

cloud-network integration

draft-wang-rtgwg-cloud-network-integration-00

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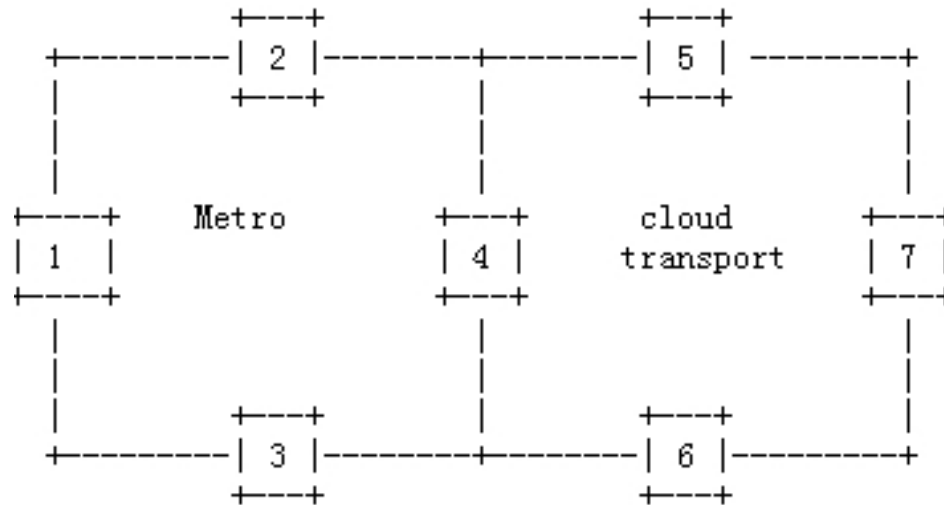
Motivation

- With the deployment of the edge DC, in order to avoid new construction of a huge cloud transport network, the existing metro network is used to access the edge DC. The interconnection between edge DCs and regional DC/core DCs is implemented through the coordination between the metro and cloud transport network.
- The access point of enterprises entering the cloud is usually in the metro network, and the dedicated line entering the cloud also involves the interconnection between the cloud transport and metro network.
- This document describes cloud-network integration scenario and networking technologies.

Interworking scenarios in the draft

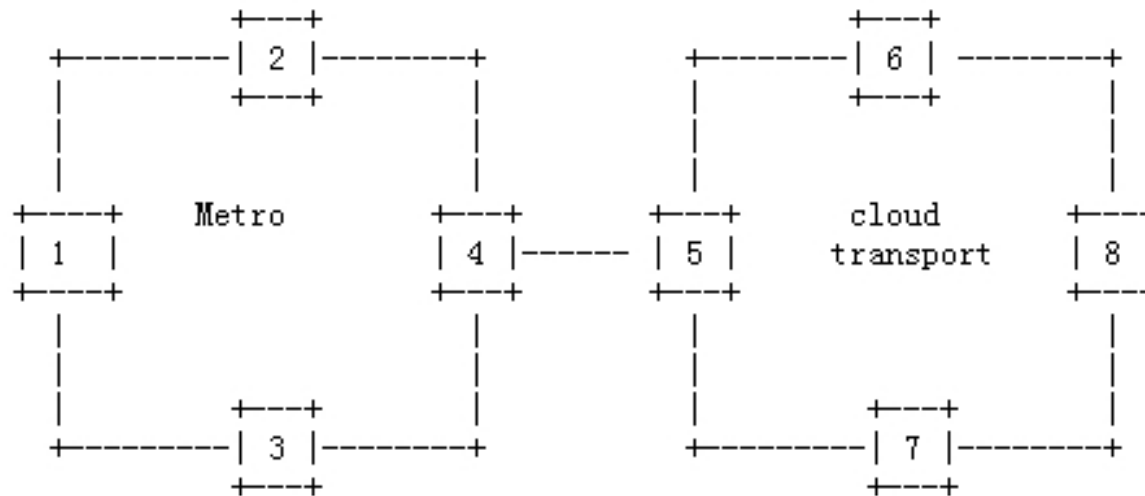
- This document mainly includes interworking scenarios.
 - Multiple domains with common border nodes.
 - Multiple domains with no common border nodes

Multiple domains with common border nodes.



- The boundary node of the cloud transport network serves as the boundary node of the metro network.
- There are independent IGP instances in metro and cloud transport networks.
- If the scale of the metro network is large, it will be divided into multiple IGPs.
- The cloud transport and metro network can have different controllers or under the same controller.

Multiple domains with no common border nodes.



- The cloud transport network and the metro network do not have a common border nodes, and the border node of the two networks are connected by a direct link.
- The EBGp needs to be deployed between the domains to connect the routes or the transport devices of the two domains.
- Hierarchical controller architecture usually be considered.

Networking Technologies

- This document defines three networking technologies:
 - Metro network does not support SRv6
 - segment splicing of different network technologies is mainly used to achieve end-to-end connection of services.
 - Some nodes of the metro network support SRv6
 - In the case of “Multiple domains with common border nodes”, [I-D.agrawal-spring-srv6-mpls-interworking] can be used to achieve interworking.
 - In the case of “Multiple domains with common border nodes”, or other metro network scenarios (such as metro networks support LDP/RSVP/MPLS-TP/SR-TP, etc.), the solution needs further discussion.
 - Metro network support SRv6
 - In this case, Solutions for interworking between two SRv6 domains need to be considered, including the centralized controller and the distributed control plane solution, and how to implement end-to-end traffic engineering.

Next Steps

- Comments welcome.

Thanks!