MAE® Services
APNIC 19 – IXSIG

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Remote Peering

- **Peering requires delivering traffic from own network to peer network**
  - **Build out national or global network**
  - **Lease private line from own network to peer network or exchange point**
  - **Extend reach via service provider network**
- **Remote Peering may meet needs of cable networks, content providers, regional ISPs, and their peers**
  - **Lower transit or reduce network costs**
  - **Control over routing**
  - **Improved customer experience (latency, throughput)**

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MAE Services Extended (MAE EXT)

- **MAE EXT extends peering reach for MAE Services customers**

  - **Customers that are geographically disperse are able to peer with each other**

- **MAE EXT may be used establish layer 2 VPN**

  - **Customer can extend their network reach thru VPN as an alternative to private line (i.e., OCn) connection**

- **Customers are able acquire national and eventually global reach without building out infrastructure**

  - **Key customers are cable networks, content providers, regional ISPs and regional networks**

- **Usage based service (95% pushed to network)**

- **MAE EXT customers self provision connections via PeerMaker**

MAE EXT - continued

- **MAE EXT is a connection oriented service**

  - **Gigabit Ethernet Access - 802.1q tagged (SX and LX)**

  - **POS w/Frame Relay encapsulation access (OC3, OC12, and OC48 SMIR)**

  - **ATM (OC3 and OC12 SMIR)**

- **Platform performs IPv4/IPv6 interworking between Ethernet, Frame Relay, and ATM (Based on Draft Martini)**

  - **Maps 802.1q VLAN tag to DLCI, 802.1q VLAN tag to VPI/VCI, and DLCI to VPI/VCI**

  - **IPv6 GigE interworking with Frame Relay and ATM - 6/05**

- **MAE Management routers function as test-point for customer edge**

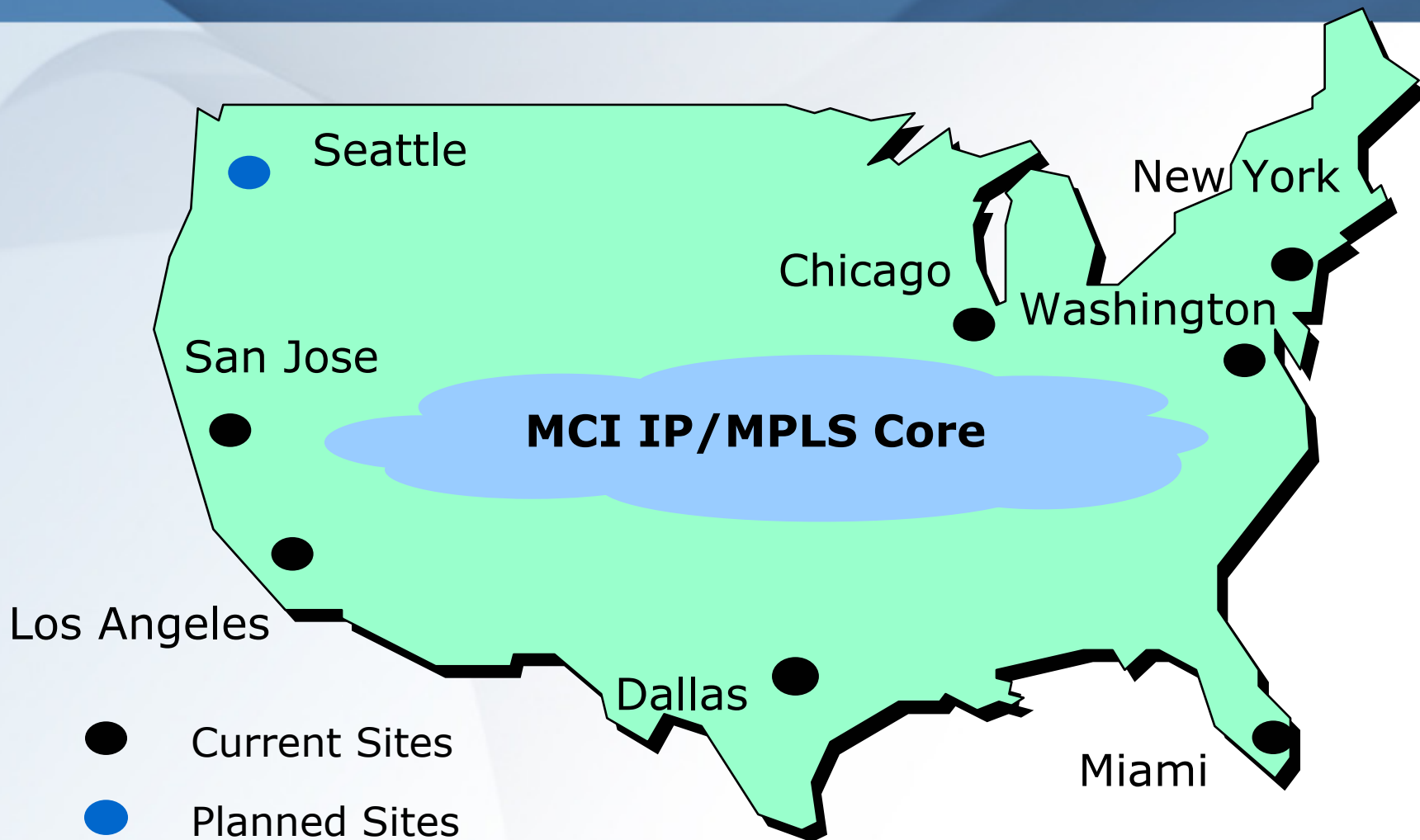 - **Frame Relay access with IPv4/IPv6 dual stack**

