RayView Network Management for RS1010

User Guide

V3.02 2014. 7

Revision History

Version	Date	Description
V3.00	2013-12-24	Primarily Released
V3.01	2014-6-20	
V3.02	2014-7-1	

Contents

CHAPTER 1 OVERVIEW	4
1.1 Introduction	4
1.2 Feature	4
1.3 Client/Server Structure	4
CHAPTER 2 INSTALLATION AND LOGIN	6
2.1 INSTALLATION	6
2.1 INSTALLATION	6
CHAPTER 3 BASIC OPERATION	8
3.1 CREATE SUBNET	8
3.2 CREATE NE	8
3.3 DELETE SUBNET.	10
3.4 DELETE NE	10
3.5 ICP/IP COMMUNICATION	10
3.6 TRAP IP	
3.7 USER GROUP MANAGEMENT.	12
2.7.2 Edit matrixitian after an annual	12
2.8 Light restriction of user group	12
2.8.1 Now user and user restriction	13
2.8.2 Edit user restriction	13
5.6.2 Edit üsel Testriction	13
3 9 LOG VIEWEP	13
3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	13
3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES 4.1 Rack Diagram Manager	13 15 15
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	13 15 15 15 16
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	
 3.9 Log viewer	
 3.9 Log viewer. CHAPTER 4 RS1010 FUNCTIONAL MODULES. 4.1 RACK DIAGRAM MANAGER. 4.2 CARD MANAGER. 4.3 CREATE DXC. 4.4 OPTICAL PORT. 4.4.1 Enable /Disable port. 4.4.2 View Optical interface information. 4.4.3 ALS Configuration. 	
 3.9 Log VIEWER	
 3.9 Log VIEWER. CHAPTER 4 RS1010 FUNCTIONAL MODULES. 4.1 RACK DIAGRAM MANAGER. 4.2 CARD MANAGER. 4.3 CREATE DXC. 4.4 OPTICAL PORT. 4.4.1 Enable /Disable port. 4.4.2 View Optical interface information. 4.4.3 ALS Configuration. 4.5 E1 PORT. 4.5.1 E1 loop. 4.5.2 BERT testing. 4.6 ETHERNET PORT (XS050) 4.6.1 Physical port configuration. 4.7 VLAN MANAGEMENT. 4.7.1 Port-based VLAN of XS050. 	
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	
 3.9 Log viewer CHAPTER 4 RS1010 FUNCTIONAL MODULES	
 3.9 Log VIEWER CHAPTER 4 RS1010 FUNCTIONAL MODULES	$\begin{array}{c} 13\\ 13\\ 15\\ 15\\ 15\\ 16\\ 19\\ 19\\ 19\\ 20\\ 20\\ 20\\ 20\\ 20\\ 21\\ 20\\ 21\\ 22\\ 22\\ 22\\ 24\\ 25\\ 22\\ 24\\ 25\\ 26\\ 27\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28\\ 28$
 3.9 Log VIEWER CHAPTER 4 RS1010 FUNCTIONAL MODULES	$\begin{array}{c} 13\\ 13\\ 15\\ 15\\ 15\\ 16\\ 19\\ 19\\ 19\\ 20\\ 20\\ 20\\ 20\\ 20\\ 21\\ 20\\ 21\\ 22\\ 22\\ 22\\ 24\\ 25\\ 22\\ 24\\ 25\\ 26\\ 27\\ 28\\ 29\\ 29\\ \end{array}$
 3.9 Log VIEWER CHAPTER 4 RS1010 FUNCTIONAL MODULES 4.1 RACK DIAGRAM MANAGER. 4.2 CARD MANAGER. 4.3 CREATE DXC. 4.4 OPTICAL PORT 4.4.1 Enable /Disable port	$\begin{array}{c} 13\\ 13\\ 15\\ 15\\ 15\\ 15\\ 16\\ 19\\ 19\\ 19\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20$
 3.9 Log viewer	$\begin{array}{c} 13\\ 13\\ 15\\ 15\\ 15\\ 15\\ 16\\ 19\\ 19\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20\\ 20$

4.8.2 Clock PRI Configuration	
4.8.3 Frequency offset overrun switch	
4.8.4 Reference restoring time	
4.8.5 ETS(external timing source) config	
4.8.6 SSM config	
4.8.7 View the current clock status	
4.9 Calendar calibrate	
4.10 KLM	
4.11 Data communication channel	
4.12 EXM/ETS	
CHAPTER 5 ALARM AND PERFORMANCE	
5.1 Alarm Managment	
5.1.1 Alarm Severity	
5.1.2 Alarm shield	
5.1.3 Protection	
5.1.4 Alarm View	
5.2 Performance Management	
CHAPTER 6 OUESTIONS	

Overview

1.1 Introduction

RayView network management system is developed to manage the RS1010 equipments; it adopts Client/Server structure, supports SNMP protocol; it performs excellent management to the network such as resource management, configuration management, alarm management, performance management and security management, which is compliant to ITU-T Recommendation. With its intuitively clear Graphical User Interface (GUI), the network operator can master RayView system easily in a short time.

This document is intended to instruct in the basics of RayView software installation, operation and maintenance. It is proper to Network Maintenance Engineer, Network Planning Designer, Equipment Commissioning Engineer and etc.

1.2 Feature

- Intuitively clear Graphical User Interface (GUI)
- > Intelligible DXC configuration interface
- Client/Server structure
- Simple Network Management Protocol (SNMP)
- > Ethernet management interface for network management
- Performs resource, configuration, alarm, performance and security management specified in ITU-T recommendation
- > Overall management for local and remote equipment
- > Real-time monitoring device interface status and quality of traffic transmission
- Remote Power Down detection (RPD) for fault location
- > Perfect alarm and performance statistic

1.3 Client/Server Structure

RayView software is of 3 layers Client/ Server structure, see Figure 1-3-1:

According to Figure 1-3-1, RayView software is divided into 3 parts:

- ♦ Object application layer(Client terminal GUI object);
- Service object layer (Object module);
- ♦ Object resource layer (Device and Database);



Figure 1-3-1 C/S Structure

The functional description of the three layers is as follows:

♦ Object application layer

The object application layer provides user operation interface window, which is the typical "thin client", to deal with the window display, window alternation operation and the display logic related closely to the window operation, etc.; the client terminal adopts Java interface.

♦ Service object layer

The service object layer equals to "middleware" service layer, consists of middleware service management process and managed object (MO). This layer aim to complete the information transmission between network/NE resource and client terminal.

♦ Object resource layer

This layer is composed of 3 parts:

a.NE real resource

in the system, the NE real resource is provided by Proxy of NE gateway. The Proxy can implement the information transmission between the associated NEs by internal addressing protocol.

b. NE resource mapping

store a copy of data that is the same as the NE configuration data by database, called NE resource mapping; the database also stores the network resource data and NE history alarm for querying.

c. Network resource

Network resource refers to the relationship attribute between NEs, such as network topology relationship, link channel of end-to end, and etc. Generally, the information of this part is stored in network management database.

Installation and Login

1.4 Installation

Steps

System installation should be followed as the step below:

- Step1 Start the setup program
- Step2 Load installation wizard
- Step3 Select installation directory
- Step4 Copy file
- Step5 Confirm installation completed
- Step6 Start server automatically
- Step7 Star client terminal manually

Note

1. Make sure that all the firewall, anti-virus software and WiFi are closed before the installation

2. Mase sure that the firewall and WiFi are closed during using this management software.

1.5 Uninstallation

Steps

Step1 Click [Start-Programs-RayView-Add or Remove programs RayView]

Step2 Load uninstallation wizard

Step3 Do the uninstallation step by step



Step4 Under the installation directory, delete the RayView folder.



<u>1. Make sure that all the firewall</u>, anti-virus software and WiFi are closed before the <u>uninstallation</u>

2. After uninstallation, you should delete the RayView folder under the installation directory, otherwise, the next installation of RayView may be unsuccessfull, or the rayview can not work normally.

1.6 Login

Steps

Step1: Select Language

Step2: Double click "Run Client" icon;

Step3: Type User name and password in the login dialog box;

Step4: click 'OK' to enter

User name: 0001 Password: 0001

🌒 Welcome to log on to	RayView 3.2	541 💶 🖂
	User name	
	Password	
NMS	Server	127.0 .0 .1
	Language	🔾 Chinese 💿 English
		Ok Cancel

Note

1. There is only one default administrator ID "0001" and the default password is "0001" after RayView installation, which should be modified to guarantee the system security. When using the system, the administrator should create new user and assign them into the corresponding restriction group.

