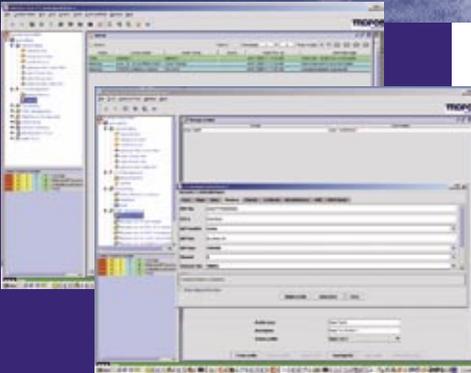# Tropos Control

Element Manager

The patented Tropos™ MetroMesh™ architecture combines the industry's most sophisticated mesh routing intelligence, designed from the ground up to optimize throughput in a dynamic metro-scale Wi-Fi mesh environment, with carrier-grade centralized element management and a purpose-built hardware platform with peerless Wi-Fi link budgets. The Tropos Networks™ MetroMesh architecture leverages Wi-Fi to enable metro-scale mesh deployments that were previously difficult or impossible. The result: the fastest, lowest-cost and simplest wireless broadband solution available anywhere.

Tropos Networks makes it incredibly easy to deploy and control hundreds or thousands of Wi-Fi cells for secure, ubiquitous 802.11 coverage over metropolitan areas. Harnessing the power of these metro-scale networks requires specialized management that only Tropos Control™ and its robust network monitoring and management features can deliver.

Tropos Control is a powerful element manager, allowing network operators to perform a plethora of important functions, including over the air configuration and updates of Tropos MetroMesh routers, whole network performance monitoring and statistical capture — including simple point-and-click graph creation, real-time link state and client connectivity monitoring and user-defined functions such as MAC address filtering and rogue client blacklisting.

Tropos knows that every management environment is different. That's why Tropos Control can be used stand-alone to manage the wireless network, or it can be integrated with SNMP-compliant, large-scale network management systems such as OpenView™. Throughout the network lifecycle — from configuration, to daily operations, to optimization and upgrades — Tropos Control gets the job done.

FEATURES

Network Monitoring
- Multiple views of network capacity and wireless link quality
- Point-and-click access to detailed configuration and security information
- Continuous alarm/problem monitoring
- Automatic collection and monitoring of performance data, with point-and-click graph creation
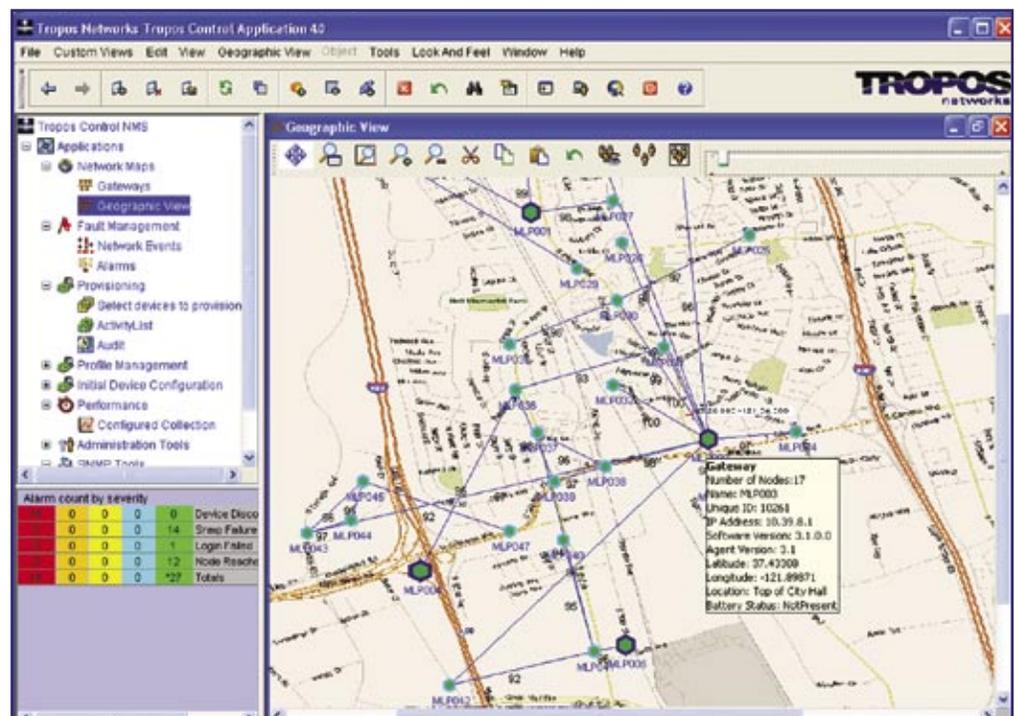- Pathalogical performance evaluation and reporting

