

Figure : TR 1905-LTE /TR1804-4G BGP with link failover test diagram

TR -1905-LTE BGP with link failover test case:-

- 1) Link failover wired-wan and cell configure primary link wired-wan secondary cell.
- 2) BGP with failover configure on TR 1905-LTE, Primary wired-wan up BGP session established via Wan interface with neighbor 172.36.252.69
- 3) When Primary wired-wan link status change to down secondary cell get up and BGP session established with source loopback ( neighbor 172.42.63.81) via cell interface.
- 4) Primary link fall-back , then BGP session auto clear via cell interface and established via wired-wan link.

TR1905 - Overview

Not secure | 192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172

# Techroutes NETWORK

## TR-1905-LTE Wireless Cellular Router/Modem






UNSAVED CHANGES: 1 AUTO REFRESH ON

**Status**

- Overview
- Network
- Firewall
- Routes
- System Log
- Kernel Log
- Reboot Log
- Realtime Graphs
- VPN
- System
- Services
- Network
- Logout

### Status

**System**

Hostname	TR1905
SN	660420158A009BF4
Firmware Version	3.2.191
Kernel Version	3.18.29
Local Time	Tue Jan 7 17:12:30 2020
Uptime	2h 18m 24s
Load Average	1.24, 0.98, 1.21
Port Status	     LAN1 LAN2 LAN3 LAN4 WAN

**Mobile 1**

Cellular Status	Down(Working mobile)
IP Address	
DNS 1	10.0.8.89
DNS 2	10.0.8.92
Cell Modem	SLM730_SLM750 (05C6_F601 )
IMEI/ESN	863879041672950
Sim Status	SIM Ready

TR1905 - Operation Mode

Not secure | 192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172/admin/network/opermode

# Techroutes NETWORK

## TR-1905-LTE Wireless Cellular Router/Modem

**Status**

**System**

**Services**

**Network**

- Operation Mode
- Mobile
- LAN
- Wired WAN
- WAN IPv6
- Interfaces
- Wi-Fi
- Firewall
- Static Routes
- Switch

### Operation mode configuration

You may configure the operation mode suitable for you environment.

