Relay Agent Information Option Stacking

(draft-zheng-dhc-relay-agent-stacking-00)

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Outline

- Objective
- Problem Definition
- Scenario
- Proposed Solution

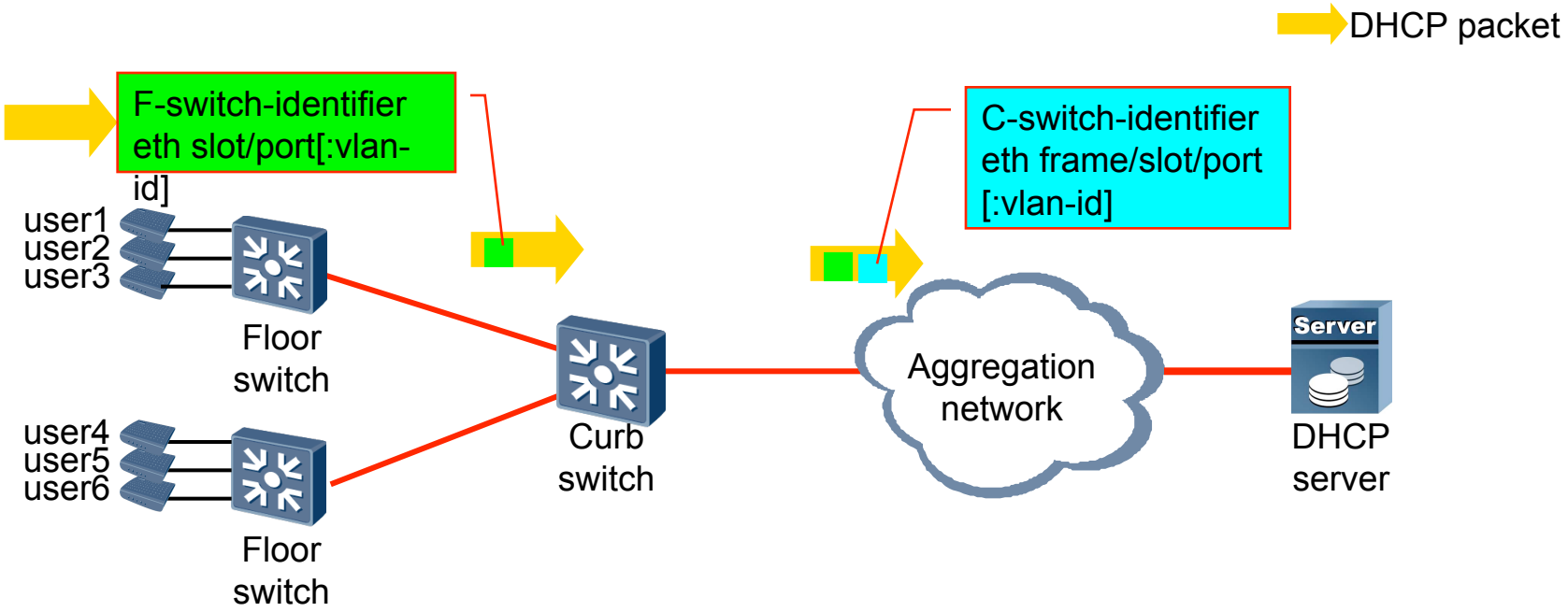
Objective

- This contribution proposes to allow adding a “second” relay agent information option (Option 82) to a DHCP message which already has a relay agent information option

Problem Definition

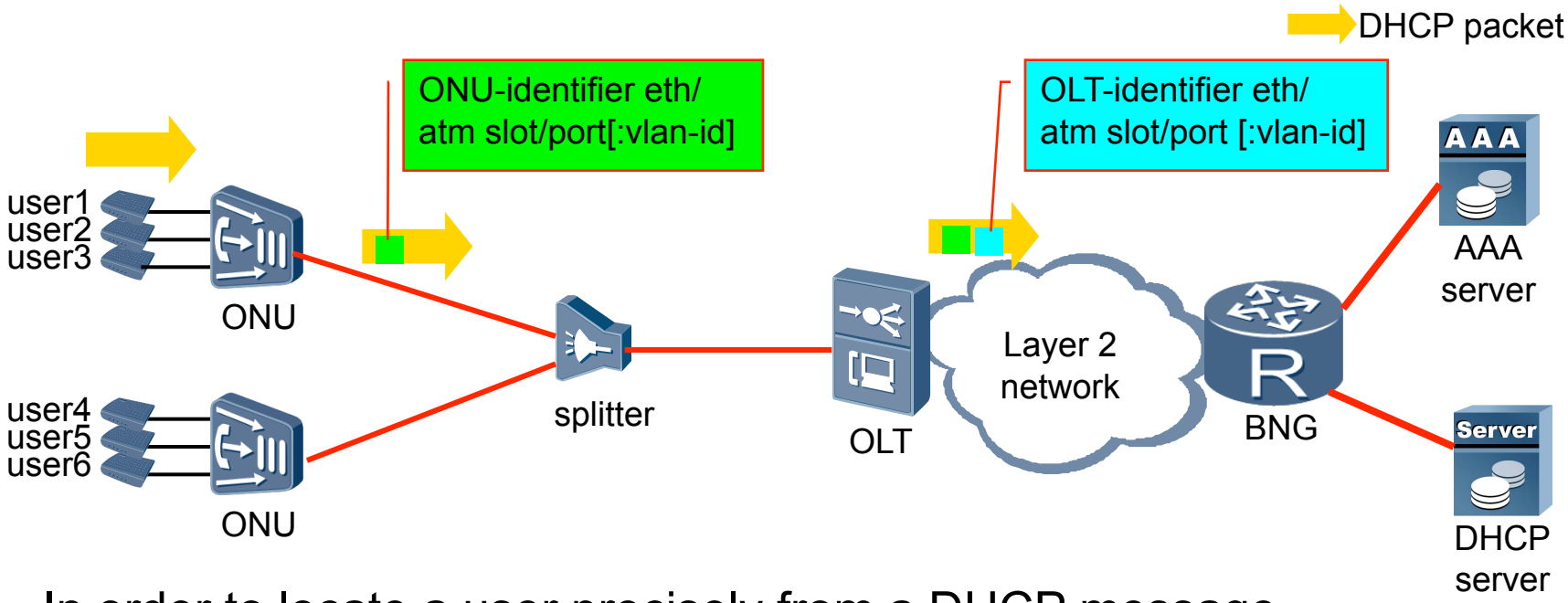
- RFC3046
  - DHCP Relay Agent does NOT add a "second" Relay Agent Information option, when it receives a DHCP packet with a Relay Agent Information option already present from a trusted circuit
- However, there are at lease two scenarios where there are multiple relay agents between DHCP client and server. Each relay agent has to add its relay agent information.
  - Scenario 1--Cascaded LAN access
  - Scenario 2--PON FTTC/B

