

# Tellabs® Panorama™ PON Manager

Increase LAN uptime while saving money by simplifying the LAN and allowing IT pros to work smarter

## Overview

Tellabs Optical LAN provides software-defined resources that are dynamically allocated based on real-time requirements. The word “resources” is meant to capture all LAN services, bandwidth, traffic management, Quality of Service (QoS), authentication, authorization and powered device (PD) management. This omnipresence is possible because fundamentally Optical LAN’s system wide intelligence is centralized in the optical line terminal (OLT) and the associated Optical LAN element management system.

Tellabs Panorama PON Manager is the cornerstone of an Optical LAN end-to-end system. It provides the centralized intelligence and element management across the entire LAN, from OLT to optical network terminals (ONT) and extends to subtended PDs. The Tellabs Panorama Manager provides LAN agility with:

- Discovery and end-to-end network views for quick actions.
- Automation to speed provisioning and moves, adds and changes.
- Consistency that eliminates error and LAN downtime.
- Portability across buildings, campus and all managed LANs.

## Benefits

The Tellabs Panorama PON Manager is one of the main drivers behind the larger Optical LAN value proposition of being simple, smart, stable, scalable and secure.

**Simple** — Automation is provided through software-defined resources that are dynamically allocated based on real-time requirements. This allows for faster installation, operational tasks and daily moves, adds and changes.

**Smart** — Discovery mechanisms and quick views of the total LAN system, ONTs, subtended devices, services, users, bandwidth, QoS and security policies allow IT to be more efficient, do more with less and handle IT skill set and head count reductions.

**Stable** — Centralized intelligence and management reduces human error/misuse by promoting machine-to-machine and process consistency. Policy consistency is achieved through templates/wizards/profiles that are distributed to all locations. Employee training is improved via set privileges, capture of actions and online help.

**Scalable** — Scale with confidence by creating templates/wizards/profiles that can be distributed locally, regionally and internationally. Meet the needs of small-to-large Enterprise LANs with Solaris, Windows, Oracle database, server/client w/remote access options from your laptop, tablet or iPad and Web-based options.

**Secure** — Define strict security policies to block malicious activities; controlled access on a per user and per device basis. Implement the defined security policies across all managed LANs for maximum process consistency.

In 2008, an Infonetics Research study found that enterprises lose ~3.6% annual revenue due to network downtime, and human factors are the biggest contributor, responsible for 50% to 80% of outages.<sup>1</sup> Since Tellabs Panorama PON Manager is more stable, scalable and secure, it can increase network availability and save businesses money by simplifying the LAN and allowing the IT staff to work smarter.

## Architectures

Tellabs Panorama PON Manager provides options that match your enterprise LAN and IT staff requirements. From operating multiple LANs around the world to large campus deployments to small single-building LANs, the PON Manager can be right-sized to your exact needs.

**Solaris-based** — Targeted for medium-to-large Enterprise entities, this Solaris-based operating system option is deployed in a server/client architecture. It can be sized to support from 1 to 50 OLTs and from 1 to 250 user sessions. Typically, it is deployed in conjunction with an Oracle database that is purchased separately but also supports a freeware database option for smaller system deployments.

**Windows-based** — The Windows operating systems versions are more likely to be deployed by medium-to-small enterprises. The Windows-based OS options can be deployed in larger LANs with an Oracle database (purchased separately) or in smaller LANs with an integrated freeware database. It too can scale from 1 to 10 OLTs and from 1 to 250 user sessions, but its virtualized Windows via VMware and Web browser options make it ideal for the smaller, nimble Enterprise IT staff.

<sup>1</sup> Juniper Networks, “What’s Behind Network Downtime?” *Infonetics Research*, 2008. — <http://www-05.ibm.com/uk/juniper/pdf/200249.pdf>

**Virtualized Windows** — This is an option to run the PON Manager in a virtualized Window environment on a single computer via a VMware ESX solutions suite. This allows enterprises to leverage their hardware capital costs over multiple applications and reduce the number of hardware platforms and associated operational costs.

**Web Browser Windows** — This option operates within a Windows environment and can be accessed via desktop, laptop or tablet machines. It is a subset of a fully functioning OLAN element management system. It is meant to streamline daily operations of diagnostics, performance and monitoring, and speed moves, adds and changes. The Web browser PON Manager provides advance search, service management and troubleshooting functions.