2. You can open task manager, make sure the following processes are exist.

explorer.exe	shiyan
Foxmail.exe	shiyan
javaw. exe	shiyan
knCenter.exe	SYSTEM
knMaster, exe	SYSTEM
knService.exe	SYSTEM
knService. exe	SYSTEM
knTrapServer.exe	SYSTEM
Lingoes. exe	shiyan
LMS.exe	SYSTEM
lsass.exe	SYSTEM
mspaint exe	shiyan
mysqld-nt.exe	SYSTEM
NitroPDFDrive	SYSTEM
QQ.exe	shiyan
QQProtect.exe	shi yan
RAYNEScan. exe	SYSTEM
RAYSERVICE. exe	SYSTEM
rundl132. exe	SYSTEM

Basic Operation

1.7 Create subnet

Steps

Click root node in the left side navigation bar, and then right-click to select [new subnet] in the right interface, the "new subnet" dialog box is shown:

Step1: input subnet label and description;

Step2: click <OK>

Subnet		
Property Select NE		
		OK Cancel
Label	Subnet_1	
Description		
	, 	

Note: subnet is just used as a container to carry NE, without any communication parameters.

1.8 Create NE

Steps

Page 11

🌖 NE		×
<u></u> ₽-NMS	Туре	RS1010
P-MSAP I		
- 155CP	Name	RS1010
- 1558B		·
- 1558A63	Gateway Type	Gateway
- 622X		
- 10088-1	Not Tuno	
- 1008A-1	nectype	openix
- 1555C		
	Gateway	
15584-1		
- 15580		
– Ultra VSM		
HUB100-2D	NE IP	192.168.0 .20
← MSAP III		
Ultra VSM	NE Address	2
- RS7000		
- RS3000		
- RS1010		
- RS1020	Tran IP(Default)	192168.0 111
155SC+	Trup II (Dordan)	102.100.0 .111
🗛 Other		
- 150S-V7	Description	
- RP1000		
- RB002		
- REOP		
- RB001		
- RB007		

Step1: Click root node in the left side navigation bar or enter the subnet node which is already created, and then right-click to select [add NE device] in the right interface, the "NE" dialog box is shown:

Step2: Select the relevant NE device type from the list left side

Step3: input NE name, select gateway type, input IP and NE address;

Step4: Click<OK>



RS1010 n

means the device is

Note

The range of the NE address is from 00 to 98, which is set by the address switch on the front panel of RS1010 equipment.

As Figure shows, the left 4-digit of the switch stands for tens of decimal figures, while the right 4-digit is 0--9. The code mode is 8421 BCD. For example, the address of '10011000' is '98'; the address of "00010101" is "15". The NE address is unique mark used for network element management, as well as the number for phone. Different devices in a network can't be set to the same address.

1.9 Delete subnet

Steps

1, right-click the subnet icon which is to be deleted, select "delete", pop up the "delete subnet" dialog box.

2, click<OK> .

Note

Delete subnet operation do not delete the NE node, after subnet deleting, the contained NE node will be added under the root node automatically.

1.10 Delete NE

Steps

1, right-click the NE icon which is to be deleted, select "delete", pop up the "delete NE" dialog box.

2, click<OK>.

Note

Delete NE operation will delete all information about the NE, including the remote NE.

1.11 TCP/IP Communication

Purpose

Set IP of NE, gateway IP and subnet mask.

Steps

1. in the navigation tree, select [config-system Manager-TCP/IP communication]

2, click <refresh>, refresh the communication parameters.

3, set IP of NE, gateway IP and subnet mask.

-TCP/IP Commun	nication		
NE IP	192.168.0 .155	IP Mask	255.255.255.0
Gateway	192.168.0 .1		

Note

Name Description	Name	Description
------------------	------	-------------

	IP address of NE,the default IP address of NE is
	192.168.0.155
	When managing the remote NE across network, TCP/IP
Gateway	communication can be implemented by router, the
	router IP is the gateway IP
	Subnet mask of the NE, which is used to determine
IP mask	subnet mask, whether the NE is on the local subnet or
	on a remote network.

Note 1, if the IP address of NE in "TCP/IP communication" is modified, the IP address of NE in "NE " window should also be modified, the IP address in two location should be the same.

👶 NE		
₽-NMS	Туре	RS1010
P→ MSAP I		
- 155CP	Namo	P91010
— 155SB	name	K31010
- 155SA63		
— 622X	Gateway Type	Gateway 🗸 🗸
- 155SB-I		
- 155SA-I	Net Type	UpLink 👻
- 155SC		
MSAP Ⅱ		
– 155SB-I		
- 155SA-I		
- 155SC		
— Ultra VSM		
HUB100-2D	NE IP	192.168.0 .155
- MSAP III		
— Ultra VSM	NE Address	1

Note 2: The default IP address is 192.168.0.155.

The address of NE(device) and PC shall be set and kept at the identical IP segment. For example, if the device IP is 192.168.0.155, while the IP of PC is 202.194.192.2, you should set the IP of PC as 192.168.0.154(for example), make the PC and device IP in the same IP segment, and the TCP/IP communication can be set up, and then change the IP of NE and IP of PC.

1.12 Trap IP

Purpose

This part introduce how to configure alarm trap IP

Steps

- 1, right-click the NE icon ,select "Monitor Server"
- 2, input the monitor IP of PC.

3, click <OK>.

	G		4
R	(S1) 📾	Open	
		Monitor Server	
	7	Edit	
	1	Delete	
		Assign As Gateway	
Lonito	r Serv	ver	
[Monito	or Serv	/er	ОК
Trap IP		192.168.0 .119	Refres Cance

Note

The trap IP is the monitor sever IP address, that is the current IP address of PC.

The monitoring server helps engineers grasp the operating status of the network at any time. If an alarm occurred from the device, it will be transferred to the server and passed on to the client side.

1.13 User group management

1.13.1 New user group and group restriction

Purpose

This operation is for the users who are capable of system maintenance right at least in the group restriction item

Steps

Step1: select [system-security-user group];

Step2: Right-click to select [new] in the pop up menu;

Step3: Type the new user group information in the popped up dialog box, click<OK>.

Note: step1~3 is used to create user group.

Step4: After creating user group, the system will pop up [group restriction] menu, select the restriction for the user group and click<OK>.

Note: step4 is used to assign restriction for each user group.

1.13.2 Edit restriction of user group

Purpose

This operation is for the users who are capable of system maintenance right at least in the management restriction item

Steps

Step1: select [system-security-user group];

Step2: right-click group list to select [group restriction];

Step3: the [group restriction] menu will be popped up, edit restriction of user group, click <OK>.

1.14 User management

1.14.1 New user and user restriction

Purpose

This operation is for the users who are capable of system maintenance right at least in the management restriction item

Steps

Step1: select [system-security-user];

Step2: Right-click to select [new] in the popup menu;

Step3: Type the new user information in the popped up dialog box, click<OK>.

Note: Step1~3 is used to create users.

Step4: After creating user, the system will pop up [user restriction] menu, select the restriction for the user and click<OK>.

Note: step4 is used to assign restriction for each user.

1.14.2 Edit user restriction

Purpose

This operation is for the users who are capable of system maintenance right at least in the management restriction item

Steps

Step1: select [system-security-user];

Step2: right-click group list to select [user restriction];

Step3: the [user restriction] menu will be popped up, edit restriction of user, click <OK>.

1.15 Log viewer

Purpose

The operation log records all kinds of operations (includes device operation and system operation);

Steps

In the main menu of network topology layer, select [system - log viewer], to view the operation records;

Right-click-<query>, pop up query interface, you may set the query condition to view the log records freely.

