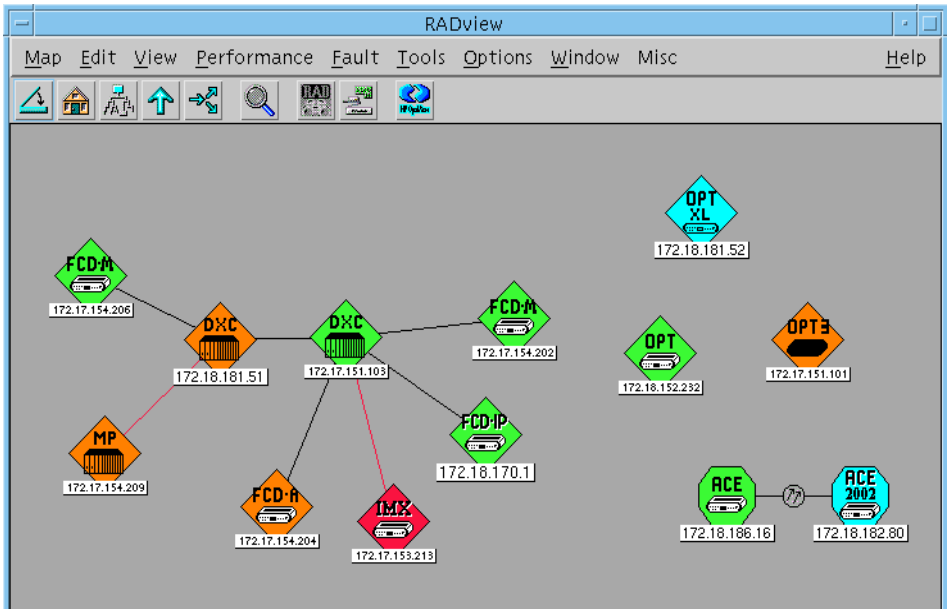
Data Sheet

RADview-HPOV

Unix-based Element Management System



Unix-based Element Management System (EMS) providing configuration, fault, performance, accounting and security management

- Hierarchical network view
- Fault management based on event logs and real-time status updates
- Configuration management via user-friendly GUI, and centralized upload/download of software/configuration files
- Performance management including statistics counters, graphs and file storage
- Security management for multi-user environment

RADview-HPOV is a powerful and user-friendly SNMP-based element management system used for planning, provisioning, and operating heterogeneous networks. It runs on a Solaris Unix platform and uses OSF/Motif and X-Windows.

The package provides complete monitoring, control and configuration of RAD products and networks via their SNMP agents.

RADview-HPOV modules are available for TDM and ATM applications as well as for RADview-Lite.

RAD
data communications
The Access Company

RADview-HPOV

Unix-based Element Management System

The management platform enables simple integration with third-party vendor management applications.

Functionality of the management platform conforms to ITU-T TMN recommendations for SNMP. The following functions specified by the TMN model are implemented by RADview-HPOV:

- Fault management
- Configuration management
- Accounting management
- Performance management
- Security management

***Note**: Some RADview features (for example, TFTP-based software download) are available only if they are implemented by the device agent.*

CONFIGURATION MANAGEMENT

Connections are established for point-to-point and point-to-multipoint topologies. User-friendly, intuitive and realistic zoom applications (see *Figure 1*) or Web-based

ConfiguRAD (see *Figure 2*) serve as simple and powerful configuration tools.

A configuration planner available for selected DXC and FCD products allows off-line network planning and simulation.

For RADview-Lite products, configuration and diagnostics are achieved through simple and user-friendly access to either Telnet or ConfiguRAD (Web-based terminal management application) directly from the topology map.

Backup and restore functions allow storing topology and configuration information.

TFTP-based software and configuration upload/download applications allow distribution of new software versions to many network elements simultaneously, while collecting statistics and presenting reports on the process status. Configuration files can also be collected and distributed.

Automatic, periodic configuration upload simplifies implementation of device configuration and backup policies.

The real-time network-level active alarm view includes sort, filter, and export file capabilities for ATM/TDM networks.

FAULT MANAGEMENT

Network events are detected, isolated and controlled. Network status changes are displayed graphically at the network, device, card and port levels. Immediate response to the fault indication can

trigger network reconfiguration, thereby minimizing network downtime.

Immediate trap-based network status detection and presentation are backed up by periodic status polling.

Maps can be defined dynamically to provide physical and logical network views (network elements and network connectivity). Powerful graphics provide the network manager with an image of each network agent.

The network is continuously monitored for irregularities and network element statuses.

RADview-HPOV supports multiple map levels enabling graphical display of the hierarchical network structure. A problem occurring at a lower level is propagated to intermediate and upper levels for display.

A comprehensive log file of all traps is maintained. Each message includes automatic identification of the trap source, event description, and date/time stamp. Information in the log is categorized according to level of severity (see *Figure 3*). A record of all trap events can be sent to a printer for hardcopy log of network problems.