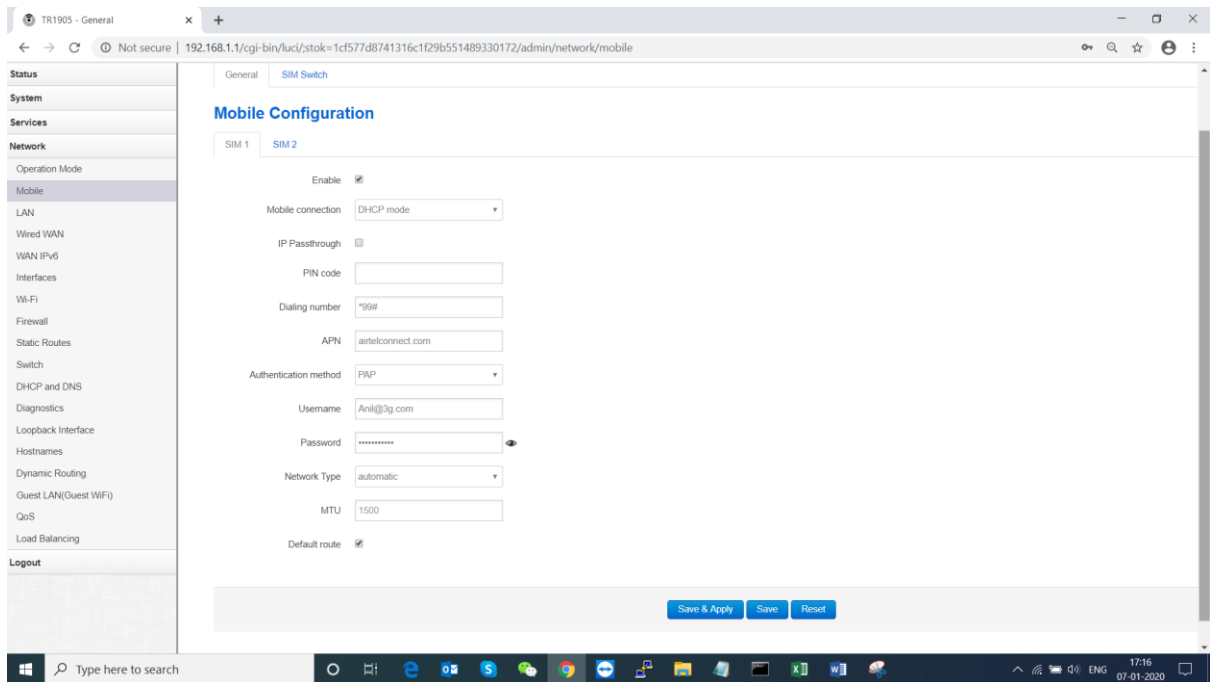
Operation mode

- Bridge mode  
All ethernet and wireless interfaces are bridged into a single bridge interface.
- Gateway mode  
The first ethernet port is treated as WAN port. The other ethernet ports and the wireless interface are bridged together and are treated as LAN ports.
- AP client mode  
The wireless ap client interface is treated as WAN port

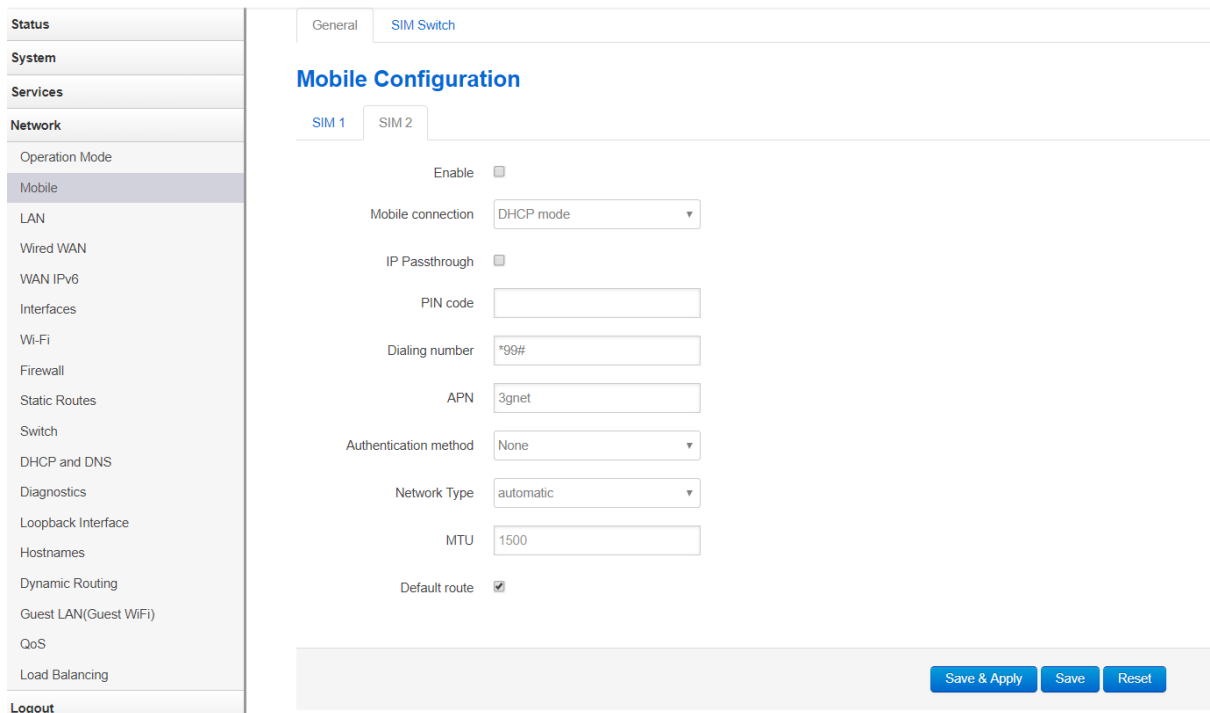
Wired-WAN port role

- Wired-WAN port acts as WAN
- Wired-WAN port acts as LAN

NAT enable



## Using SIM1 only Sim2 disabled



Sim switch configuration default:-

UNSAVED CHANGES: 4

**Status**

**System**

**Services**

**Network**

Operation Mode

**Mobile**

LAN

Wired WAN

WAN IPv6

Interfaces

Wi-Fi

Firewall

Static Routes

Switch

DHCP and DNS

Diagnostics

Loopback Interface

Hostnames

Dynamic Routing

Guest LAN(Guest WiFi)

General SIM Switch

### Cell Switch Configuration

Master SIM SIM 1

Enable SIM switch

#### Switch Rules

On Time

On ICMP check

On signal strength

On dial fail

On data limit

Switch to master

Save & Apply
Save
Reset

## Interface Wired-wan configuration

**Status**

**System**

**Services**

**Network**

**Logout**

### Interfaces - WAN

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interface INTERFACE.VLANNR (e.g.: eth0.1).

