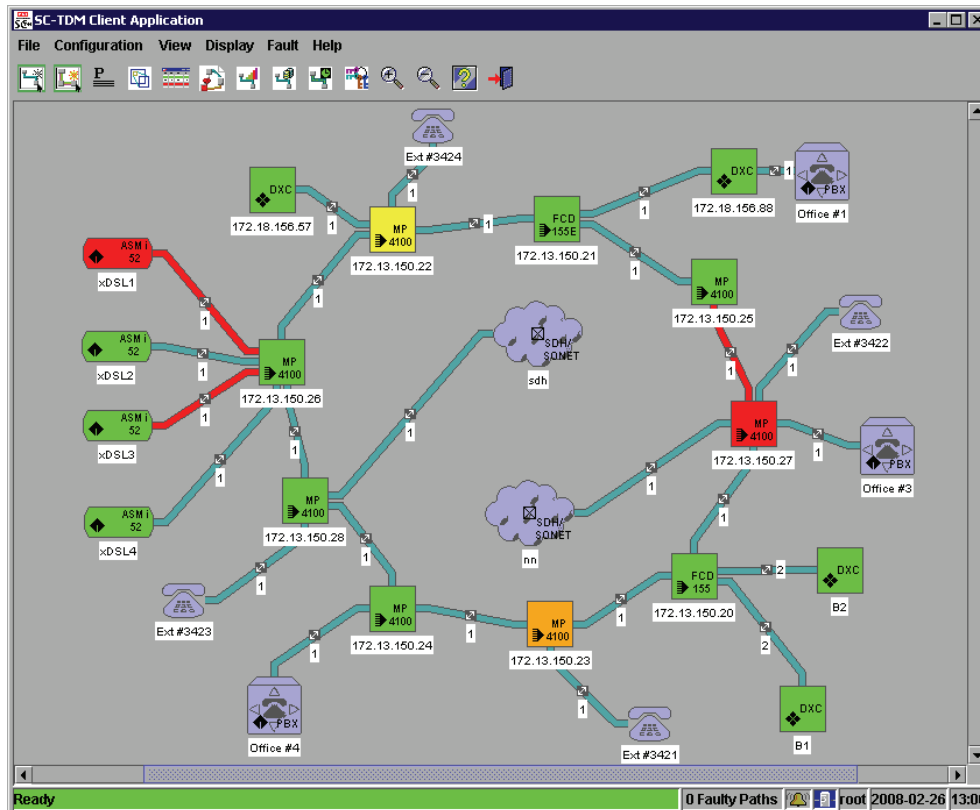


RADview-SC/TDM

Network Management System for TDM Applications



End-to-end service management for RAD's MAP devices

- Manages end-to-end solutions over SDH/Sonet and PDH networks
- Simplifies and automates service monitoring, and provisioning for error-free and efficient bandwidth and inventory utilization
- Maximizes service assurance with device carrier class and software level protection
- Discovers network services and reports on SDH/Sonet and PDH network configuration problems
- Embeds other vendor's devices via sophisticated network cloud



RADview-SC/TDM

Network Management System for TDM Applications

The RADview Service Center TDM (RV-SC/TDM) is the all-in-one TDM application of the RAD family of network management products. This application enables end-to-end service management of RAD's Multiservice Access Platform (MAP) devices, for simplified service provisioning.

Intuitive GUI, "point-and-click" functionality, and easy-to-follow wizards increase the efficiency and accuracy of the service provisioning and monitoring process over SDH and PDH combined networks.

The open, scalable, multi-access management capabilities allow network operators to add new services while minimizing overall operating costs, reducing provisioning times and maximizing efficiency of the network infrastructure.

RADview-SC/TDM offers full interoperation with element management applications using CORBA-based client-server architecture.

NETWORK MONITORING

RADview-SC/TDM displays graphic and alphanumeric network inventory representations from nodes up to services level.

Dynamic network status indication and alarms are displayed per node, link, SDH/SONET trail, frames and service. Only service-affecting alarms are displayed, focusing the user on relevant information.

Online maps display various types of parameters such as:

- Services
- Network nodes and links
- Clouds and CE equipment
- Logical PDH rings and SDH/SONET trails
- Faults on nodes and links
- Clock source flow
- Bandwidth utilization
- Inventory
- Security access permissions.

NETWORK DISCOVERY

Discovery of existing network services, as well as potential network configuration conflicts, assures the best utilization of existing network resources and easy migration steps, in addition to generating network configuration problem reports for PDH and SDH/SONET levels.

AUTOMATED SERVICE MANAGEMENT

RADview-SC/TDM supports automatic service routing based on efficient bandwidth resource analysis of user-configurable cost per link, service priority, and protection level.

An intuitive GUI increases the efficiency and accuracy of the service provisioning process, aided by "point-and-click" functionality and easy-to-follow wizards, with tips and hints bubbles throughout the process.

