

Multi-WAN w/ auto notification for WAN's status updates

PH18-MUM

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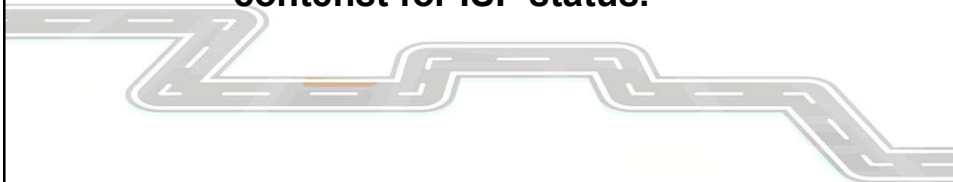
MTCTCE- 1504TCE023

MTCINE - 1504INE021

MTCUME-1511UME014

What do we have for today?

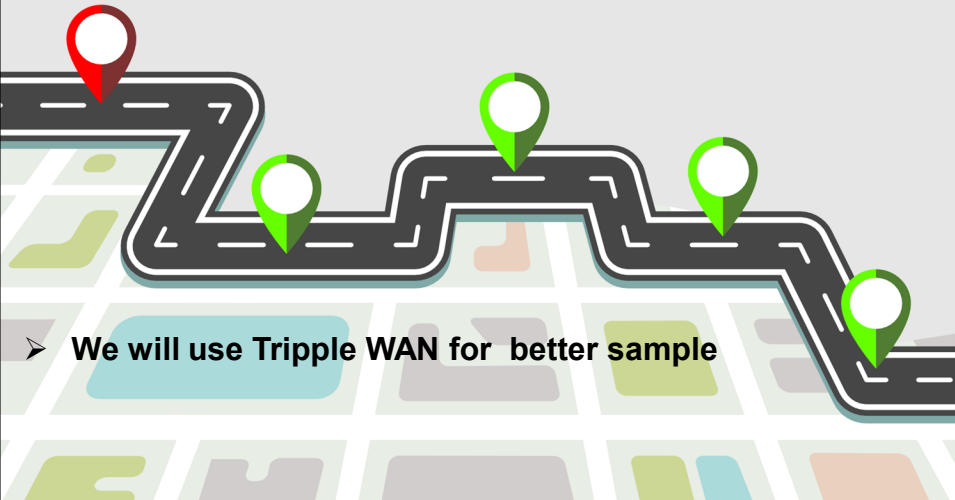
- **Basic MultiWAN using ECMP.**
- **Force destination address to route out of a specific ISP.**
- **Ensure dst.address will go out of specific route.**
- **Setup routers email settings.**
- **Setup Trigger and email content for ISP status.**





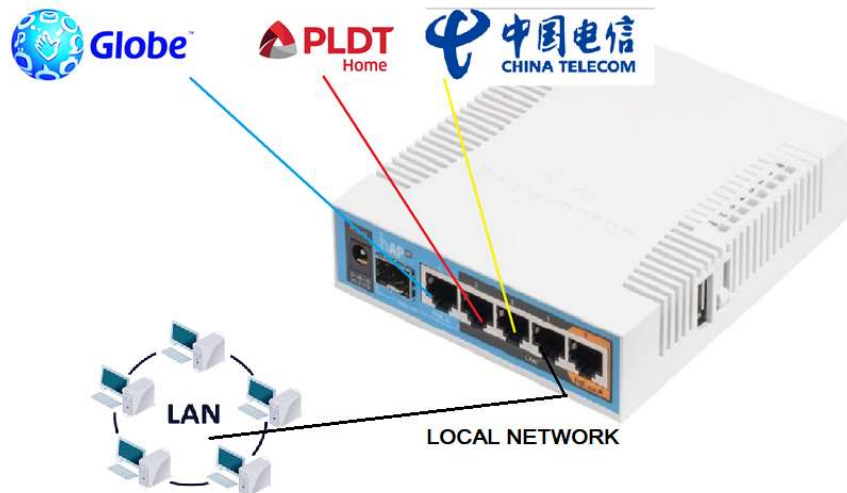
Multi-WAN Setup

Multi-WAN is a practical setup to maximize multiple ISP's
And be able to avoid downtime if you have alternate ISP.



