their private network using Tunnel to communicate over Internet.



## Advantage if we use VPN

- Your ISP didn't know what you get up to on the internet
- You appear to access the internet from the IP address of the VPN server
- Safe to use Public Wi-Fi Hotspot





## Disadvantage if we use VPN

- Your internet will slow down

L2TP

Layer 2 Tunneling Protocol

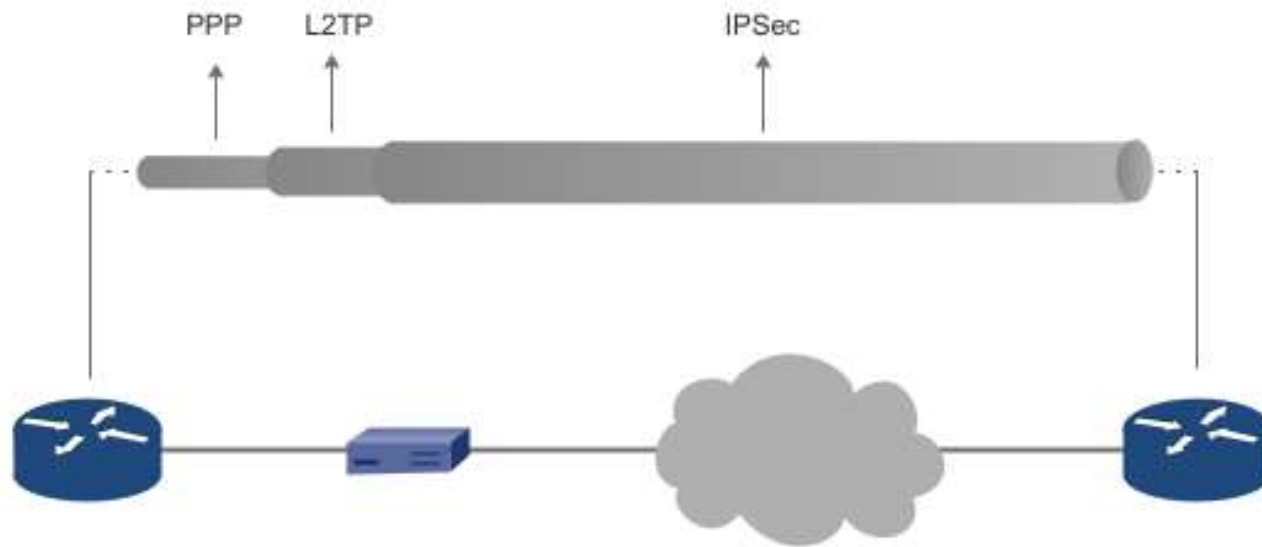
# What is L2TP?



