Applicability of OSPF Topology-Transparent Zone

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Contents

- Introduction
- Applications
  - TTZ in One Area Network
  - TTZ in Multi-Area Network
  - TTZ for IP RAN (Updated)
- Next Step

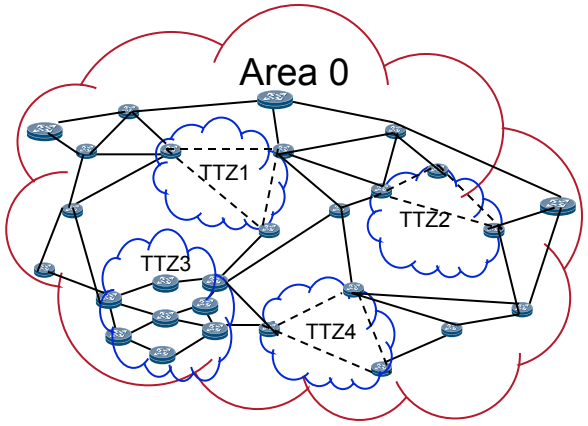
Introduction

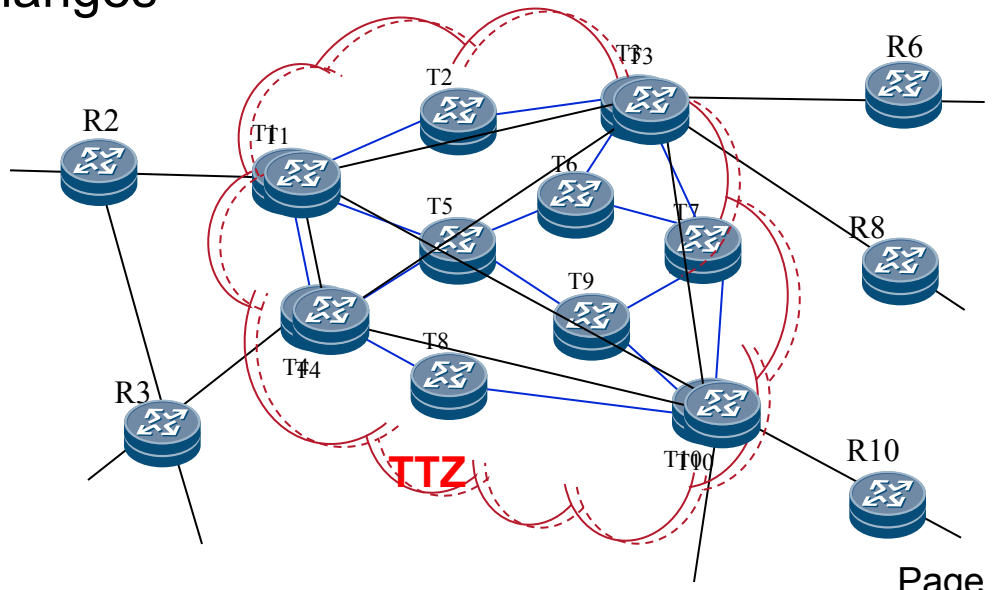
TTZ is a group of routers

- **virtualized as TTZ edge routers fully connected**
- routers outside TTZ
  - ✓ are NOT aware of, just see the edge routers connected, TTZ topology is hidden
  - ✓ see the topology beyond TTZ
- Routers inside TTZ see the network topology beyond TTZ boundary

Smooth migration to TTZ

- a part of area can be smoothly migrated to a TTZ without any network architecture changes





Problem Space – IP RAN

- The IP RAN provides connectivity for IP-based mobile broadband (MBB) from LTE and 4G base stations.
- Ratio of MBB subscribers to total mobile subscribers is expected to grow from 15% in 2011 to nearly 40% in 2016
- MBB market is forecast to grow to $1 trillion by 2016, with the bulk of the growth coming from MBB services.
- At the end of 2012 China Mobile 25[(1)] had deployed more than 500,000 nodes to support MBB services.
- The size of the IP RAN network must seamlessly scale to hundreds of thousands of nodes.
- Frequently splitting area as IP RAN network grows rapidly has issues

1. PTN Market Research 2013 Frost & Sullivan

Issues and Solution

Splitting an area into more areas:

- Significant network architecture changes, lots of time for network planning, configuration and migration
- Service interruptions, thus reduce the availability of the network
- Complex for end to end service creation crossing areas

Solution: TTZ resolves these issues through transferring parts of an area to TTZs:

- No significant network architecture change, migration to TTZ is smooth and can be automatic
- No (or minimum) service interruption
- Easy for end to end service creation crossing TTZs (same as before)

Next Step

- Welcome comments