#### Common Configuration

General Setup **Advanced Settings** Physical Settings Firewall Settings

Status eth0.2

**Uptime:** 0h 4m 13s  
**MAC-Address:** 90:22:06:00:8F:5A  
**RX:** 131.90 KB (2265 Pkts.)  
**TX:** 154.24 KB (1852 Pkts.)  
**IPv4:** 172.36.252.70/30

Protocol Static address

IPv4 address 172.36.252.70

IPv4 netmask 255.255.255.252

IPv4 gateway 172.36.252.69

IPv4 broadcast

**Link failover configuration wired-wan and cell (primary link is wired-wan , Secondary is SIM )**  
**When primary link remain up default route via wired-wan meanwhile cell remain down:-**

Status
System
Services
ICMP Check
VRRP
Failover
SNMP
DTU
Modbus
GPS
SMS
VPN
DDNS
Connect Radio Module
Captive Portal
NMS
WEB Filter
Network
Logout

Failover [Advanced](#)

## Failover Configuration

### Failover Settings

Enable

Back To High priority

Current interface primary

### Primary Configuration

Primary Wired\_wan

Host1 to ping 10.55.11.69

Host2 to ping

Ping timeout 1

Max Retries 3

Interval between ping 10

NAT Default

### Secondary Configuration

Secondary Cell\_mobile

Host1 to ping

Host2 to ping

Ping timeout 1

Max Retries 10

Interval between ping 30

NAT Default

### Third Configuration

Third None

Host1 to ping

Host2 to ping

Ping timeout 1

# Firewall

## Network Firewall Traffic Rules.

- 1) Allow All LAN Ports Enable Check Box and Save & Apply.
- 2) Open ports on router for Telnet (Name: Telnet, Protocol: TCP+UDP, External Port: 23) first need to click on add button then Save & Apply.
- 3) Open ports on router for BGP (Name: BGP, Protocol: TCP+UDP, External Port: 179) first need to click on add button then Save & Apply.

After

The screenshot displays the Mikrotik WinBox Firewall configuration interface. At the top, two ICMPv6 rules are listed: 'Allow-ICMPv6-Input' and 'Allow-ICMPv6-Forward', both set to 'Accept second'. Below these is the 'Open ports on router:' section, which contains a table with columns for Name, Protocol, and External port. A row for 'BGP' is highlighted with a red box, showing 'TCP+UDP' as the protocol and '179' as the external port, with an 'Add' button next to it. Below this is the 'New forward rule:' section, which has a table with columns for Name, Source zone, and Destination zone. A row for 'New forward rule' is shown with 'lan' as the source zone and 'wan' as the destination zone, with an 'Add and edit...' button. At the bottom right, there are three buttons: 'Save & Apply' (highlighted with a red box), 'Save', and 'Reset'.

# Firewall

## Network Firewall Security.

- 1) Select Allow option from side box SSH access from WAN.
- 2) Select Allow option from side box Ping from wan to LAN.
- 3) Tick the box of Enable telnet.

TR1905 - Security x +

Not secure | 192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172/admin/network/firewall/security/

UNSAVED CHANGES: 1

General Settings Port Forwards Traffic Rules Source NAT DMZ Security **MAC Filter**

### System Security Configuration

SSH access from WAN

Ping from WAN to LAN

Enable telnet

#### HTTPS Access

HTTPS port

HTTPS access from WAN

Remote network

#### HTTP Access

HTTP port

HTTP access from WAN

Remote network

RFC1918 filter

Save & Apply Save Reset

## Loopback Interface configuration

Network -----loopback interface configure loopback IP172.42.63.82/32

TR1905 - Loopback Interface x +

Not secure | 192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172/admin/network/lo

Techroutes NETWORK TR-1905-LTE Wireless Cellular Router/Modem

UNSAVED CHANGES: 3

### Loopback Interface Configuration

IP address

Netmask

IP address 2

Netmask 2

Save & Apply Save Reset

## Dynamic Routing

### Network Dynamic Routing.

- 1) Tick the box of Enable Zebra.
- 2) Tick the box of Enable BGP.
- 3) Save and Apply.