Method that you can use to make a tunnel for your VPN



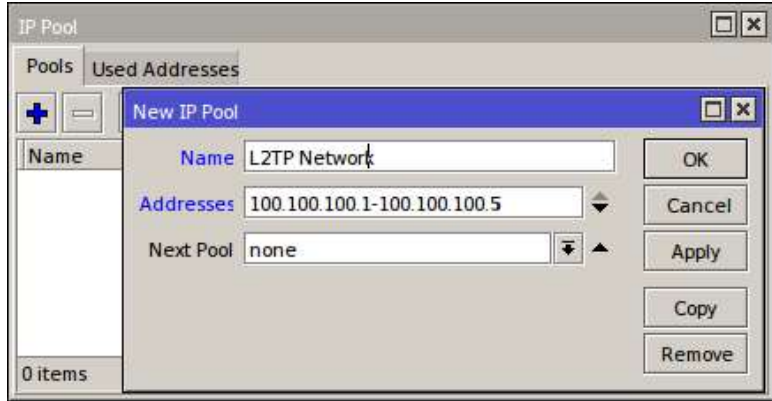
## If L2TP Combine with IPSec



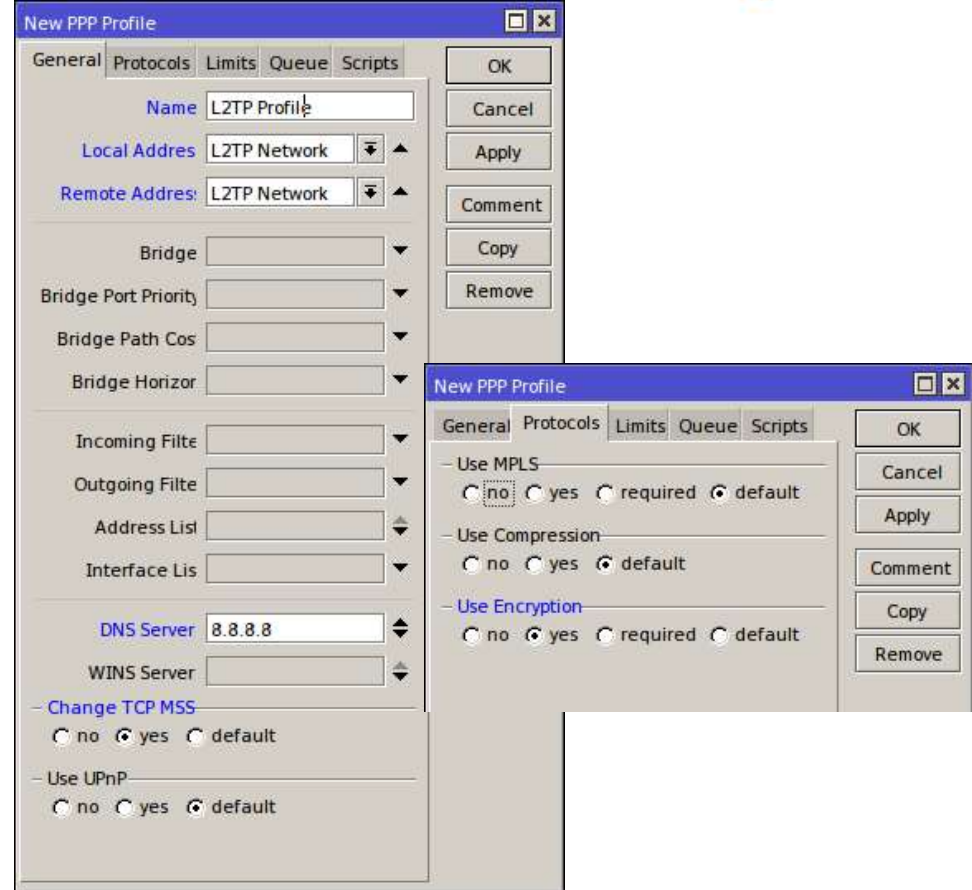
If PPP send from one site to other site, L2TP will encrypt to packet in L2TP Tunnel. And if we combine L2TP with IPsec, IPsec will encrypt L2TP Tunnel.