Note: Currently, the log cannot be deleted

System Operation Window Help				
💵 🕕 🤷 🗐			0	
占 🕒 🏦 🗇 < < > > Tota	al records: 1 Curren	t page: 1 Records of each	page: 200 🔻	
👫 Query 🛛 🗙	Object	Name		Detail
Ouerv	client	Log on client		

RS1010 Functional Modules

1.16 Rack Diagram Manager

Steps

- 1 In the navigation tree, select [Rack Diagram Manager], the rack diagram is shown ;
- 2 Right-click the ports on the rack panel, the configuration window will pop up, this is the shortcut way for configuration;

		<u>rin, orith</u> , and r Port Config DXC Manager	WF UNLE NOPA NOPE CARDI CARDI CARDI CARDI ALS VI DALE ROPA RODE TALMI TALMI TALMI BUST	CRALMO ENTERING SSS CON EANI
— 🔗 Calendar Calibrate — 🏧 Granularity		Alarm Query	SOCKET1 SOC	CKET2 SOCKET3
- lexim/ets	l a	Performance Query	666666666 666666666	XSO50 ETH1ETH2ETH3ETH4
 		Refresh	<u>81_8</u>	
👇 👀 Port Manager				
- 🏘 SDH Port - 🏘 Tributary Port				
- 🏘 System Port				
🗐 Device Info Manager				
		Manually Connect]	

1.17 Card Manager

RS1010 provides several service cards such as E1 card, Ethernet card and to meet user's various requirements.

Steps

1 In the navigation tree, select [Config-card Manager],the card manager window is shown;

2 Right-click and select "add card" ,the add card window will pop up.

ll-lard Manager

Page 18

# Rack Diagram Mar Bit (Card Mo Card Name HD Version Status DXC Manager DXC Manager Normal Normal Clock Overhead VI.0 VI.0 VI.0 Normal Clock Overhead X8050 MSTP Card VI.01 Normal Clock Overhead TCP/P Commt Card Config Normal Calendar Callb Card Canfig VLAN Config DXC Manager Card Manager System Port Data Commur Detete Add Card Card Manager System Port Detete Property Card Canfig Device Info Manager Proview Print Export Export X8050 Optional Slot: 2 Card Mode: X8 Sol: 2 Card Mode: X8 Soit: 2 Card Mode: X8 Soit: 2 Ok Ok Cancel	Rack Diagram Mar Slot Card Mo Card Name HD Version Driver Version Status DXC Manager System Manager System Manager V1.0 V1.0 Normal System Manager Cock Overhead V1.01 V1.01A2 Normal TCP/IP Commune Card Config VLAN Config VLAN Config VLAN Config Card Manager Data Commune Dyck Manager Update Dyck Manager System Port System Port Add Card Refresh Preview Print Device Info Manager Print Export Xdd card Normal								
Image: System Manager System Manager Clock Overhead TCP/IP Commu Calendar Callb Cand Manager Cand Manager SDH Port Soft Manager Soft Manager Soft Manager Optional Slot: Zalendar Slot: Zalendar Slot: Card Model: X8020 XS020 XS020 XS020 XS020 XS020 XS020 XS030 XS030	Image: System Manager 1 X8 E1 Card V1.0 Normal System Manager System Manager Image: System Port I	— 🚼 Rack Diagram Ma		Slot Card Mo	Card Nam	е	HD Version	Driver Version	Status
Add card VI2 X8050 MSTP Card VI.01 VI.01A2 Normal Property Card Config VLAN Config DXC Manager Update Delete Add Card Refresh System Port System Port Delete Add Card Refresh Device Info Manager Uptional Slot: 2 Card Model: X8 Sol1 XS020 XS020 XS020 Card Model: X8 Sol2 Card Model: X8 Card Model: X8 Sol2 Card Model: X8 Sol2 Card Model: X8 Sol2 Card Model: X8 Sol2 Card Model: X8 Card Model: X8 Sol2 Card Model: X8 Card Card	System Manager Clock Overhead TCP/IP Commu Calendar Calib Calendar Calib Calendar Calib Card Manager Card Manager Card Manager Card Manager Card Manager Card Manager Dota Commun Card Manager Dot Manager Device Info Manager Device Info Manager Manager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Marager Card Manager Marager	— 🛐 DXC Manager		1 X8	E1 Card		V1.0	V1.0	Normal
Clock Overhead Calendar Calib Calendar Calib Calendar Calib Calendar Calib Calendar Calib Card Manager Dotata Commur Update Dot Manager SDH Port System Port System Port Preview Printt Export	Clock Overhead TCP/IP Commu KLM Calendar Calib Card Config VLAN Config DXC Manager Data Commur Card Manager Optimized Manager System Port Preview System Port Device Info Manager Preview Print Export	👇 🎭 System Manager		3 XS050	MSTP Card		V1.01	V1.01A2	Normal
 Overhead T CP/IP Commu Calendar Calib Calendar Calib Card Config VLAN Config DXC Manager Update Data Commur Update Detete Add Card Refresh Preview Print Export Add card V12 X8 V12 X8014 X5011 X5020 X5011 X5020 X5011 X5020 X5030 X5060 Ok Cancel	Add card Property Card Config VLAN Config VLAN Config Data Commur Card Manager Pot Manager Pot Manager Pot Manager System Port Preview Preview Print Export	— 📬 Clock							
Add card VIAN Config VLAN Config VLAN Config VLAN Config VLAN Config VLAN Config DXC Manager Update Delete Add Card Refresh Preview Print Export X4014 X5011 X5020 X5050 X5030 X5060 Ok Carcel	Add card	— 💊 Overhead					Droportu	7	
Add card VIAN Config VLAN Config DXC Manager Dybional Slot: Proview Print Export Add card VIZ Optional Slot: Zard Model: X8 X011 XS020 XS021 XS050 XS030 XS060 Ok Card Config VLAN Config DXC Manager Update Delete Add Card Refresh Preview Preview Note: Card Model: X8050 X8060 Ok Card Config VLAN Config DXC Manager Delete Add Card Refresh Preview Print Export Note: VIZ Optional Slot: Zard Model: X8050 X8060 Ok	Add card Add card	— 🌉 TCP/IP Comm					Property	_	
Calendar Calib Granularity	Calendar Calib Granularity Data Commun Data Commun Card Manager Dydate Delete SDH Port Add Card System Port Device Info Manager Device Info Manager Preview Print Export						Card Config		
Add card VT2 X8 X4014 XS020 XS060 Nok Cancel	Granularity Data Commur Card Manager OXC Manager Update Port Manager SDH Port Tributary Port Tributary Port System Port Device Info Manage Preview Print Export	— 🚰 Calendar Calil	111				VI AN Config	-	
Add card VT2 X80 X4014 X501 X5020 X501 X5020 X5020 <t< td=""><td>Add card Add card Add card Add card Add card Add card</td><td>- 🕋 Granularity</td><td></td><td></td><td></td><td></td><td>TEIN COMING</td><td>_</td><td></td></t<>	Add card Add card Add card Add card Add card Add card	- 🕋 Granularity					TEIN COMING	_	
Sard Manager Port Manager Sol Port Tributary Port System Port Device Info Manager Device Info Manager Preview Preview Print Export	Image: Image: Image: Image: <t< td=""><td>- 💎 EXIW/ETS</td><td></td><td></td><td></td><td></td><td>DXC Manager</td><td></td><td></td></t<>	- 💎 EXIW/ETS					DXC Manager		
Port Manager	Port Manager Port Manager Port Solutions Port Privice Info Manage Preview Print Export	— 🛏 Card Manager					Update		
Add Card System Port System Port Device Info Manage Add Card Preview Print Export Add card VT2 X8 VT2 X4014 XS011 XS020 XS050 XS060 Ok Cancel	Add Card Add Card Refresh Device Info Manage Add card Add card Preview Print Export	👇 😪 Port Manager				T	Delete		
System Port Device Info Manage Preview Print Export Add card VT2 X8 X4014 XS011 XS020 XS021 XS020 XS021 XS020 XS021 XS050 XS030 XS060 Ok Cancel	System Port Device Info Manage Preview Print Export	- 🏘 SDH Port - 🏘 Tributary Port					Add Card		
Add card VT2 X8 X4014 XS011 XS020 XS021 XS050 XS030 XS060 Ok Cancel	Add card	System Port					Refresh		
Add card VT2 X8 X4014 XS011 XS020 XS020 XS021 XS050 XS030 XS060 Ok Cancel	Add card	– 🗾 Device Into Manag	6			ß	Preview	_	
Add card VT2 Optional Slot: 2 X8011 XS020 Card Model: X8 XS021 Soit: 2 XS030 0k 0k XS060 Ok Cancel	Add card					8	Print		
Add card VT2 X8 X4014 XS011 XS020 XS021 XS050 2 Soit: 2 Ok Cancel	Add card					余	Export		
Add card VT2 X8 X4014 XS011 XS020 XS021 XS050 XS030 XS060 Ok Cancel	Add card								
	X8 Optional Slot: X4014 2 XS011 2 XS020 Card Model: X8 XS021 2	Add card VT2 Op X8 Op X4014 2 XS021 Ca XS050 2 XS030 2 XS060 2	tion rd M it:	nal Slot: Model: X8 Ok Cancel					

Note

Socket1 and socket 2 are only for E1 card, and socket3 is only for Ethernet card.

