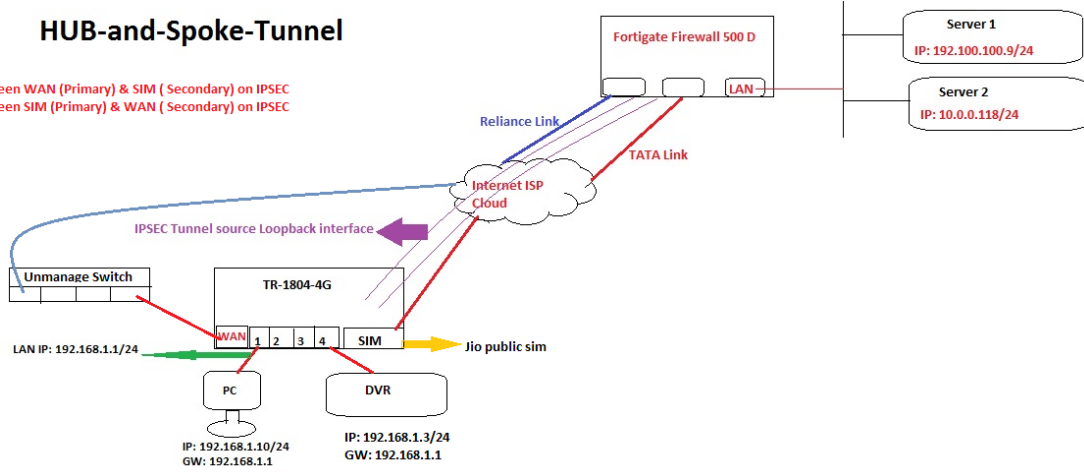


Topology

HUB-and-Spoke-Tunnel

- Requirement:
- 1) Failover between WAN (Primary) & SIM (Secondary) on IPSEC
 - 2) Failover between SIM (Primary) & WAN (Secondary) on IPSEC



Failover Configuration

TR-1804-4G Wireless Cellular Router/Modem
UNSAVED CHANGES: 1

Status

System

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ICMP Check

VRRP

Failover

DTU

SNMP

GPS

SMS

VPN

DDNS

Connect Radio Module

NMS

Network

Logout

Failover
Advanced

Failover Configuration

Failover Settings

Enable

Back To High priority

Current interface primary

Primary Configuration

Primary Cell_mobile

Host1 to ping 8.8.8.8

Host2 to ping

Ping timeout 1

Max Retries 5

Interval between ping 10

Secondary Configuration

Secondary:

Host1 to ping:

Host2 to ping:

Ping timeout:

Max Retries:

Interval between ping:

Third Configuration

Third:

Host1 to ping:

Host2 to ping:

Ping timeout:

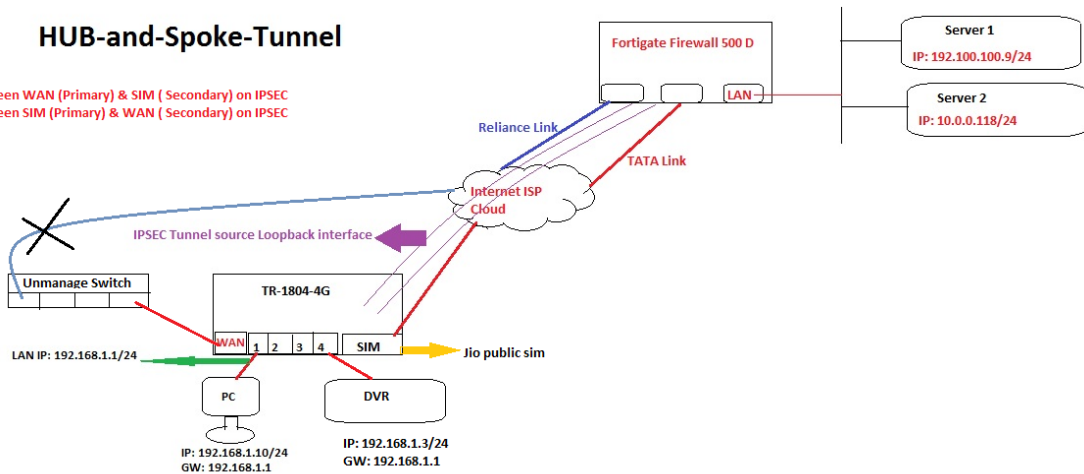
Max Retries:

Interval between ping:

SIM (Primary link) up and WAN (Secondary link) down

HUB-and-Spoke-Tunnel

- Requirement:
- 1) Failover between WAN (Primary) & SIM (Secondary) on IPSEC
 - 2) Failover between SIM (Primary) & WAN (Secondary) on IPSEC



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IPSec | **IPSec Log** | OpenVPN | PPTP tunnel | L2TP tunnel

IPSec Status

```
Status of IKE charon daemon (weakSwan 5.3.3, Linux 3.18.29, mips):
uptime: 58 seconds, since Jul 31 17:27:27 2018
malloc: sbrk 114688, mmap 0, used 107752, free 6936
worker threads: 11 of 16 idle, 5/0/0 working, job queue: 0/0/0, scheduled: 4
loaded plugins: charon random nonce aes des sha1 sha2 md5 pem pkcs1 grp x509 revocation hmac stroke kernel-netlink socket-default updown xauth-generic
Listening IP addresses:
192.168.1.1
fdfd:65e6:bd35::1
10.93.196.41
Connections:
TATA_Link: %any...14.141.165.149 IKEv1, dpddelay=30s
TATA_Link: local: [10.93.196.41] uses pre-shared key authentication
TATA_Link: remote: [14.141.165.149] uses pre-shared key authentication
TATA_Link: child: 172.16.102.234/32 === 192.100.100.0/24 TUNNEL, dpdaction=clear
TATA_Link_1: child: 172.16.102.234/32 === 10.0.0.0/24 TUNNEL, dpdaction=clear
Security Associations (1 up, 0 connecting):
TATA_Link(1): ESTABLISHED 58 seconds ago, 10.93.196.41[10.93.196.41]...14.141.165.149[14.141.165.149]
TATA_Link(1): IKEv1 SPIs: 55e8f7d79537c963_j 39f1bae87521fee_j, pre-shared key reauthentication in 23 hours
TATA_Link(1): IKE proposal: AES_CBC_128/HMAC_MD5_96/PRF_HMAC_MD5/MODP_1024
TATA_Link(1): INSTALLED, TUNNEL, reqid 1, ESP in UDP SPIs: c5693dee_j c858693b_o
TATA_Link(1): AES_CBC_128/HMAC_SHA1_96, 16222 bytes_i (257 pkts, 0s ago), 14480 bytes_o (205 pkts, 0s ago), rekeying in 11 hours
TATA_Link(1): 172.16.102.234/32 === 192.100.100.0/24
TATA_Link_1(2): INSTALLED, TUNNEL, reqid 2, ESP in UDP SPIs: c1d00544_j c858693c_o
TATA_Link_1(2): AES_CBC_128/HMAC_SHA1_96, 0 bytes_i, 3120 bytes_o (52 pkts, 0s ago), rekeying in 11 hours
TATA_Link_1(2): 172.16.102.234/32 === 10.0.0.0/24
```

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Routes

The following rules are currently active on this system.

ARP

IPv4-Address	MAC-Address	Interface
192.168.1.64	8c:e7:48:4a:00:66	br-ian
192.168.1.10	c8:5b:76:7a:52:30	br-ian

Active IPv4-Routes

Network	Target	IPv4-Gateway	Metric	Table
ifmobile	10.0.0.0/24	10.64.64.65	0	220
ifmobile	192.100.100.0/24	10.64.64.65	0	220
ifmobile	0.0.0.0/0	10.64.64.65	0	main
ifmobile	10.64.64.65		0	main
lan	192.168.1.0/24		0	main
ifmobile	8.8.8.8	10.64.64.65	0	local