# Configure Mikrotik as L2TP Server for Android Client

# L2TP Configuration



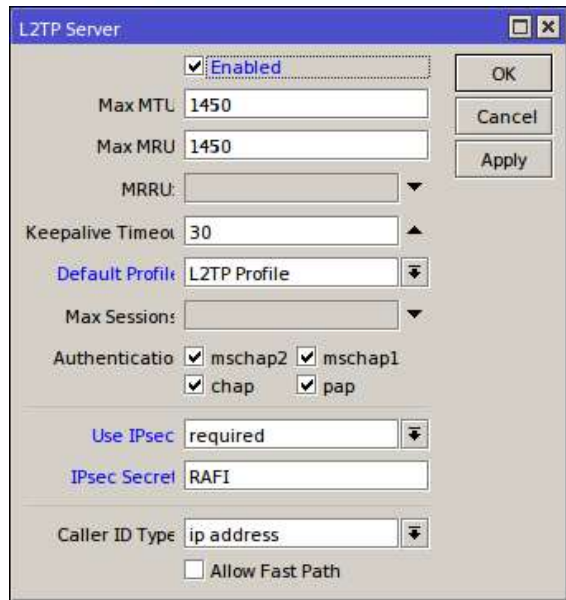
Make IP Pool for L2TP Network



Make a new PPP Profile



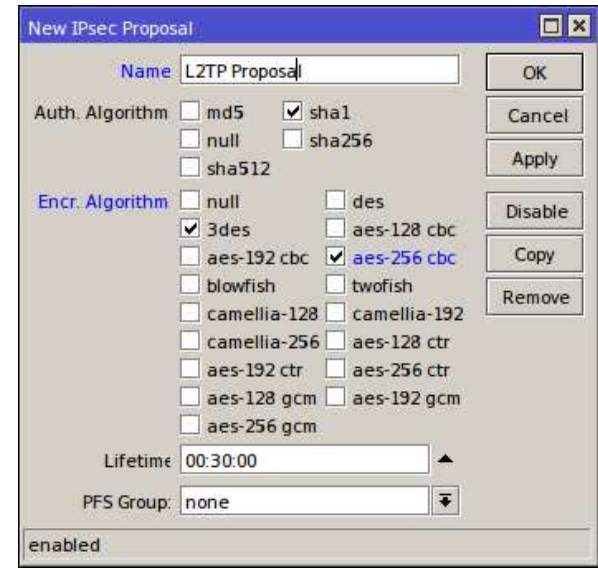
# L2TP Configuration



Enable L2TP Server

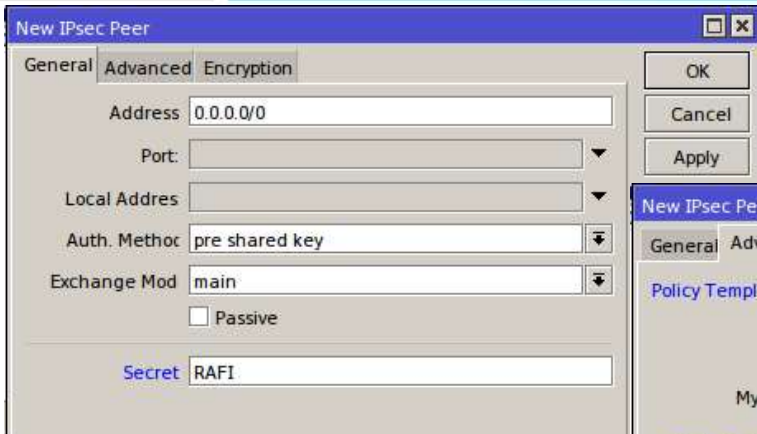


Make a new PPP Secret for L2TP



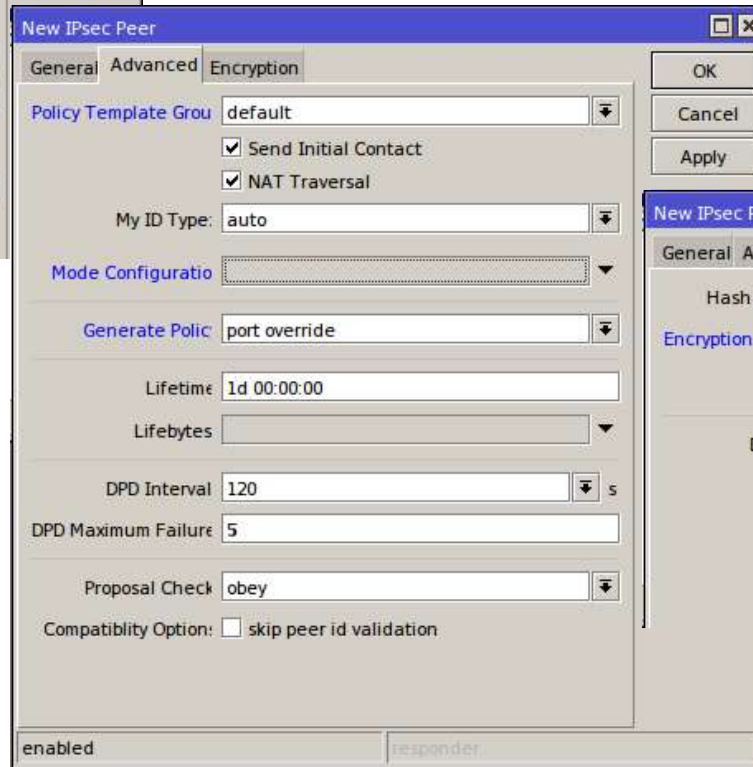
Make a new IPsec Proposal for L2TP

# Configure IPsec Peer



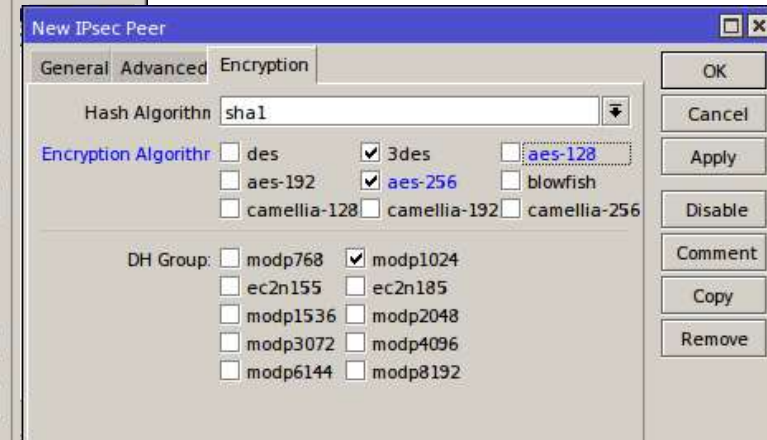
The 'New IPsec Peer' dialog box is shown with the 'General' tab selected. The 'Address' field contains '0.0.0.0/0'. The 'Auth. Method' is set to 'pre shared key'. The 'Exchange Mod' is set to 'main'. The 'Secret' field contains 'RAFI'. There are 'OK', 'Cancel', and 'Apply' buttons on the right side.

Define that everyone who know ipsec secret, will be connect to ipsec server.



The 'New IPsec Peer' dialog box is shown with the 'Advanced' tab selected. The 'Policy Template Group' is set to 'default'. The 'Send Initial Contact' and 'NAT Traversal' checkboxes are checked. The 'My ID Type' is set to 'auto'. The 'Generate Policy' is set to 'port override'. The 'Lifetime' is set to '1d 00:00:00'. The 'DPD Interval' is set to '120' seconds. The 'DPD Maximum Failure' is set to '5'. The 'Proposal Check' is set to 'obey'. There is a 'Compatibility Option' for 'skip peer id validation'. The status at the bottom is 'enabled' and 'responder'.

