www.raisecom.com

System Log Function

Legal Notices

Raisecom Technology Co., Ltd makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. **Raisecom Technology Co., Ltd** shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty.

A copy of the specific warranty terms applicable to your Raisecom product and replacement parts can be obtained from Service Office.

Restricted Rights Legend.

All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of **Raisecom Technology Co., Ltd.** The information contained in this document is subject to change without notice.

Copyright Notices.

Copyright ©2007 Raisecom. All rights reserved.

No part of this publication may be excerpted, reproduced, translated or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in Writing from **Raisecom Technology Co., Ltd.**

Trademark Notices

RAISECOM is the trademark of Raisecom Technology Co., Ltd.

Java™ is a U.S. trademark of Sun Microsystems, Inc.

Microsoft® is a U.S. registered trademark of Microsoft Corporation.

Windows NT® is a U.S. registered trademark of Microsoft Corporation.

Windows® 2000 is a U.S. registered trademark of Microsoft Corporation.

Windows® XP is a U.S. registered trademark of Microsoft Corporation.

Windows® and MS Windows® are U.S. registered trademarks of

Microsoft Corporation.

Contact Information

Technical Assistance Center

The Raisecom TAC is available to all customers who need technical assistance with a Raisecom product, technology, or, solution. You can communicate with us through the following methods:

Address: 2nd Floor, South Building of Rainbow Plaza, No.11 Shangdi Information Road, Haidian District, Beijing 100085

Tel: +86-10-82883305

Fax: +86-10-82883056

World Wide Web

You can access the most current Raisecom product information on the World Wide Web at the following URL:

http://www.raisecom.com

Feedback

Comments and questions about how the … system software works are welcomed. Please review the FAQ in the related manual, and if your question is not covered, send email by using the following web page:

http://www.raisecom.com/en/xcontactus/contactus.htm.

If you have comments on the … specification, instead of the web page above, please send comments to:

export@raisecom.com

We hope to hear from you!

CONTENTS

Release Notes

Date of Release	Manual Version	Software Version	Revisions

Preface

About This Manual

This manual introduces primary functions of the configuration management software for RC series products.

Who Should Read This Manual

This manual is a valuable reference for sales and marketing staff, after service staff and telecommunication network designers. For those who want to have an overview of the features, applications, structure and specifications of … device, this is also a recommended document.

Relevant Manuals

《Raisecom NView System User Manual》

《Raisecom Nview System Installation and Deployment Manual》

《… User Manual》

《… Commands Notebook》

Organization

This manual is an introduction of the main functions of … EMS. To have a quick grasp of the using of the EMS of … , please read this manual carefully. The manual is composed of the following chapters

Chapter 1 Overview

This chapter briefly introduces the basic function of …

Chapter 2 Configuration Management

This chapter mainly introduces the central site configuration management function of the ….

Chapter 3 Performance Management

This chapter focuses on performance management function of ….

Chapter 4 Device Maintenance Management

This chapter introduces the device maintenance management function of ….

Appendix A Alarm Type

The alarm types supported by ….

Compliance

The RC series products developed by Raisecom are strictly complied with the following standards as well as ITU-T, IEEE, IETF and related standards from other international telecommunication standard organizations:

YD/T900-1997 SDH Equipment Technical Requirements - Clock

YD/T973-1998 SDH 155Mb/s and 622Mb/s Technical conditions of optical transmitter module and receiver module

YD/T1017-1999 Network node interface for the Synchronous Digital Hierarchy (SDH)

YD/T1022-1999 Requirement of synchronous digital hierarchy (SDH) equipment function

YD/T1078-2000 SDH Transmission Network Technique Requirements-Interworking of Network Protection Architectures

YD/T1111.1-2001 Technical Requirements of SDH Optical Transmitter/Optical Receiver Modules——2.488320 Gb/s Optical Receiver Modules

YD/T1111.2- 2001 Technical Requirements of SHD Optical Transmitter/Optical Receiver Modules——2.488320 Gb/s Optical Transmitter Modules

YD/T1179- 2002 Technical Specification of Ethernet over SDH

G.703 Physical/electrical characteristics of hierarchical digital interfaces

G.704 Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels

G.707 Network node interface for the synchronous digital hierarchy (SDH)

G.774 Synchronous digital hierarchy (SDH) - Management information model for the network element view