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 Mobile **WAN** LAN

Mobile Status

Mobile 1

Cellular Status	Up
Cell Modem	SLM730_SLM750 (05C6_F601)
IMEI/ESN	868621029221243
Sim Status	SIM Ready
Strength	20 / 31, dBm : -73
Selected Network	4G (LTE) only
Registered Network	Registered on Roaming network: "JIO 4G", 7,
Sub Network Type	TDD LTE
Location Area Code	4E
Cell ID	B9010
Band	40,39025
ICCID	89918740400031581709
RSRP	-104 dBm

RSRP	-104 dBm
RSRQ	-12 dB
SINR	6.0 dB
MSISDN/IMSI	/ 405874003635168

Connection Status

Port	Mobile-PPP
IPv4 Addr	10.93.196.41/32
DNS 1	49.45.0.1
Gateway	10.64.64.65
Uptime	0h 2m 16s
RX	66.39 KB (537 Pkts.)
TX	85.79 KB (789 Pkts.)

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 Mobile WAN **LAN**

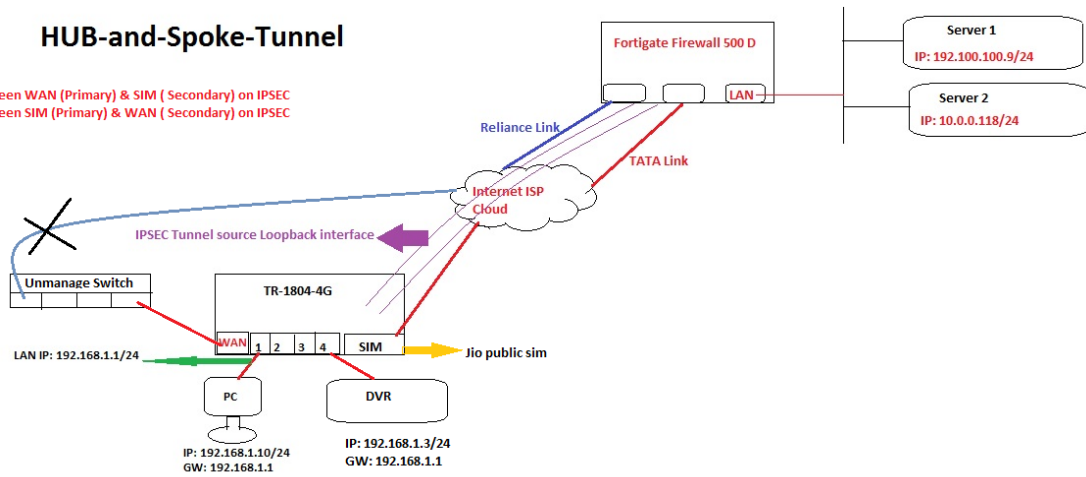
WAN Status


IPv4 WAN Status	<table border="1"> <tr><td>Port</td><td>pppoe-wan</td></tr> <tr><td>Protocol:</td><td>pppoe</td></tr> <tr><td>Address:</td><td>0.0.0.0</td></tr> <tr><td>Netmask:</td><td>255.255.255.255</td></tr> <tr><td>Gateway:</td><td>0.0.0.0</td></tr> <tr><td>Mac Addr:</td><td>00:00:00:00:00:00</td></tr> <tr><td>RX</td><td>0.00 B (0 Pkts.)</td></tr> <tr><td>TX</td><td>0.00 B (0 Pkts.)</td></tr> </table>	Port	pppoe-wan	Protocol:	pppoe	Address:	0.0.0.0	Netmask:	255.255.255.255	Gateway:	0.0.0.0	Mac Addr:	00:00:00:00:00:00	RX	0.00 B (0 Pkts.)	TX	0.00 B (0 Pkts.)
Port	pppoe-wan																
Protocol:	pppoe																
Address:	0.0.0.0																
Netmask:	255.255.255.255																
Gateway:	0.0.0.0																
Mac Addr:	00:00:00:00:00:00																
RX	0.00 B (0 Pkts.)																
TX	0.00 B (0 Pkts.)																
IPv6 WAN Status	Not connected																
Active Connections	<input type="text" value="256 / 16384 (1%)"/>																

Again SIM (Primary link) up and WAN (Secondary link) down

HUB-and-Spoke-Tunnel

- Requirement:
- 1) Failover between WAN (Primary) & SIM (Secondary) on IPSEC
 - 2) Failover between SIM (Primary) & WAN (Secondary) on IPSEC




TR-1804-4G Wireless Cellular Router/Modem

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Routes

The following rules are currently active on this system.