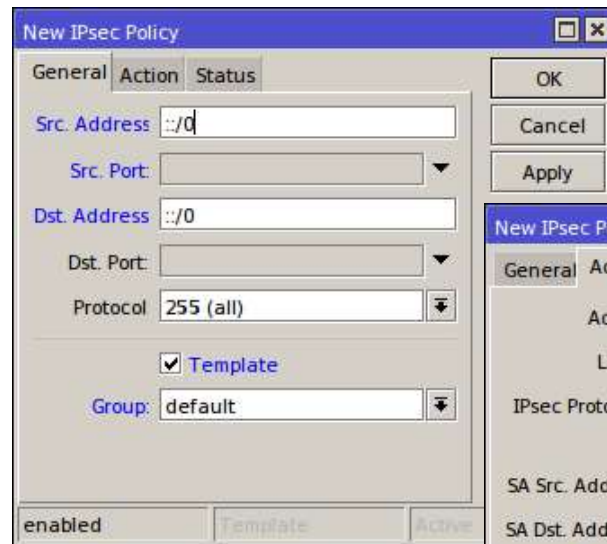
Configure Policy Template



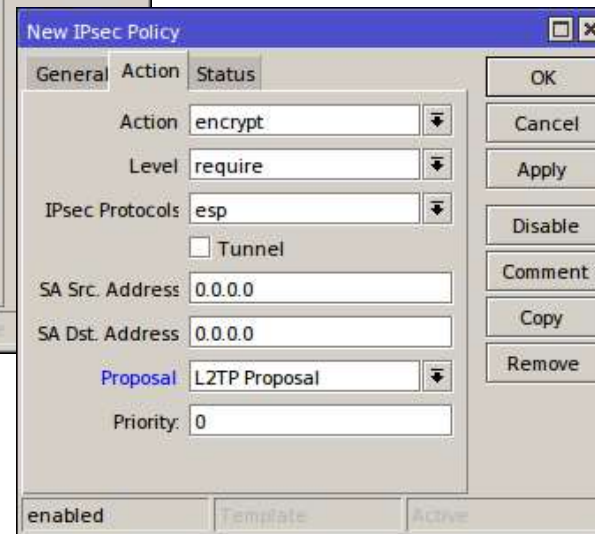
The 'New IPsec Peer' dialog box is shown with the 'Encryption' tab selected. The 'Hash Algorithm' is set to 'sha1'. The 'Encryption Algorithm' section has '3des' and 'aes-256' checked, and 'aes-128' highlighted. The 'DH Group' section has 'modp1024' checked. There are 'OK', 'Cancel', 'Apply', 'Disable', 'Comment', 'Copy', and 'Remove' buttons on the right side.

Configure what encryption algorithm will we use

# Configure IPsec Policy



Configure that all address is include.



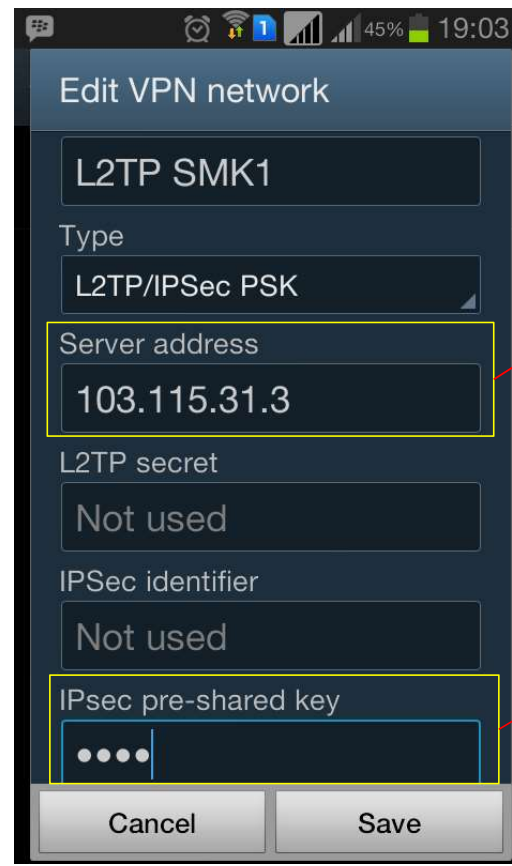
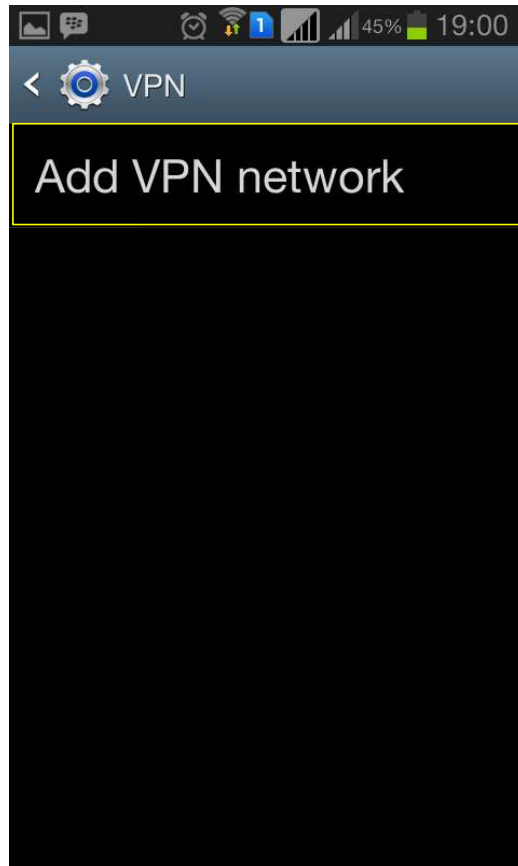
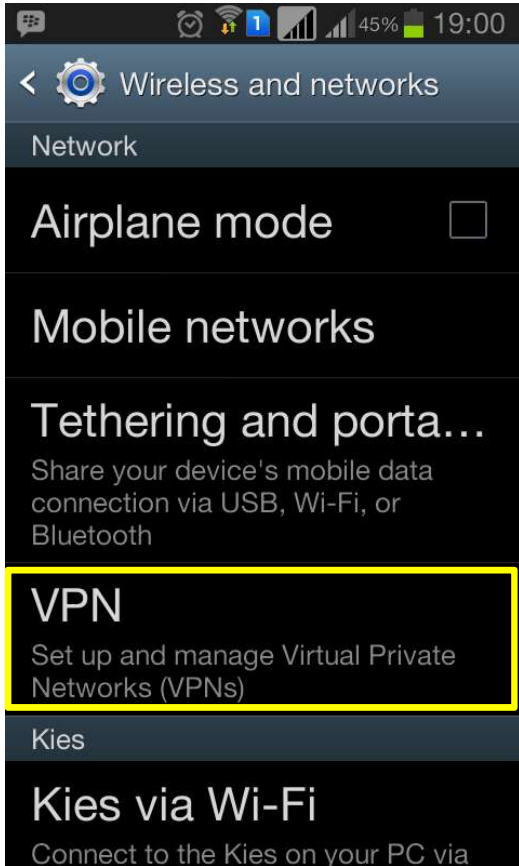
Define what IPsec protocol will we use