The screenshot shows a web browser window with the URL `192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172/admin/`. The page title is "TR-1905-LTE Wireless Cellular". The left sidebar contains a navigation menu with the following items: Status, System, Services, Network, Operation Mode, Mobile, LAN, Wired WAN, WAN IPv6, Interfaces, Wi-Fi, Firewall, Static Routes, Switch, DHCP and DNS, Diagnostics, Loopback Interface, Hostnames, and Dynamic Routing (highlighted).

### Dynamic Routing

**Zebra**

Enable

Password

**OSPF**

Enable

Password

**OSPF6**

Enable

Password

**RIP**

Enable



## RIP

Enable

Password  

## RIPng

Enable

Password  

## BGP

Enable

Password  

Save & Apply

Save

Reset

# Telnet TR 1905-LTE Router via local LAN IP.

- 1) Local Username: router Password: admin!@#.
- 2) Again Tenet local LAN with BGP port no 2605 and type password zebra.
- 3) Here can do BGP Configuration via cmd.

```
192.168.1.1-PuTTY
WARNING: telnet is a security risk.
TR1905 login: router
Password:
login:Router
Password:admin!@#

BusyBox v1.23.2 (2019-04-17 10:54:22 CST) built-in shell (ash)
=====TR1905=====
root@TR1905:~#
root@TR1905:~# telnet 192.168.1.1 2605
Again Telnet Router with BGP login
port :2605

Entering character mode
Escape character is '^]'.

Hello, this is Quagga (version 0.99.22.4).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

User Access Verification
Password:
TR1905>
TR1905> ena
TR1905#
TR1905# config t
TR1905(config)#
TR1905(config)#
```

```
root@TR1905:~#
root@TR1905:~# telnet 192.168.1.1 2605

Entering character mode
Escape character is '^]'.

Hello, this is Quagga (version 0.99.22.4).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

User Access Verification

Password:
Password:
Password:
TR1905>
TR1905> ena
TR1905#
TR1905# sh run

Current configuration:
!
password zebra
!
router bgp 64520
  bgp router-id 192.168.1.1
  network 192.168.1.0/24
  redistribute connected
  redistribute static
  neighbor 172.36.252.69 remote-as 9730
  neighbor 172.36.252.69 ebgp-multihop 6
  neighbor 172.42.63.81 remote-as 9730
  neighbor 172.42.63.81 ebgp-multihop 5
  neighbor 172.42.63.81 update-source lo
  neighbor 172.42.63.81 timers 5 15
!
access-list vty permit any
access-list vty deny any
!
line vty
  access-class vty
!
end
TR1905#
```

via source wired-wan primary  
for cell source loopback interface

```
router bgp 64520
  bgp router-id 192.168.1.1
  network 192.168.1.0/24
  redistribute connected
  redistribute static
  neighbor 172.36.252.69 remote-as 9730 // neighbor 172.36.252.69 for wired-wan
  neighbor 172.36.252.69 ebgp-multihop 6
  neighbor 172.42.63.81 remote-as 9730 // neighbor 172.42.63.81 is for cell interface
  neighbor 172.42.63.81 ebgp-multihop 5
  neighbor 172.42.63.81 update-source lo
  neighbor 172.42.63.81 timers 5 15
```

```
TR1905# sh ip bgp summary
```

```
BGP router identifier 192.168.1.1, local AS number 64520
```

```
RIB entries 66, using 4752 bytes of memory
```

```
Peers 2, using 5056 bytes of memory
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
172.36.252.69	4	9730	28	21	0	0	0	00:15:35	33
172.42.63.81	4	9730	0	0	0	0	0	never	Connect

BGP with primary wired link up and working,  
Secondary link is down

```
Total number of neighbors 2
```

```
TR1905#
```

```
TR1905# sh ip bgp neighbors
```

```
BGP neighbor is 172.36.252.69, remote AS 9730, local AS 64520, external link
```

```
BGP version 4, remote router ID 202.123.42.1
```

```
BGP state = Established, up for 00:15:45
```

```
Last read 00:00:40, hold time is 180, keepalive interval is 60 seconds
```

```
Neighbor capabilities:
```

```
4 Byte AS: advertised and received
```

```
Route refresh: advertised and received(old & new)
```

```
Address family IPv4 Unicast: advertised and received
```

```
Graceful Restart Capabilty: received
```

```
Remote Restart timer is 120 seconds
```

```
Address families by peer:
```

```
IPv4 Unicast(preserved)
```

```
Graceful restart informations:
```

```
End-of-RIB send: IPv4 Unicast
```

```
End-of-RIB received:
```

```
Message statistics:
```

```
Inq depth is 0
```

```
Outq depth is 0
```

	Sent	Rcvd
Opens:	1	1
Notifications:	0	0
Updates:	3	12
Keepalives:	17	15
Route Refresh:	0	0
Capability:	0	0
Total:	21	28