## Features and Functions

From the PON Manager Main Menu Bar, you can access resources in the File, Edit, View, Profiles, Tools and Help pull-down menus [Figure 1]. For example, within the Profiles options you can capture consistent configurations for equipment, Ethernet ports, services, connections and alarms. In the Tool pull-down menu, you will find the option for building templates that allow you to save uniformed attributes and rules to be applied later. Finally, within the Help options, you can access technical documentation that can help expedite senior IT staff troubleshooting or assist with junior IT staff training.

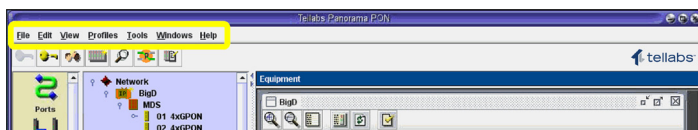


Figure 1. Panorama PON Manager Main Menu

By navigating through the Tool Bar, you can Log on/off, access the User Manager, add OLT system into Panorama PON Manager, use search/find function, sync/filter alarms, create PON protection groups, configure voice gateway and automate reports [Figure 2]. Of interest in the User Manager is the ability to create/edit roles/privileges based on corporate security policies. In the PON Protection section, you can create Type-B PON protection configurations for optical distribution network redundancy between ports or PON service modules or geographically dispersed OLTs. And under the Reports area, you can generate and automate a wide variety of reports using either standard templates or customized formats.

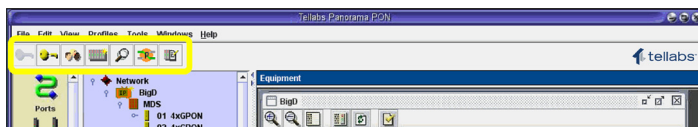


Figure 2. Tellabs Panorama PON Manager Tool Bar

In the Application View Bar, you can enable many features and functions that, when activated, launch into main Application Window view [Figure 3]. The most popular applications are as follows:

**Ports** — The ports application is used to assign uniformed profiles to ONTs. This is where consistent information for PoE, RSTP, IGMP, and NAC, PAE and LLDP is captured. It's also where you can enable and disable ports.

**Links** — This function allows you to manage the 1 GbE and 10 GbE uplink interfaces. Here you can provision LAG groups, VLAN management and VLAN mappings.

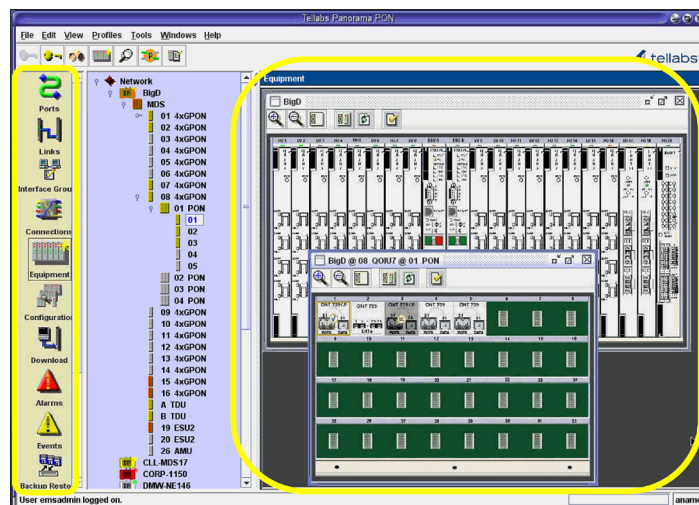


Figure 3. Application View Bar (above left) and Application View Window (above right)

**Equipment** — The equipment application offers a complete view of the entire network on one screen. Drill-down capabilities also allow an alarm to be followed from an icon at system level all the way to card specifics for quick problem identification and resolution.

**Configurations** — The configuration application captures system-level parameters. In this application, you would manage the input to SIP, SNMP, IEEE 802.1x settings, NTP timing and VoIP integration parameters.

**Alarms/Events** — For real-time views of alarms and events, you would launch the alarm and events application for 4-color view in the applications window. This provides visibility across the entire end-to-end LAN for quick diagnostics and troubleshooting.

**Downloads/Backups** — Upgrading to a new feature package or to roll back to a prior feature package can be accomplished from the downloads application. Setting up automatic backups is an easy process with the configurator tool. Simply pick the time and the frequency, and the system establishes backups based on those parameters. Backups can be scheduled daily or weekly, and day/time/systems are all definable.