- We will use Tripple WAN for better sample

Tripple WAN Source



IP configurations for simulation

- ISP1: 192.168.50.0/24
GW: 192.168.50.1 
- ISP2: 192.168.60.0/24
GW: 192.168.60.1 
- ISP3: 192.168.70.0/24
GW: 192.168.70.1 
- Local Network: 192.168.10.0/24
GW: 192.168.10.1

Tripple WAN setup

1. IP>Addresses
2. IP>DNS
3. Firewall>NAT>masquerade
4. Firewall>Mangle
5. IP>Routes
6. Local DHCP

Tripple WAN

IP>Addresses

Address List

Address	Network	Interface
... LOCAL Network		
192.168.10.254/24	192.168.10.0	ether4
192.168.50.254/24	192.168.50.0	ether1-WAN1
192.168.60.254/24	192.168.60.0	ether2-WAN2
192.168.70.254/24	192.168.70.0	ether3-WAN3

IP>DNS

DNS Settings	
Servers:	208.78.222.222  208.67.220.220 

Tripple WAN

Firewall>NAT>masquerade

Firewall					
Filter Rules		NAT	Mangle	Service Ports	Connections
+ - ✓ ✗ 📁 🔍 00 Reset Counters 00 Res					
#	Action	Chain	Out. Interface		
0	masquerade	srcnat	ether1-WAN1		
1	masquerade	srcnat	ether2-WAN2		
2	masquerade	srcnat	ether3-WAN3		

Firewall>Mangle

Firewall							
Filter Rules		NAT	Mangle	Service Ports	Connections	Address Lists	Layer7 Protocols
00 Reset Counters 00 Reset All Counters							
#	Action	Chain	In. Interface	Connection Mark	New Connection Mark	New Routing Mark	
::: Tripple WAN CONFIG							
	mark connection	input	ether1-WAN1		wan1_conn		
	mark connection	input	ether2-WAN2		wan2_conn		
	mark connection	input	ether3-WAN3		wan3_conn		
	mark routing	output		wan1_conn		to_wan1	
	mark routing	output		wan3_conn		to_wan3	
	mark routing	output		wan2_conn		to_wan2	

Tripple WAN

IP>Routes

Route List

Routes

Next hops

Rules

VRF



	Dst. Address	Gateway	Distance	Scope	Target Scope	Routing Mark
AS	0.0.0.0/0	192.168.50.1 reachable ether1-WAN1	1	30	10 to_wan1	
AS	0.0.0.0/0	192.168.60.1 reachable ether2-WAN2	1	30	10 to_wan2	
AS	0.0.0.0/0	192.168.70.1 reachable ether3-WAN3	1	30	10 to_wan3	
::: Multi-WAN						
AS	0.0.0.0/0	192.168.70.1 reachable ether3-WAN3, 1...	1	30	10	

Route <0.0.0.0/0>

General

Attributes

Dst. Address: 0.0.0.0/0

Gateway:

192.168.70.1 reachable ether3-WAN3

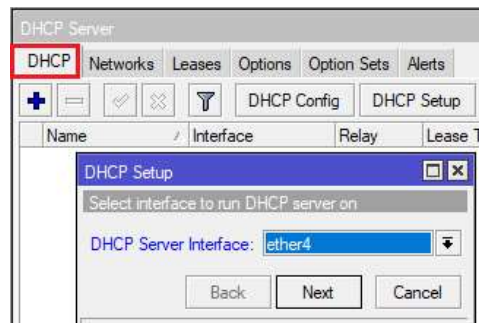
192.168.60.1 reachable ether2-WAN2

192.168.50.1 reachable ether1-WAN1

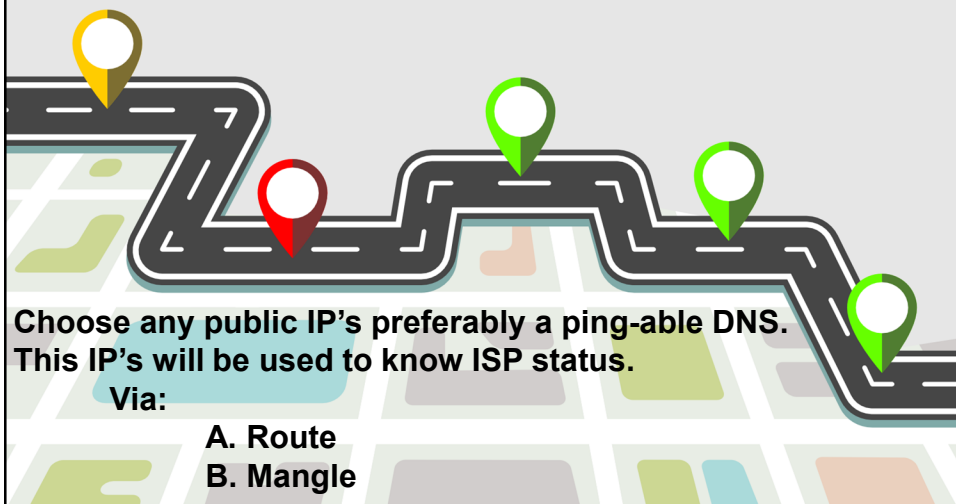
Check Gateway:

Tripple WAN

Local DHCP



Force a dst.address to route out of a specific ISP.