Network Management
- All network parameters editable through management console
- Loadable profiles for network topology, security policies
- Over-the-air configuration and software updates

Simplified Deployment
- All functions available from a single management station
- Bulk provisioning of MetroMesh router configurations and security settings
- Automatic discovery and graphical placement of MetroMesh routers
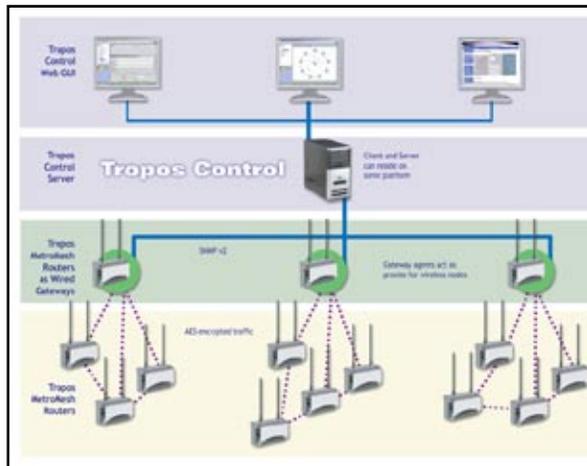
Tropos Control
Element Manager

TECHNICAL SPECIFICATIONS

Tropos Control Architecture

Tropos Control is built on a client/server architecture; the server collects and stores management information from devices in the network, and the Web-based clients provide a graphical user interface to the server data.

- Tropos Wi-Fi wired gateway mesh routers communicate with Tropos Control via SNMP and act as management proxies for the wireless mesh routers.

Deployment

Tropos Control allows rapid, easy field deployment, minimizing costs and time-to-network. Automatic discovery makes scaling the network simple:

Pre-installation Configuration

- Connect the mesh routers to Tropos Control, which pre-loads them with software and configuration data.
- Simply mount the mesh routers and plug them into any available power source.

Automatic Discovery

- Add or remove mesh routers from live, running networks for automatic network expansion or adjustment.
- Tropos Control automatically senses new mesh routers and uploads the appropriate software and configuration data.

Minimum System Requirements

Server

- 512 MB RAM, Pentium III or equivalent
- Windows 2000, XP

Client Workstations

- 256 MB RAM, Pentium II or equivalent
- Windows 2000, XP

Server and cllient application can be run on the same machine for easy deployment

Network Monitoring

Tropos Control provides multiple graphical views of the network and its mesh router clusters, with geographical maps and global locations, to deliver at-a-glance network status and performance information to the network manager.

Tropos Control also monitors performance and identifies actual and potential problems:

- Faulty or out-of-reach mesh routers
- Poorly performing mesh routers

For longer-term performance analysis, Tropos Control includes a comprehensive analytic reporting system:

- Pre-defined summary and trend reports
- User-defined custom reports
- Open access to statistics for exporting

Network Management

Tropos Control enables centralized management of all mesh router configuration parameters, including:

- 802.11i/WPA configuration
- ESSID assignment
- RF channel assignment
- WEP key assignment
- DHCP configuration
- NAT configuration
- VPN port filtering configuration
- Custom packet filtering
- Mesh router-to-client and router-to-router transmit rate specifications

Profiles can be created for scheduled maintenance and for specific operational situations:

- Periodic, automatic WEP key changes
- Rapid security policy changes
- Priority network access for fire, police and EMS during emergencies

Ordering Information:

Part Number: NM009000
Tropos Control Element Management System

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