VXLAN GPE Extension for Packets Exchange Between Control and User Plane of vBNG

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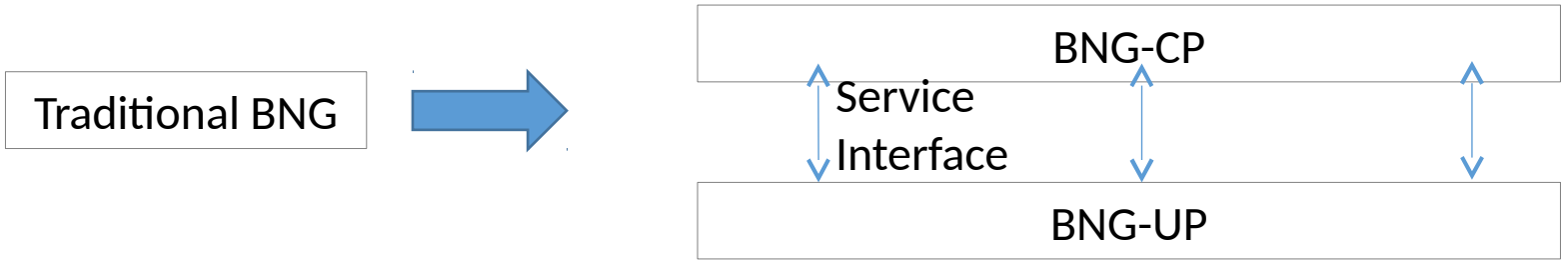
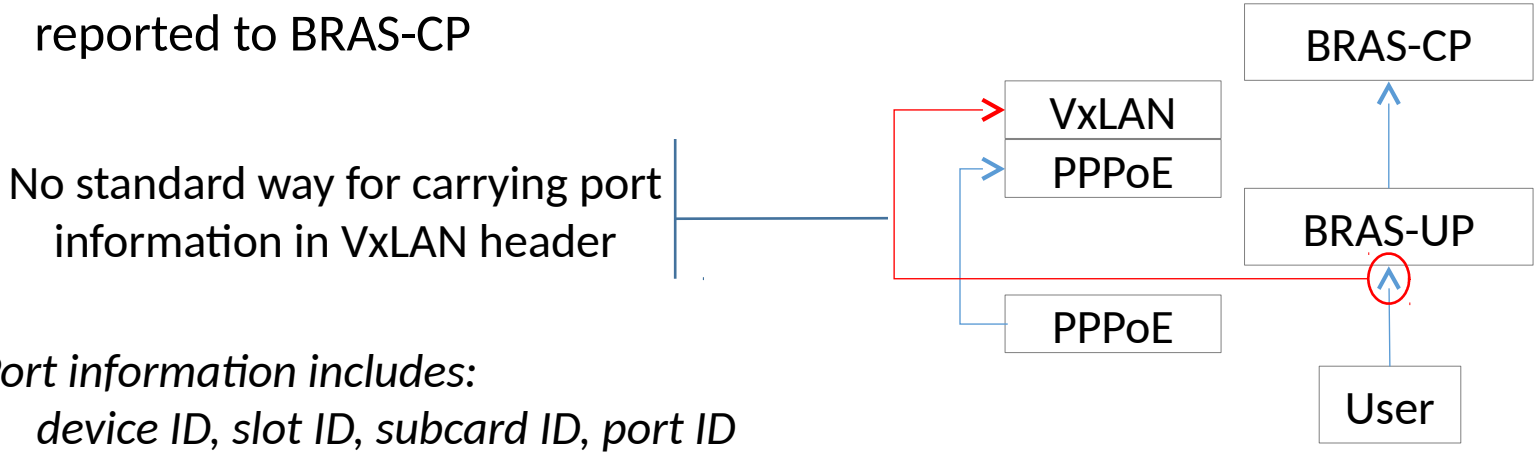
Problem to be addressed

- For China Mobile's metro network evolution, we choose to separate control plane and user plane of the traditional BNG (Broadband Network Gateway , or called BRAS, Broadband Remote Access Server)