1.18 Create DXC

RS1010 supports cross-connection, by which, the E1 traffic and Ethernet traffic can be assigned to any timeslot of OPTA/B, the creation and deletion of cross-connection can be implemented by management software. The protection type can be 1+1, 1+0.

Steps

- 1 In the navigation tree, select [DXC manager- DXC] to enter DXC circuit;
- 2 Right-click the blank and select [create], the DXC creator window pop up;

- 3 In the "DXC creator" window, select RS1010 and port from the source part, and E1 port/ VCG path from the destination part.
- 4 Select source path, such as PATH2, click Shift or Ctrl tab to select multiple continuous

or intermittent paths. Click

5 Click the created circuit, and then select the ;select the same number of destination E1

path. Click 🥙 . Thus the cross-connection circuit is created.

6 To modify the DXC circuit, select one or more records, right-click to do the "open/close protection" or "activate/inactivate" operation.

- 7 To reconfigure the circuit, right-click to select "clear table" to clear all the records.
- 8 Click "OK" button, the DXC circuit status is "pre-adding".



DEC Creator						×
DXC Creator						
Source	DXC				Destination	\neg
Card RS1010 👻	Source	Destination	ActivateProtectiAuto Pr	. Protection M	Card 3_XS050 👻	
Port: OPTA 💌	A:PATH1 A:PATH2 A:PATH3		Activated 1+1 Pr Enable Activated 1+1 Pr Enable Activated 1+1 Pr. Enable	Automaticall Automaticall Automaticall	Port: VCG1 💌	
PATH4	A:PATH5		Activated 1+1 Pr Enable	Automaticall	Path1	
PATH6					Path2	
PATH7 =					Path3 =	
PATH8					Path4	
PATH9					Path5	
PATH10					Path6	
PATH11	11				Path7	
PATH12					Path8	
Note						

1. By default, there is no cross-connection, and all the timeslot resource is free.

field	range	description
ID	e.g.:1, 2, 3, 4, 5	The number of the DXC circuit
Source	e.g.:A_ PATH1	The source of the circuit (including plate, slot, channel and timeslot)
Destination	e.g.E1_2	The destination of the circuit (including plate, slot, channel and timeslot)
Activated Status	Activate, inactivate	Indicate the circuit is available or not
Protection Type	1+1 mode 1+0 mode	 1+1 mode:the client traffic is always transmitted in two directions, taking the same time slot, over the both working and protection path (VC12 or timeslot) simultaneously. 1+0 mode: the client traffic is transmitted over the dedicated working path without protection path standby. There is no protection path so the path of port A and port B with the same VC12 No. can be transmitted to different client traffic,
Auto Protection	ON ofF	 (1) the DXC circuit for pass-through service do not supports protect function, it is "—" (2) when protection is 1+1 mode, it can be enabled or disabled; when protection is 1+0 mode, it is "—"
Protection Mode	Prefer switch to A Prefer switch to B Auto protection Force switch to A Force switch to B	For 'prefer switch to A/B' operation, the alarm (TU-AIS, TU-LOP) will be checked for the corresponding timeslot of optical A/B. If there is alarm, this operation will not be executed; while for 'force switch to A/B' operation, the system will switch to the pointed port without checking any alarm.
Actual source	e.g.:A	Show the actual source of circuit
DXC description	e.g.:XX bank	Show the user information

2 The menu item description:

3 right-click menu

Menu Name	Function	Note
DXC Property	Pop up DXC Property window	
Create	Pop up create DXC manager window	
Delete	Delete that DXC circuit	
Open auto	Enable the 1+1 protection to that DXC circuit	

protect		
Close auto	Close the 1+1 protection to that DXC circuit	
protect		
Activate	Make that DXC circuit available for use	
Inactivate	Make that DXC circuit unavailable for use	
Query	Pop up DXC query window	
Refresh	Refresh DXC circuits	

1.19 Optical port

1.19.1 Enable /Disable port

Steps

- 1. In the navigation tree, select [config/port Manager/SDH Port/SDH Port].
- 2. Choose a record and right-click and select "Port Config".
- 3. click "General" tab, under port usage, select Enable/Disable



General Threshold	Loop Customer	Config
		Refrest
		Cancel
Wavelength	1310nm	
Code pattern	NRZ	
Distance	40.0km	
Temperature	47.781°C	
Bias Current	2.36mA	
Received Power	-7.36dBm	
Transmitted Power	-2.07dBm	
Port Usage Enable		
Enable		
Disable		

1.19.2 View Optical interface information

Steps

- 1. In the navigation tree, select [config/port Manager/SDH port/SDHport] .
- 2. Choose a record and right-click and select "Port Config".
- 3. click "General", "Threshold" tab, click "refersh" button to view the information.

1.19.3 ALS Configuration

Steps

1. In the navigation tree, select [config/port Manager/SDH port/ALS] .

2. do operations such as enable/ disable ALS, manual send pulse, long interval/short interval settings and so on,.

Page 23

— 🚦 Rack Diagram Mar	SDH Port ALS	
— 🕎 DXC Manager	ALS Function	Config
👇 % System Manager		coning
- 📬 Clock	ALS(Automatic Laser Shutdown/Reduction) is to protect eyes from laser hurt, in case	Refresh
- 🗣 Overhead	of optic fiber break, the optical line system reduces or switches off the power of the tran	
- M TCP/IP Commu	smitter automatically, and then transmits laser pulse at regular intervals (long or short i	
- abc KLM	Intervals) in order to restore the power of the transmitter when the fiber is repaired. Long	
Calendar Calib	-intervals is to transmit laser impulse for 2s every 100s; short-intervals is to transmit la	
- 🚰 Granularity	ser impulse for 2s every 12.5s.	
- 😻 EXM/ETS		
Data Commun	-MC Enchlo	
- 📕 Card Manager	AP2 FURDIG	
- Ve Port Manager	Enable Disable	
Tributon Port		
A System Port		
Device Info Manage	_Interval Mode	
- j Device Into Manage		
	Short Interval O Long Interval	
	Mannually Transmit Laser Pulse	_
	Select OPT OPTA Transmit	
Config		

Note

The ALS function of the OPTA, OPTB port must be configured as enabled or disabled simultaneously; only when the corresponding optical interface detects a Loss of signal and the ALS is enabled by SNMP, that particular optical interface will enter into the ALS state.

1.20 E1 port

1.20.1 E1 loop

Steps

- 1. In the navigation tree, select [config/port Manager/Tributary port/E1 port].
- 2. Click "E1 port" tab
- 3. Choose a record and right-click and select "Port Config".
- 3. Click "loop" tab, select line loop or device loop

1.20.2 BERT testing

RS1010 provides an embedded BERT (Bit Error Ratio Tester) for maintenance actions such as fault localization and failure detection. It makes a great facility for operator in environment without any external BERT.

The embedded BERT can detect any E1 line (it only detects the existed E1), note that the E1 used for BERT testing cannot be employed for traffic transmitting, but other E1 can work normally.

Steps

1. In the navigation tree, select [config/port Manager/Tributary port/E1port].

2. Click "BERT" ta	ab
– 🚦 Rack Diagram Mar	E1 Port BERT
 Processing Constraints Processing Clock Processing Clock	E1 Bit Error Rate Tester(BERT), which generates 215-1 pseudo random sequence, monit or 215-1 pseudo random sequence or G704 CRC-4 multiframe, and check for bit error st atic to perform internal or external testing. Tributary Transmit/Receive Transmit: E1 1 Direction E1 Start to Transmit
— ₩ Granularity — ↔ EXM/ETS	Receive: E1_1 Direction E1 Start to Receive
— I III Data Commun — IIII Card Manager	Status
← ಈ Port Manager – ♦ SDH Port ← ♦ Tributary Port – ♦ Ethernet Po	Bit Error Alarm Received Bit Error: Image: Constraint of the second sec
→ 🏘 E1 Port → 🏘 System Port → 👰 Device Info Manage	Time Receive Time:
	Current PC Time:
	Operate Clear Erorr Counter Insert Bit Erorr
Config	

1.21 Ethernet port (XS050)

This part takes XS050 as an example, to describe the configuration of Ethernet port.