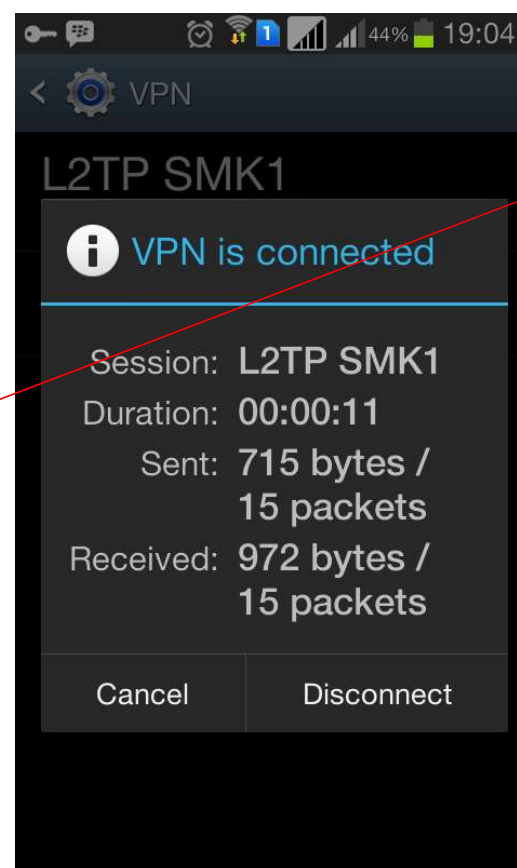
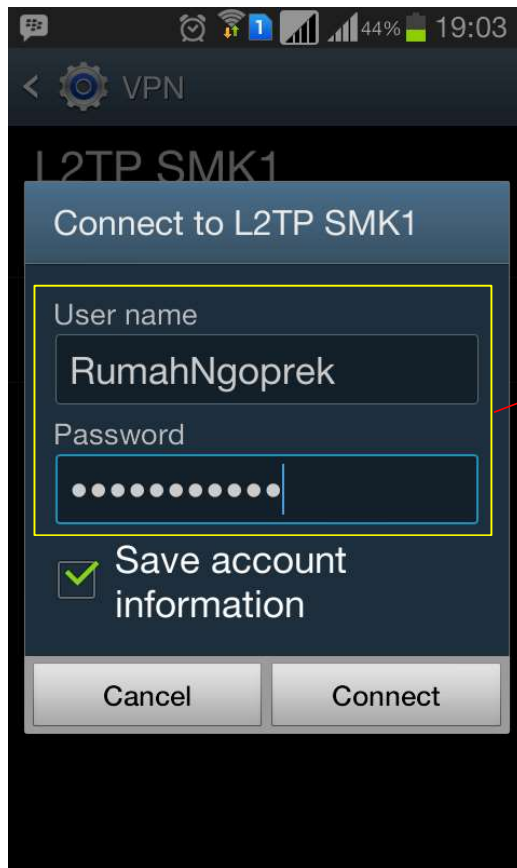
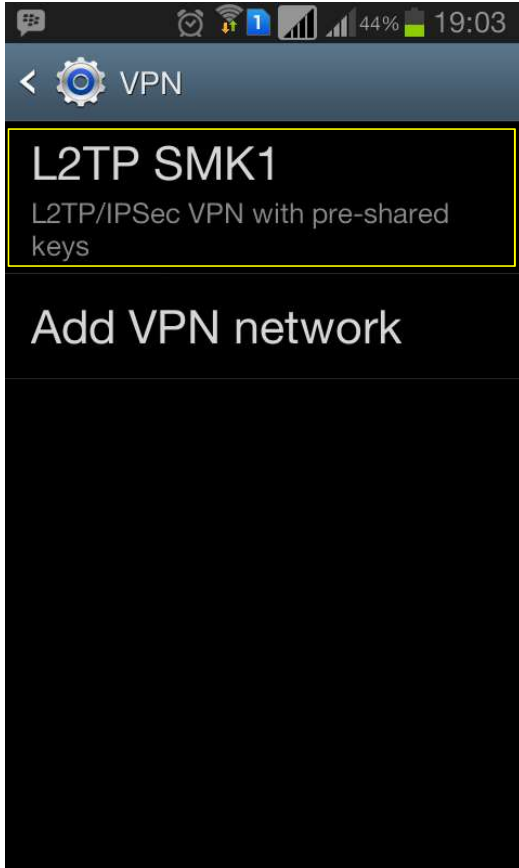