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MAE EXT - Transit

- **MAE® Transit Services provide Internet access from MAE® ports**

  - **Full routes, a full view of the global Internet routing tables**

  - **Partial routes, AS701 originating routes only**

- **Available from any customer port**

  - **Provisioned on sub-interface (802.1q tag, DLCI, or VPI/VCI)**

- **Usage based billing (95th percentile) on bi-directional traffic**

  - **Greater of transmit or receive**

- **Transit service is currently only IPv4**

  - **IPv6 available 2Q05**

2/17/2005

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PeerMaker^{SM} Provisioning Tool

- **PeerMaker^{SM} is a web-based provisioning tool that allows MCI MAE® Services customers to build and maintain their own connections**

  - **No need to place an order to establish a new connection**

- **PeerMaker allows building any-to-any connection regardless of the port type: GigE, FR, or ATM**

- **Customers may display traffic graphs of ports and connections.**

  - **PeerMaker retrieves the data and displays daily, weekly, or monthly views on demand.**

- **Customers can view a detailed history of their connection changes**

- **Secure access to PeerMaker using the SecurID® card**
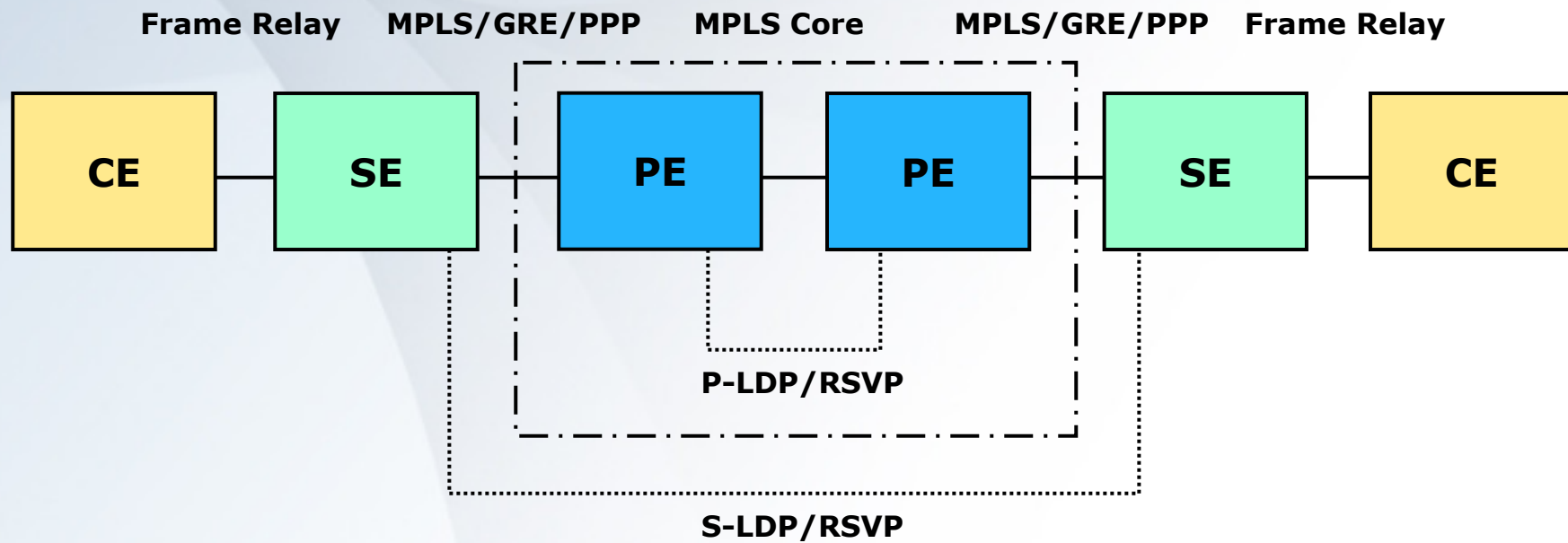
MAE Services – Extended Peering 2/05

Seattle

New York

Chicago

Washington

San Jose

MCI IP/MPLS Core

Los Angeles

Dallas

Miami

● Current Sites

● Planned Sites

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MAE Services – Global Extended Peering 2005/06

Amsterdam

Chicago

London   Frankfurt

Tokyo   Seattle   Paris

Seoul   San Jose   New York

Taipei   Dallas

Los Angeles   Washington

Hong Kong   Miami

Singapore

Sydney

● **Current Sites**
● **Proposed Sites**

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Trunk over GRE

Frame Relay   **MPLS/GRE/PPP**   **MPLS Core**   **MPLS/GRE/PPP**   **Frame Relay**