Choose IP's

Choose 3 ping-able IP that we will be used for monitoring later-on.

**49.151.178.157 for
ISP1 Monitor**

**124.106.88.146 for
ISP2 Monitor**

**121.96.219.176 for
ISP3 Monitor**

```
Select Command Prompt - ping 121.96.219.176 -t
Reply from 121.96.219.176: bytes=32 time=90ms TTL=52
Reply from 121.96.219.176: bytes=32 time=54ms TTL=52
Reply from 121.96.219.176: bytes=32 time=54ms TTL=52
Reply from 121.96.219.176: bytes=32 time=57ms TTL=52
Reply from 121.96.219.176: bytes=32 time=49ms TTL=52
Reply from 121.96.219.176: bytes=32 time=45ms TTL=52
Reply from 121.96.219.176: bytes=32 time=45ms TTL=52
Reply from 121.96.219.176: bytes=32 time=45ms TTL=52
Reply from 121.96.219.176: bytes=32 time=70ms TTL=52
Reply from 121.96.219.176: bytes=32 time=52ms TTL=52

Command Prompt - ping 124.106.88.146 -t
Reply from 124.106.88.146: bytes=32 time=75ms TTL=46
Reply from 124.106.88.146: bytes=32 time=76ms TTL=46
Reply from 124.106.88.146: bytes=32 time=114ms TTL=46
Reply from 124.106.88.146: bytes=32 time=75ms TTL=46
Reply from 124.106.88.146: bytes=32 time=73ms TTL=46
Reply from 124.106.88.146: bytes=32 time=97ms TTL=46
Reply from 124.106.88.146: bytes=32 time=95ms TTL=46
Reply from 124.106.88.146: bytes=32 time=76ms TTL=46

Command Prompt - ping 49.151.178.157 -t
Reply from 49.151.178.157: bytes=32 time=41ms TTL=48
Reply from 49.151.178.157: bytes=32 time=41ms TTL=48
Reply from 49.151.178.157: bytes=32 time=44ms TTL=48
Reply from 49.151.178.157: bytes=32 time=41ms TTL=48
Reply from 49.151.178.157: bytes=32 time=41ms TTL=48
Reply from 49.151.178.157: bytes=32 time=85ms TTL=48
Reply from 49.151.178.157: bytes=32 time=40ms TTL=48
Reply from 49.151.178.157: bytes=32 time=40ms TTL=48
Reply from 49.151.178.157: bytes=32 time=40ms TTL=48
```

A. Force dst. to Route to a specific ISP via Route

IP> Routes:

when dst. is **49.151.178.157** gateway is **ISP1's GW**
 when dst. is **124.106.88.146** gateway is **ISP2's GW**
 when dst. is **121.96.219.176** gateway is **ISP3's GW**

Route List							
Routes							
Next Hops							
Rules							
VRF							
+ - [] [x] [] [] [] []							
	Dst. Address	Gateway	Distance	Scope	Target Scope	Rc	
...	ISP2_monitor						
AS	124.106.88.146	192.168.60.1 reachable ether2-WAN2	1	10	10		
...	ISP3_monitor						
AS	121.96.219.176	192.168.70.1 reachable ether3-WAN3	1	10	10		
...	ISP1_monitor						
AS	49.151.178.157	192.168.50.1 reachable ether1-WAN1	1	10	10		

B. Force dst. to Route to a specific ISP via Mangle

Chain: Output dst.add: **49.151.178.157** new connection mark: **wan1-check**
Chain: Prerouting connection mark: **wan1-check** new-routing-mark: **to_wan1**

Chain: Output dst.add: **124.106.88.146** new connection mark: **wan2-check**
Chain: Prerouting connection mark: **wan2-check** new-routing-mark: **to_wan2**

Chain: Output dst.add: **121.96.219.176** new connection mark: **wan3-check**
Chain: Prerouting connection mark: **wan3-check** new-routing-mark: **to_wan3**

Firewall						
Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols						
+ - ✓ ✗ [icon] [icon] 00 Reset Counters 00 Reset All Counters						
#	Action	Chain	Dst. Address	Connection Mark	New Connection Mark	New Routing Mark
0	mark connection	output	49.151.178.157		wan1-check	
1	mark routing	prerouting		wan1-check		to_wan1
2	mark connection	output	124.106.88.146		wan2-check	
3	mark routing	prerouting		wan2-check		to_wan2
4	mark connection	output	121.96.219.176		wan3-check	
5	mark routing	prerouting		wan3-check		to_wan3

The Problem

Despite having Route and Mangles that will force packets to go out of a certain ISP.

