



WaveCenter EMS Pro

Carrier-Grade Element Management System

Aperto's intuitive WaveCenter™ EMS Pro provides a highly scalable, resilient management infrastructure for Aperto powered PacketWave, PacketMAX and 802.16e-2005 compliant networks.

Data Sheet



WaveCenter EMS Pro

KEY FEATURES

- Full FCAPS functions within telecommunications management networking
 - Intuitive graphical user interface (GUI) for "point and click" simplicity
 - Universal management for PacketMAX 802.16-2004 and 802.16e-2005 compliant elements
 - Automatically discover new nodes and configure new nodes in bulk
 - Completely redundant, resilient management network with instantaneous recovery of failures
 - Scalable, distributed architecture suitable for early stage networks or those containing hundreds of thousands of elements
- Bulk upgrade and provisioning features for rapid service creation to new subscribers

WaveCenter EMS Pro

With the ability to discover, inventory and manage equipment in real time, the *WaveCenter EMS Pro* ensures rapid network deployment and subscriber provisioning for WiMAX networks. Its fully resilient, distributed architecture allows carriers a single comprehensive platform from which to control all aspect of WiMAX networking. Adherent to the standard WiMAX provisioning model, WaveCenter EMS Pro helps operators seamlessly integrate fixed, nomadic, portable and ultimately mobile systems into their WiMAX networks.

Comprehensive Management Tool

WaveCenter EMS Pro provides full FCAPS (Fault, Configuration, Accounting, Performance, and Security) capabilities making network information easily analyzable thereby allowing the network administrator to make fast, intelligent choices. Information is displayed in intuitive screens while the underlying real-time and historical performance data gathered from each device is stored in a central relational database. *WaveCenter EMS Pro* includes an embedded SQL database so no additional software is required.

Highly Scalable/Distributed Architecture

WaveCenter EMS Pro employs a highly efficient IP-based distributed client/server architecture that can scale to support networks as large as 10,000 elements from a single server instance. By adding servers, distributing the processing responsibilities, WaveCenter EMS Pro scales to support networks comprised of hundreds of thousands of elements. Software modules (*EMS Client, EMS Front End Server, EMS Back End Server, and Relational Database*) are designed to work across multiple server platforms.

Carrier Grade Redundancy and Resiliency

Carriers demand resilient networking, even at the management layer. WaveCenter EMS Pro permits the designation of a hot standby server replicating all management functions in case of primary failure. If the primary server goes off-line, provisioning and monitoring functions seamlessly fail-over to the standby without impacting the network. Administrators can backup an entire network configuration and restore onto another system, greatly reducing migration time.

Powerful Configuration Capabilities

Templates can be created to define commonly used configurations making it easy to quickly rollout new equipment and customers. Modifications to configurations can be made either to individual network devices or "in bulk" to groups of network devices at the touch of a button.

Timely Information Enables Rapid Response

WaveCenter EMS Pro provides administrators access to real-time information displayed in intuitive formats. Network and RF performance parameters are closely monitored to achieve maximum usage of wireless bandwidth and to ensure all customers are receiving their intended service levels.

Alarms and events are processed within seconds of an actual alarm event, multiple *WaveCenter EMS Pro* clients can see this information allowing administrators to rapidly deploy solutions even before the subscriber may have noticed there was a problem.

Wireless to the MAX

WaveCenter EMS Pro System Specifications

Operator Benefits:

- **Accelerate time to revenue and increase productivity** by using the intuitive interface for rapidly provisioning new base stations or activating new subscribers.
- **Streamline operations and boost profits** with centralized management and monitoring of global networks comprised of hundreds of thousands of elements.
- **Maximize investment in network assets** by leveraging WaveCenter EMS Pro for managing all Aperto WiMAX systems including PacketWave, PacketMAX and 802.16e-2005 compliant systems.
- **Simple integration into existing OSS/BSS infrastructure** through standard northbound interfaces avoiding lengthy and expensive integration projects required with proprietary systems.
- **Capitalize on per-subscriber service models** by leveraging WaveCenter EMS Pro as a gateway to PacketMAX powerful set of statistics, reporting and accounting information for each user or group of users attached to the same subscriber unit.



Use WaveCenter EMS Pro to manage PacketMAX 802.16-2004 and 802.16e-2005 WiMAX elements

Specifications:

Architecture
Hardware Platform

: Distributed client, front end server, back end server, and database server platforms
: Server: Dual 1.1 GHz Pentium Processor or higher

2048 MB RAM
40 GB mass storage space
Client: 2 GHz Pentium IV Processor
1024 MB RAM

4 GB mass storage space

: Windows 2000, 2003
: Integrated SQL Server, Oracle 9i & 10g
: SNMP, XML, CORBA (future)
: SNMP V2

Environmental

Software/OS Platform
Database Support/Options
Northbound/OSS Interfaces
Element Management

About Aperto Networks:

Aperto Networks helps leading service providers deliver affordable wireless voice and broadband profitably by building the world's most advanced WiMAX base stations and subscriber units. Aperto fundamentally changes the economics of delivering voice and broadband services through IP-rich, point-to-point and point-to-multipoint networks, allowing carriers to offer a wider variety of services to more customers using less equipment. Its carrier-class WiMAX technology offers industry-leading subscriber density, quality of service, ease of use and reliability. Aperto is a founding board member of the WiMAX Forum as well as a founder and lead contributor to IEEE 802.16 and the FTTC/BBAN standards. Serving more than 400 customers in over 90 countries, Aperto Networks is based in Milpitas, CA. Visit our website at www.apertonet.com.



12 avenue des prés
78059 St Quentin en Yvelines

Tel: 33 (0)1 72 74 16 25
Fax: 33 (0)1 46 94 02 20

<http://www.cbnetworks.fr> E-mail: sales@cbnetworks.fr