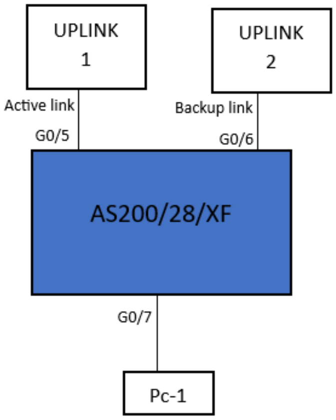
Alpha Bridge®
Technologies

Backup-links
Test Report

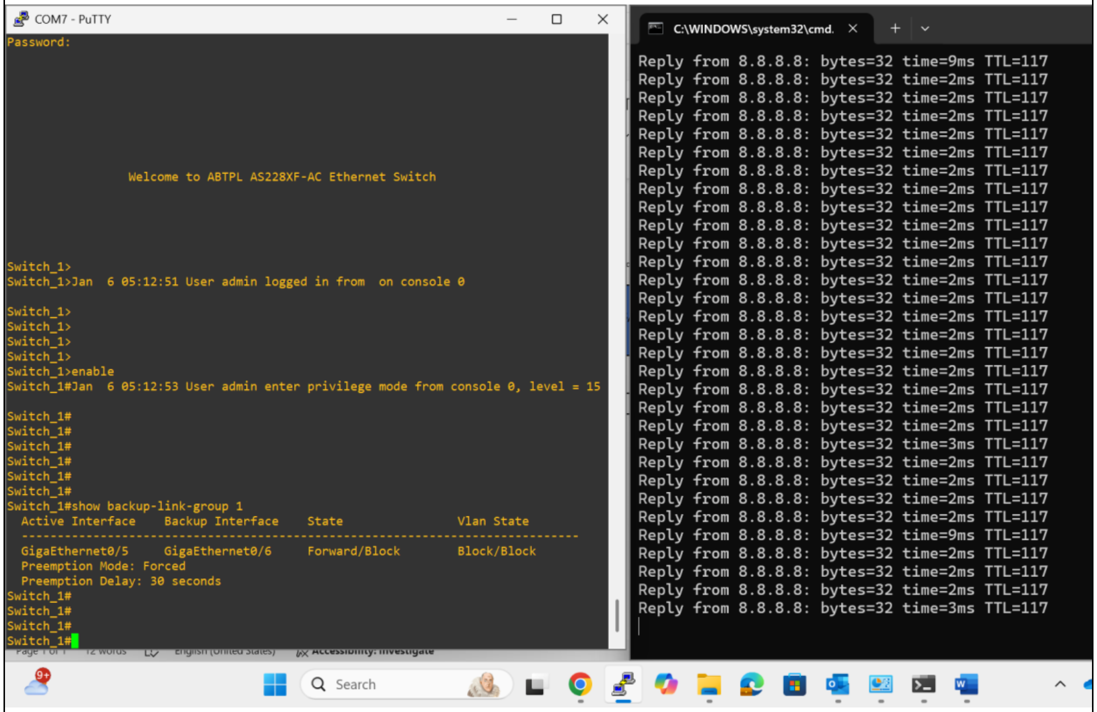
Test	Backup-links in AS200/28/XF version 139318
Test procedure	

Configuration

Configuration in Switch:

```
!
backup-link-group 1 preemption-mode forced delay 30  // creating the backup-link-group
!
interface GigaEthernet0/5
 switchport pvid 200
 backup-link-group 1 active // assigning the port as active port for uplinks
 backup-link-group mmu transmit
 backup-link-group mmu receive
!
interface GigaEthernet0/6
 switchport pvid 200
 backup-link-group 1 backup // assigning the port as backup port for uplinks
 backup-link-group mmu transmit
 backup-link-group mmu receive
!
interface GigaEthernet0/7
 switchport pvid 200
```