CE — SE — PE — PE — SE — CE

P-LDP/RSVP

S-LDP/RSVP

- **GRE Tunnel endpoints in SE to SE**

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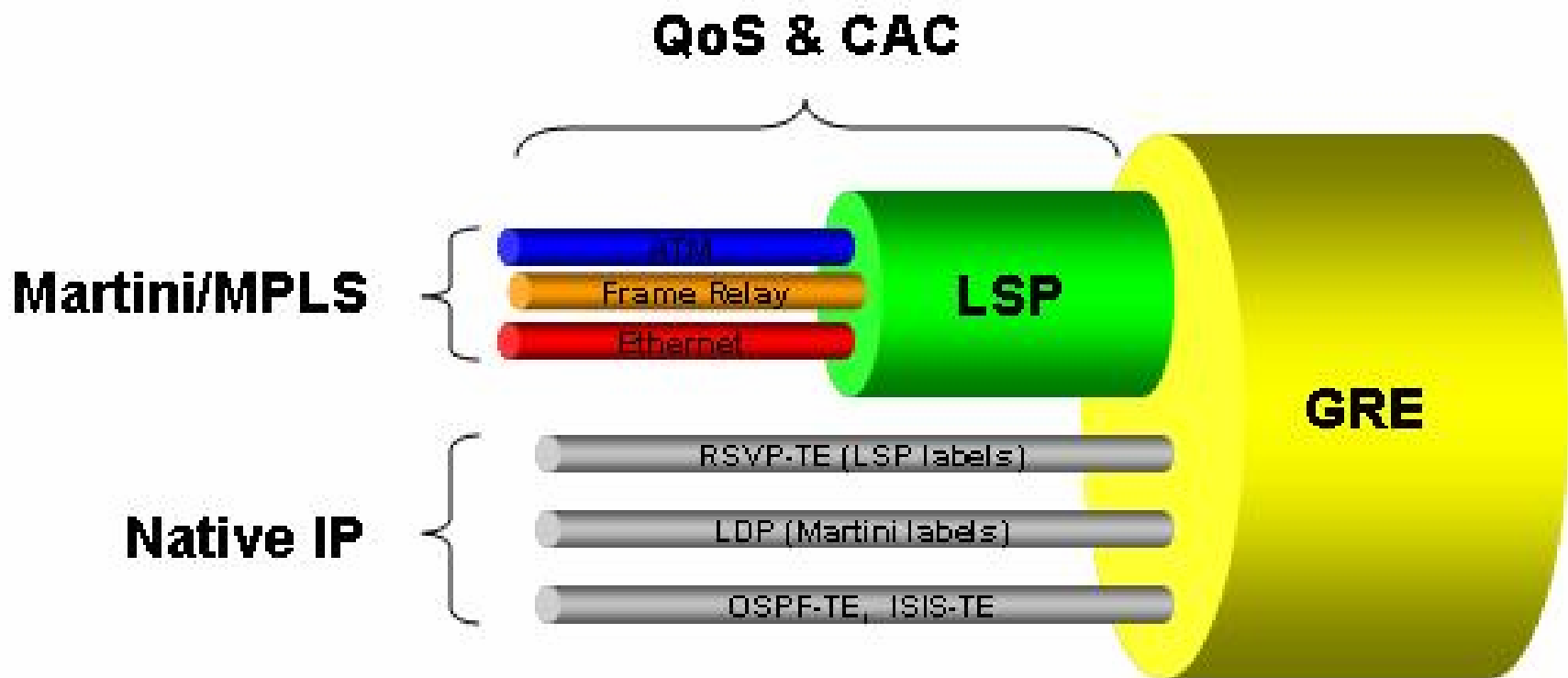