Routes will be disabled whenever gateway is unreachable.
Giving chance for the router to ping a monitoring IP thru other ISP/Gateway

This will give false report in our monitoring.
As we want to make them triggers

Scenario 1

Route List

Routes	Nexthops	Rules	VRF
Det. Address	Gateway	Check Gat...	Distance Scope Target Scope Routing M
DAC ▶ 192.168.70.0/24	ether3-WAN3 reachable		0 10 10
DAC ▶ 192.168.60.0/24	ether2-WAN2 reachable		0 10 10
DC ▶ 192.168.50.0/24	ether1-WAN1 unreachable	255	10 10
DAC ▶ 192.168.10.0/24	ether4 reachable		0 10 10
... ISP2_monitor			
AS ▶ 124.106.88.146	192.168.60.1 reachable ether2-WAN2		1 10 10
... ISP3_monitor			
AS ▶ 121.96.219.176	192.168.70.1 reachable ether3-WAN3		1 10 10
... ISP1_monitor			
S ▶ 49.151.178.157	192.168.50.1 unreachable		1 10 10
S ▶ 0.0.0.0/0	192.168.50.1 unreachable		1 30 10 to_wan1
AS ▶ 0.0.0.0/0	192.168.60.1 reachable ether2-WAN2		1 30 10 to_wan2
AS ▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3		1 30 10 to_wan3
... Multi-WAN			
AS ▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3, 192.168.60.1...		1 30 10

Terminal

```

16 49.151.178.157 56 47 43ms
17 49.151.178.157 56 47 40ms
18 49.151.178.157 56 47 39ms
19 49.151.178.157 56 47 39ms
  
```

49.151.178.157 is still ping-able despite ISP1 being disconnected

Forced Route Disabled

Route for mangle disabled

Scenario 2

Route List

Routes	Nexthops	Rules	VRF
Det. Address	Gateway	Check Gat...	Distance Scope Target Scope Routing Mark: f
DAC ▶ 192.168.70.0/24	ether3-WAN3 reachable		0 10 10
DC ▶ 192.168.60.0/24	ether2-WAN2 unreachable	255	10 10
DAC ▶ 192.168.50.0/24	ether1-WAN1 reachable		0 10 10
DAC ▶ 192.168.10.0/24	ether4 reachable		0 10 10
... ISP2_monitor			
S ▶ 124.106.88.146	192.168.60.1 unreachable		1 10 10
... ISP3_monitor			
AS ▶ 121.96.219.176	192.168.70.1 reachable ether3-WAN3		1 10 10
... ISP1_monitor			
AS ▶ 49.151.178.157	192.168.50.1 reachable ether1-WAN1		1 10 10
AS ▶ 0.0.0.0/0	192.168.50.1 reachable ether1-WAN1		1 30 10 to_wan1
S ▶ 0.0.0.0/0	192.168.60.1 unreachable		1 30 10 to_wan2
AS ▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3		1 30 10 to_wan3
... Multi-WAN			
AS ▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3, 192.168.60.1...		1 30 10

Terminal

```

[admin@Multi-WAN auto change Gateway] > ping 124.106.88.146
SEQ HOST                               SIZE TTL TIME STATUS
0 124.106.88.146 56 45 442ms
1 124.106.88.146 56 45 373ms
2 124.106.88.146 56 45 408ms
3 124.106.88.146 56 45 458ms
4 124.106.88.146 56 45 485ms
  
```

124.106.88.146 is still ping-able despite ISP2 being disconnected

Forced Route Disabled

Route for mangle disabled

Scenario 3

Route List

Routes
Nexthops
Rules
VRF

+
=
x
y

	Dest. Address	Gateway	Check Gat...	Distance	Scope	Target Scope	Routing Mark
DC	192.168.70.0/24	ether3-WAN3 unreachable		255	10	10	
DAC	192.168.60.0/24	ether2-WAN2 reachable		0	10	10	
DAC	192.168.50.0/24	ether1-WAN1 reachable		0	10	10	
DAC	192.168.10.0/24	ether4 reachable		0	10	10	
...	ISP2_monitor						
AS	124.106.88.146	192.168.60.1 reachable ether2-WAN2		1	10	10	
...	ISP3_monitor						
S	121.96.219.176	192.168.70.1 unreachable		1	10	10	
...	ISP1_monitor						
AS	49.151.178.157	192.168.50.1 reachable ether1-WAN1		1	10	10	
AS	0.0.0.0/0	192.168.50.1 reachable ether1-WAN1		1	30	10_to_wan1	
AS	0.0.0.0/0	192.168.60.1 reachable ether2-WAN2		1	30	10_to_wan2	
S	0.0.0.0/0	192.168.70.1 unreachable		1	30	10_to_wan3	
...	Multi-WAN						
AS	0.0.0.0/0	192.168.70.1 unreachable, 192.168.60.1 reachable...		1	30	10	