G.781 Synchronization layer functions

G.783 Characteristics of synchronous digital hierarchy (SDH) equipment functional blocks

G.784 Synchronous digital hierarchy (SDH) management

G.803 Architecture of transport networks based on the synchronous digital hierarchy (SDH)

G.813 Timing characteristics of SDH equipment slave clocks (SEC)

G.823 The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy

G.825 The control of jitter and wander within digital networks which are based on the synchronous digital hierarchy (SDH)

G.826 End-to-end error performance parameters and objectives for international, constant bit-rate digital paths and connections

G.828 Error performance parameters and objectives for international, constant bit-rate synchronous digital paths

G.829 Error performance events for SDH multiplex and regenerator sections

G.831 Management capabilities of transport networks based on the synchronous digital hierarchy (SDH)

G.841 Types and characteristics of SDH network protection architectures

G.842 Interworking of SDH network protection architectures

G.957 Optical interfaces for equipments and systems relating to the synchronous digital hierarchy

G.691 Optical interfaces for single channel STM-64 and other SDH systems with optical amplifiers

G.664 Optical safety procedures and requirements for optical transport systems

I.731 ATM Types and general characteristics of ATM equipment

I.732 ATM Functional characteristics of ATM equipment

IEEE 802.1Q Virtual Local Area Networks (LANs)

IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering

IEEE 802.3 CSMA/CD Access Method and Physical Layer Instruction

Chapter 1 System Log Function

1.1 System log function introduction

1.1.1 System log function overview

The switch system information and some debugging output will be sent out for log handling, which will decide the destination that the log information will be sent according to the system log configuration: log files, console, TELNET, log host.

1.1.2 System log format

The format of system log is:

timestamp   module-level- Message content

For example: FEB-22-2005 14:27:33   CONFIG-7-CONFIG:USER " raisecom "   Run " logging on "

1.2 Configure system log function

1.2.1 Default system log configuration

Function	Default value
Set the log information to export to the console	Console the direction of the log host is enabled; Output scale is informational。
Set the log information to export to file	Enable the output of the log on file direction
Configure log host	The configuration information without log host
Configure the log exporting to monitor	Monitor the direction of log host is disabled
Enable/disable system log	Enable
Log rate configuration	The sending rate without the limit of logs
Configure the time stand of the log information	Use standard time

1.2.2 Configure system log source

1.2.2.1 Enable/disable system log

Step	Command	Description
1	**config**	Enter global configuration mode
2	**logging on**	Enable system log
3	**exit**	Return to privileged EXEC mode
4	**show logging**	Show the configuration

For example:

Raisecom#**config**

Configuration mode, one conmmand input per times. End with CTRL-Z.

CONFIG-I:Configured from console ...

Raisecom(config)#**logging on**

set successfully!

Raisecom(config)#**exit**

Raisecom#**show logging**

Syslog logging:Enable, 0 messages dropped, messages rate-limited 0 per second

Console logging:Enable, level=informational, 0 Messages logged

Monitor logging:Disable, level=informational, 0 Messages logged

Time-stamp logging messages: date-time

Log host information:

Target Address   Level   Facility   Sent   Drop

1.2.2.2 Configure the time stand of the log information

Step	Command	Description
1	**config**	Enter global configuration mode
2	**logging time-stamp { standard | relative-start | null }**	Time stamp setting **Standard:** standardtime mmm-dd-yyyy hh-mm-ss，for

example "FEB-22-2005
14:27:33"

relative-start: switch running
time hh-mm-ss, for example
"29:40:6" means the switch has
been running for 29 hours 40
minutes 6 second

null: no time stamp in log
information

3	exit	Back to privileged EXEC mode
4	show logging	View the configuration

For example:

Raisecom#**config**

Raisecom(config)#**logging time-stamp relative-start**

set successfully!