1.21.1 Physical port configuration

Steps

- 1. In the navigation tree, select [config/port Manager/Tributary port/Ethernet port].
- 2. Click [Physical port] tab.
- 3. Select a port record and right-click and select "Config".

0.00

Page 25

— 📑 Rack Diagram Mar	Dhysical	Port VC	3				
— 🕎 DXC Manager	Thysicari		5				
- 💑 System Manager	Port	Lo	cation	Customer	Port Type	Port Usage	Work Mode
Clock	ETH1	3_X <u>8050</u>	ETH 1	X	RJ45	Enable	Auto Negotiation
— 💊 Overhead	ETH2	3_X p	ort Config		RJ45	Enable	Auto Negotiation
- 🛋 TCP/IP Commi	ETH4	3_X			RJ45	Enable	Auto Negotiation
	ETH3	з_х D	XC Manager		RJ45	Enable	Auto Negotiation
- 🧬 Calendar Calib		V	iew VCG				
— 🔛 Granularity		AA o	illenv				
— 🕸 EXM/ETS		00 3	(doly	_			
🗕 🏟 Data Commur		R	efresh				
— 📜 Card Manager		💩 P	review				
🔶 👀 Port Manager		<u> </u>	rint				
– 🏘 SDH Port		- P	THIC				
👇 🏘 Tributary Port		🏦 E	xport				
– 🏘 Ethernet Po							
🗆 🏘 E1 Port							
🗕 🏘 System Port							
🗕 🧾 Device Info Manage							
]							
Config							

4. Click [General] tab to enable/disable port

Port Config3_ XS050_ETH_2	
VLAN Loop Customer General Mode	Config Refresh
MSTP Branch Card	Cancel
Port Usage	
Enable	

5. Click [Mode] tab to do operation such as "auto negotiation" and "flow control"

rt Config3_ XS050_ETH_2	
VLAN Loop Customer General Mode	Config Refresh
MSTP Branch Card Current Status	Cancel
Auto Negotiation	
Speed	
Duplex Full Duplex	

1.22 VLAN Management

XS030,XS050 and XS060 are the Ethernet card of RS1010, all cards supports two VLAN modes: 802.1Q tag-based VLAN, port-based VALN. VLAN mode can be configured via Management software.

For XS030/XS050, do the following steps to enter into windows of VLAN configuration

Steps

- 1. In the navigation tree, select [config/port Manager/Tributary port/Ethernet port].
- 2. Click [Physical port] tab.
- 3. Select a port record and right-click and select "Config".
- 4 Click [VLAN] tab, click "VLAN Settings".

Port Config3_ XS050_	ETH_2	
VLAN Loop Custome		Config
General	Mode	Refresh
MSTP Branch	Card	Cancel
VLAN Set	lings	

For XS060, do the following steps to enter into windows of VLAN configuration

Steps

- 1. In the navigation tree, select [config/port Manager/Tributary port/Ethernet port].
- 2. Click [VLAN] tab.

E	thernet Port	
	Physical Port VCG VLAN VCG	
	Port VLAN Member	Port VLAN
	LAN1	VLAN Mode
	LAN1	Port Property
	LAN1	VI AN Table
		OinO Config
		Qing coning

1.22.1 Port-based VLAN of XS050

Steps

- 1. Click "port VLAN"
- 2. Select mode1/2/3/4/5 from mode list

Page 28

ΥL	AN Settings						
	VLAN Mode	Port VLAI	N			○ 802.1Q VL	AN
ſ	Port Mirroring	ort Mode 🛛 V	LAN Table				
	Mode Access Por LAN1 Mode LAN1 Mode Mode W Mode	▼ 1 2 3 N2 4 5 AN2	LAN3	LAN4	-Trunk Port	LAN2	LAN3
	LAN2	LAN2	LAN3	LAN4	UAN2	LAN2	
	LAN3	LAN2	LAN3	LAN4	WAN3	LAN2	LAN3

1.22.2 802.1Q VLAN of XS050

Steps

- 1. Click "802.1Q VLAN"
- 2. Click "port mode" tab. Config LINK type and port PVID.

VLAN Settings		
VLAN Mode	© 802.10 VLAN	Config
	Ç	Refresh
Port Mirroring Port Mode VLAN Table		
Access Port	Trunk Port	Cancel
LANI	WAN1	
LINK TYPE Access	LINK TYPE Access	
PVID 0	PVID 0	
PRI 0	PRI 0	
LAN2	UAN2	
LINK TYPE Access	LINK TYPE Access	
PVID 0	PVID 0	
PRI 0	PRI 0	
LAN3		
LINK TYPE Access	LINK TYPE Access	
PVID 0	PVID 0	
	DDI 0	

3. Click "VLAN table" tab, add VLAN table

VLAN Settings		
VLAN Mode Port VLAN	© 802.1Q VLAN	Config
Port Mirroring Port Mode VLAN Table		Refresh
New VLAN ID : 2 Member	(1-4094) ((WAN1) ?(WAN2) ?(WAN3) ?(WAN4)	Cancel
VLAN ID Member 2 ETH_1;ETH_2;VCG_1;		

1.22.3 Port-based VLAN of XS030

Steps

1. Click [VLAN mode] tab

VLAN settings	
VLAN Table VLAN Mode Port VLAN	Config
	Refresh
	Cancel
VLAN Mode:	
PORT VLAN	
PORT VLAN	
802.1Q VLAN	

- 2. Select "PORT VLAN" from the VLAN mode list
- 3. Click "port vlan " tab and select port mode1/2/3/4/5 from the port mode list,

LAN Table	VLAN Mode Port	VLAN				 Config
Access Port	Trunk Port					Refrest
Mode:	Mode 1 👻	·				Cancel
Link Type: PVID: PRI:	Access ▼ 0 0 ▼	☑ LAN1 ☑ WAN1	LAN2	WAN3	U WAN4	
LAN 2 Link Type: PVID: PRI:	Access V	LAN1	₽ LAN2 ₽ WAN2	WAN3	WAN4	

1.22.4 802.1Q VLAN of XS030

Steps

1. Click [VLAN mode] tab, Select "802.1Q VLAN" from the VLAN mode list

VLAN settings	
VLAN Table VLAN Mode Port VLAN VLAN Mode:	Config Refresh Cancel
802.1Q VLAN 🗸	

2 Select mode 5, and then select Link Type and type PVID

Page 31

VLAN settings	×
VLAN Table VLAN Mode Port VLAN	Config
Access Port Trunk Port	Refresh
Mode:	Cancel
Link Type: Access - LAN1 LAN2	
PVID: U PRI: O WAN1 WAN2 WAN3	
LAN 2	
Link Type: Access	
PVID: 0 WAN1 WAN2 WAN3 WAN4	

3 Click "VLAN table" tab, add VLAN table

VLAN settings	×
VLAN Table VLAN Mode Port VLAN	New
New VLAN ID: 3 (1-4094) Member	Refresh Cancel
✓ ETH1(LAN1) ✓ VCG1(WAN1) ✓ ETH2(LAN2) ✓ VCG2(WAN2) □ VCG3(WAN3)	
VCG4(WAN4)	
List	
VLAN ID Member 2 ETH1;ETH2;VCG3; 3 ETH1;ETH2;VCG1;VCG2;	

1.22.5 Port-based VLAN of XS060

Steps

1. Click [VLAN mode] tab on the right side.

Ethernet Port						
Physical Port VCG VLAN VCG						
				Port VLAN		
				VLAN Mode		
				Port Property		
VLAN Mode	802.1Q VLAN Disable, QinQ VLAN Disable 🔻		Config	VLAN Table		
	802.1Q VLAN Disable, QinQ VLAN Disable			QinQ Config		
	802.1Q VLAN Enable, QinQ VLAN Disable		Refresh			
	802.1Q VLAN Disable, QinQ VLAN Enable					

2.Click [Port VLAN] tab on the right side, right-click the record and click "config".

Ethernet Port							
Physical Port	VCG VLAN	VCG					
Port Name				Port VLAN M	lember		Port VLAN
WAN1 LAN1			1				VLAN Mode
LAN2 LAN1 LAN1 LAN1		Config					 Port Property
		Refresh					VLAN Table
		💩 Preview					Qing coning
		📇 Print					
		🏦 Export					
	VAN1 Po	rt Conf	ig			×	
	Optional	Port	I	Port VLAN Memb	ег		
	1.410			1.814		Config	
	LANZ			LANT			
	WAN3					Refresh	
						Cancel	
			>>				
			<<				
		1		1			

1.22.6 802.1Q VLAN of XS060

Steps

1. Click [VLAN mode] tab, Select "802.1Q VLAN" from the VLAN mode list

2. Add VLAN table, click "VLAN Table" tab on the right side, right-click on the left blank, select "New" from the pop up menu.

