

Hello @Zyxel_Derrick,

I'll try one last time to provide information about this bug.

Network info:

- Link aggregation with 3 interfaces between Zyxel switch and a router
- Link aggregation is using LACP
- LACP traffic is captured on the router
- Zyxel switch MAC address: b8:ec:a3:xx:xx:xx
- Router MAC address: fe:e1:ba:xx:xx:xx

Working LACP with firmware V2.40(AAZI.1)_20180705

All 3 interfaces are active on the switch:

```
GS1900# show lag
```

```
Load Balancing: src-dst-mac-ip.
```

```
Group ID | Type | Ports
-----+-----+-----
1        | LACP | Active: 1-3
```

LACP exchange captured on router during switch reboot:

```
02:32:44.354807 b8:ec:a3:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Partner Information TLV (0x02), length 20
    System 00:00:00:00:00:00, System Priority 32768, Key 1000, Port 1, Port Priority 32768
    State Flags [Timeout, Aggregation, Collecting, Default]
  Collector Information TLV (0x03), length 16
  Max Delay 0
  Terminator TLV (0x00), length 0

02:32:44.362662 fe:e1:ba:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System fe:e1:ba:xx:xx:xx, System Priority 32768, Key 6, Port 1, Port Priority 32768
    State Flags [Activity, Aggregation, Synchronization]
  Partner Information TLV (0x02), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Collector Information TLV (0x03), length 16
  Max Delay 0
  Terminator TLV (0x00), length 0

02:32:44.472654 fe:e1:ba:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System fe:e1:ba:xx:xx:xx, System Priority 32768, Key 6, Port 1, Port Priority 32768
    State Flags [Activity, Aggregation, Synchronization]
  Partner Information TLV (0x02), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Collector Information TLV (0x03), length 16
  Max Delay 0
  Terminator TLV (0x00), length 0

02:32:45.354877 b8:ec:a3:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation]
  Partner Information TLV (0x02), length 20
    System fe:e1:ba:xx:xx:xx, System Priority 32768, Key 6, Port 1, Port Priority 32768
    State Flags [Activity, Aggregation, Synchronization]
  Collector Information TLV (0x03), length 16
  Max Delay 0
  Terminator TLV (0x00), length 0
```

The Zyxel switch correctly detects the router partner, and goes into synchronization state.

Broken LACP with firmware V2.50(AAZI.0)

All 3 interfaces are inactive on the switch (LACP standby mode):

```
GS1900# show lag
```

```
Load Balancing: src-dst-mac-ip.
```

Group ID	Type	Ports
1	LACP	Inactive: 1-3

LACP exchange captured on router during switch reboot:

```
02:39:44.262789 b8:ec:a3:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Partner Information TLV (0x02), length 20
    System 00:00:00:00:00:00, System Priority 32768, Key 1000, Port 1, Port Priority 32768
    State Flags [Timeout, Aggregation, Collecting, Default]
  Collector Information TLV (0x03), length 16
    Max Delay 0
  Terminator TLV (0x00), length 0

02:39:44.269710 fe:e1:ba:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System fe:e1:ba:xx:xx:xx, System Priority 32768, Key 6, Port 1, Port Priority 32768
    State Flags [Activity, Aggregation, Synchronization]
  Partner Information TLV (0x02), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Collector Information TLV (0x03), length 16
    Max Delay 0
  Terminator TLV (0x00), length 0

02:39:44.389699 fe:e1:ba:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System fe:e1:ba:xx:xx:xx, System Priority 32768, Key 6, Port 1, Port Priority 32768
    State Flags [Activity, Aggregation, Synchronization]
  Partner Information TLV (0x02), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Collector Information TLV (0x03), length 16
    Max Delay 0
  Terminator TLV (0x00), length 0

02:39:45.262777 b8:ec:a3:xx:xx:xx > 01:80:c2:00:00:02, ethertype Slow Protocols (0x8809), length 124: LACPV1, length 110
  Actor Information TLV (0x01), length 20
    System b8:ec:a3:xx:xx:xx, System Priority 65535, Key 1000, Port 1, Port Priority 1
    State Flags [Activity, Aggregation, Default]
  Partner Information TLV (0x02), length 20
    System 00:00:00:00:00:00, System Priority 32768, Key 1000, Port 1, Port Priority 32768
    State Flags [Timeout, Aggregation, Collecting, Default]
  Collector Information TLV (0x03), length 16
    Max Delay 0
  Terminator TLV (0x00), length 0
```

As you can see, with the new firmware, the Zyxel switch never goes into synchronization mode, it never acknowledges the LACP packets from the router which have the **Synchronization** flag.

The Zyxel switch keeps sending packet with partner's state flags "**Timeout, Aggregation, Collecting, Default**" and **no partner MAC address**. This means that the **Zyxel switch never process the LACP packets sent by the router**.

To avoid being asked the same questions your support already asked 20 times:

- Yes I've rebooted the switch multiple times.
- Yes I've done a factory reset and reconfigured from scratch with the new firmware.
- Yes I've tested with different routers and switches. The problem is clearly coming from the Zyxel switch as shown in the above packet capture.
- No I won't give you my full name, address and phone number, I don't see how this information is going to help you fix this bug...

If you have questions relevant to this bug, and that your goal is really to fix it, don't hesitate to ask.