Network uptime is maximized using Provision Carrier Class Service protection with PDH rings, SDH/SONET path protection, and automatic N:1 software service protection.

In case of failure while provisioning a new configuration, full rollback to the original configuration is provided.

Automatic service rerouting ensures network resilience and maximizes the uptime of a critical service. This important capability enables the service provider to uphold service level agreements (SLAs) per provisioned service.

Service level reporting allow service providers to quickly and efficiently determine the uptime (in percentage) of a provisioned customer circuit.

For user-friendly maintenance, existing services can be edited and expanded, while simulator mode enhances network and service design, optimization and planning.

Date/Time	Event	Entity	NE Type	Name	User	Description
2005-05-23 10:03:34 IST	EMS Event Log Server is up	Server	--	EMS Event Log	system	EMS Event Log Server is Up
2005-05-23 10:03:34 IST	EMS Event Log Server is up	Server	--	EMS Event Log	system	EMS Event Log Server is Up
2005-05-23 10:03:56 IST	EMS Server is up	Server	--	EMS	system	EMS Server (3.02) is Up
2005-05-23 10:07:08 IST	Other Problem occurred	NE	FCD-IP	172.18.156.146	system	Note: Acknowledged Update Operation from: 172.18.156.146 vi
2005-05-23 10:07:59 IST	Other Problem occurred	NE	FCD-IP	172.18.156.74	system	Note: Acknowledged Update Operation from: 172.18.156.74 via
2005-05-23 12:04:48 IST	Path rerouting completed	Path	--	cable 1	root	Re-Route Completed Successfully
2005-05-23 12:16:02 IST	Path rerouting completed	Path	--	z	root	Re-Route Completed Successfully

Figure 1. Event Browser

FAULT MANAGEMENT

RADview-SC/TDM fault management correlates incoming events to service and helps present the actual status of the provisioned services.

It includes a history log that allows the filtering of events according to event types and users.

To maximize integrity, faulty services are automatically and periodically self-healed and repaired using priority-based repair of multiple services and periodical attempts, in addition to manually initiated repairs.

SECURITY

Network access security is based on authorization rights by:

- Access level (administrator, operator, technician, and monitor)
- Device level (write, read and no access)
- User-profile architecture.

THIRD-PARTY INTEGRATION

RADview-SC/TDM uses CORBA-based architecture as a northbound interface that can be integrated with the carrier's front and back office systems and any third-party application.

All system events published as CORBA events allow an OSS application to listen for well-filtered and relevant events from one central system.

SDH/SONET LAYER

RADview-SC/TDM supports SDH/SONET Layer 1, easy monitoring of SDH/SONET trails, frames, VCs and cross-connects along the route. The system shows frame configuration based on allocated services and optimizes provisioning on VC-shared resources.

NETWORK CLOUD

Third-party devices can be embedded using a special cloud node that can be set up to include various end points and linked to other MAP devices.

A sophisticated cross-connect wizard allows the replication of third-party device cross-connect data.

Select Tube

Select Tube:

Tube Name	Source NE	Destination NE	Type	Faulty
172.18.170.151 -To- 172.18.170.154 with VC 1211	172.18.170.151	172.18.170.154	VCG	<input type="checkbox"/>
Aux trail for B2B	172.18.170.151	172.18.170.155	Framed E1	<input type="checkbox"/>
Core SDH trail, Eth backup	172.18.170.151	172.18.170.155	VCG	<input type="checkbox"/>
Site A1 SDH trail	172.18.170.151	172.18.170.152	Framed E1	<input type="checkbox"/>
Site B2 to A3 trail	172.18.170.151	172.18.170.154	Framed E1	<input type="checkbox"/>
Site B3 to B1 trail (Ethernet Over SDH)	172.18.170.151	172.18.170.155	VCG	<input type="checkbox"/>
Site B3 to C3 SDH trail (managed by David L)	172.18.170.151	172.18.170.154	Unframed E1	<input checked="" type="checkbox"/>

Tube Data...

AU4	TUG2-1	TUG2-2	TUG2-3	TUG2-4	TUG2-5	TUG2-6	TUG2-7
TUG3-1	TU12-1						
	TU12-2						
TUG3-2	TU12-1						
	TU12-2						
TUG3-3	TU12-1						
	TU12-2						

Network Data

NES Paths

-Faulty

	Static Protection	Dynamic Protection	No Protection	All Protection Levels
Active	1	2	0	3
NotActive	1	0	0	1
All	2	2	0	4

List...

-Not Faulty

	Static Protection	Dynamic Protection	No Protection	All Protection Levels
Active	7	16	1	24
NotActive	7	6	0	13
All	14	22	1	37

List...