# Configure Android Phone

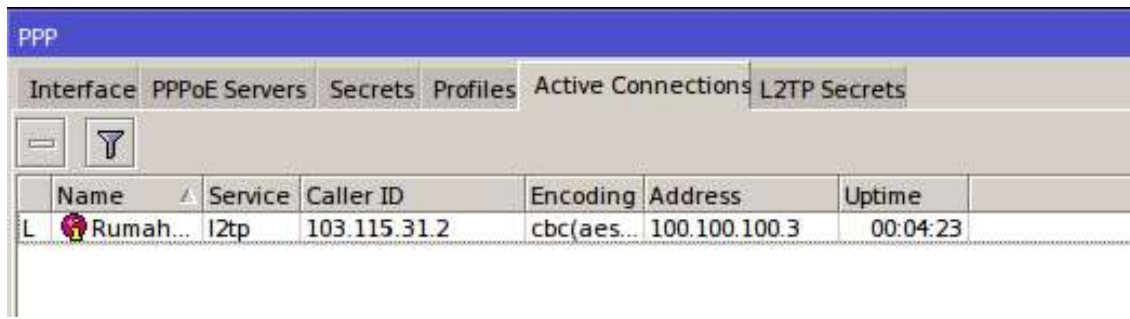
# Configuration on Android Phone





User and password that we have configure in PPP Secret

# Verification



The screenshot shows the 'PPP' window with the 'Active Connections' tab selected. A table below the tabs lists active connections.