ARP

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192.168.1.64	8c:e7:48:4a:00:66	br-ian
192.168.1.10	c8:5b:76:7a:52:30	br-ian

Active IPv4-Routes

Network	Target	IPv4-Gateway	Metric	Table
ifmobile	10.0.0.0/24	10.64.64.65	0	220
ifmobile	192.100.100.0/24	10.64.64.65	0	220
ifmobile	0.0.0.0/0	10.64.64.65	0	main
ifmobile	10.64.64.65		0	main
lan	192.168.1.0/24		0	main
ifmobile	8.8.8.8	10.64.64.65	0	local

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 Mobile **WAN** LAN

Mobile Status

Mobile 1

Cellular Status	Up
Cell Modem	SLM730_SLM750 (05C6_F601)
IMEI/ESN	868621029221243
Sim Status	SIM Ready
Strength	20 / 31, dBm : -73
Selected Network	4G (LTE) only
Registered Network	Registered on Roaming network: "JIO 4G", 7,
Sub Network Type	TDD LTE
Location Area Code	4E
Cell ID	B9010
Band	40,39025
ICCID	89918740400031581709
RSRP	-104 dBm

RSRP	-104 dBm
RSRQ	-12 dB
SINR	6.0 dB
MSISDN/IMSI	/ 405874003635168

Connection Status

Port	Mobile-PPP
IPv4 Addr	10.93.196.41/32
DNS 1	49.45.0.1
Gateway	10.64.64.65
Uptime	0h 2m 16s
RX	66.39 KB (537 Pkts.)
TX	85.79 KB (789 Pkts.)

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 Mobile WAN **LAN**

WAN Status

IPv4 WAN Status	Port	pppoe-wan
	Protocol:	pppoe
	Address:	0.0.0.0
	Netmask:	255.255.255.255
	Gateway:	0.0.0.0
	Mac Addr:	00:00:00:00:00:00
	RX	0.00 B (0 Pkts.)
	TX	0.00 B (0 Pkts.)

IPv6 WAN Status	Not connected
Active Connections	<input type="text" value="256 / 18384 (1%)"/>

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IPSec [IPSec Log](#) [OpenVPN](#) [PPTP tunnel](#) [L2TP tunnel](#)

IPSec Status

Status of IKE charon daemon (weakSwan 5.3.3, Linux 3.18.29, mips):

uptime: 58 seconds, since Jul 31 17:27:27 2018

malloc: sbrk 114688, mmap 0, used 107752, free 6936

worker threads: 11 of 16 idle, 5/0/0 working, job queue: 0/0/0, scheduled: 4

loaded plugins: charon random nonce aes des sha1 sha2 md5 pem pkcs1 grp x509 revocation hmac stroke kernel-netlink socket-default updown xauth-generic

Listening IP addresses:

192.168.1.1

fdfd:65e6:bd35::1

10.93.196.41

Connections:

TATA_Link: %any...14.141.165.149 IKEv1, dpddelay=30s

TATA_Link: local: [10.93.196.41] uses pre-shared key authentication

TATA_Link: remote: [14.141.165.149] uses pre-shared key authentication

TATA_Link: child: 172.16.102.234/32 === 192.100.100.0/24 TUNNEL, dpdaction=clear

TATA_Link_1: child: 172.16.102.234/32 === 10.0.0.0/24 TUNNEL, dpdaction=clear

Security Associations (1 up, 0 connecting):

TATA_Link[1]: ESTABLISHED 58 seconds ago, 10.93.196.41[10.93.196.41]...14.141.165.149[14.141.165.149]

