



shaping tomorrow with you

Maintaining Fast Protection in Mixed-Vendor Ethernet Networks

Fujitsu Mobile Backhaul and Ethernet Business Services Solutions

Two Ethernet-centric Fujitsu solutions address challenges in mobile backhaul and business services. The FLASHWAVE® 5300 and FLASHWAVE 7120 families of products are ideal for these solutions because fast Ethernet protection is paramount in both. In some cases, a greenfield solution incorporates exclusively the Fujitsu products described in these solutions. In other cases, the Ethernet portion of the solution must work with existing Ethernet products from other suppliers.

Mobile Backhaul Solution

One of the Fujitsu mobile backhaul solutions using E-Line services, E-LAN services or both includes:

- Ethernet switching and transport via the FLASHWAVE 5300 and FLASHWAVE 7120 families
- Microwave links for hard-to-reach cell sites via the Fujitsu GX4000 E-band Radio
- End-to-end Service-Level Agreement (SLA) via NetOmnia™

Figure 1 illustrates this solution.

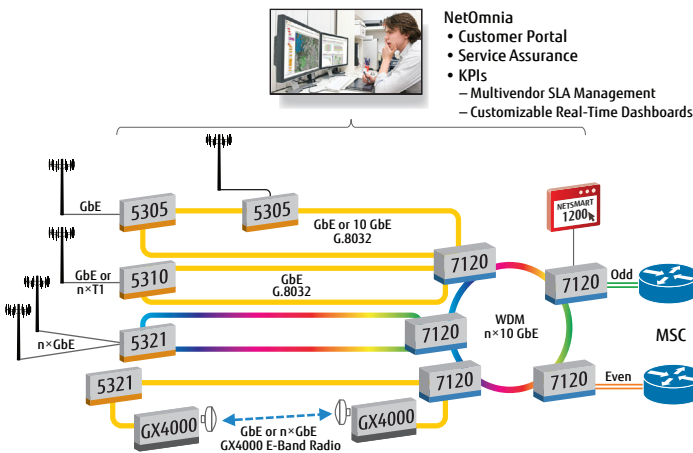


Figure 1: Mobile backhaul solution providing E-Line services, E-LAN services or both

Business Services Solution

In addition to serving mobile backhaul applications, Fujitsu has solutions for business services—Ethernet Virtual Private Line (E-Line) data service defined by the Metro Ethernet Forum and Ethernet LAN (E-LAN) services.

One of the Fujitsu business services includes:

- Ethernet switching and transport via the FLASHWAVE 5300 and FLASHWAVE 7120 families
- End-to-end SLA via NetOmnia

Figure 2 illustrates this solution.

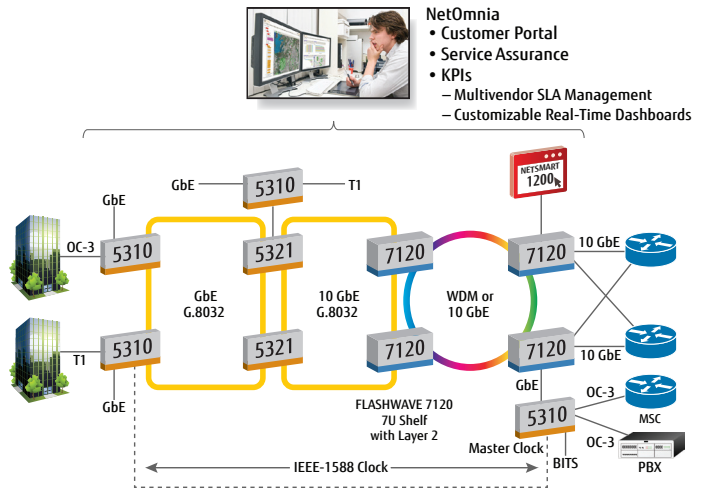


Figure 2: Business services solution providing E-Line and E-LAN services

Maintaining Fast Protection in Mixed-Vendor Ethernet Networks

Fast Protection

ITU-T G.8032 defines one form of fast protection in Ethernet networks. The FLASHWAVE 5300 and FLASHWAVE 7120 families use G.8032 to provide fast restoration in both of these solutions. G.8032 defines a mechanism for ring-based fast protection in bridged networks. During a failure, traffic flows around the viable portion of the ring as shown in Figure 3.