QinQ Config

Ethernet Port			
General VLAN Global			
	Current page: 1	Becards of each name: 200 -	Port VLAN
	Current page.	Records of each page. 200 V	VLAN Mode
VLAN ID	Member		Dort Dronerty
			VLAN Table
	L* MOM		
	📋 Delete		
	Delete	all records	
	Refres	sh	
Ethernet Port			
Physical Port VCG VLAN VCG			
BBBA @ C > > Total records: 2	Current name: 1	Records of each page: 200	Port VLAN
	Current page.	The correst of each page. 200 V	VLAN Mode
	Memper		Port Property
2 JENNI, 3 LANI WAN3			VI AN Table
	🕞 New		OinO Config

3. Config port mode and port PVID. click " port property" tab on the right side, right-click on the left records , select "config" from the pop up menu, select port mode and type PVID.

📋 Delete

Delete all records Refresh

ł	åthernet Port							
	Physical Port VCG VLAN VCG							
	Port Name	PVID Port Mode	Priority		Allo	wed to pass through VLAN ID		Port VLAN
	WAN0 1	Access	0					VLAN Mode
	LAN2 1	Access	0		Config			Port Property
	LAN1 1	Access	0		comig			VLAN Table
					Refresh			QinQ Config
					💩 Preview			dind coming
					📇 Print			
					金 Export			

1.23 Configure Clock

Purpose

This part introduces how to configure SDH clock, including:

- ▲ Clock mode
- ▲ Clock PRI
- ▲ Frequency offset overrun switch
- ▲ Reference restoring time
- ▲ External timing source
- ▲ SSM
- ▲ current clock status

1.23.1 Clock mode Configuration

Steps

Steps1: in the navigation tree, select [config/system manager/clock], select in the "Timing source selection" item. Note : SSM and clock priority is only available in the "auto mode".

Timing Sou Manual	arce Selectio	on O Auto Sel	WTR Ti Sele	me ct time	1min	-		
Auto Selection Rules								
	 Enable 		🔿 Di	isable				
-Clock Pri	.ority							
Clock 1	OPTA(T11)	•	Clock 2	OPTA(T11)		-		
Clock 3	OPTA(T11)	•	Clock 4	OPTA(T11)		-		
Clock 5	OPTA(T11)	-	Clock 6	OPTA(T11)		-		

Step 2: click "manual" and click button, pop up the manual mode settings window. First, set tracing clock as the following figure, when the settings is successful, it will send 3 commands:

- A, clock mode is manual
- B, the clock reference assigned by manual
- C, not force to holdover mode

Click "next" button, to assign timing mode

	Lanual		X	
	-Timing Source Selection	on		1
Ì	Tracing	OPTA(T11)	 Config 	
1			Refresh	
į	Next	Close		
		5,666		

Step3: in [timing mode] interface, only when the current timing source is identical with the timing source assigned manually, and it is locked status, the <force to holdover> can be configured.



1.23.2 Clock PRI Configuration

Purpose

This part introduce how to configure the priority of clock.

the equipment will always tracing the current available clock with the highest priority, only when the clock with the highest priority is deteriorate or manual swith clock, the equipment may switch to trace clock with lower priority.

For clock protection, two clock reference at least must be configured. Usually, tributary clock should not be used as the equipment clock.

Steps

Step1: in the navigation tree, select [config/system manager/clock], select in the "clock Priority(PRI)" item. Select the timing reference according to the PRI

Step2: click <config>.

Step3: for the equipment which needs to be activated, click <config activate> button;

Clock Priority							
Clock 1	OPTA(T11)	•	Clock 2	OPTA(T11)	-		
Clock 3	OPTA(T11)	•	Clock 4	OPTA(T11)	-		
Clock 5	OPTA(T11)	•	Clock 6	OPTA(T11)	-		

1.23.3 Frequency offset overrun switch

Purpose

This part introduce how to set the frequency offset overrun switch.

when the frequency offset is out of normal range, the system will determine whether switch to the next clock according to this settings.

Steps

Step1: in the navigation tree, select [config/system manager/clock], select "switch when overrun" or "not switch when overrun".

Step2: Click <config>.

Frequency offset overrun switch

1.23.4 Reference restoring time

Purpose

This part introduces how to configure reference restoring time.

The equipment will wait for a period of time- the restoring time, when the timing source is from failure to available. If the timing source is always available in this period of time, the equipment will automatically set this timing as the available timing source. E.g. the degraded clock with highest PRI can be reused as the equipment timing source after being resorted.

Steps

Step1: in the navigation tree, select [config/system manager/clock], set the reference restoring time(WTR time) from "select time" dropdown box .

Step2: Click <config>.

-WTR Time			
Select time	1min	•	

1.23.5 ETS(external timing source) config

Purpose

The device can trace the ETS which can be 2.048Mb/s(HDB3) or 2.048MHz

Steps

Step1: in the navigation tree, select [config/system manager/clock], select 2.048Mb/s or 2.048MHz for input and output.

Step2: Click <config>.

External timing source input (T31/T32)								
2.048Mb/s	2.048Mb/s							
Insert SSM value 08	Insert SSM value 0B							
_ ⊢External timing source output (T4	41/T42)							
T41/T42 source OutA(T11)	0UT-2.048Mb/s							
	O 2.048Mb/s O Enable SSM							
Force to insert SSM value	O 2.048MHz O Disable SSM							

1.23.6 SSM config

Purpose

SSM (Synchronization Status Message) is used for indicating quality level (QL) of clock reference timing, which make the SDH node acquire the upstream clock information by SSM, and transfer the information to the downstream. It adopts 4 bits code to indicate 16 types of message.

SSM channel :SSM can be transmitted through S1 byte of the multiplex section overhead as defined in ITU-T G.707. bit 5, 6, 7, 8 of S1 byte indicate 16 codes to reprensent quality level. The SSM generator can be closed and 1111 can be inserted, which means it can not be used for synchronization.

Steps

Step1: in the navigation tree, select [config/system manager/clock], configure SSM Step2: Click <config>.

Page 37

SSM config C Enable SSM
O Disable SSM

1.23.7 View the current clock status

Purpose

This part will introduce how to view the current clock status.

Steps

Step1: in the navigation tree, select [config/system manager/clock],

Step2: Click <refresh>.

Step	3: view	the	current	clock	status.
------	---------	-----	---------	-------	---------

Field	Range	Description			
Current clock status	Locked, tracing, holdover, freerun mode	Show the current clock mode Locked mode: the clock of SDH will trace the same or higher quality input clock source, and locked the timing source. Holdover mode: if all the timing source supply fail, the clock signal is kept relatively accurate by controlling the oscillator and applying the stored frequency correction values for the previous signal. Free run mode: if the oscillator don't store the previous signal or is on the hold-over mode over 24 hours, the device will work on the free run mode			
Reference source	Such as: OPTA	Show the current reference source being traced. Normally, the clock of SDH will trace the highest quality clock source.			
SSM information	Quality unknown, Rec. G.811, Rec.G.812 transit, Rec.G.812 local, Synchronous Equipment Timing Source(the internal oscillator of the equipment), Do not use for synchronization	Show the SSM information			
S1 byte	Such as: no information	Show the S1 byte information			
SSM value	00, 02, 04, 08, 0b, 0f				
Frequency offset					

1.24 Calendar calibrate

Purpose

The occurrence time of alarm and performance event is important for the maintenance, but the system time of NE and the management software may be different, so it is necessary to keep the time of NE in steps with that of the software.

Note:

1, please ensure the clock synchronization of the NEs in the network before configuring

the time calibrate;

- 2, please ensure the server and client PC time is correct.
- 3, currently the calibrate only supports 24 hour clock.

Steps

Manually calibrate

- 1, in the navigation tree, select [config/system manager/calendar calibrate-manually.
- 2, input the NE time
- 3, click<OK>.

Automatically calibrate

- 1, in the navigation tree, select [config/system/calendar calibrate-automatically.
- 2, select "ON".
- 3, select the automatic calibrate cycle (based on the server time)
- 4, Click<config>.