GRE Encapsulation

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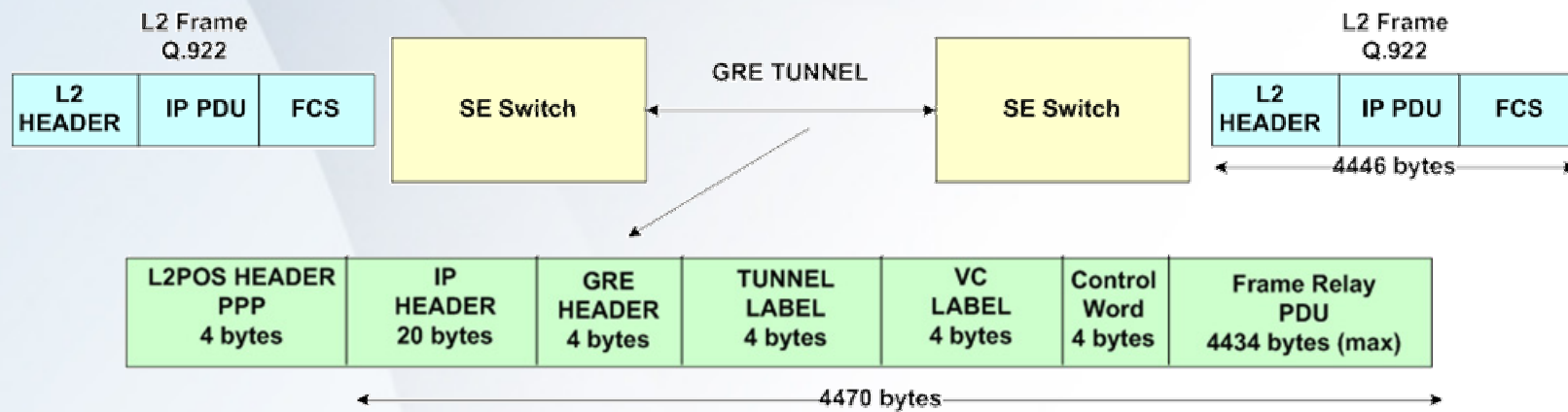
MAE Services Extended Peering Topology