TATA_Link[1]: IKEv1 SPIs: 55e8f7d78637c963_j 38f15ae8f7521fee_j pre-shared key reauthentication in 23 hours

TATA_Link[1]: IKE proposal: AES_CBC_128/HMAC_MD5_96/PRF_HMAC_MD5/MODP_1024

TATA_Link[1]: INSTALLED, TUNNEL, reqid 1, ESP in UDP SPIs: c5693dee_i c858693d_o

TATA_Link[1]: AES_CBC_128/HMAC_SHA1_96, 16222 bytes_i (257 pkts, 0s ago), 14480 bytes_o (205 pkts, 0s ago), rekeying in 11 hours

TATA_Link[1]: 172.16.102.234/32 === 192.100.100.0/24

TATA_Link[1(2)]: INSTALLED, TUNNEL, reqid 2, ESP in UDP SPIs: c1d00544_j c858693c_o

TATA_Link[1(2)]: AES_CBC_128/HMAC_SHA1_96, 0 bytes_i 3120 bytes_o (52 pkts, 0s ago), rekeying in 11 hours

TATA_Link[1(2)]: 172.16.102.234/32 === 10.0.0.0/24


```
C:\Windows\system32\cmd.exe - ping 192.100.100.9 -t
Reply from 192.100.100.9: bytes=32 time=106ms TTL=60
Reply from 192.100.100.9: bytes=32 time=102ms TTL=60
Reply from 192.100.100.9: bytes=32 time=98ms TTL=60
Reply from 192.100.100.9: bytes=32 time=92ms TTL=60
Reply from 192.100.100.9: bytes=32 time=93ms TTL=60
Reply from 192.100.100.9: bytes=32 time=90ms TTL=60
Reply from 192.100.100.9: bytes=32 time=86ms TTL=60
Reply from 192.100.100.9: bytes=32 time=137ms TTL=60
Reply from 192.100.100.9: bytes=32 time=125ms TTL=60
Reply from 192.100.100.9: bytes=32 time=122ms TTL=60
Reply from 192.100.100.9: bytes=32 time=87ms TTL=60
Reply from 192.100.100.9: bytes=32 time=79ms TTL=60
Reply from 192.100.100.9: bytes=32 time=72ms TTL=60
Reply from 192.100.100.9: bytes=32 time=107ms TTL=60
Reply from 192.100.100.9: bytes=32 time=146ms TTL=60
Reply from 192.100.100.9: bytes=32 time=144ms TTL=60
Reply from 192.100.100.9: bytes=32 time=144ms TTL=60
Reply from 192.100.100.9: bytes=32 time=72ms TTL=60
Reply from 192.100.100.9: bytes=32 time=104ms TTL=60
Reply from 192.100.100.9: bytes=32 time=97ms TTL=60
Reply from 192.100.100.9: bytes=32 time=96ms TTL=60
Reply from 192.100.100.9: bytes=32 time=61ms TTL=60
Reply from 192.100.100.9: bytes=32 time=89ms TTL=60
Reply from 192.100.100.9: bytes=32 time=87ms TTL=60

C:\Windows\system32\cmd.exe - ping 10.0.0.113 -t
Reply from 192.100.100.9: bytes=32 time=94ms TTL=60
Reply from 192.100.100.9: bytes=32 time=90ms TTL=60
Reply from 192.100.100.9: bytes=32 time=87ms TTL=60
Reply from 192.100.100.9: bytes=32 time=83ms TTL=60
Reply from 192.100.100.9: bytes=32 time=82ms TTL=60
Reply from 192.100.100.9: bytes=32 time=79ms TTL=60
Reply from 192.100.100.9: bytes=32 time=61ms TTL=60
Reply from 192.100.100.9: bytes=32 time=125ms TTL=60
Reply from 192.100.100.9: bytes=32 time=114ms TTL=60
Reply from 192.100.100.9: bytes=32 time=110ms TTL=60
Reply from 192.100.100.9: bytes=32 time=86ms TTL=60
Reply from 192.100.100.9: bytes=32 time=67ms TTL=60
Reply from 192.100.100.9: bytes=32 time=72ms TTL=60
Reply from 192.100.100.9: bytes=32 time=99ms TTL=60
Reply from 192.100.100.9: bytes=32 time=136ms TTL=60
Reply from 192.100.100.9: bytes=32 time=134ms TTL=60
Reply from 192.100.100.9: bytes=32 time=63ms TTL=60
Reply from 192.100.100.9: bytes=32 time=95ms TTL=60
Reply from 192.100.100.9: bytes=32 time=88ms TTL=60
Reply from 192.100.100.9: bytes=32 time=86ms TTL=60
Reply from 192.100.100.9: bytes=32 time=72ms TTL=60
Reply from 192.100.100.9: bytes=32 time=79ms TTL=60
Reply from 192.100.100.9: bytes=32 time=77ms TTL=60
```