Terminal

```

sent=934 received=881 packet-loss=5% min-rtt=71ms avg-rtt=167ms
echo: dhcp,critical,error dhcp-client on ether2-WAN2 lost IP address
[admin@Multi-WAN auto change Gateway] > ping 124.106.88.146
SEQ HOST                                SIZE TTL TIME  STATUS
0 124.106.88.146                        56  45 177ms
1 124.106.88.146                        56  45 72ms
2 124.106.88.146                        56  45 177ms

```

Forced Route Disabled

Route for mangle disabled

121.96.219.176 is still ping-able despite ISP2 being disconnected

Ensuring dst.address will go out of assigned specific route



The Solution

To avoid monitoring IP's being pinged thru other ISP's we will use Firewall Filter.

Chain: Output dst.add: 49.151.178.157 out.interface:Ether2_Wan2 action: drop
Chain: Output dst.add: 49.151.178.157 out.interface:Ether3_Wan3 action: drop

Chain: Output dst.add: 124.106.88.146 out.interface:Ether1_Wan1 action: drop
Chain: Output dst.add: 124.106.88.146 out.interface:Ether3_Wan3 action: drop

Chain: Output dst.add: 121.96.219.176 out.interface:Ether1_Wan1 action: drop
Chain: Output dst.add: 121.96.219.176 out.interface:Ether2_Wan2 action: drop

The Solution

Drops monitoring IP for ISP1 from going out of ISP2 & ISP3

Chain: Output dst.add: 49.151.178.157 out.interface:Ether2_Wan2 action: drop
Chain: Output dst.add: 49.151.178.157 out.interface:Ether3_Wan3 action: drop

Firewall						
Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols						
+ − ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset All Counters						
#	Action	Chain	S Dst. Address	I In. Inter...	O Out. Interface	
0	✗ drop	output	49.151.178.157		ether2-WAN2	
1	✗ drop	output	49.151.178.157		ether3-WAN3	
2	✗ drop	output	124.106.88.146		ether1-WAN1	
3	✗ drop	output	124.106.88.146		ether3-WAN3	
4	✗ drop	output	121.96.219.176		ether1-WAN1	
5	✗ drop	output	121.96.219.176		ether2-WAN2	

The Solution

Drops monitoring IP for ISP2 from going out of ISP1 & ISP3

Chain: Output dst.add: **124.106.88.146** out.interface:Ether1_Wan1 action: drop

Chain: Output dst.add: **124.106.88.146** out.interface:Ether3_Wan3 action: drop

Firewall							
Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols							
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset All Counters							
#	Action	Chain	S	Dst. Address	I	In. Inter...	Out. Interface
0	✗ drop	output		49.151.178.157			ether2-WAN2
1	✗ drop	output		49.151.178.157			ether3-WAN3
2	✗ drop	output		124.106.88.146			ether1-WAN1
3	✗ drop	output		124.106.88.146			ether3-WAN3
4	✗ drop	output		121.96.219.176			ether1-WAN1
5	✗ drop	output		121.96.219.176			ether2-WAN2

The Solution

Drops monitoring IP for ISP3 from going out of ISP1 & ISP2

Chain: Output dst.add: **121.96.219.176** out.interface:Ether1_Wan1 action: drop

Chain: Output dst.add: **121.96.219.176** out.interface:Ether2_Wan2 action: drop

Firewall							
Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols							
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset All Counters							
#	Action	Chain	S	Dst. Address	I	In. Inter...	Out. Interface
0	✗ drop	output		49.151.178.157			ether2-WAN2
1	✗ drop	output		49.151.178.157			ether3-WAN3
2	✗ drop	output		124.106.88.146			ether1-WAN1
3	✗ drop	output		124.106.88.146			ether3-WAN3
4	✗ drop	output		121.96.219.176			ether1-WAN1
5	✗ drop	output		121.96.219.176			ether2-WAN2

Firewall Drops Traffic for 49.151.178.157 going out of ether2_WAN2 and ether3_WAN3.