Г	Calendar calibrate	
	Manually	Refresh
		Tionean
	PC time 2011-02-14 02:49:34 NE time 2011-02-14 10:50:46	
	Verify time now?(24 hours) OK	
	Automatically	
	-	
	O ON OFF	
	Auto verify time	
	on Sunday v at 0:00 v	
	Config	

1.25 KLM

Purpose

In order to be able to communicate with the equipment from other vendors, the management system provides three different concatenation types simultaneously: logic order, path order and line order.

Steps

Step1: in the navigation tree, select [config/system manager/ KLM]. Step2:Select optical interface:

- 1, view the TU-12 numbering: click <refresh> to view the TU-12 numbering.
- 2, set the TU-12 numbering: select the corresponding mode;
- 3, Click <config>.

TU12 numbering									
When communicating with SDH dovice from other manufacturers, the appropriate numberi									
when communicati	when communicating with SDH device from other manufacturers, the appropriate number								
ng order should be s	ng order should be selected.								
Sav									
NOCE	11SC						Default		
The logic order is d	К	L	м	Logic	Path	Line 🔺	Dordant		
efault	TUG3	TUG2	TU12	Order	Order	Order	Refresh		
cidali.	1	1	1	1	1	1			
	2	1	1	22	2	22			
E.g.: Path 23 in logi	3	1	1	43	3	43			
c order column corr	1	2	1	2	4	4			
t order column com	2	2	1	23	5	25 =			
esponds to TU-12(3	2	1	44	6	46			
2. 2. 1) .where K=2.	1	3	1	3	7	7			
1 - 2 M-4	2	3	1	24	8	28			
L=2,101=1.	3	3	1	45	9	49			
	1	4	1	4	10	10			
	2	4	1	25	11	31			
	3	4	1	46	12	52			
	1	5	1	5	13	13			
	2	5	1	26	14	34			
Mode select	3	5	1	47	15	55			
	1	6	1	6	16	16			
	2	6	1	27	17	37			
📄 🔾 Logic order	3	6	1	48	18	58			
	1	7	1	7	19	19			
	2	7	1	28	20	40			
Path order	3	7	1	49	21	61			
	1	1	2	8	22	2			
○ Line order	2	1	2	29	23	23			
	3	1	2	50	24	44			
		2	2	9	25	5 🖵			
	<u>u</u>	7	7	30	76	76			

1.26 Data communication channel

Purpose

In order to communicate with the equipment from other vendors, you need to configure the data communication channel.

Steps

Step1: in the navigation tree, select [config/system manager/data communication channel].

Step2: Select optical interface:

1, view the data communication channel: click <refresh> to view the data communication channel.

2. Set the data communication channel.: select the "mode", "allow DCC", "the other OHs source";

3, Click <config>.

field	range
mode	select 'non-standard' mode to avoid overhead collision when communicating with device of other vendor
allow DCC	Control whether the network management software can manage this optical interface or not
the other OHs source	Set other OH source to pass-through or loopback the current free overhead when communicating with device of other vendor

Note

1, in standard mode: EOW occupy E1, RS232 channel occupy F1, DCC channel occupy D1, D2, D3;

Other overhead:D4 V1 V2 D5 V3 V4 D6 V5 V6 D7 V7 V8 D8 V9 V10 D9 V11 V12 D10 D11 D12

2, in non-standard mode:EOW occupy D4, RS232 channel occupy D5, DCC channel occupy D6, D7, D8.

Other overhead: E1 F1 D1 D2 D3 V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 D9 V11 V12 D10 D11 D12

1.27 EXM/ETS

Purpose

For RS1010 equipment, the 23rd, 24th E1 in this interface can be used as ETS or XE1. T3/T4 port: external timing source interface, the equipment can extract the timing information from the T3 port and then recovery the system clock;

XE1 port: extended management interface, as external interface, an external management cable is needed to implement management; as internal interface, the management information is mapped to VC-12 channel, thus various network management information from different networks can be transmitted to the same management center. Note that the DXC configuration is needed when inner extendable management interface is used.

Steps

Step1: in the navigation tree, select [config/system manager/EXM/ETS].

Step2: select ETS1/2 or EXM, click <config>.

Step3: if select the IEXM, you need to configure the DXC circuit, refer to "DXC manager".

• — — RS1010	EXM/ETS								
— 👫 Rack Diagram Mar	ETS interface: by which the system clock is e	xtracted and restored; EXM interface:Extended							
— 🛐 DXC Manager	management interface,optional internal/external interface, as external interface,an external								
🗛 🦠 System Manager	management ethernet cable is needed to implement network manaagement,As internal int								
— 🟫 Clock	erface, the network management data is mapped to VC12 channel, thus various network m								
— 💊 Overhead	anagement information from different networks can be transmitted to the same manageme								
– 🌉 TCP/IP Commu	nt center. Note that the DXC configuration is needed when inner Inner extendable manage								
- add KLM	ment interface is used.								
— 🧬 Calendar Calib									
— 🚰 Granularity									
- 🏘 EXM/ETS	EXM1/ETS1	EXM2/ETS2							
🗆 ᡝ Data Commur									
— 📁 Card Manager									
👇 😪 Port Manager		O 132/142(E1S2)							
— 🏘 SDH Port	O OEVM	O OEXM							
👇 🏘 Tributary Port	OEXIV	U ULAM							
– 🏘 Ethernet Po	● EXM	• EXM							
🗕 🏘 E1 Port	IEXM	IEXM							
– 🏘 System Port									
🗕 🧾 Device Info Manage	-Embedded DCN Configuration-								
	Destination	Activated Status Protection Type Auto P							
Config									
Coming									
Alarm Perform									

Alarm and Performance

1.28 Alarm Managment

1.28.1 Alarm Severity

Steps

1.In the NE manager, click "alarm" tab at the left corner, In the navigation tree, click [alarm config]

2. Choose a record and right-click and select "critical alarm/major alarm/minor alarm/warning alarm".

g Alarm N	ame Severity	Auto Report	Device Shielding	NMS Shielding	Description
rm EXM_FAIL	Major	Enable	Disable	Disable	EXM channel unavailable
m LTI	Critical	Enable	Disable	Disable	Loss of Incoming Timing Reference
Switchin TIMEDeg	Major	Enable	Disable	Disable	Timing signal degrade
SSMBMismat	ch Major	Enable	Disable	Disable	Synchronization Timing Identifier Mismatch
NOP	Critical	Enable	Disable	Disable	Loss of Optical Signal on the receive line
TF	Critical	Enable	Disable	Disable	Transmit fault
OOF	Critical	Enable	Disable	Disable	Out of Frame
LOF	Critical	Enable	Disable	Disable	Loss of Frame
RS_TIM	Minor	Disable	Disable	Disable	Regenerator Section Trace Identifier Mismatch
MS_RDI	Minor	Disable	Disable	Disable	Multiplex Section Remote Defect Indication
MS_EXC	Major	Enable	Disable	Disable	Multiplex Section bit errors exceed the threshold
MS_DEG	Minor	Disable	Disable	Disable	Multiplex Section Degraded
MS_AIS	Minor	Disable	Disable	Disable	Multiplex Section Alarm indication
AU_LOP	Critical	Enable	Disable	Disable	Loss of AU Pointer
AU_AIS	Minor	Disable	Disable	Disable	AU Alarm indication
AUPJAlarm	Minor	Disable	Disable	Disable	AU pointer adjustment exceed the threshold
TU_LOM	Critical	Enable	Disable	Disable	High Order Path MF Lose
HP_TIM	Critical	Enable	Disable	Disable	High order path Trace Identifier Mismatch
HP-UNEQ	Critical	Enable	Disable	Disable	High order path Unequipped
HP_RDI	Critical	Enable	Disable	Disable	High order Path Remote Defect Indication
HP_PLM	Critical	Enable	Disable	Disable	High order path Payload Mismatch
HP_EXC	Minor	Disable	Disable	Disable	High order path Excessive errors
HP_DEG	Minor	Disable	Disable	Disable	High order Path degrade
HP_AIS	Minor	Disable	Disable	Disable	High Order Path Alarm indication
RPD	Minor	Disable	Disable	Disable	Remote power down
TD	Major	Enable	Disable	Disable	Transmit DEgraded Signal
	Minor	Disable	Disable	Disable	Laser Temperature High
RPH	Major	Enable	Disable	Disable	RX Power High
RPL	Minor	Disable	Disable	Disable	RX Power Low
(LPL	Minor	Disable	Disable	Disable	TX Power Low

