

Redline Management Suite

Features

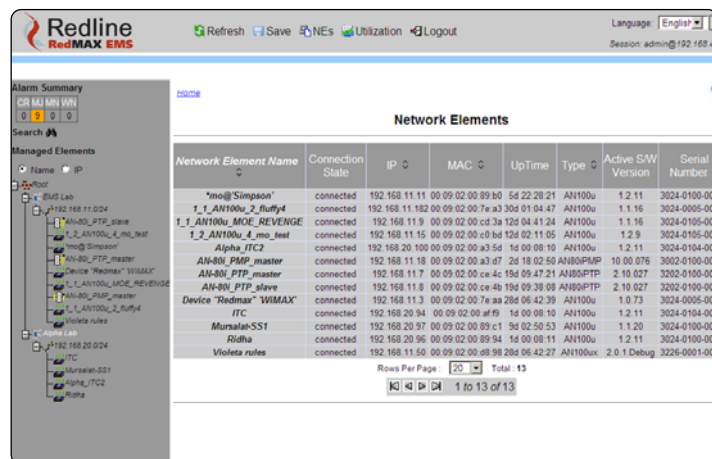
- Standards-based, carrier-class solution
- Supports Subscriber Self Installation
- Integration with OSS/BSS via Northbound Interface
- Inventory Management & Reporting
- Included SQL Database
- Comprehensive FCAPS Support
- High Availability Servers
- Full Scalability

System Recommendations

- Windows Server & Enterprise Linux P4 3GHz, dual CPU, 4 GB (small < 5,000 NE's) (Requires Windows 2003 server enterprise edition to use more than 1.xGB)
- Solaris 10, SUN Netra T2000, 1.2 GHz UltraSPARC, 8 GB RAM (medium <15,000 NE's)
- Solaris 10, SUN Netra T2000, 1.2 GHz UltraSPARC, 16 GB RAM (large <25,000 NE's)
- Solaris 10, SUN Netra T2000, 1.2 GHz UltraSPARC, 32 GB RAM (x-large <75,000 NE's)

Redline's award-winning Management Suite (RMS) is a sophisticated element management solution that gives broadband network operators the ability to easily deploy, control, monitor and upgrade their Redline components network-wide through an intuitive, user-friendly GUI. Redline RMS acts as a gateway between the Redline equipment in the network and the NMS and OSS/BSS, enabling full automation in the system.

Network management is a top priority for service providers, private and enterprise network operators. An efficient, centralized management system that enables network operators to manage and monitor their systems from one location can help companies to significantly reduce the cost of operating their networks, improve customer satisfaction and enhance their ability to deliver advanced IP services.



Network Element Name	Connection State	IP	MAC	UpTime	Type	Active SW Version	Serial Number
*m0@Simpson	connected	192.168.11.11	00:09:02:00:09:b0	54:22:20:21	AN100u	1.2.11	3024-0100-000
1_1_AN100u_2_fuff4	connected	192.168.11.182	00:09:02:00:7e:a3	304:01:04:47	AN100u	1.1.16	3024-0005-000
1_1_AN100u_MOE_REVENGE	connected	192.168.11.9	00:09:02:00:c0:3a	124:04:41:24	AN100u	1.1.16	3024-0105-000
1_2_AN100u_4_m0_test	connected	192.168.11.15	00:09:02:00:c0:bd	124:02:11:05	AN100u	1.2.9	3024-0105-004
Alpha_ITC2	connected	192.168.20.100	00:09:02:00:a3:54	14:00:08:10	AN100u	1.2.11	3024-0104-000
AN-80_PTP_master	connected	192.168.11.18	00:09:02:00:a3:47	28:18:02:59	AN80PTP	1.0.0.078	3002-0100-000
AN-80_PTP_slave	connected	192.168.11.7	00:09:02:00:ce:4c	154:05:47:21	AN80PTP	2.10.027	3202-0100-000
Device "Redmax" WIMAX	connected	192.168.11.3	00:09:02:00:7e:aa	284:06:42:39	AN100u	1.0.73	3024-0005-000
ITC	connected	192.168.20.94	00:09:02:00:af:f9	14:00:08:10	AN100u	1.2.11	3024-0104-000
Murmalae-SST	connected	192.168.20.37	00:09:02:00:89:c1	30:02:50:53	AN100u	1.1.20	3024-0100-000
Ridha	connected	192.168.20.95	00:09:02:00:99:94	14:00:08:11	AN100u	1.2.11	3024-0100-000
Violeta rules	connected	192.168.11.50	00:09:02:00:48:98	284:06:42:27	AN100u	2.0.1	Debug 3226-0001-000

The Redline RMS monitors network elements, collects traffic statistics, provisions services and integrates the existing NMS with the EMS. It also enables operators to perform software upgrades to all Redline equipment on the network from a central location while providing multi-level access security.

