Written by BiRU Monday, 31 October 2016 14:45 -

# **Problem on SecureNAT**

SecureNAT is a fairly simple way to setup Softether. You don't need a lot of sysadmin skill and network understanding in order to get Softether up and running.

The problem is SecureNAT is a bit **SLOW**. I will show a comparison at the end of this article.

We can boost the performance using a local bridge.

## Softether using local bridge

To start with you need Softether installed and setup. You can follow the guide on  $\frac{\text{Softether on}}{\text{VPS}}$ 

Just skip the last step "Enable the Virtual NAT"

## Local bridge Setup

### Network setup

VPN Server IP: 192.168.7.1

VPN Client IP Range: 192.168.7.50-192.168.7.60

Tap Device name: tap\_soft

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From here we go to the "Local Bridge Setting"

	me	Status	Type	User	Group	Session	MAC Tables	IP Tables
VPN		Online	Standalone	1	0	1	1	2
٠								
Manage Vir	tual Hub	Online	Offine	View	Status	ate a Virtual Hub	Properties	Delete
anagement of I stener List (TCF	isteners: /IP port(:			VPN Server a	nd Network Info	rmation and Setti	ngs:	
					Encryption and	Network	Clusterii	ng Configuratio
Port Number	Status		Create		Encryption and	Network	Clusteri	ng Configuratio
Port Number	Status Listening		Create		Encryption and View Server	Status	Clusterii	ng Configuratio
Port Number TCP 443 TCP 992 TCP 1194 TCP 5555	Status Listening Listening Listening		Create Delete Start		Encryption and View Server About this VF	i Network Status N Server	Clusterii	ng Configuration tering Status how List of P Connections
TCP 443 TCP 992 TCP 1194 TCP 5555	Status Listening Listening Listening		Create Delete Start Stop	FN LL The set and the set and	Encryption and View Server About this VF /ersion (Pre-	I Network Status N Server Server	Clusterin Clus Clus Clus Clus Clus Clus Clus Clus	ng Configuratio tering Status how List of P Connections dit Config

Local Bridge Setting

First we choose the Virtual Hub. It should be only one for normal setup.

Then we check the tap device box.

After that we type in the name of the tap device(I use soft here for simplicity).

V	is also possible to creat rtual Hub. (Tap is suppo	adapter). e a tap device (virtual network interface) and establish rted on Linux versions only)	a bridge connection with a
Numb	Virtual Hub Name	Network Adapter or Tap Device Name	Status
			Delete Local Bridge
New New	Local Bridge Definition		
Ø	Virtual Hub:	o bridge. PN	;
Type to	Select the Vitual Hub:	o bridge. PN ith Physical Existing Network Adapter ith New Tap Device tap device to create.	;
Type to	Virtual Hub:	b bridge PN th Physical Existing Network Adapter th New Tap Device tap device to create.	, ,

Create Local Bridge

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After the creation of the local bridge we jump back to our server. And run

# ifconfig tap\_soft

It should show you something similar to this



Check on the server

Because we are not going to use SecureNAT and SecureDHCP. We need to install a DHCP server on our VPS. We are going to use dnsmasq as our DHCP server.

1 # apt-get install dnsmasq

Now edit the /etc/dnsmasq.conf file. Add these 3 lines at the end.

1 2 3 interface=tap\_soft

The above 3 lines are used to enable the dhcp server on interface tap\_soft.

Next step we need a new set of init script which will config tap interface for us when Softether start up.

/etc/init.d/vpnserver

1 2	3	4	5
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Then we need to enable NAT on linux server.

Add this file to /etc/sysctl.d/ to enable ipv4 forwarding.

/etc/sysctl.d/ipv4 forwarding.conf

1 net.ipv4.ip\_forward = 1

Apply the sysctl run

1 # sysctl --system

Then we add a POSTROUTING rule to iptables

1 # iptables -t nat -A POSTROUTING -s 192.168.7.0/24 -j SNAT --to-source

To make our iptables rule survive after reboot install iptables-persistent

1 # apt-get install iptables-persistent

After all the above setting, restart the vpnserver then we are good to go.

1 2 # /etc/init.d/vpnserver re#tætc/init.d/dnsmasq rest

Comparison on SecureNAT and local bridge method.



Speed test on local bridge

C SPEEDTEST.NET 2.05° KM DOWNLOAD UPLDAD PING 4.42 Nb/s 0.57 Nb/s 256 m GRADE: D SLOWER THAN 71X0

Speed test on SecureNAT

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# Conclusion

Local bridge use far less CPU resources than SecureNAT. It is a bit trouble to setup but I think it is worth to use local bridge.