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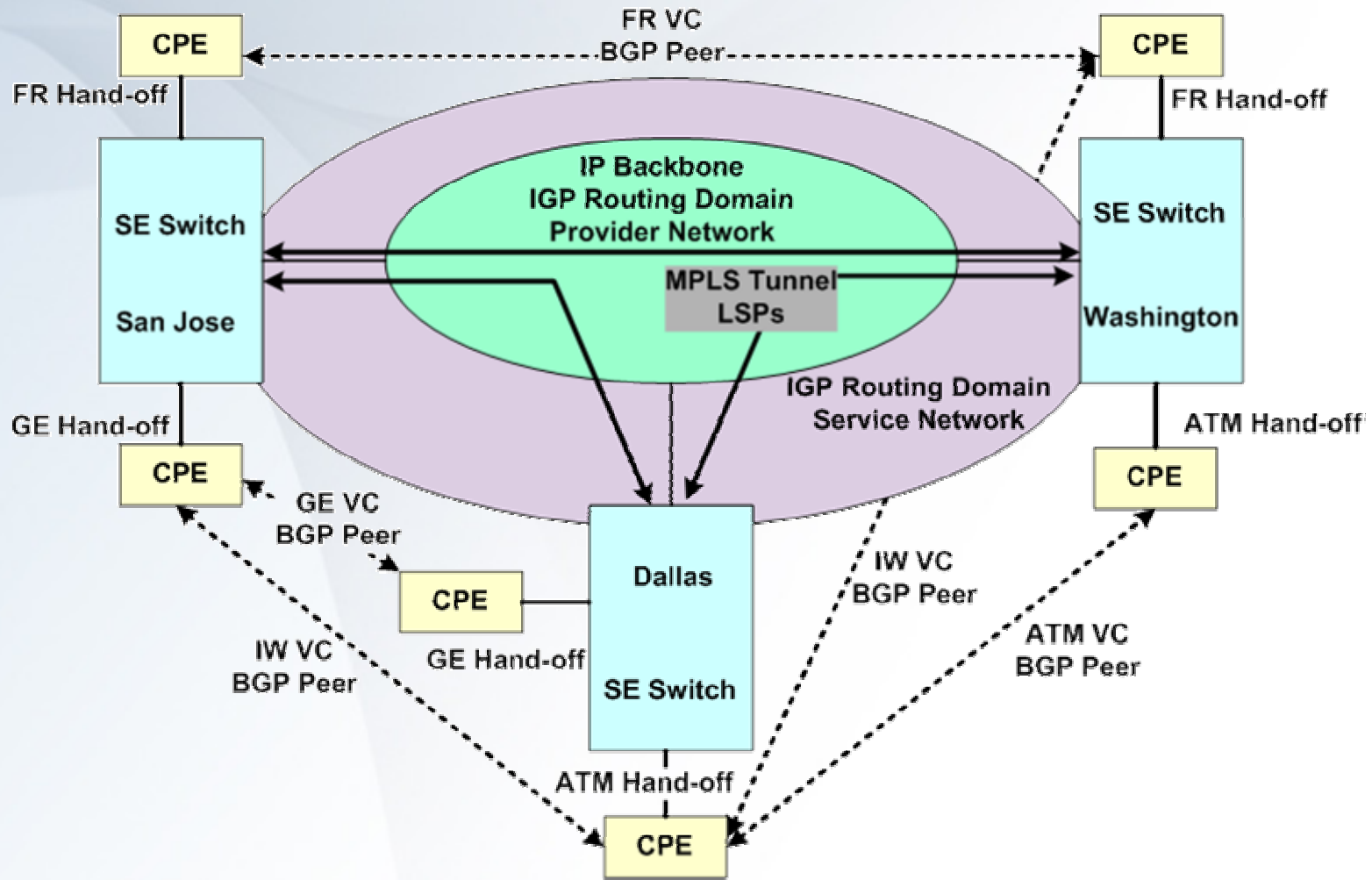
GRE Tunnel Implementation

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Trunk Failover

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