Scenario 1--Cascaded LAN access



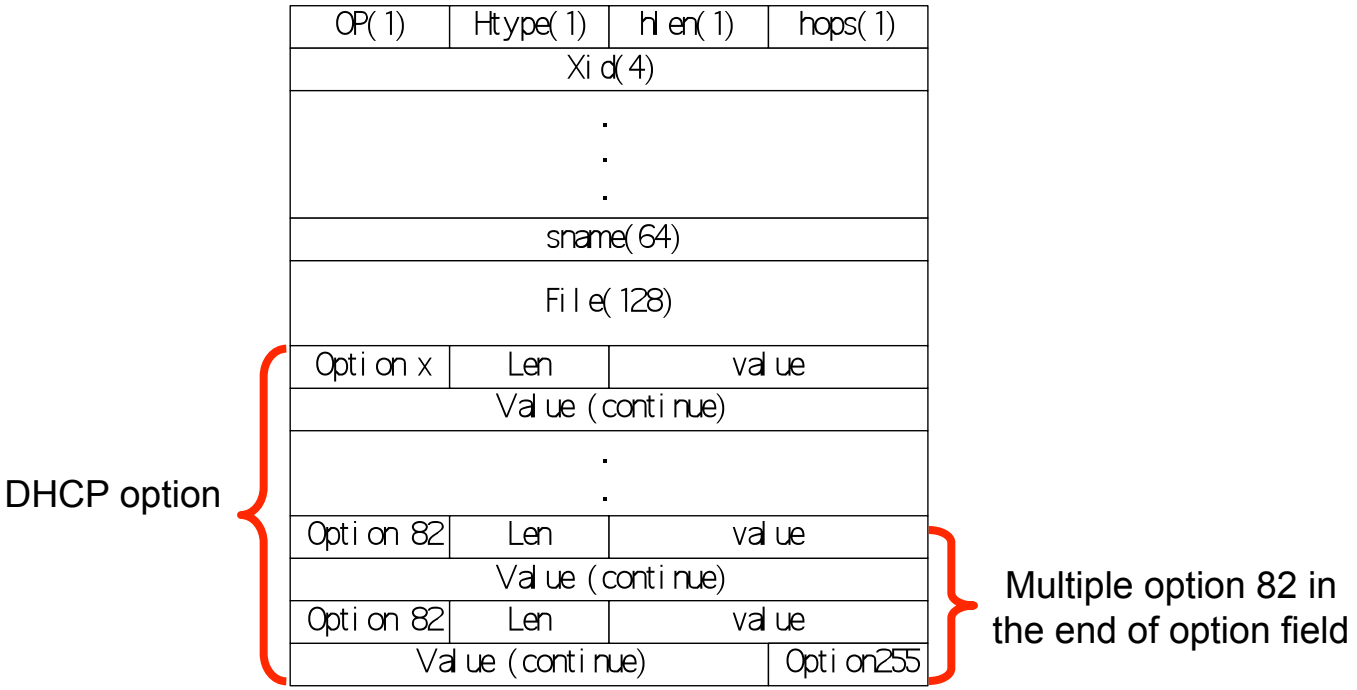
- This is a scenario which had been discussed in IETF 75th meeting.
- As the problem is described in “draft-huang-dhc-relay-ps-00 ”, the amount of configuration information will substantially increase if only Floor switches allow to add option 82.

Scenario 2--PON FTTC/B



- In order to locate a user precisely from a DHCP message via Option 82, ONU need add a user's access loop identification on which port the user is attached, while OLT need add PON port where the ONU is attached.
- DHCP Relay Agent resides in both ONU and OLT

Proposed Solution



- Agent Operation
  - The relay agent can add a “second” relay agent information option (Option 82) to a DHCP message which already has a relay agent option
  - The “second” relay agent information option shall be added as the last option (but before ‘End Option’ 255)
  - The “second” relay agent information option echoed by a server MUST be removed by the relay agent which added it when forwarding a server-to-client response back to the client

Question

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