

# EdgeGenie Service Management

**Provision, Monitor, Maintain and Optimize the Network Edge**

Telco Systems' EdgeGenie service management system offers a complete solution for full life cycle of network deployment from planning to managing, monitoring and maintaining of Ethernet services. Assuring services end-to-end requires knowing how services are being delivered across the network. Understanding how network resources are being utilized and identifying and correcting problems quickly is key to reducing customer churn.

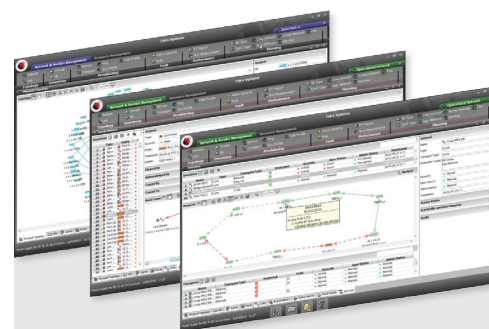
EdgeGenie optimizes network resources by utilizing sophisticated path computation algorithms to ensure ongoing optimization. An advanced planning tool allows the operator to model "what if" scenarios to predict how network changes will affect service delivery. With EdgeGenie providers can not only visualize how services are being transported across the network but how changes to the network will affect the existing operational network.

EdgeGenie lowers operational costs by dramatically reducing the complexity of service management in the Ethernet edge network. While it is designed specifically for Telco Systems' IP edge and aggregation devices, it can also co-exist with 3rd party vendors' MPLS cloud to ensure that services are being delivered end-to-end.

A next-generation GUI design streamlines the usage of the system to save time and manpower costs. Quick action buttons enable the operator to access a wide range of options without going through a series of pull-down menus. This unique navigational design simplifies complex operational procedures for network operators.

## Network and Service Management

The network and service management application includes tools to provision services over Ethernet and MPLS networks using advanced path computation algorithms, pre-defined SLA profiles and available network resources.



## Product Highlights

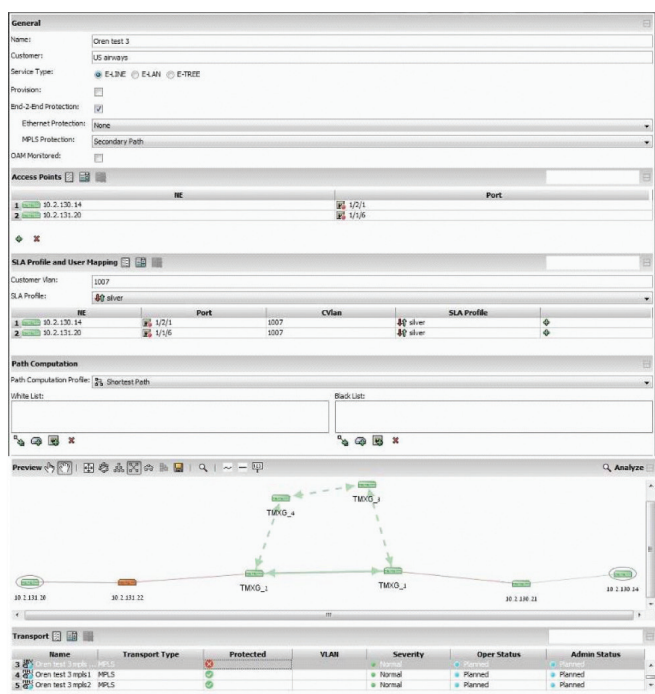
- End-to-end service enabling
- Next generation GUI design
- Robust and scalable multi servers architecture with full component resilience
- End-to-end multi protocol provisioning, including both MPLS and Ethernet tunnels
- End-to-end computation of redundant paths to protect services
- GUI-based service analyzer for quick visual access to services
- Customer Network Management to allow end users to manage their own services
- Standard (MTOSI compliant) north-bound interface

## Provisioning

The provisioning engine provides smart computation profiles to allow the operator to wisely distribute traffic across his network. This eliminates the need for complex CLI scripts which often result in service delays and costly service mistakes.

### The provisioning module supports:

- MEF services (E-Line, E-LAN, and E-TREE\*)
- Constraint and threshold-based path calculation
- Multi protocol support (L2, MPLS)
- End-to-end protection with disjoint paths
- Cross-Domain provisioning



The system allows definition of multiple types of provider-defined SLA profiles which can include CIR, EIR, CBS, and EBS for each level. Profiles may also include advanced hierarchical quality of service where the DSCP values and CIR limits can also be set for the real time applications like voice and video and how the remaining bandwidth can be allocated between the business critical and best effort applications.

In addition, the provisioning engine can configure failover mechanisms and compute redundant paths throughout the network to protect services.