**Inventory** — The inventory application gives you a quick view of all your Optical LAN equipment, service modules, Ethernet switch units and ONTs. Once launched into the application view window, you can sort by serial numbers, feature package versions or any of the columns of information.

### Solaris Operating System

Solaris			
Number of OLTs	Number of GUIs	Processor	Memory and hard disk
1-10	5	✓ Sun SPARC T5-1B server module (3.6 GHz SPARC T5 16-Core CPU) ✓ Sun SPARC T4-1 (1.85 GHz SPARC T4 8-Core CPU) ✓ Sun SPARC T3-1 (1.65 GHz SPARC T3 16-Core CPU) ✓ Sun SPARC Enterprise T5120 (1.4 GHz UltraSPARC T2 8-Core CPU)	✓ 8 GB RAM ✓ 300 GB SAS Disk
<b>Operating System</b>		Solaris 10 (any update) for Oracle 10g and Postgres Solaris 10 (update 6 or later) for Oracle 11g	
<b>Database Support</b>	64-bit Standard Edition for Oracle	✓ Postgres Release 9.2 ✓ Oracle Database 10g Release 2 (10.2.0.1) for standard deployment ✓ Patch #8202632 to update to Release 10.2.0.5 for hardened deployment ✓ Oracle Database 11g Release 1 (11.2.0.1) for standard deployment ✓ Oracle Database 11g Release 1 (11.2.0.4) for hardened deployment	

### Windows Operating System

Windows			
Number of OLTs	Number of GUIs	Processor	Memory and hard disk
1-2	2	✓ 1 Intel CPU with at least 2 core	✓ 4 GB RAM ✓ 160 GB SATA Disk
1-10	5	✓ 1 Intel CPU with at least 4 core	✓ 8 GB RAM ✓ 160 GB SATA Disk
<b>Operating System</b>		✓ Windows 7 64-bit Professional Edition or above, SP1 for Postgres only ✓ Windows Server 2008/2012 64-bit Standard Edition R2 for Oracle or Postgres	
<b>Database Server</b>	32-bit Standard Edition for Oracle	✓ Postgres Release 9.2 ✓ Oracle Database 10g Release 2 (10.2.0.3) for standard deployment ✓ Patch #8202632 to update to Release 10.2.0.5 for hardened deployment ✓ Oracle Database 11g Release 1 (11.2.0.1) for standard deployment ✓ Oracle Database 11g Release 1 (11.2.0.4) for hardened deployment	✓ Minimum RAM requirement becomes 8 GB if Oracle 11g is used

## VMware

	VMware	
<b>Guest Operating System</b>	✓	Windows 7 64-bit Professional Edition SP1 or above, for Postgres only
	✓	Windows Server 2008 64-bit Standard Edition R2 for Oracle or Postgres
	✓	Windows Server 2012 64-bit Standard Edition R2 for Oracle or Postgres
<b>Memory</b>	✓	Use limits from OS tables
<b>Hard Disk</b>	✓	Use limits from OS tables
<b>File System</b>	✓	VMFS, Virtual IDE Disk, Persistent.
<b>NIC</b>	✓	1 GB NIC required, two or more recommended.

## General Specifications

### Northbound Protocols

- TL1

### Security

- IPv6 for NMS-to-EMS communication
- IPSEC for NMS-to-EMS communication
- IPSEC for EMS client to EMS server communication
- SNMPv2/v3 at network element
- Secure downloads
- Role-based administration
- User-defined security privileges
- Security audits

## Ordering Information

Tellabs™ Panorama™ PON Manager software is purchased separately. Tellabs Panorama PON Manager software versions are tightly coupled with corresponding equipment feature packages. For assistance in acquiring the proper PON Manager software license, please contact a Tellabs account manager or email [ask@Tellabs.com](mailto:ask@Tellabs.com).

Unix or Windows-based hardware is not sold through Tellabs and should be purchased separately. If Oracle database software is desired, their software license and support should be acquired directly from Oracle.

Take the next step. Contact Tellabs today.



+1 800 690 2324  
+1 630 798 9900  
[www.tellabs.com](http://www.tellabs.com)

1415 West Diehl Road  
Naperville, IL 60563  
U.S.A.