Name	Service	Caller ID	Encoding	Address	Uptime
L Rumah...	l2tp	103.115.31.2	cbc(aes...	100.100.100.3	00:04:23

There is active connections in PPP



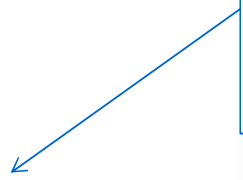
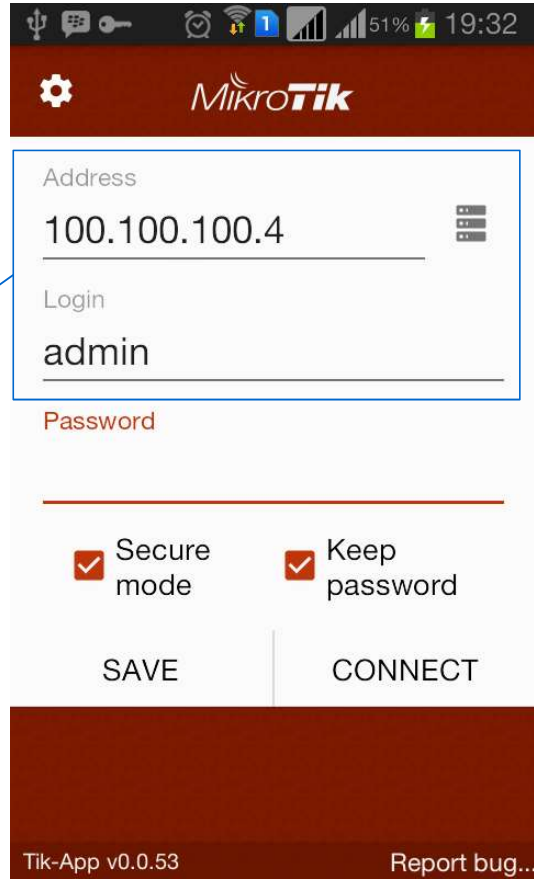
The screenshot shows the 'IPsec' window with the 'Remote Peers' tab selected. A table below the tabs lists active remote peers.

Local Address	Remote Address
103.115.31.3	103.115.31.2

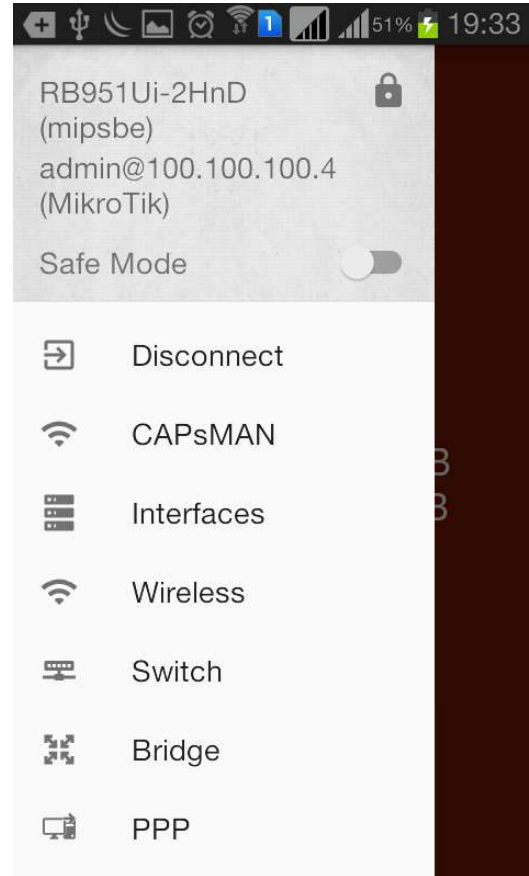
IPSec remote peers active




# Verification



Address and user



# Discuss about Network?

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[www.ngonfigterus.id](http://www.ngonfigterus.id)

Terima Kasih  
Thank You  
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