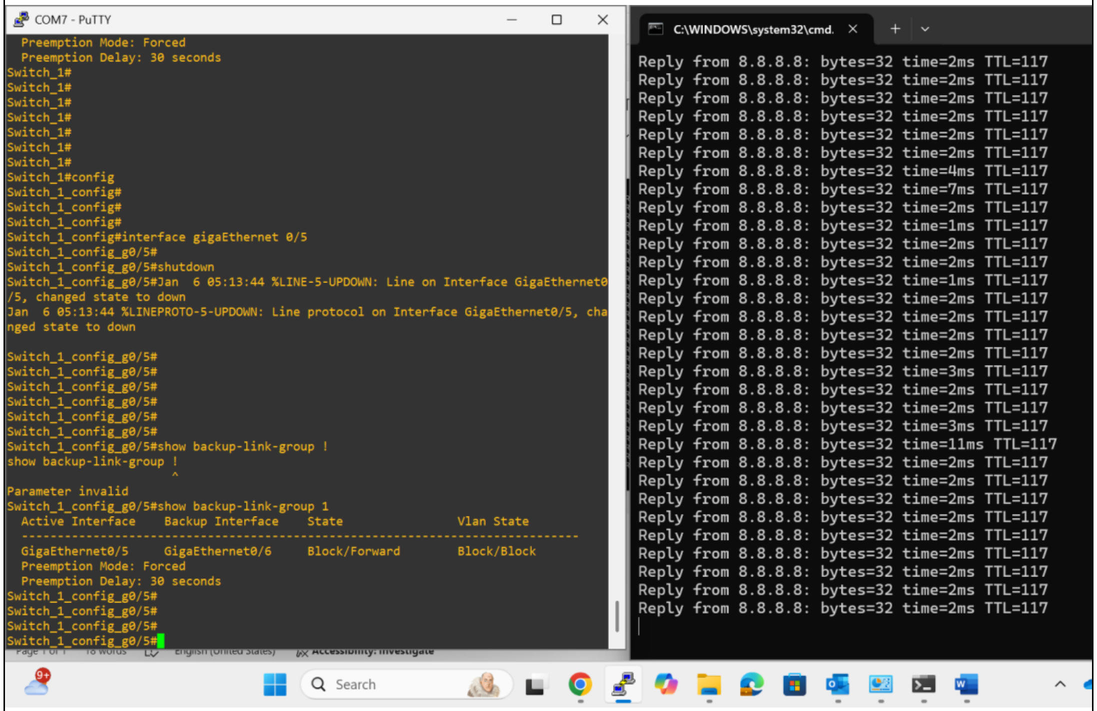
	!
test result	When the both ports g0/5 and g0/6 are up



```
Password:




                 Welcome to ABTPL AS228XF-AC Ethernet Switch




Switch_1>
Switch_1>Jan  6 05:12:51 User admin logged in from  on console 0

Switch_1>
Switch_1>
Switch_1>
Switch_1>
Switch_1>enable
Switch_1#Jan  6 05:12:53 User admin enter privilege mode from console 0, level = 15

Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#show backup-link-group 1
  Active Interface    Backup Interface    State                 Vlan State
  ---------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Forward/Block         Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1#
Switch_1#
Switch_1#
Switch_1#
```

```
Reply from 8.8.8.8: bytes=32 time=9ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=9ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
```