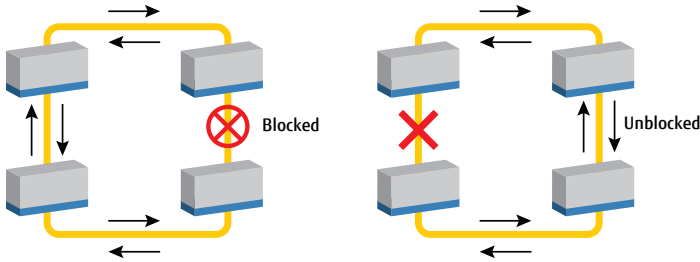


Figure 3: G.8032 Ethernet ring protection switching

Fast Protection in Mixed Deployments

As mentioned earlier, some deployments require FLASHWAVE 5300 family products to interface with other existing Ethernet networks. Most Ethernet features function properly in mixed environments. One of the more challenging features to interoperate in a mixed-vendor environment is G.8032 fast protection. Fujitsu has tested a variety of topologies with the FLASHWAVE 5310 and Alcatel-Lucent products and successfully interoperated G.8032 fast protection. Figure 4 illustrates some of the configurations tested.

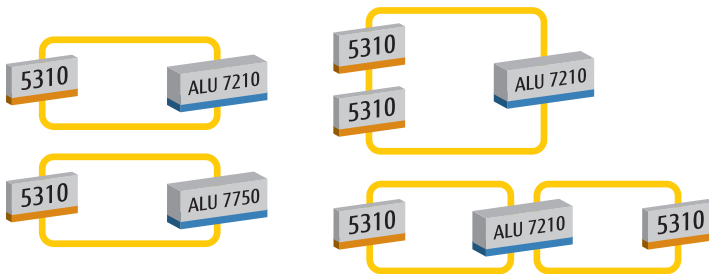


Figure 4: FLASHWAVE 5310 and Alcatel-Lucent interoperation configurations

For details on configuring each device for G.8032 interoperation with the ALU 7210, consult Customer Acceptance Plan document CAP-14-016, FLASHWAVE 5310–Alcatel SR 7210 SAS-M Interoperability Application. For details on configuring each device for G.8032 interoperation with the ALU 7750, consult Customer Acceptance Plan document CAP-14-017, FLASHWAVE 5310 & ALU 7750 G.8032 Ring Protection Interoperability Testing. These configurations are easily extended to all other FLASHWAVE 5300 and FLASHWAVE 7120 products and to related Alcatel-Lucent equipment.

Summary

Successful G.8032 interoperation of the FLASHWAVE 5310 and the ALU 7210 and of the FLASHWAVE 5310 and the ALU 7750 allows the mixed deployment of Fujitsu Ethernet solutions and existing Alcatel-Lucent deployments, maintaining the Ethernet functions, including fast protection, required in a Carrier Ethernet network.

Fujitsu Network Communications, Inc.

2801 Telecom Parkway, Richardson, TX 75082

Tel: 888.362.7763

us.fujitsu.com/telecom

© Copyright 2015 Fujitsu Network Communications, Inc.
FLASHWAVE® is a trademark of Fujitsu Network Communications Inc. (U.S.A.)
FUJITSU (and design)™ and "shaping tomorrow with you" are trademarks of
Fujitsu Limited in the United States and other countries. All Rights Reserved.
All other trademarks are the property of their respective owners.
Configuration requirements for certain uses are described in the product documentation.
Features and specifications subject to change without notice.

1.0/02.15