UTM: Interoperability issue for OSPF with tunnel-interfaces between 5.9.x.x, 5.8.x.x and 6.x.x.x. (SW10735)

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Title

UTM: Interoperability issue for OSPF with tunnel-interfaces between 5.9.x.x, 5.8.x.x and 6.x.x.x.

Resolution

Article Applies To:

Gen6 SM E10000 series: NSA E10800, NSA E10400, NSA E10200, NSA E10100
Gen6 SM 9000 series: NSA 9600, NSA 9400, NSA 9200
Gen6 NSA series: NSA 6600, NSA 5600, NSA 4600, NSA 3600 Gen5 NSA E-Class series: NSA E8510, E8500, NSA E7500, NSA E6500, NSA E5500
Gen5 NSA series: NSA 5000, NSA 4500, NSA 3500, NSA 2400, NSA 2400 MX, NSA 240, NSA 220, NSA 220 /W. NSA 250M, NSA 250M /W.
Gen5 TZ Series: TZ 215, TZ 215 W, TZ 210, TZ 210 W

Firmware/Software Version: SonicOS 5.8.x, 5.9.x, 6.x

Services: Routing

Problem Definition:

There exists an interoperability issue for OSPF over tunnel-interfaces with 5.9.x.x vs. 5.8.x.x or 6.x.x.x. By default, both sides of an OSPF adjacency tell the other side what they believe the MTU is on the interface over which they are sending packets. If one side gets a different (actually smaller) MTU than what it believes is the MTU, the adjacency is not formed. Previous to 5.9.0.0, we always used an MTU of 1500 on tunnel-interfaces. In SonicOS 5.9, a more realistic MTU (1446) was assigned to tunnel-interfaces populated in ZebOS.

Unfortunately, this breaks compatibility with the unnumbered tunnel-interface implementation on 5.8.x and 6.x.x.

Resolution or Workaround:

The following workaround has to be configured from the CLI.

The OSPF CLI provides a command that will force OSPF to ignore MTU differences on a particular interface.

In this case, it's the 5.9.x.x OSPF code that complains about the MTU since the value sent from 5.8.x and 6.x.x is 1500 - larger than the 1446 MTU for the tunnel-interface in 5.9.x.x.

 On the SonicOS 5.9.x.x appliance do the following:

 1. Enter Configuration mode on the SonicOS CLI.
 2. Navigate to Routing, then OSPF in the CLI.
 3. Show the OSPF interfaces with the "show ip ospf interface" command. You should see the tunnel-interface you want to configure in the list.
 4. Enter configuration mode in the OSPF CLI with the "configure terminal" command.
 5. Configure the tunnel interface with the "interface " command.
 6. Disable the MTU comparison with the "ip ospf mtu-ignore" command.
 7. Exit back to the non-config OSPF prompt.
 8. Save the change with the "write file" command.
 9. Exit out of the CLI config.

Here is an example:

```
   admin@> conf
config# routing
(config-routing)# ospf

ZebOS version 7.7.0 IPIRouter 7/2009
ARS OSPF>show ip ospf interface
TI2 is up, line protocol is up
Internet Address 39.29.29.93/24, Area 0.0.0.0, MTU 1446
Process ID 0, Router ID 10.0.0.1, Network Type POINTOPOINT, Cost: 1
Transmit Delay is 1 sec, State Point-To-Point
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
Hello due in 00:00:04
Neighbor Count is 1, Adjacent neighbor count is 1
Crypt Sequence Number is 1385167419
Hello received 178 sent 178, DD received 3 sent 4
LS-Req received 1 sent 1, LS-Upd received 3 sent 3
LS-Ack received 2 sent 3, Discarded 0
ARS OSPF>configure terminal
ARS OSPF(config)>interface TI2
ARS OSPF(config-if)>ip ospf mtu-ignore
ARS OSPF(config-if)>exit
ARS OSPF(config)>exit
ARS OSPF>write file
Configuration saved to OSPF
ARS OSPF>exit
(config-routing)# end
config # end
```