```
Minimum time between advertisement runs is 30 seconds
```

```
For address family: IPv4 Unicast
```

```
Community attribute sent to this neighbor(both)
```

```
33 accepted prefixes
```

```
Connections established 1; dropped 0
```

```
Last reset never
```

```
External BGP neighbor may be up to 6 hops away.
```

```
Local host: 172.36.252.70, Local port: 53513
```

```
Foreign host: 172.36.252.69, Foreign port: 179
```

```
Nextthop: 172.36.252.70
```

```
Nextthop global: fe80::9222:6ff:fe00:8f5a
```

```
Nextthop local: ::
```

```
BGP connection: non shared network
```

```
Read thread: on Write thread: off
```

```
BGP neighbor is 172.42.63.81, remote AS 9730, local AS 64520, external link
BGP version 4, remote router ID 0.0.0.0
BGP state = Connect
Last read 00:15:53, hold time is 15, keepalive interval is 5 seconds
Configured hold time is 15, keepalive interval is 5 seconds
Message statistics:
  Inq depth is 0
  Outq depth is 0

      Sent      Rcvd
Opens:          0          0
Notifications: 0          0
Updates:        0          0
Keepalives:     0          0
Route Refresh:  0          0
Capability:     0          0
Total:          0          0
Minimum time between advertisement runs is 30 seconds
Update source is lo

For address family: IPv4 Unicast
Community attribute sent to this neighbor(both)
0 accepted prefixes

Connections established 0; dropped 0
Last reset never
External BGP neighbor may be up to 5 hops away.
Next connect timer due in 15 seconds
Read thread: on Write thread: on

TR1905#
```

```

TR1905# sh ip bgp
BGP table version is 0, local router ID is 192.168.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
               r RIB-failure, S Stale, R Removed
Origin codes: i - IGP, e - EGP, ? - incomplete

```

Network	Next Hop	Metric	LocPrf	Weight	Path
*> 3.3.3.1/32	172.36.252.69			0	9730 ?
*> 4.4.4.1/32	172.36.252.69			0	9730 ?
*> 8.8.8.1/32	172.36.252.69			0	9730 ?
*> 10.55.11.66/32	172.36.252.69			0	9730 ?
*> 10.55.11.68/32	172.36.252.69			0	9730 ?
*> 10.55.11.69/32	172.36.252.69			0	9730 ?
*> 101.0.0.0/24	172.36.252.69	0			9730 ?
*> 172.34.158.8/29	172.36.252.69			0	9730 ?
*> 172.36.240.30/32	172.36.252.69	0			9730 ?
* 172.36.252.68/30	172.36.252.69	0			9730 ?
*>	0.0.0.0	1		32768	?
*> 172.37.84.192/30	172.36.252.69			0	9730 ?
*> 172.38.34.0/30	172.36.252.69			0	9730 ?
*> 172.38.43.92/30	172.36.252.69	0			9730 ?
*> 172.38.149.88/30	172.36.252.69	0			9730 ?
*> 172.40.2.204/32	172.36.252.69			0	9730 ?
*> 172.40.2.205/32	172.36.252.69			0	9730 ?
*> 172.40.8.40/30	172.36.252.69	0			9730 ?
*> 172.40.24.66/32	172.36.252.69			0	9730 ?
*> 172.40.32.13/32	172.36.252.69			0	9730 ?
*> 172.40.32.14/32	172.36.252.69			0	9730 ?
*> 172.40.60.228/30	172.36.252.69	0			9730 ?
*> 172.40.162.26/32	172.36.252.69			0	9730 ?
*> 172.40.162.57/32	172.36.252.69			0	9730 ?
*> 172.40.224.164/30					
	172.36.252.69	0			9730 ?
*> 172.42.63.81/32	172.36.252.69			0	9730 ?
* 172.42.63.82/32	172.36.252.69			0	9730 ?
*>	0.0.0.0	1		32768	?
*> 182.78.171.216/30					
	172.36.252.69			0	9730 ?
*> 192.168.0.0/32	172.36.252.69			0	9730 ?
*> 192.168.0.4/32	172.36.252.69			0	9730 ?
* 192.168.1.0	0.0.0.0	1		32768	?
*>	0.0.0.0	0		32768	i
*> 202.92.238.208/28					
	172.36.252.69			0	9730 ?
*> 202.92.239.0/26	172.36.252.69			0	9730 9730 i
*> 202.92.239.192/26					
	172.36.252.69			0	9730 9730 i
	-----				
	172.36.252.69			0	9730 9730 i
*> 202.92.239.194/32					
	172.36.252.69			0	9730 ?

