



# SMARTHAUL™ ELEMENT MANAGEMENT SYSTEM DATASHEET

## SmartHaul™ Element Management System (EMS)

### Key Features & Benefits

- Unified management umbrella for all Siklu radios
- Reduce OPEX
- Full FCAPS support
- Complete lifecycle management of the network
- Maximize network performance
- Faster time-to-resolution of problems
- Scalable – from small to full telco network
- REST API (northbound interface)

### SmartHaul™ EMS, Complete Lifecycle Management for Siklu Products

Siklu SmartHaul™ EMS is a scalable and reliable network management platform specially designed to provide end-to-end life cycle management for Siklu’s products, including EtherHaul™ P2P and MultiHaul™ PtMP offerings. Siklu SmartHaul™ EMS provides a fast and simple approach to network management. The platform allows all Siklu’s network elements to be viewed from a single unified dashboard supporting full FCAPS functionality with a wide range of network management functions including fault, performance, topology, maps, configuration, monitoring, and dashboard reporting.

### Efficient Dashboard – Optimized Performance

SmartHaul™ EMS Dashboard provides a unified view in a single, easy-to-use page that highlights essential data at the network, site, and Siklu elements levels. The EMS provides comprehensive support to help zero-in on equipment failures and troubleshoot the network.

### Full comprehensive tool kit for OPEX reduction

Fault management- Centralized list of active and historical alarms for quick network diagnostics and fast remediation.

Performance management- Real-time and historical performance measurements provide a comprehensive understanding of the current state of the network and its elements, allowing fast and full insight into your network.

Configuration management - Direct Access to each element. Use GUI or CLI access links to individual network element making it a breeze to dive into any radio. No need to remember IP addresses or other credentials.

### Networkwide SW upgrade

Campaign tasks, such as SW upgrades across your entire network, can be run manually or scheduled automatically, and indicators are provided for of task progress and task completion. The Campaign Manager saves time and significantly cuts management costs.

### Scalable Pay as you grow

Quick to implement and simple to use, the SmartHaul™ EMS scales to fit any network size.





# SMARTHAUL™ ELEMENT MANAGEMENT SYSTEM SPECIFICATION

## Features

<b>Dashboard</b>	<ul style="list-style-type: none"> <li>Network status at a glance</li> <li>Inventory summary of elements by type</li> <li>Alarms summary by severity</li> <li>Availability summary with management status</li> <li>Radio spectrum and channels used</li> <li>Device Dashboard</li> </ul>
<b>Map</b>	<ul style="list-style-type: none"> <li>Hierarchical network visualization</li> <li>Street map or Satellite view modes</li> <li>Elements Location and links between elements</li> </ul>
<b>Configuration</b>	<ul style="list-style-type: none"> <li>Frequency allocations</li> <li>Device list and summary of radio parameters and status</li> <li>Specific device configuration via direct GUI or CLI links</li> </ul>
<b>Fault Management</b>	<ul style="list-style-type: none"> <li>Centralized Alarm list</li> <li>Alarm action</li> <li>Events</li> </ul>
<b>Performance</b>	<ul style="list-style-type: none"> <li>Current and historical data</li> <li>Radio -RSSI, CINR , Modulation</li> <li>Data BW utilization</li> </ul>
<b>Administration</b>	<ul style="list-style-type: none"> <li>User Management covering permissions and credentials</li> <li>Domain Management supports multiple domains and assigns user/device to a given domain</li> <li>Licence Management based on number of managed elements</li> <li>File Management of SW images and configuration files</li> </ul>
<b>Campaign Management</b>	<ul style="list-style-type: none"> <li>Schedule: Mass SW Upgrades</li> <li>Broadcast of network wide configuration files</li> </ul>

## General

<b>License basic options</b>	Up to 20, 50, 100, 250, 500 elements and higher
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## Minimum EMS Server Requirements

<b>Operating System</b>	CentOS Linux 7.2 (1511) on x86_64 bit (English Edition)
<b>CPU</b>	2 cores at least 2 GHz CPU frequency
<b>Memory</b>	8 GB RAM
<b>Hard Disk</b>	128 GB (SSD preferred)
<b>Network interface</b>	2 x 1GB ETH NICs