A variety of tests, such as loopbacks, BERT and tone tests ensure quick fault discovery and recovery, and help reduce operational costs by avoiding unnecessary field activities.

PERFORMANCE MANAGEMENT

Network throughput and error rates are analyzed and controlled. Thresholds can be set for different variables, such as error rates or link utilization, for immediate alerts on network status and traffic usage.

Performance monitoring information is displayed in real-time or in last 24 hours / 96 intervals in table or chart format.

Performance information is collected per node/port (for TDM equipment) or per node/port/VP/VC (for ATM networks) per day. Collected data is stored in ASCII files for simple import by any report generation utility.

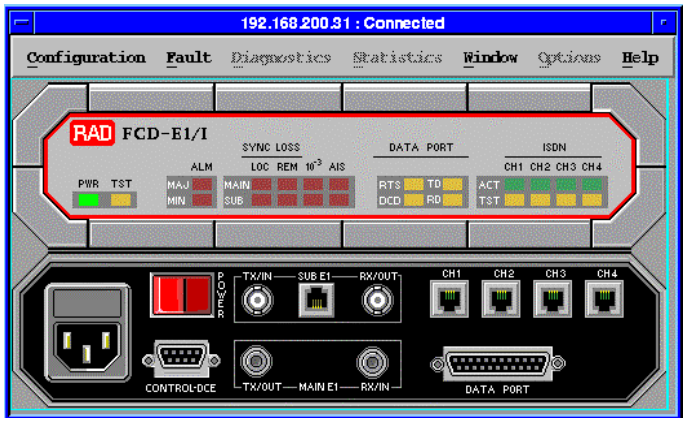


Figure 1. Zoom Application

SECURITY MANAGEMENT

Four levels of security are provided:

- Unix security enforces and restricts access to the RADview-HPOV console
- SNMP communities ensure that SNMP GET and SET are performed only from stations with access permissions
- Limited access list stored in the network element assures that only managers with specific IP addresses are allowed to configure specific devices.
- RADview-HPOV login/password and security mechanisms define four types of users:
  - Administrator: full access to all network elements, additionally, can define users and associate privileges to them
  - Operator: full access to configure a selected network element list
  - Technician: read-only access, additionally loop/test activation privilege
  - Monitor: read-only access.

***Note**: For RADview-Lite products, access control is enforced by the NE.*

ACCOUNTING MANAGEMENT

Performance data stored by RADview-HPOV, together with logged traps, provide long-term information on network status and can be used as infrastructure for Service Level Agreements (SLA) reporting tools.