```
Total number of prefixes 34
```

```

root@TR1905:~# route
Kernel IP routing table
Destination      Gateway         Genmask        Flags Metric Ref    Use Iface
default          172.36.252.69  0.0.0.0       UG    0      0      0 eth0.2
3.3.3.1          172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
4.4.4.1          172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
8.8.8.1          172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
10.55.11.66     172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
10.55.11.68     172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
10.55.11.69     172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
101.0.0.0       172.36.252.69  255.255.255.0   UG    0      0      0 eth0.2
172.34.158.8    172.36.252.69  255.255.255.248 UG    0      0      0 eth0.2
172.36.240.30   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.36.252.68   *              255.255.255.252 U      0      0      0 eth0.2
172.37.84.192  172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.38.34.0     172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.38.43.92   172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.38.149.88  172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.40.2.204   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.2.205   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.8.40    172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.40.24.66   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.32.13   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.32.14   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.60.228  172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.40.162.26  172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.162.57  172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
172.40.224.164 172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
172.42.63.81   172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
182.78.171.216 172.36.252.69  255.255.255.252 UG    0      0      0 eth0.2
192.168.0.0    172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
192.168.0.4    172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
192.168.1.0    *              255.255.255.0   U      0      0      0 br-lan
202.92.238.208 172.36.252.69  255.255.255.240 UG    0      0      0 eth0.2
202.92.239.0   172.36.252.69  255.255.255.192 UG    0      0      0 eth0.2
202.92.239.192 172.36.252.69  255.255.255.192 UG    0      0      0 eth0.2
202.92.239.194 172.36.252.69  255.255.255.255 UGH   0      0      0 eth0.2
root@TR1905:~#

```

192.168.1.1/cgi-bin/luci/stok=1cd577d8741316c1f29b551489330172/admin/status/routes

## Techroutes NETWORK

### TR-1905-LTE Wireless Cellular Router/Modem

UNSAVED CHANGES

**Status**

- Overview
- Network
- Firewall
- Routes**
- System Log
- Kernel Log
- Reboot Log
- Realtime Graphs
- VPN

**System**

**Services**

**Network**

**Logout**

#### Routes

The following rules are currently active on this system.

##### ARP

IPv4-Address	MAC-Address	Interface
172.36.252.69	e0:ac:f1:5f:77:81	eth0.2
192.168.1.34	d8:c4:97:98:dd:2f	br-lan

##### Active IPv4-Routes

Network	Target	IPv4-Gateway	Metric	Table
wan	0.0.0.0/0	172.36.252.69	0	main
wan	3.3.3.1	172.36.252.69	0	main
wan	4.4.4.1	172.36.252.69	0	main
wan	8.8.8.1	172.36.252.69	0	main
wan	10.55.11.66	172.36.252.69	0	main
wan	10.55.11.68	172.36.252.69	0	main
wan	10.55.11.69	172.36.252.69	0	main
wan	101.0.0.0/24	172.36.252.69	0	main
wan	172.34.158.8/29	172.36.252.69	0	main

wan	192.168.0.4	172.36.252.69	0	main
lan	192.168.1.0/24		0	main
wan	202.92.238.208/28	172.36.252.69	0	main
wan	202.92.239.0/26	172.36.252.69	0	main
wan	202.92.239.192/26	172.36.252.69	0	main
wan	202.92.239.194	172.36.252.69	0	main
wan	10.55.11.69	172.36.252.69	0	local

Active IPv6-Routes

Network	Target	Source	Metric	Table
lan	fd::178ff:abf7::/64		1024	main
(eth0)	:::8		256	local
lan	:::8		256	local
wan	:::8		256	local
lan	:::8		256	local

## Case 2:

Down Primary wired-wan link, switch cell and BGP with source loopback via cell interface get up and BGP session with wired-wan get down :-

- Network
- Firewall
- Routes
- System Log
- Kernel Log
- Reboot Log
- Realtime Graphs
- VPN
- System**
- Services
- Network
- Logout

Hostname	TR1905
SN	660420156A009BF4
Firmware Version	3.2.191
Kernel Version	3.18.29
Local Time	Tue Jan 7 17:51:21 2020
Uptime	2h 57m 15s
Load Average	0.97, 0.60, 0.56
Port Status	<div style="display: flex; align-items: center; gap: 5px;"> <span></span> <span></span> <span></span> <span></span> <span></span> </div>

**Mobile 1**

Cellular Status	Up(Working mobile)
IP Address	10.55.11.68/255.255.255.248
DNS 1	10.0.8.89
DNS 2	10.0.8.92

Cell Modem	SLM730_SLM750 (05C6_F601 )
IMEI/ESN	863879041672950
Sim Status	SIM Ready
Strength	<span style="color: green;">T</span> 28 / 31, dBm : -58
Selected Network	Automatic
Registered Network	Registered on Home network: "IND Airtel", 7,
Sub Network Type	FDD LTE

BGP with cell is up