- Between BNG-CP and UP, service interface is used to transmit PPPoE/IPoE authentication packets from UP to CP. We prefer to use VxLAN to encapsulate user's packets. Furthermore, user's port information on BNG-UP should be reported to BRAS-CP

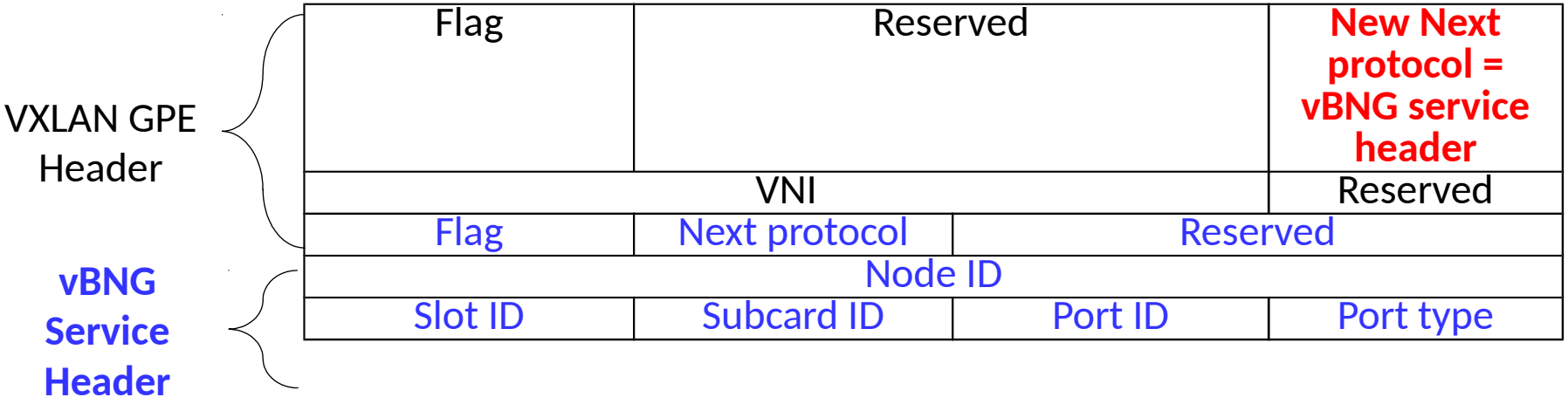


Port information includes:

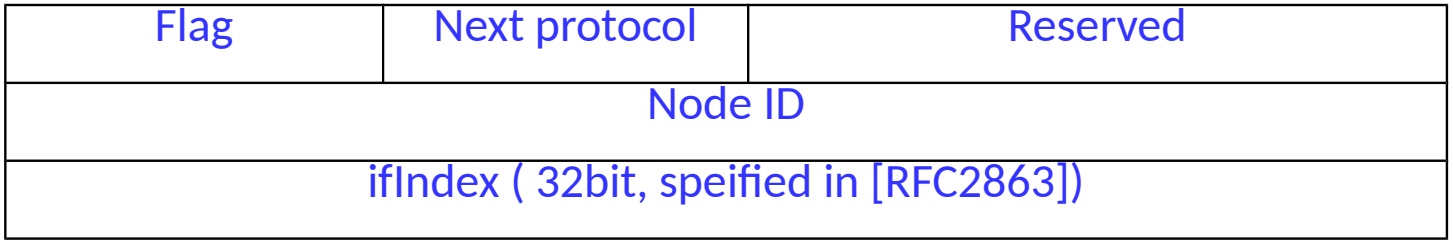
- *device ID, slot ID, subcard ID, port ID*

Proposed solution

- Extend VxLAN-GPE header to meet the requirement because it see ms leverage the flexibility and complexity.

