NMA TO LUCENT SESS FOR BX.25 SCC PORTS USING A X.25 NETWORK

Application Note

Application Overview

The Alswitch (AI180I, AI130, and AI110 Series Chassis) allows you to connect the Lucent 5ESS switch control center system (SCCS) ports to Lucent's network management architecture NMA for alarm surveillance. The Lucent 5ESS uses BX.25 on it's specialized common carrier (SCC) ports in conjunction with a "link swap over" mechanism between the primary and secondary SCC links. This means that two BX.25 circuits must be provisioned across the X.25 network. The Alswitch not only supports the BX.25 protocol, but it maintains the alternate link routing information necessary for connection to the standby SCC BX.25 link in case of a failure in the primary BX.25 link. This eliminates the need to provision multiple circuits in the X.25 network.

You can fully implement alarm and maintenance support on your 5ESS by using the Alswitch. The Alswitch also supports all the 5ESS Operations Administration Maintenance and Provisioning (OAM&P) ports like EADAS, Echo Back, Recent Change / Verify (RC/VFY), Loop Test (LT/RDC), Supplementary Trunk Line Work Station (STLWS), Master Control Center (MCC), and Read Only Printer (ROP).

FEATURES & BENEFITS

- Better trunk utilization and resource allocation By using the Al296 (16-Port High Speed Multi-Protocol Line Card), NMA can utilize its trunk link to monitor other network elements (NEs) and multiple 5ESS switches, rather than monitoring one 5ESS switch with point to point circuits.
- Fault tolerant operation The Alswitch maps incoming SVC calls to either SCC link for fault conditions and manual switch over maintenance windows.
- All your 5ESS OAM&P applications on one platform The Alswitch supports all the OAM&P applications on your 5ESS. This allows you to quickly implement your switch management and gives you a single, SNMP managed platform for your mission critical Class 5 Switch.
- Elegant Migration Strategy The TCP/IP interface on the AI296 allows you to migrate to a TCP/IP data communications network DCN and maintain SCC support.

AI Product Model Number	Description		
AI296	16-Port High Speed Multi-Protocol Line Card		
Alswitch	Al180I, Al130, and Al110 chassis and common equipment are NEBS Level 3 compliant, -48V DC, redundant powered, enclosure for the Telco office environment		

AI COMPONENTS

ARCHITECTURE OVERVIEW



This is how it works:

- 1. The head-end Alswitch is connected to the BX.25 links of the NMA host and to the X.25.
- 2. The tail-end Alswitch is connected to both the SCC0 and SCC1 links on the 5ESS switch with one link in active mode and the other link as a standby in case of failure.
- 3. NMA places a call to the 5ESS switch out the BX.25 port of the NMA host. The Alswitch dynamically maps the PVC call to a SVC call in the X.25 DCN.
- 4. The tail-end Alswitch receives the SVC call and dynamically translates the call to the active SCC BX.25 link to the 5ESS.
- 5. The exclusive passive link feature of the AI296 allows it to bring up only one SCC link at a time, thus eliminating communication conflicts.
- 6. If the active SCC link to the 5ESS fails, the tail-end Alswitch automatically reroutes the call to the standby SCC BX.25 link.

Please note, Alswitch has the capability to support multiple, diverse applications in addition to the application presented in this document. For information on additional applications, please visit our web site at www.aiinet.com.

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