```

TR1905#
TR1905#
TR1905#
TR1905# sh ip bgp summ
TR1905# sh ip bgp summary
BGP router identifier 192.168.1.1, local AS number 64520
RIB entries 92, using 6624 bytes of memory
Peers 2, using 5056 bytes of memory

Neighbor    V  AS  MsgRcvd  MsgSent  TblVer  InQ  OutQ  Up/Down  State/PfxRcd
172.36.252.69 4  9730    0         0         0    0    0:00:00  never Active
172.42.63.81  4  9730   143       108         0    0    0:00:08:34  46

Total number of neighbors 2
TR1905#
TR1905#

```



```
TR1905# sh ip bgp ne
TR1905# sh ip bgp neighbors
BGP neighbor is 172.36.252.69, remote AS 9730, local AS 64520, external link
BGP version 4, remote router ID 0.0.0.0
BGP state = Active
Last read 00:10:01, hold time is 180, keepalive interval is 60 seconds
Message statistics:
  Inq depth is 0
  Outq depth is 0
  Sent      Rcvd
  Opens:    0      0
  Notifications: 0      0
  Updates:  0      0
  Keepalives: 0      0
  Route Refresh: 0      0
  Capability: 0      0
  Total:    0      0
Minimum time between advertisement runs is 30 seconds

For address family: IPv4 Unicast
Community attribute sent to this neighbor(both)
0 accepted prefixes

Connections established 0; dropped 0
Last reset never
External BGP neighbor may be up to 6 hops away.
Next connect timer due in 19 seconds
Read thread: off Write thread: off

BGP neighbor is 172.42.63.81, remote AS 9730, local AS 64520, external link
BGP version 4, remote router ID 202.123.42.87
BGP state = Established, up for 00:09:56
Last read 00:00:01, hold time is 15, keepalive interval is 5 seconds
Configured hold time is 15, keepalive interval is 5 seconds
Neighbor capabilities:
  4 Byte AS: advertised and received
  Route refresh: advertised and received(old & new)
  Address family IPv4 Unicast: advertised and received
Graceful Restart Capability: received
  Remote Restart timer is 120 seconds
Address families by peer:
  IPv4 Unicast(not preserved)
Graceful restart information:
  End-of-RIB send: IPv4 Unicast
  End-of-RIB received: IPv4 Unicast
Message statistics:
  Inq depth is 0
  Outq depth is 0
  Sent      Rcvd
```

```
192.168.11-PC1TY
Next connect timer due in 61 seconds
Read thread: off Write thread: off

BGP neighbor is 172.42.63.81, remote AS 9730, local AS 64520, external link
BGP version 4, remote router ID 202.123.42.87
BGP state = Established, up for 00:17:30
Last read 00:00:04, hold time is 15, keepalive interval is 5 seconds
Configured hold time is 15, keepalive interval is 5 seconds
Neighbor capabilities:
  4 Byte AS: advertised and received
  Route refresh: advertised and received(old & new)
  Address family IPv4 Unicast: advertised and received
Graceful Restart Capability: received
  Remote Restart timer is 120 seconds
Address families by peer:
  IPv4 Unicast(not preserved)
Graceful restart information:
  End-of-RIB send: IPv4 Unicast
  End-of-RIB received: IPv4 Unicast
Message statistics:
  Inq depth is 0
  Outq depth is 0
  Sent      Rcvd
  Opens:    1      1
  Notifications: 0      0
  Updates:  3      76
  Keepalives: 211    194
  Route Refresh: 0      0
  Capability: 0      0
  Total:    215    271
Minimum time between advertisement runs is 30 seconds
Update source is lo

For address family: IPv4 Unicast
Community attribute sent to this neighbor(both)
46 accepted prefixes