-All

	Static Protection	Dynamic Protection	No Protection	All Protection Levels
Active	8	18	1	27
NotActive	8	6	0	14
All	16	24	1	41

List...

Close Refresh

Figure 2. SDH Tunneling and Network Service View

RADview-SC/TDM

Network Management System for TDM Applications

Specifications

UNIX-BASED SERVER

Minimum Hardware Requirements

For networks consisting of up to 300 managed elements:

SUN Fire V215 Server with XVR-100

graphics card, or SUN Ultra 25

(see following *Note*)

2 GB RAM or more

Swap file twice the RAM size

Hard disk with at least 2 GB free space

under the /opt partition (depending

on the number of applications

installed)

Hard disk with at least 600 MB for

Informix directory

17-inch color monitor, supporting

1152 × 900 resolution with depth 24

Note: For each 4 additional simultaneous users via X-session add 1 GB RAM and 1 CPU. (When using EMS client on a different workstation there is no need to add RAM or CPU).

Add 512MB RAM to the server for each additional client connected via X-session to the server.

For larger networks, consisting of more than 300 managed elements, contact your RAD sales representative.

Minimum Software Requirements

Sun Sparc Solaris Ver. 10, Nov 2006 or later

CDE 1.4 or higher

HP OpenView NNM 7.51

For up to 250 nodes, HPOV NNM Starter Edition is enough. For more than 250 nodes, the appropriate HPOV license must also be purchased.

Note: All the requirements and guideline tables apply to a single-user scenario. If several users use RADview simultaneously, additional resources are required to maintain the performance as indicated above.

PC-BASED CLIENT

Minimum Hardware Requirements

IBM PC compatible with a Pentium 4,

3.0 GHz processor

2 GB RAM

Note: Installing RADview on a stronger CPU-based PC equipped with more RAM will generally result in better performance.

Hard drive with one NTFS-formatted drive (for Informix installation)

1024 × 768 or higher display resolution

Minimum Software Requirements

Microsoft Windows XP: SP1 or later, or

Microsoft Windows 2003 Service

Pack 1 or later without Terminal

services enabled

English version

Windows services installed and configured

to run automatically: SNMP, SNMP

Trap, Server

SUPPORTED PRODUCTS

DXC-8R/10A/30/30E, DXC-100*

FCD-E1, FCD-E1A, FCD-E1L, FCD-T1L,

FCD-E1LC, FCD-T1LC, FCD-E1M, FCD-T1M,

FCD-IP, FCD-IPM, FCD-155, FCD-155E

Megaplex-2100/2104, Megaplex-4100

Optimux-45, Optimux-45L

* Limited support

Ordering

RV-SC/TDM/UNIX/#

Unix-based RADview Service Center for TDM applications.

Includes RADview-HPOV/TDM and RADview-EMS/TDM element management systems and 800 ENW licensing points.

Note: To order more license points, refer to the RAD License Calculator.

Legend

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

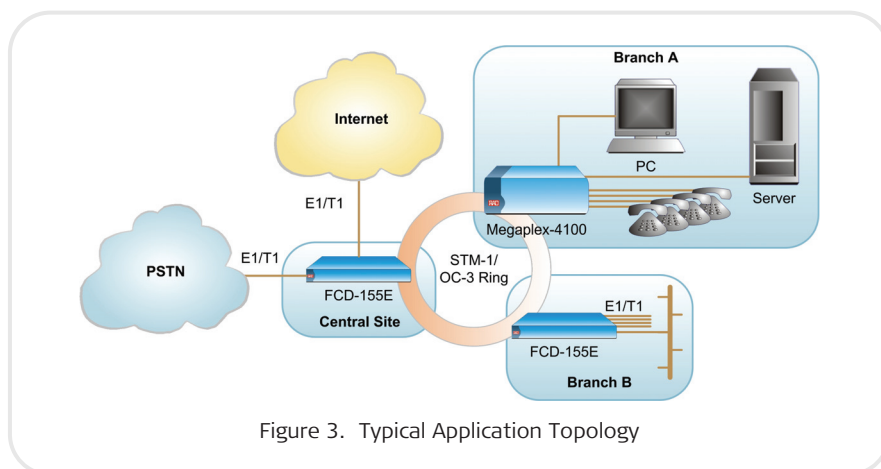


Figure 3. Typical Application Topology

International Headquarters
 24 Raoul Wallenberg Street
 Tel Aviv 69719, Israel
 Tel. 972-3-6458181
 Fax 972-3-6498250, 6474436
 E-mail market@rad.com

CB NETWORKS
<http://www.cbnetworks.fr>

12 avenue des prés
 78059 St Quentin en Yvelines
 Tel: 33 (0)1 77 55 03 00
 Fax: 33 (0)1 30 44 11 95
 E-mail: sales@cbnetworks.fr



data communications
 The Access Company