

Tellabs® 6300 Network Management System

Carrier-class network manager for a full range of Tellabs third-generation Ethernet, SDH and DWDM network elements.

Simple, Scalable, Sensible

The Tellabs 6300 NMS is a fully integrated network and element management system. The manager provides you with optimal control of your Tellabs® 6300 Managed Transport System using an easy-to-use Graphical User Interface (GUI).

The architecture of the Tellabs 6300 NMS is highly scalable and supports both distribution and high availability options. Deployment scenarios range from a single workstation with simple element management of small networks to comprehensive, disaster-tolerant network management scenarios for country-wide networks comprising thousands of individual elements, multiple management centres, and numerous concurrent users.

The Tellabs 6300 NMS is the choice for network operators that aim for:

- Fast provisioning of Ethernet based EPL, EVPL and E-LAN services via Ethernet-over-SDH (EoSDH) with guaranteed SLAs end-to-end built on MPLS QoS.
- Centralised management of a Distributed Transport Switching network architecture.
- Efficient management of the service quality and the growth of SDH and Ethernet fiber access and SDH/DWDM core networks for transport of voice and data services from own or other carriers mobile/fixed network.

Do More With Less

The Tellabs 6300 NMS offers you extensive functionality for managing Ethernet, SDH, and DWDM networks, taking full advantage of the many capabilities embedded in these technologies. Moreover, usability and operator convenience are emphasized so the network manager is as easy to use as it is effective. For example, the intuitive GUI reduces the need for end-user training and limits the risk of human error. As a result the operating expenses are decreased and delays and downtime are reduced.

Setting up trails through the network is accomplished using a simple point-and-click GUI operation by selecting the 2 end points for the trail. The route (or routes, if the trail is protected) can be specified either manually or calculated automatically based on specific user input. Alarms from network elements are associated with the trails so users can quickly and easily determine the traffic implications of the faults and their impact on customers' connections.

The Tellabs 6300 NMS also features powerful tools to support a domain concept. This makes it easy to assign diverse responsibilities



to different parts of your organisation or individuals in order to create a customized view of the network that precisely meets their needs to help them accomplish their daily work more efficiently.

Changes in the network topology can be done using simple drag-and-drop from the GUI and the network configuration is maintained and logged in the Tellabs 6300 NMS database. This is where the physical network is modelled in an operational way. The model is an implementation of the ETSI layered model for SDH networks, which enables the user to view only the layer of the actual network that is relevant for the task at hand.

Seamless Integration in Multi-Vendor Networks

The Tellabs 6300 NMS is ideal for multi-vendor transmission networks in which the Tellabs 6300 systems and the network manager must coexist with other vendors' network elements and management systems to form a coherent solution. The network manager takes full advantage of the open architecture of the HP OpenView TeMIP platform, which can handle an extensive suite of network protocols/standards. This facilitates the development of interfaces enabling the network manager to be implemented as part of a multi-vendor transmission network. For even greater convenience and flexibility, the Tellabs 6300 NMS also features an XML-based northbound interface to facilitate the integration of the network manager into an umbrella management system.

Integrated Ethernet, SDH and DWDM Network Management

Enables seamless inter-working with the management of Ethernet, SDH and DWDM networks.

The element management and network management functions are hosted on the same hardware and software platform to improve usability and to make maintenance and upgrading as simple as possible.

Trail Set-Up and Reconfiguration

Complete trail lifecycle management, including the set-up of trails through the network and any subsequent changes of routes and sub-routes of a trail, protection and de-protection of trails, plus changes to the signal structure.

Physical Diverse Routing

Provides a higher degree of protection by ensuring that all of the alternative resources used for a protected route are physically different from the resources already occupied by the route that is to be protected. The function is also useful when replacing an existing route/sub-route with a new route/sub-route.

Layered Network Database and View

Provides an information repository for all functions at the network layer and means for registration of trails, links, matrices, etc. It holds the structural relations between different layers in the Ethernet/MPLS, SDH and DWDM multiplexing architectures and means for storing the operational states of network resources. The user can view the layer relevant for the task at hand.

Network Editor

Features tools for fast and straightforward creation of new network elements in the network traffic model, with automatic upload of all relevant lower network level representations. A bulk upload of a user-specified set of network elements can also be initiated if desired.

Domains

Enables the user to organise work responsibilities by dividing the network model into a hierarchy of domains and sub-domains, according to traffic type, geography or topology. As the organization evolves, the contents of domains can be rearranged using simple cut-and-paste operations.

Advanced Alarm Handling

Special functions detect, collect, present and log alarms from the equipment in the network. Advanced workflow and analysis functions

help users analyze problems and initiate repair actions, including filtering, correlation, domain-based alarm contexts, alarm escalation and optionally trouble-ticketing.

Trail Surveillance

Monitors the network alarms, locates the trails that are affected and generates alarms for them, including higher-layer client trails. The alarms generated by trail surveillance contain information about who the customer of the trail is, so users can quickly initiate repairs according to SLAs.

Trail Grooming

Through grooming, the VC-12 time-slots in a VC-4 trail can be rearranged into a single, economical TUG-3 — completely freeing other TUG-3s for use as, say, a new VC-3. The function can automatically optimize the free capacity or the user can specify a particular TUG-3 that is to be freed from traffic.

Performance Data

Automatically collects performance counters in the network elements and stores them in an SQL database so reports can be activated or data exported. The system supports non-intrusive monitoring.

Protection

Support of Sub-Network Connection Protection (SNCP), not only for end-to-end trails but also for parts of a route.

Synchronisation

Graphically illustrates the clock distribution and synchronisation, including the timing flow in the network and the timing qualities of the individual network elements.

Tellabs® 8000 Intelligent Network Manager/ Tellabs 6300 NMS Connector

The connector provides integration between the Tellabs 8000 intelligent network manager and the Tellabs 6300 NMS, which enables seamless provisioning of VC-12 trails through Tellabs' SDH and DWDM network from the Tellabs 8000 manager.

Scalability

There are virtually no limits to the number of individual network elements when deploying the Tellabs 6300 NMS in conjunction with a distributed architecture. The largest system currently in use supports more than 3,000 network elements and 50 concurrent users.

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