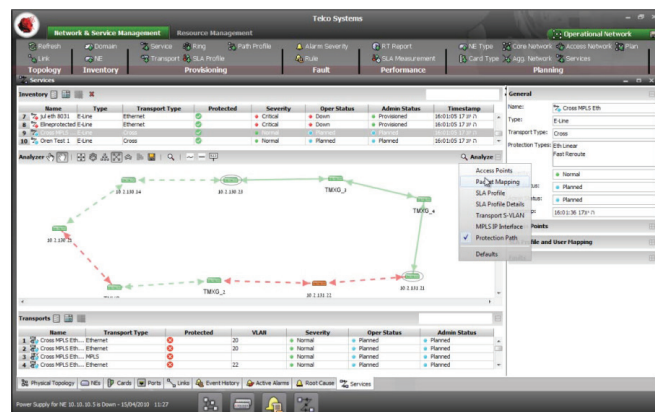
## Service Analyzer

The service analyzer is one of the provisioning module unique tools that enhance the user experience. Using the service analyzer, the user gets a graphical representation of the service topology and gains on-the-fly instant access to service attributes data, visualized on the service topology map. This capability allows the operator to correlate between service infrastructure and service attributes at a glance.

The service analyzer provides instant access to information such as:

- Access Points
- Packet Mapping
- SLA Profiles
- SLA Profile Details
- Transport S-VLAN
- MPLS IP Interface
- Protection path

## End-to-end Service and SLA Monitoring

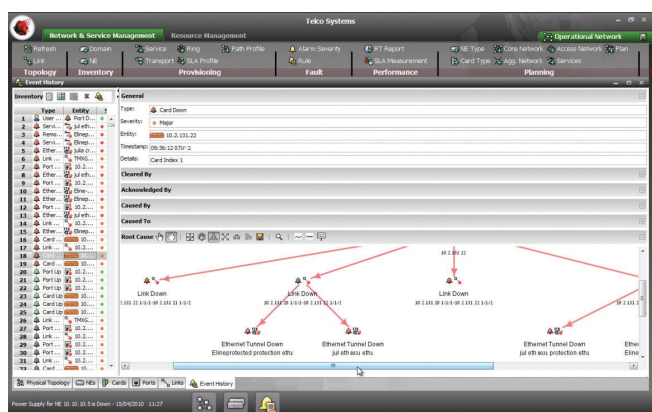


In addition, EdgeGenie includes the ability to manage and customize network domains and physical topologies, manage inventory, and proactively monitor faults and alarms.

A unique root cause analysis tool allows the operator to quickly understand which network faults affect services and to initiate corrective action. The root cause analysis tool provide a unique graphical representation of the relations between network faults and affected services that allows the operator to easily understand which are the affected services and which faults should be dealt with first in order to amend the service outages.

An SLA manager defines, measures and analyzes customer SLAs. Threshold crossing alarms provide indication before SLA breach.

- End-to-End status propagation
- Advanced visualization for detailed analysis
- Failure and faults detection with root cause analysis
- Real time and long term SLA monitoring
- User alarms based on user defined queries
- Customer service management application



## Service Maintenance

Resources can be added, configured and restored through the system to facilitate smooth network expansion, and multiple reroute during maintenance ensures that there is no customer downtime.

- End-2-End Service hitless reroute
- "Evacuate" - multiple reroute for maintenance
- "Repair" - supporting service configuration restoration
- "Add Resource" - supporting smooth network expansion
- Scheduled configuration backup and restore

## Device Manager

EdgeGenie's Device Manager is a powerful tool providing a realtime craft interface to manage all supported devices.

Using the Device Manager, the user has access to EMS-like functionality, allowing him to manage the device attributes and gain access to per-port performance reports through an intuitive and easy to use GUI.

In addition, the device manager provides a real-time view of the managed device with port status, LEDs, CPU utilization and device temperature.

## Northbound Interface

The EdgeGenie's Service Management System includes an MTOSIcompliant north bound interface to allow it to co-exist and share information with 3rd party OSS and BSS applications.

## Customer Network Management (CNM)

The Customer Network Management (CNM) portal allows the operator to provide service-related information to its customers.

The CNM can be used by the operator/service provider as a sales tool to provide to its customers the justification to move away from best effort services into services with SLA or increase their service bandwidth. The portal can display any traffic analyzing reports provided by the system and based on the versatile amount of PM's gathered from the network by the system.

The CNM portal can also be used by the operator to provide proof to its customers that service SLA's are being met.

## Supported Devices

EdgeGenie supports the Company's demarcation and aggregation switches which are purpose-built for the carrier's Ethernet edge. They embody a wide range of features including standardsbased OAM, a choice of resiliency protocols including G.8031\* and G.8032\*, support for multiple transport mechanisms like QinQ, VPLS, or HVPLS using L2VPNs, and offer advanced provisioning capabilities for pre-configuration and auto-configuration, and remote troubleshooting and diagnosis features like RFC 2544-based embedded test heads and loopback options.

## System Requirements

EdgeGenie's distributed architecture provides a robust and scalable solution that supports multiple servers and clients with full component resilience.

### Server OS

Windows XP  
 Server 2003  
 Server 2008  
 Windows 7  
 Linux

### Client

All Windows platforms  
 Any web browser