#	Action	Chain	Src. Address	Dst. Address	Src. Port	Dst. Port	In...	Out. Interface	Bytes	Packets
0	drop	output	49.151.178.157					ether2-WAN2	896 B	1
1	drop	output	49.151.178.157					ether3-WAN3	56 B	

Cannot Ping 49.151.178.157
when ISP1 is down.

Route List						0	1	2	3	4
Routes	Nextops	Rules	VRF							
+	+	+	+	+	+	+	+	+	+	+
Dst. Address	Gateway	Check Gat...	Distance	Scope	Target Scope	Routing Mark				
DAC	192.168.70.0/24	ether3-WAN3 reachable		0	10	10				
DAC	192.168.60.0/24	ether2-WAN2 reachable		0	10	10				
DC	192.168.50.0/24	ether1-WAN1 unreachable	255	10	10	10				
DC	192.168.10.0/24	ether4 reachable		0	10	10				
...	ISP2_monitor									
AS	124.106.88.146	192.168.60.1 reachable ether2-WAN2		1	10	10				
...	ISP3_monitor									
AS	121.96.219.176	192.168.70.1 reachable ether3-WAN3		1	10	10				
...	ISP1_monitor									
S	49.151.178.157	192.168.50.1 unreachable		1	10	10				
S	0.0.0.0/0	192.168.50.1 unreachable		1	30	10	to_wan1			
AS	0.0.0.0/0	192.168.60.1 reachable ether2-WAN2		1	30	10	to_wan2			
AS	0.0.0.0/0	192.168.70.1 reachable ether3-WAN3		1	30	10	to_wan3			
...	Multi-WAN									
AS	0.0.0.0/0	192.168.70.1 reachable ether3-WAN3, 192.168.60...		1	30	10				

```
Terminal
max-rtt=354ms

[admin@Multi-WAN auto change Gateway] > ping 49.151.178.157
0      SIZE TTL TIME  STATUS
1      packet reje...
2      packet reje...
3      packet reje...
4      packet reje...
```

Firewall Drops Traffic for 124.106.88.146 going out of ether1_WAN1 and ether3_WAN3.

Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols

Filter Rules

Chain output

Dest. Address 124.106.88.146

Out. Interface ether1-WAN1

Bytes 0 B

Packets 280 B

Cannot Ping 124.106.88.146
when ISP2 is down.

Route List

Routes

Nextops

Rules

VRF

+

-

🔍

🔗

🔧

🔑

SE0_HOST

0

1

2

	Dst. Address	Gateway	Check Gat...	Distance	Scope	Target Scope	Routing Mark
DAC	▶ 192.168.70.0/24	ether3-WAN3 reachable		0	10	10	
	▶ 192.168.60.0/24	ether2-WAN2 unreachable		255	10	10	
DAC	▶ 192.168.50.0/24	ether1-WAN1 reachable		0	10	10	
DAC	▶ 192.168.10.0/24	ether4 reachable		0	10	10	
::: ISP2_monitor							
S	▶ 124.106.88.146	192.168.60.1 unreachable		1	10	10	
::: ISP3_monitor							
AS	▶ 121.96.219.176	192.168.70.1 reachable ether3-WAN3		1	10	10	
::: ISP1_monitor							
AS	▶ 49.151.178.157	192.168.50.1 reachable ether1-WAN1		1	10	10	
AS	▶ 0.0.0.0/0	192.168.50.1 reachable ether1-WAN1		1	30	10	to wan1
S	▶ 0.0.0.0/0	192.168.60.1 unreachable		1	30	10	to wan2
S	▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3		1	30	10	to wan3
::: Multi-WAN							
AS	▶ 0.0.0.0/0	192.168.70.1 reachable ether3-WAN3, 192.168.50.1 reachable ether1-WAN1, 192.168.60.1 reachable ether2-WAN2, 192.168.10.1 reachable ether4		1	30	10	

```
Terminal
/      Move up to base level
..     Move up one level
/command Use command at the base level
[admin@Multi-WAN auto change Gateway] > ping 124.106.88.146

SEQ HOST                                     SIZE TTL TIME                        STATUS
0                                             packet r.
1                                             packet r.
2                                             packet r.
```

Firewall Drops Traffic for 121.96.219.176 going out of ether1_WAN1 and ether2_WAN2.

Firewall

Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols

       Reset Counters  Reset All Counters

#	Action	Chain	Out. Address	Out. Interface	Bytes	Packets
	 drop	output	121.96.219.176	ether1-WAN1	504 B	
	 drop	output	121.96.219.176	ether2-WAN2	0 B	

Cannot Ping 121.96.219.176
when ISP3 is down.