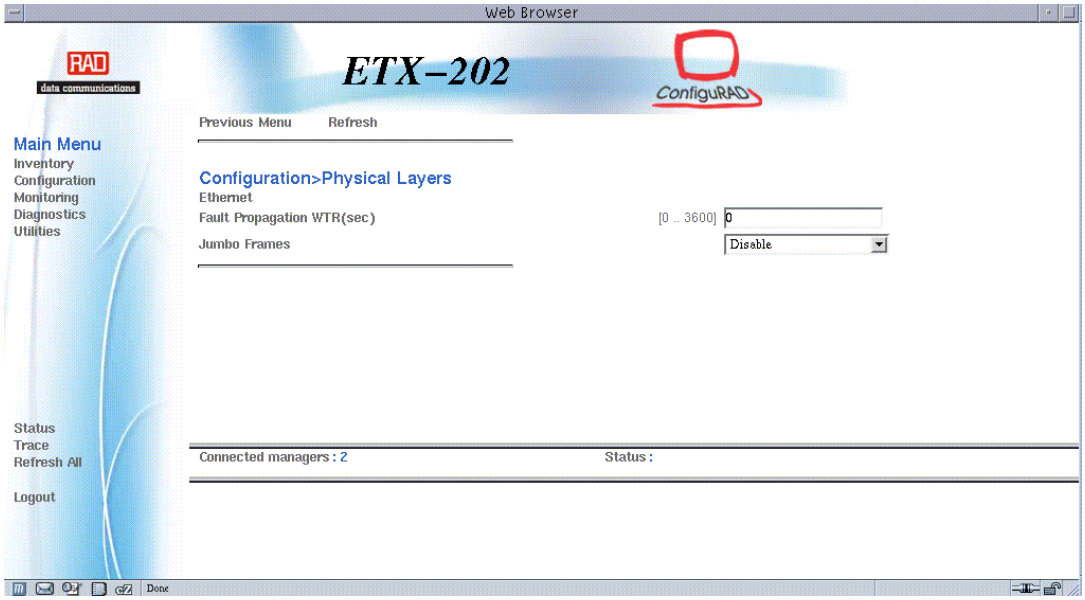


Figure 2. ConfiguRAD Screen

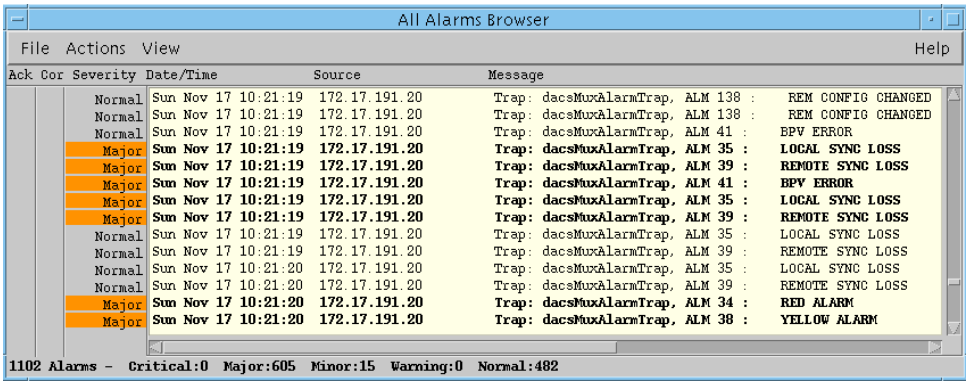


Figure 3. Alarms Browser

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Specifications

Minimum Hardware Requirements
For networks consisting of up to 150 managed elements in single-user configuration:

- SUN Fire V210 Server with XVR-100 graphics card, or SUN Ultra 25 (see *Note*)
- Hard drive with 1–2 GB free space under the /opt partition (depending on the amount of applications installed)
- 600 MB for Informix (under any partition)
- 2 GB RAM
- Swap file twice RAM size
- 17-inch color monitor, supporting 1152 × 900 resolution with depth 24
- For each 3 additional simultaneous users (X-session) add 1 GB RAM and 1 CPU
- For each additional simultaneous open zoom application add 75 MB RAM.

***Note**: For larger networks, consisting of more than 150 managed elements, see Table 1.*

Minimum Software Requirements

- Sun Sparc Solaris Ver. 2.8, Jul 2003 or later or
  Sun Sparc Solaris Ver. 10, Nov 2006 or later

***Note**: Verify that the option "Select to Include Solaris 64 Bit Support" is checked during Solaris installation*

- CDE 1.4
- HP OpenView NNM 7.5 (according to RADview compatibility)
- For up to 250 nodes, HPOV NNM Starter Edition is enough. For managing more than 250 nodes, the appropriate HPOV license must also be purchased.

***Note**: All the requirements and Table 1 apply to a single-user scenario. If several users use RADview simultaneously, additional resources may be required to maintain satisfactory performance as indicated above.*

Ordering

RV-HP-SW/*
Unix-based Element Management System, regular installation

RV-HP-SW/*/#
Unix-based Element Management System, upgrade or evaluation version

Legend

* Module (see *Table 2*):
- **TDM** TDM applications
- **ATM** ATM applications
- **Lite** RADview-Lite

\# Installation type:
- **UPG** Upgrade of an existing installation
- **DEMO** 60-day, fully functional evaluation version

RV-LIC
RADview license

***Note:** For licensing, each RAD device is assigned an Equivalent Node Weight (ENW) according to its complexity. Use RADview's License Calculator to determine the number of license points required for your installation.*

RV-LIC/DXC-100
License activation key for DXC-100

Table 1. HW Scaling Guidelines – Solaris

Managed Elements	System	No. of CPUs	RAM
Up to 150	SUN Fire V210 Server (and above) with XVR-100 graphics card, or Sun Ultra (for Solaris 10 only)	1	2 GB
150 to 300		1	2 GB
300 to 800		2	2 GB
800 to 1500	Sun Fire V490/V890	4	4 GB
1500 to 5000	Sun Fire V890/V890	4	8 GB

Table 2. Supported RAD Products

Package	Supported Products
TDM	DXC-8R/10A/30/30E, DXC-100, DXC-4, FCD-E1A, FCD-E1L/E1M, FCD-IP, FCD-IPD, FCD-IPM, FCD-T1L/T1M, FCD-E1LC/T1LC, FCD-E1/T1, FCD-E1I, FOMi-E3/T3, IMX-2T1/E1, Kilomux-2100/2104, LRS-24, Optimux-4E1/4T1, Optimux-4E1L/4T1L, Optimux-4E1C/4T1C, Optimux-45/45L, Optimux-XL, Optimux-34, Optimux-25, Optimux-106, Optimux-108, PRBm-20
ATM	ACE-202, ACE-2002
Lite	APD, APS, ETX-102, ETX-202, Egate-20, Egate-100, FPS, RIC-155, RIC-155GE, RICi-E1/T1, RICi-4E1/T1, RICi-8E1/T1, RICi-E3/T3, SPS, Vmux-400

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