Cell ID	B9023
Band	3,1336
ICCID	89918740400031581709
RSRP	-118 dBm
RSRQ	-19 dB
SINR	2.0 dB
MSISDN/MSI	*MODE: 0, 0 / 405874003635168

Connection Status

Port	Mobile-PPP
IPv4 Addr	10.93.196.41/32
DNS 1	49.45.0.1
Gateway	10.64.64.65
Uptime	0h 3m 28s
RX	128.96 KB (1007 Pkts.)
TX	225.91 KB (1164 Pkts.)


TR-1804-4G Wireless Cellular Router/Modem
UNSAVED CHANGES: 2

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IPSec
IPSec Log
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L2TP tunnel

IPSec Status

Refresh

Status of IKE charon daemon (weakSwan 5.3.3, Linux 3.18.29, mips):

uptime: 3 minutes, since Jul 31 17:40:52 2018

malloc: sbrk 114688, mmap 0, used 107760, free 6928

worker threads: 11 of 16 idle, 5/0/0 working, job queue: 0/0/0, scheduled: 4

loaded plugins: charon random nonce aes des sha1 sha2 md5 pem pkcs1 gmp x509 revocation hmac stroke kernel-netlink socket-default updown xauth-generic

Listening IP addresses:

192.168.1.1

fdfd:66e6:bd35::1

10.93.196.41

Connections:

TATA_Link: %any...14.141.165.149 IKEv1, dpddelay=30s

TATA_Link: local: [10.93.196.41] uses pre-shared key authentication

TATA_Link: remote: [14.141.165.149] uses pre-shared key authentication

TATA_Link: child: 172.16.102.234/32 === 192.100.100.0/24 TUNNEL, dpdaction=clear

TATA_Link_1: child: 172.16.102.234/32 === 10.0.0.0/24 TUNNEL, dpdaction=clear

Security Associations (1 up, 0 connecting):

TATA_Link[1]: ESTABLISHED 3 minutes ago, 10.93.196.41[10.93.196.41]-14.141.165.149[14.141.165.149]

TATA_Link[1]: IKEv1 SPIs: e453a5c8ca78b1c9_1f 538657cfa9ab09da_r, pre-shared key reauthentication in 23 hours

TATA_Link[1]: IKE proposal: AES_CBC_128/HMAC_MD5_96/PRF_HMAC_MD5/MODP_1024

TATA_Link[1]: INSTALLED, TUNNEL, reqid 1, ESP in UDP SPIs: c5f1391_1 c8596a60_o

TATA_Link[1]: AES_CBC_128/HMAC_SHA1_96, 62976 bytes_i (997 pkts, 1s ago), 143241 bytes_o (822 pkts, 1s ago), rekeying in 11 hours

TATA_Link[1]: 172.16.102.234/32 === 192.100.100.0/24

TATA_Link_1[2]: INSTALLED, TUNNEL, reqid 2, ESP in UDP SPIs: c099bb7b_j c8586a61_o

TATA_Link_1[2]: AES_CBC_128/HMAC_SHA1_96, 0 bytes_i, 11460 bytes_o (191 pkts, 1s ago), rekeying in 11 hours

TATA_Link_1[2]: 172.16.102.234/32 === 10.0.0.0/24