Route List

Routes Nexthops Rules VRF

Dst. Address	Gateway	Check Gat...	Distance	Scope	Target Scope	Routing Mark
DC 192.168.70.0/24	ether3-WAN3 unreachable		255	10	10	
DAC 192.168.60.0/24	ether2-WAN2 reachable		0	10	10	
DAC 192.168.50.0/24	ether1-WAN1 reachable		0	10	10	
DAC 192.168.10.0/24	ether4 reachable		0	10	10	
ISP2_monitor 124.106.88.146	192.168.60.1 reachable ether2-WAN2		1	10	10	
ISP3_monitor 121.96.219.176	192.168.70.1 unreachable		1	10	10	
ISP1_monitor 49.151.178.157	192.168.50.1 reachable ether1-WAN1		1	10	10	
AS 0.0.0.0/0	192.168.50.1 reachable ether1-WAN1		1	30	10_to_wan1	
AS 0.0.0.0/0	192.168.60.1 reachable ether2-WAN2		1	30	10_to_wan2	
AS 0.0.0.0/0	192.168.70.1 unreachable		1	30	10_to_wan3	
Multi-WAN 0.0.0.0/0	192.168.70.1 unreachable, 192.168.50.1 reachable...		1	30	10	

```
[admin@Multi1-WAN auto change Gateway] > ping 121.96.219.176
```

SEQ	HOST	SIZE	TTL	TIME	STATUS
0					packet r...
1					packet r...
2					packet r...

Setup routers email settings.



Router's Email setup

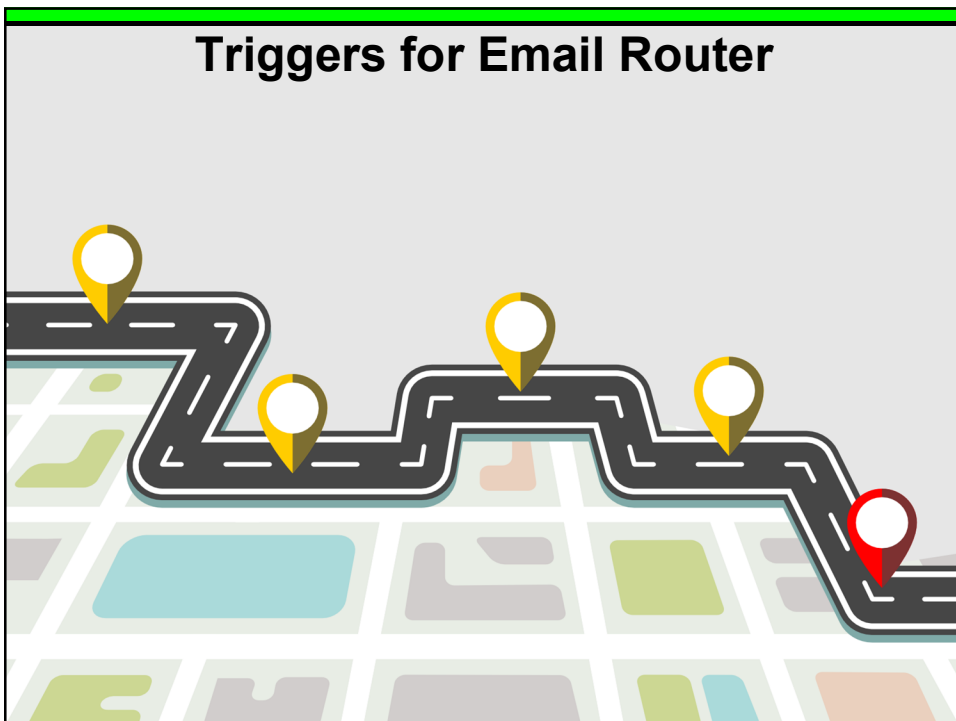


The image shows a screenshot of the 'Email Settings' dialog box. It contains two main sections. The top section, labeled 'mail server setting', includes fields for 'Server' (mikrotikphilippines.com), 'Port' (26), and 'Start TLS' (no). The bottom section, labeled 'account to be used by the router to send mails', includes fields for 'From' (mar.flordeliza), 'User' (mar.flordeliza@mikrotikphilippines.com), and 'Password' (masked with asterisks). On the right side of the dialog are buttons for 'OK', 'Cancel', 'Apply', and 'Send Email'.

