Clarent® Element Management System (CEMS)

Turnkey Hardware/Software Solution for Configuring and Provisioning Clarent Networks.

The **Clarent Element Management System** provisions and manages all of the Clarent network elements, from one centrally located server, through a user-friendly, browser-based interface.

- Seamless, one-step network configuration and provisioning

- Enables fast and error-free network implementations

- Standardized interfaces: SNMP, XML, JDBC

- Unix and NT Support

- SQL Server 7.0/2000 and Oracle 8.1.7 Support

The Clarent Element Management System (CEMS) includes a new, one-step configuration and provisioning capability for Clarent network elements, combining the configuration of the actual network element platforms with the corresponding Clarent network database entries for a greatly simplified network provisioning solution.

Easy Configuration and Provisioning

The enhanced graphical user interface for CEMS starts with the CEMS Tree of Network Elements, which displays an icon for every element in your Clarent network. A simple click on the appropriate icon can either add new network elements or display and update existing ones.

The new one-step configuration and provisioning functionality is introduced for the Clarent Class 4 Call Manager (C4CM), Clarent Backbone High Density Gateway (BHG), and Clarent Class 5 Call Manager (C5CM). With one click on the CEMS container icon for a network element, an operator is presented one simple screen to complete all of the required input to start processing calls on your network. Status display and device control are included in the CEMS console to facilitate network updates and management.

Applications Access

Access is provided to traditional Clarent support applications including the Gateway Controller, Gatekeeper Controller, Domain Controller, and Clarent Assist. Use the Gateway and Gatekeeper tools for one-step configuration and provisioning of these Clarent network elements. Clarent Domain Controller provides a powerful capability for managing large and small groupings of subscribers, accounting codes, service classes, call routing, call rates, and Clarent Connect routes. Clarent Assist, with a new, intuitive, user interface, is provided to manage subscribers, call routing, call rating, and call accounting with real time database update capabilities.

Error-Free Network Implementation

Error-free network deployment is a reality with the one step provisioning system. Unlike other vendor solutions (which follow the old PSTN back-office OSS approach), there are no diverse data streams to be synchronized. As shown in Figure 1, all of the input required to process calls, from configuration of the actual network devices to subscriber and call routing management, is accomplished from one management system.

Multi Platform Support

CEMS is available on both Windows NT and Unix operating environments. Minimum processing requirements are provided for NT servers. For Unix environments, the NEBS compliant Sun Netra AC200/DC200 is required.
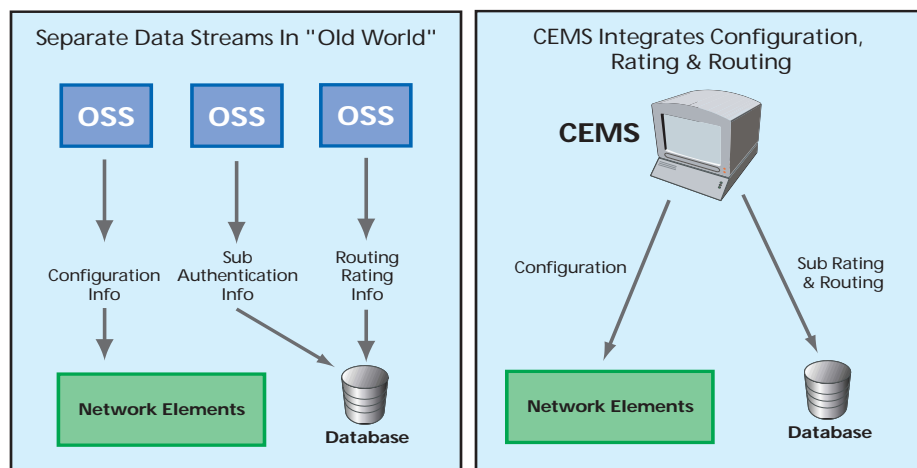

Figure 1. Error-free network implementation on CEMS

Technical Specifications

Minimum Recommended NT Specifications

CPU
600MHz, 256 MB RAM

Chassis
Heavy-duty steel
Rack mountable
19'' (with mounts) W x 21'' D x 3.5''(2u) H
Weight approx. 40 lbs.