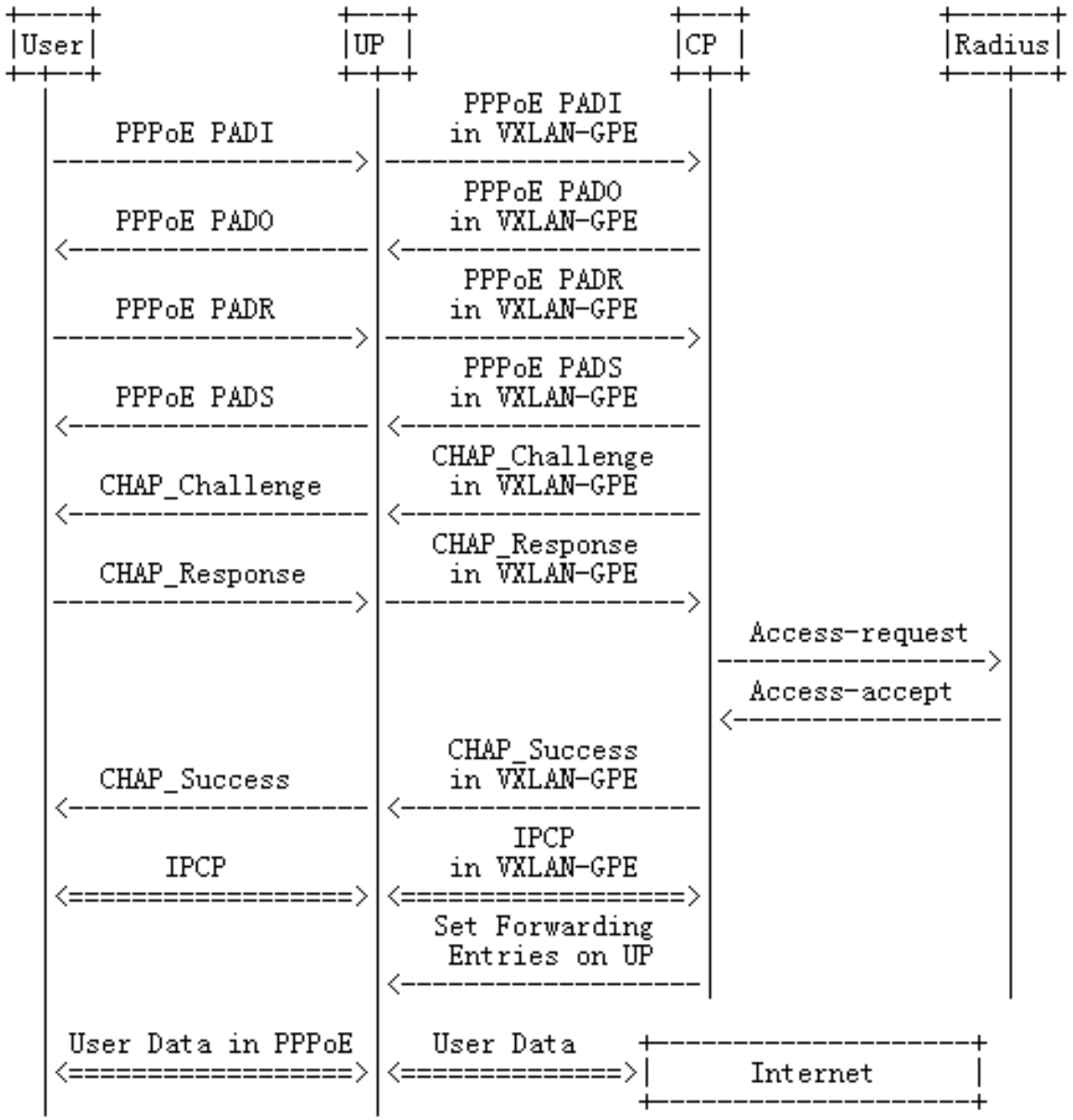


- An optional format for port information



- It's a standard way to indicate a port/interface. But it can't explicitly show the port's location. CP should maintain a mapping table between ifIndex and physical port exactly same as UP. Should define a way to generate this table, UP or CP make the decision? It's relatively more complex than the explicit way

Example of PPPoE dialup process



Next Steps

- Welcome your comments and suggestions
- Request for WG adoption

Thanks