mail server setting

account to be used by the router to send mails

Triggers for Email Router

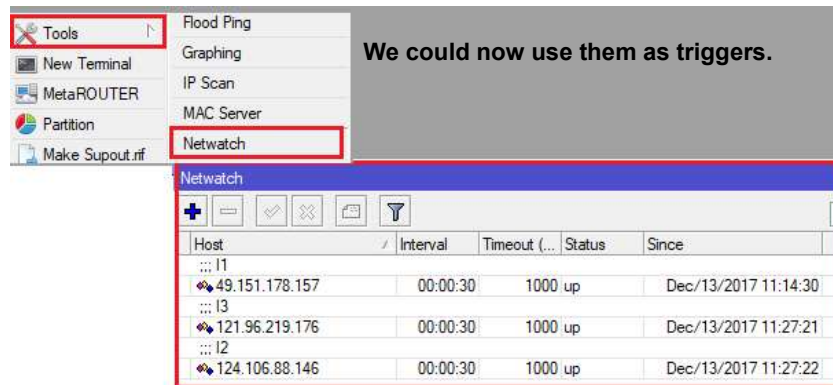


Auto Email setup

Now that we are assured that when ISP1 is down you cannot ping **49.151.178.157**

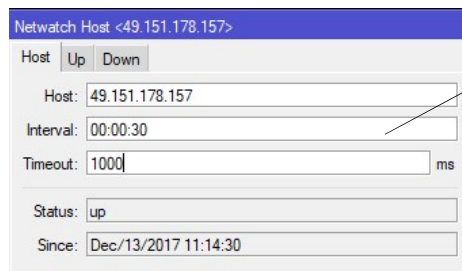
Now that we are assured that when ISP2 is down you cannot ping **124.106.88.146**

Now that we are assured that when ISP3 is down you cannot ping **121.96.219.176**

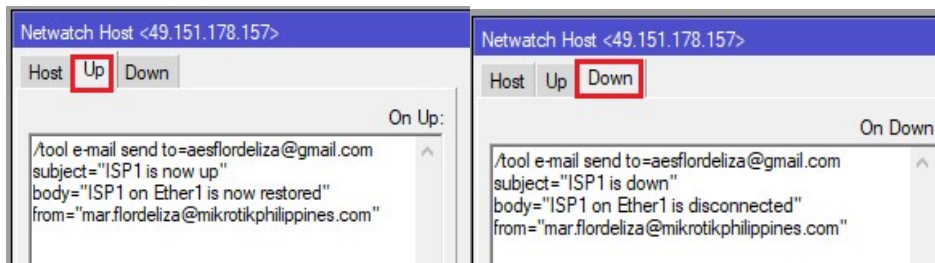


Auto Email setup

With the use of Netwatch monitoring **49.151.178.157** for ISP1



Interval period could be shorten for a more accurate status check.



Auto Email setup

With the use of Netwatch monitoring **124.106.88.146** for ISP2

Netwatch Host <124.106.88.146>

Host Up Down

Host: 124.106.88.146

Interval: 00:00:30

Timeout: 1000 ms

Status: up

Since: Dec/13/2017 11:27:22

Interval period could be shorten for a more accurate status check.

Netwatch Host <124.106.88.146>

Host Up Down

On Up:

```
/tool e-mail send to=aesflordeliza@gmail.com
subject="ISP2 is now up"
body="ISP2 on Ether2 is now restored"
from="mar.flordeliza@mikrotikphilippines.com"
```

Netwatch Host <124.106.88.146>

Host Up Down

On Down:

```
/tool e-mail send to=aesflordeliza@gmail.com
subject="ISP2 is down"
body="ISP2 on Ether2 is Down"
from="mar.flordeliza@mikrotikphilippines.com"
```

Auto Email setup

With the use of Netwatch monitoring **121.96.219.176** for ISP3

Netwatch Host <121.96.219.176>

Host Up Down

Host: 121.96.219.176

Interval: 00:00:30

Timeout: 1000 ms

Status: up

Since: Dec/13/2017 11:27:21

Interval period could be shorten for a more accurate status check.

Netwatch Host <121.96.219.176>

Host Up Down

On Up:

```
/tool e-mail send to=aesflordeliza@gmail.com
subject="ISP3 is now up"
body="ISP3 on Ether3 is now restored"
from="mar.flordeliza@mikrotikphilippines.com"
```

Netwatch Host <121.96.219.176>

Host Up Down

On Down:

```
/tool e-mail send to=aesflordeliza@gmail.com
subject="ISP3 is down" body="ISP3 on
Ether3 is Down"
from="mar.flordeliza@mikrotikphilippines.com"
```

Configuration benefits?

- Knows when your ISP goes down and the time it was restored.
- Router reports via email means you could also receive it while on vacation/away from work.
- Ease of mind that you don't need to manually check each ISP manually, specially for multiple ISP deployment.
- Ensuring configuration will work even on modem-router down time, ISP link disconnection or any other forms of internet source problem.

Thank You



The End

- Questions and Answers

To get in touch with me:

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