1.28.2 Alarm shield

Steps

1.In the NE manager, click "alarm" tab at the left corner, In the navigation tree, click [alarm config]

2. Choose a record and right-click and select alarm shield configuration items.

RS1010	Н	KJIOIO													
– 🚮 Alarm Config		Alarm Name	Severity	Auto Report Device Shielding NMS Shieldi		NMS Shielding	Description								
– 🔢 Current Alarm		EXM_FAIL	Major	Enable	Disable [Disable		Disable		Disable			Disable	EXM channel unavailable
– 🛄 History Alarm		LTI	Critical	Enable	Disa	able		Disable	Loss of Incoming Timing Reference						
- 🕅 Protection Switchin		TIMEDeg	Major	Enable	Dis	ahle		Disable	Timing signal degrade						
		SSMBMismatch	Major	Enable	Dis		Critical /	Alarm	Synchronization Timing Identifier Mismatch						
		NOP	Critical	Enable	Dis		Major 01	arm	Loss of Optical Signal on the receive line						
		TF	Critical	Enable	Dis		тиајот мі	ann	Transmit fault						
		OOF	Critical	Enable	Dis		Minor Al	arm	Out of Frame						
		LOF	Critical	Enable	Dis		Warning	Alarm	Loss of Frame						
		RS_TIM	Minor	Disable	Dis				Regenerator Section Trace Identifier Mismatch						
		MS_RDI	Minor	Disable	Dis		Auto Rej	oort (Enable)	Multiplex Section Remote Defect Indication						
		MS_EXC	Major	Enable	Dis		Auto Do	ort/Dieable)	Multiplex Section bit errors exceed the threshold						
		MS_DEG	Minor	Disable	Dis		нию перотциза	son (Disabile)	Multiplex Section Degraded						
		MS_AIS	Minor	Disable	Dis		Device S	Shield(Enable)	Multiplex Section Alarm indication						
		AU_LOP	Critical	Enable	Dis		Deurice F	hield/Disable)	Loss of AU Pointer						
		AU_AIS	Minor	Disable	Dis		Device 3	meiu(Disanie)	AU Alarm indication						
		AUPJAlarm	Minor	Disable	Dis		NMS Shi	eld(Enable)	AU pointer adjustment exceed the threshold						
		TU_LOM	Critical	Enable	Dis				High Order Path MF Lose						
		HP_TIM	Critical	Enable	Dis		NMS Shi	eld(Disable)	High order path Trace Identifier Mismatch						
		HP-UNEQ	Critical	Enable	Dis	a.	Dresiew		High order path Unequipped						
		HP_RDI	Critical	Enable	Dis	_	TICNER		High order Path Remote Defect Indication						
		HP_PLM	Critical	Enable	Dis	8	Print		High order path Payload Mismatch						
		HP_EXC	Minor	Disable	Dis	命	Export		High order path Excessive errors						
		HP_DEG	Minor	Disable	Dis				High order Path degrade						
		HP_AIS	Minor	Disable	Disa	able		Disable	High Order Path Alarm indication						
1															

configuration	description
item	
Severity	Alarm level: Critical (red), major(orange), minor(yellow), warning(purple)
Auto report	Auto update is on: NE trap the alarm generated automatically (that is NE send the alarm to PC automatically when the alarm is occurred); Auto update is off: NE do not trap the alarm generated automatically, refresh alarm manually can update the alarm shown in PC (if alarm is not disappeared)
Device shield	If device shield is on, NE do not trap the alarm, and refresh alarm manually can not update the alarm shown in PC when alarm is occurred in device
NMS shield	NMS shield is on: NMS will discard the alarm when receiving; NMS inhibit alarm is off: the alarm will be saved into the database when received by NMS

1.28.3 Protection

Steps

1.In the NE manager, click "alarm" tab at the left corner, In the navigation tree, click [alarm config-Protection switching conditions]

2 select the alarm as the condition of protection switching

•- 🗑 RS1010	Protection St	vitching Conditi	ons				
🗕 🚮 Alarm Config							Config
— 🔢 Current Alarm							
— 👪 History Alarm	SPI Alarm	✓ NOP	TF				Refresh
Protection Switchin							
	RS Alarm	✓ OOF	🖌 LOF	RS-TIM			
	MS Alarm	MS-RDI	MS-EXC	MS-DEG	MS-AIS	🖌 AU-LOP	
		🖌 AU-AIS	AUPJAlarm				
		_					
	HP Alarm	✓ LOM	HP-TIM	HP-UNEQ	HP-RDI	HP-PLM	
		HP.FXC	HP.DEG	P HP.AIS	THP.IAlarm		
	I P Alarm	TU-LOP	TU-LOM	LP-TIM	LP RDI	LP-EXC	
		LP-PLM	LP-UNEQ	TU-AIS			

1.28.4 Alarm View

Steps

1. In the NE manager, click "alarm" tab at the left corner, In the navigation tree, click [alarm config-current alarm/history alarm]

Page 44

ዮ- 🛐 RS1010		Total records: 0
- 📸 Alarm Config	🔏 Query 🗙 🕻	Severity A
- 👪 History Alarm	Query	
Protection Switchir	🗹 All	
	Select	
	All	
	Туре	
	Severity	
	Confirm	
	Time	
	From	
	0000-00-00	
	То	
	0000-00-00	
Config	OK Close	
Alarm Perform		

1.29 Performance Management

Steps

1. In the NE manager, click "perform" tab at the left corner, In the navigation tree, click [Perform]

2. do performance threshold configuration, performance view or performance clear

ዮ- 🗑 RS1010	RS1010RS	Performance Threshold		
👇 🌌 Performance Conf	-Local H	Grror(15-minute)		r (24-hour)
	100011			. (54 11042)
	EB	0	EB	0
	ES	0	ES	0
E1 Port	SES	0	SES	0
🕶 🔯 Performance View	UAS	0	UAS	0
— 🔯 performance clear				
📥 🧖 Automatic Perform				

RAYVIEW Management User Guide for RS1010_V3.02

Page 45

RS1010								
Performance Conf	Source	Туре	Statistic Time	EB	ES	SES	UAS	
- 👷 RS	RS1010_Drop1	Current						
- 😪 MS	RS1010_Drop2	Current						
- 😪 HP								
– 😪 LP								
🔄 🔶 E1 Port								
🕅 Performance View								
– 🍭 15-minute Perf								
🗆 🖳 🍳 24-hour Perfor								
🔯 performance clear								
🛛 🔯 Automatic Perform								
								Select C
								RS1010
								RS1010
								1 X8
								3 X506
								0_10000
								<
								Display
								Accu
								Appr

Questions

Q1:Alarm can not be refresh to interface

A1:Troubleshoot:

- A: Make sure the IP address of monitor is correct; you can Right-click –monitor server--Refresh
- B: If the IP address of monitor is correct, make sure process 'knTrapServer.exe' is open, view process in task manager to confirm that.

C: If there is no problem in step A and B, make sure if 'knTrapServer.exe' is stop by firewall.

You can click start--Run—CMD to enter DOS window: Enter into the installation folder of RAYVIEW. such as: C:\RAYVIEW\Server\bin



type 'start kntrapserver' and then enter

If the firewall prevention tip window pop up, allow or release prevention. Restart server and client terminal, refresh alarm.

Q2 the TCP/IP communication between device (NE) and PC failed (PC can not connect to device, the NE is offline)

A2:Troubleshoot:

First, you should know the default NE(device) address. The default NE IP address is 192.168.0.155. The address of NE(device) and PC shall be set and kept at the identical IP segment. For example, if the device IP is 192.168.0.155, while the IP of PC is 202.194.192.2, you should set the IP of PC as 192.168.0.154(for example), make the PC and device IP in the same IP segment, and the TCP/IP communication can be set up, and then change the IP of NE and IP of PC.

Q3 Client terminal link server failed

A3:Troubleshoot:

Check the IP address of server that client terminal connect with, make sure the communication between client and server is correct, and make sure the server is open. There is 4 processes (kncenter.exe\knmaster.exe\raynescan.exe\kntrapserver.exe) at least.

Q4:The client and server are in two PC separately, and the client terminal runs slowly.

A4:Troubleshoot:

Check the IP settings of the client terminal to see if there is DNS server IP, make sure the communication between client and the DNS server is correct, if the connection is break, delete the DNS server IP.