To help ensure uninterrupted service and to maximize the traffic on the network, the Redline RMS includes programmable TCA's (threshold crossing alerts) for varying levels of alarm severity. The tool also includes a Northbound Interface (NBI) for provisioning including services, reports inventory and alarm propagation.

The Redline RMS is a critical piece in the total telecommunications-management solution. Built from the ground up to support a whole new generation of WiMAX standard products including Redline's RedMAX 4C family, Redline RMS takes into account new carrier and service provider requirements for performance, scalability, new all-IP WiMAX architectures, and the ongoing operational challenges they face.

Redline Management Server Operation and Features

Elements Supported

- RedMAX
- RedMAX 4C
- RedCONNEX

Networking and Communication

- TCP/IP Interfaces
- Web Based
- CORBA (NBI: TMF 814 v.3)
- WSDL
- SNMP
- Trap forwarding via SNMP NBI

Platforms and Technologies

- J2EE
- Web Based Client (IE, Netscape and Firefox)
- Linux Enterprise server 4
- Solaris 10 server
- Windows 2003 Server
- SQL Database
- High Availability
- Concurrent Users: 25
- Number of Elements/Server: up to 75,000 *

*depends on hardware and operating system

OA&M

- Reporting
- Log generation and administration
- Backup and Restore of Database

Configuration Management

- Auto Discovery of Network Elements
- Service Class Bundles
- Service Flow Bundles
- Pre-provisioning
- Provisioning Classifications (VLAN, DSCP, IP, etc.)

Fault Management

- X.733 ITU-T based Alarm
- Alarm filtering
- Alarm Severity Assignment Profiles
- Alarm Configuration
- Alarm Types with Threshold Crossing Alerts (TCA)

Security Management

- Role Definitions
- User Login Tracking
- User Sessions Logging
- User Authentication Management
- Password & User Policies
- Multi-user & Activity Logging

Performance Management

- Performance Threshold Crossing Alerts
- Key Performance Indicators Dashboard
- Retrieval of performance monitoring and traffic data
- Service Flow and Radio statistics
- Full 802.16-2004 Support
- Full 802.16-2005 Support

Inventory Management

- Element Software Upgrades & Scheduling
- Image Management
- Element Configuration Backup & Restore

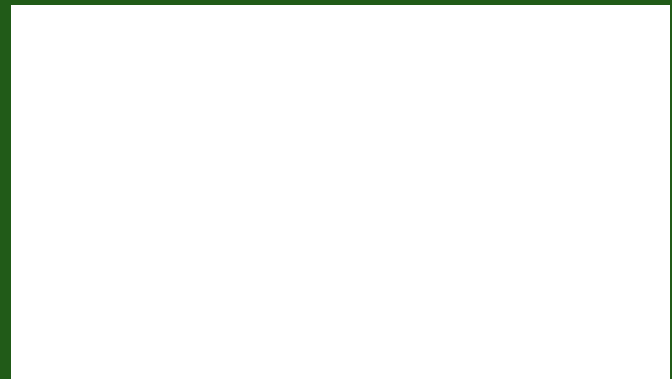
RedCARE Support

Reliable broadband wireless connectivity requires dependable equipment and around-the-clock access to network engineering expertise. Redline's RedCARE program delivers outstanding support through a dedicated Certified Partner community. These Partners ensure that Redline products operate at exceptional performance levels and services are delivered to the highest networking standards possible.

Redline's global network of Certified Partners provide responsive customer and solution support everywhere Redline's products are available. Redline's experienced support engineers and service experts ensure that you get the help you need - when you need it most.

About Redline Communications

Redline Communications is the leading provider of standards-based wireless broadband solutions. Redline's RedMAX™ WiMAX Forum Certified™ systems and award-winning RedCONNEX™ family of broadband wireless infrastructure products enable service providers and other network operators to cost-effectively deliver high-bandwidth services including voice, video and data communications. Redline is committed to maintaining its wireless industry leadership with the continued development of WiMAX and other advanced wireless broadband products. With more than 35,000 installations in 75 countries, and a global network of over 100 partners, Redline's experience and expertise helps service providers, enterprises and government organizations roll out the services and applications that drive their business forward.



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