Environment
Operating temp: 0° to 40°C
Humidity: 10% to 80%

Power Supplies
Dual hot-swappable, 250W
115V 60Hz, or 230V 50Hz, or -48VDC

Alarms
Temperature, fan failure, and power supply failure
Molex alarm connector for integration with external
    alarm systems

Cooling
4 high-volume chassis fans

Drives
1.44MB floppy disk drive
10.6GB EIDE hard drive
32x CDROM EIDE drive

Keyboards and Mouse
PS/2 keyboard and mouse

Video
Industry standard SVGA

Connectivity
PBX or PSTN connection
10/100BaseT Ethernet connection with RJ-45 cat-5 cable

Customer Supplied Optional Equipment
Rack mount SVGA monitor and cable
Rack mount keyboard/trackball
UPS/Battery backup

Required Unix Specifications (Sun Netra AC200/DC200)

Architecture
UltraSPARC IIe V9 Superscalar Processor Platform Version 9:
• 64-bit single processor
• 500 MHz Integrated memory controller PC 100/133

Cache
16 KB data and 16 KB instruction on-chip Secondary: 256 on-chip

Main Memory
PC133 standard Registered DIMMs
1 GB RAM

Network
Dual Ethernet/Fast Ethernet STP (10BaseT/100BaseT)
I/O 80 MB/sec Ultra SCSI (SCSI-3) (synchronous)

Expansion bus
Single full-length PCI slot compliant with PCI specification version 2.1; slot operates at 33 MHz, 32 bits
2 USB ports

Internal CD
Optional 644 MB Slimline CD-ROM drive; 24X speed, DVD-ROM

Internal disk
Up to two 3.5x1-in. disks (18GB or 36GB each); disk bays are front accessible and support hot-plug

External disk
All Ultra2SCSI SE/LVCdevices

OE
Solaris 8 Operating Environment

Networking
ONC[tm], NFS[tm], TCP/IP, SunLink[tm], OSI, MHS, IPX/SPX, DCE

AC Power Operating
Operating power 90-264V AC, 98W, 2A/1A input current

DC Power Operating
Operating power -48/60V DC
Heat Output 550 BTU/hour, 335 BTU/hour (nominal)

Short-term Operating Temperature
Designed to meet 5° C to 40° C (41° F to 104° F)

Nonoperating Temperature
Designed to meet -40° C to 70° C (-40° F to 158° F) 10% to 95% relative humidity, noncondensing

Humidity (Operating)
20% to 80% relative humidity, noncondensing, subject to a maximum absolute humidity of 0.024 Kg water/Kg dry air

Humidity (Non-Operating)
10% to 95% relative humidity, noncondensing

Seismic
GR-63-CORE requirements for earthquake risk zone 4

Noise (in accordance with ISO 9296)
Less than 60dBA (GR-63-CORE Test Method) Idling acoustic noise

Regulations
Designed to meet or exceed the following requirements:

Safety	UL 1950/CSA C22.2 No. 950, EN 60950 (73/23/EEC), IEC 950
Emissions	CFR Title 47 FCC Part 15, EN 55022 (89/336/EEC)
Immunity	EN 50082-1 (89/336/EEC)
Telco environment	Telcordia: GR-63-CORE, GR-1089-CORE, TR-NWT-000295 (pending) Telcordia: SR 3580 NEBS Level 3 Certified
Safety	cULus Mark, TUV GS Mark, CE Mark
EMC	CE Mark (93/68/EEC), FCC authorized Class A

Height
44.00 mm (1.73 in.) (1U)

Width (without mounting ears)
437.2 mm (17.21 in.)

Depth (with front bezel)
487.4 mm (19.2 in.)

Weight
9 kg (20 lbs.)

Shipping Weight (product and packing)
11.5 kg (25 lbs.)

Tree of Network Elements interface

Clarent Class 5 Call Manager Configuration Screen

www.clarent.com