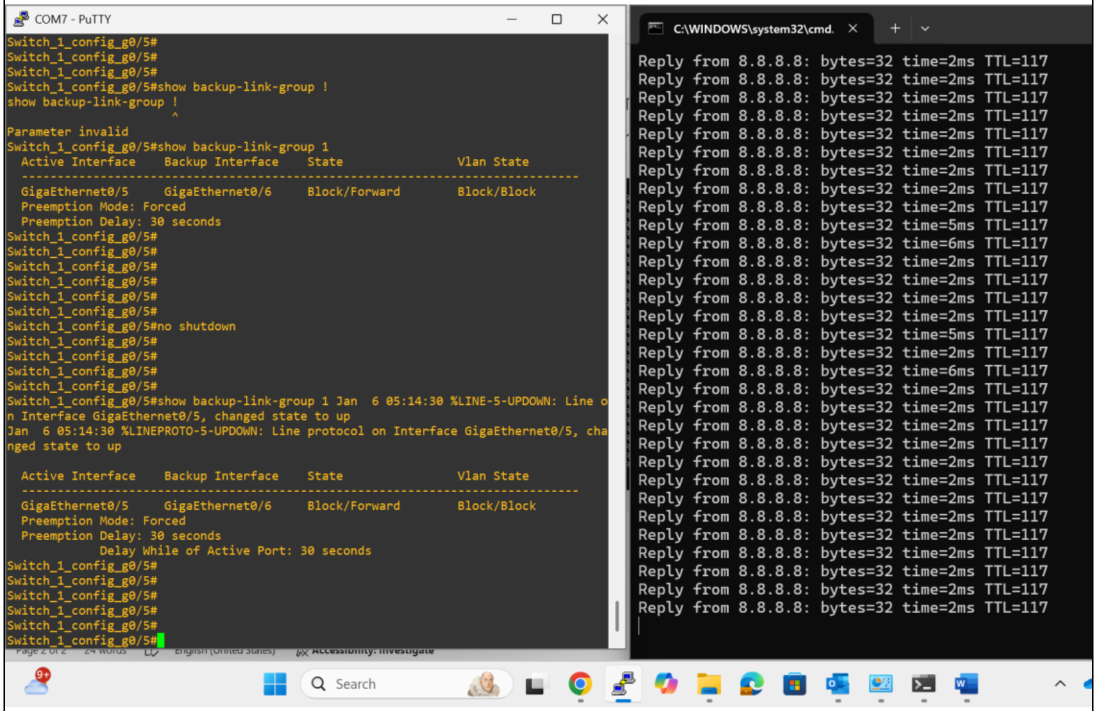
When the port g0/5 is down



```
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#
Switch_1#config
Switch_1_config#
Switch_1_config#
Switch_1_config#
Switch_1_config#interface gigaEthernet 0/5
Switch_1_config_g0/5#
Switch_1_config_g0/5#shutdown
Switch_1_config_g0/5#Jan  6 05:13:44 %LINE-5-UPDOWN: Line on Interface GigaEthernet0
/5, changed state to down
Jan  6 05:13:44 %LINEPROTO-5-UPDOWN: Line protocol on Interface GigaEthernet0/5, cha
nged state to down

Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#show backup-link-group !
show backup-link-group !
                       ^
Parameter invalid
Switch_1_config_g0/5#show backup-link-group 1
  Active Interface    Backup Interface    State                 Vlan State
  ---------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Block/Forward         Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
```

```
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=4ms TTL=117
Reply from 8.8.8.8: bytes=32 time=7ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=1ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=1ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
Reply from 8.8.8.8: bytes=32 time=11ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
```