Connections established 1; dropped 0
Last reset never
External BGP neighbor may be up to 5 hops away.
Local host: 172.42.63.82, Local port: 49455
Foreign host: 172.42.63.81, Foreign port: 179
Next hop: 172.42.63.82
Next hop global: ::1
Next hop local: ::
BGP connection: non shared network
Read thread: on Write thread: off

TR1905#
TR1905#
```

TR1905 - Mobile

Not secure | 192.168.1.1/cgi-bin/luci/stok=1cf577d8741316c1f29b551489330172/admin/status/network

System	Selected Network Automatic	
Services	Registered Network Registered on Home network: "IND Airtel", 7,	
Network	Sub Network Type FDD LTE	
Logout	Location Area Code 7F1	
	Cell ID 3EB02	
	Band 1,400	
	ICCID 8991000900336877298F	
	RSRP -78 dBm	
	RSRQ -6 dB	
	SINR 30.0 dB	
	MSISDN/IMSI / 404100504699603	

### Connection Status

Port	eth1
IPv4 Addr	10.55.11.68/29
DNS 1	10.0.8.89
DNS 2	10.0.8.92
Gateway	10.55.11.69
Uptime	0h 22m 34s
RX	259.50 KB (5089 Pkts.)
TX	260.20 KB (5151 Pkts.)

**BGP established with SIM via source loopback ,when primary (wired-wan ) link go down**

```

TR1905#
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TR1905# sh ip bgp summary
BGP router identifier 192.168.1.1, local AS number 64520
RIB entries 92, using 6624 bytes of memory
Peers 2, using 5056 bytes of memory

Neighbor    V  AS MsgRcvd MsgSent  TblVer  InQ  OutQ  Up/Down  State/PfxRcd
172.36.252.69 4  9730      0      0        0    0    0 never    Active
172.42.63.81  4  9730    337    272        0    0    0 00:22:13  46

Total number of neighbors 2
TR1905#
TR1905#
TR1905#
TR1905# sh ip bgp summary
BGP router identifier 192.168.1.1, local AS number 64520
RIB entries 92, using 6624 bytes of memory
Peers 2, using 5056 bytes of memory

Neighbor    V  AS MsgRcvd MsgSent  TblVer  InQ  OutQ  Up/Down  State/PfxRcd
172.36.252.69 4  9730      0      0        0    0    0 never    Active
172.42.63.81  4  9730    350    283        0    0    0 00:23:06  46

Total number of neighbors 2
TR1905#
TR1905#
TR1905#
TR1905#

```

## BGP Route with sim

192.168.1.1 - PuTTY

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
default	10.55.11.69	0.0.0.0	UG	11	0	0	eth1
3.3.3.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
4.4.4.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
7.7.7.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
7.7.7.2	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
7.7.7.3	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
8.8.8.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
10.12.13.0	10.55.11.69	255.255.255.0	UG	0	0	0	eth1
10.55.11.64	*	255.255.255.248	U	11	0	0	eth1
10.55.11.66	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
10.55.11.68	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
10.55.11.69	*	255.255.255.255	UH	11	0	0	eth1
10.100.100.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
10.100.100.2	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
101.0.0.0	10.55.11.69	255.255.255.0	UG	0	0	0	eth1
172.19.32.0	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.34.158.8	10.55.11.69	255.255.255.248	UG	0	0	0	eth1
172.36.123.152	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.36.240.30	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.36.252.68	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.37.84.192	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.38.34.0	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.38.43.92	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.38.149.88	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.40.2.204	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.2.205	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.8.40	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.40.24.66	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.32.13	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.32.14	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.60.228	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
172.40.162.26	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.162.57	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
172.40.224.164	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
182.78.171.216	10.55.11.69	255.255.255.252	UG	0	0	0	eth1
192.168.0.0	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.0.1	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.0.2	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.0.4	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.0.6	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.0.7	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1
192.168.1.0	*	255.255.255.0	U	0	0	0	br-lan
192.168.10.0	10.55.11.69	255.255.255.0	UG	0	0	0	eth1
202.92.238.208	10.55.11.69	255.255.255.240	UG	0	0	0	eth1
202.92.239.0	10.55.11.69	255.255.255.192	UG	0	0	0	eth1
202.92.239.192	10.55.11.69	255.255.255.192	UG	0	0	0	eth1
202.92.239.194	10.55.11.69	255.255.255.255	UGH	0	0	0	eth1

root@FR1905:~#

Type here to search

18:13 07-01-2020