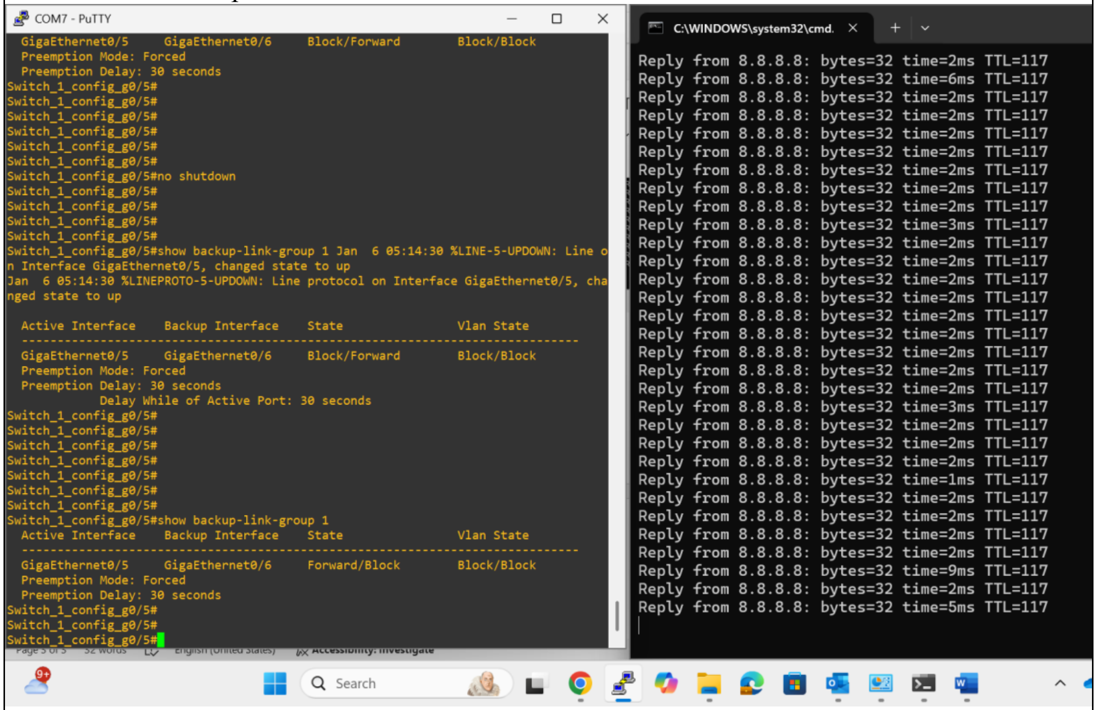
When the port g0/5 is restored



```
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#show backup-link-group !
show backup-link-group !
                       ^
Parameter invalid
Switch_1_config_g0/5#show backup-link-group 1
  Active Interface    Backup Interface    State                Vlan State
  ------------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Block/Forward        Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#no shutdown
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#show backup-link-group 1 Jan  6 05:14:30 %LINE-5-UPDOWN: Line o
n Interface GigaEthernet0/5, changed state to up
Jan  6 05:14:30 %LINEPROTO-5-UPDOWN: Line protocol on Interface GigaEthernet0/5, cha
nged state to up

  Active Interface    Backup Interface    State                Vlan State
  ------------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Block/Forward        Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
             Delay While of Active Port: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
```

```
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=5ms TTL=117
Reply from 8.8.8.8: bytes=32 time=6ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=5ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=6ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
```

After 30 secs of the port 5 restored



```
  GigaEthernet0/5     GigaEthernet0/6     Block/Forward        Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#no shutdown
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#show backup-link-group 1 Jan  6 05:14:30 %LINE-5-UPDOWN: Line o
n Interface GigaEthernet0/5, changed state to up
Jan  6 05:14:30 %LINEPROTO-5-UPDOWN: Line protocol on Interface GigaEthernet0/5, cha
nged state to up

  Active Interface    Backup Interface    State                Vlan State
  ------------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Block/Forward        Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
             Delay While of Active Port: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#show backup-link-group 1
  Active Interface    Backup Interface    State                Vlan State
  ------------------------------------------------------------------------------
  GigaEthernet0/5     GigaEthernet0/6     Forward/Block        Block/Block
  Preemption Mode: Forced
  Preemption Delay: 30 seconds
Switch_1_config_g0/5#
Switch_1_config_g0/5#
Switch_1_config_g0/5#
```

```
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=6ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=3ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=1ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=9ms TTL=117
Reply from 8.8.8.8: bytes=32 time=2ms TTL=117
Reply from 8.8.8.8: bytes=32 time=5ms TTL=117
```

Result	When the active port is down the traffic is shifted to backup port with zero packet loss.