1.2.2.3 Configure the log rate

Step	Command	Description
1	config	Enter global configuration mode
2	logging rate <1-1000>	Configure the log number sent every second
3	exit	Return to privileged EXEC mode

1.2.3 Configure system log output

1.2.3.1 Log information output to console

Step	Command	Description
1	config	Enter global configuration mode
2	logging console {<0-7> | alerts | critical | debugging | emergencies | errors | informational | notifications | warnings}	Configure and enable log information output to console and the parameter information, use command **no** to close the log output direction <0-7> log scale alerts immediate action is needed (scale

	no logging console	1)
		critical critical state (scale 2)
		Debugging debug the information (scale 7)
		emergencies system not available (scale 0)
		errors errors (scale 3)
		Informational inform the event (scale 6)
		notifications normal event in the critical condition (scale 5)
		Warnings warning condition (scale 4)
3	**exit**	Return to privileged EXEC mode
4	**show logging**	Show the configuration

1.2.3.2 Configure the log host

Step	Command	Description
1	**config**	Enter global configuration mode
2	**logging host A.B.C.D { local0 | local1 | local2 | local3 | local4 | local5 | local6 | local7} { <0-7> | alerts | critical | debugging | emergencies | errors | informational | notifications | warnings }** **no logging host A.B.C.D**	Configure and enable log information output to console and the parameter information, use command **no** to close the log output direction. Local0-local7 the name of log host equipment <0-7> log scale alerts immediate action is needed (scale 1) critical critical state (scale 2) Debugging debug the information (scale 7) emergencies system not available (scale 0) errors errors (scale 3) Informational inform the event (scale 6)

		notifications normal event in the critical condition (scale 5)
		Warnings warning condition (scale 4)
3	**exit**	Return to privileged EXEC mode
4	**show logging**	Show the configuration

1.2.3.3 Configure the log information to the file

Step	Command	Description
1	**config**	Enter global configuration mode
2	**logging file** **no logging file**	Configure and start recording the log information into flash files, use command **no** to close the log output direction
3	**exit**	Return to privileged EXEC mode
4	**show logging**	Show the configuration

1.2.3.4 Configure the log output to monitor

Step	Command	Description
1	**config**	Enter global configuration mode
2	**logging monitor {<0-7> | alerts | critical | debugging | emergencies | errors | informational | notifications | warnings}** **no logging monitor**	Configure and enable log information output to console and the parameter information, use command **no** to close the log output direction <0-7> log scale alerts immediate action is needed (scale 1) critical critical state (scale 2) Debugging debug the information (scale 7) emergencies system not available (scale 0) errors errors (scale 3) Informational inform the event (scale 6)

		notifications normal event in the critical condition (scale 5)
		Warnings warning condition (scale 4)
3	**exit**	Return to privileged EXEC mode
4	**show logging**	Show the configuration

1.2.4 Monitoring and Maintenance

Use command **show** to monitor and maintain log function

Command	Description
show logging	Show the configuration
show logging file	Show the log file content

For example:

Use **show logging** to look over the current log configuration state:

Raisecom# **show logging**

Syslog logging:Enable, 0 messages dropped, messages rate-limited 0 per second

Console logging:Enable, level=informational, 0 Messages logged

Monitor logging:Disable, level=informational, 0 Messages logged

Time-stamp logging messages: date-time

Log host information:

Target Address   Level   Facility   Sent   Drop

Use **show logging file** to look over the log file content:

Raisecom# **show logging file**

0:15:44   CONFIG-7-REBOOT-A:Reboot system by raisecom

0:15:43   CONFIG-7-CONFIG:USER " raisecom "   Run " erase   "

0:15:43   CONFIG-7-ERASE-A:Erase system configuration file by raisecom

0:15:31   CONFIG-6-LINK_U:port 24 Link   UP

0:11:6   CONFIG-6-LINK_U:port 17 Link   UP

0:11:4   CONFIG-6-LINK_D:port 17 Link Down

0:10:40   CONFIG-6-LINK_D:port 24 Link Down

0:10:39   CONFIG-6-LINK_U:port 17 Link   UP

0:10:37   CONFIG-6-LINK_D:port 17 Link Down

0:10:33   CONFIG-6-LINK_U:port 17 Link   UP

0:10:30   CONFIG-6-LINK_D:port 17 Link Down

0:10:29   CONFIG-6-LINK_U:port 17 Link   UP

0:7:4   CONFIG-6-LINK_U:port 24 Link   UP

0:3:6   CONFIG-7-LOGIN-A:user: raisecom Login

1.2.5 Typical configuration example

Topology structure:

Fig 1 Topology structure

As is shown in fig 1, configure the switch IP address to 20.0.0.6, then start logging function, configure logging host, configure the IP address to 20.0.0.168.

The switch configuration is as follows:

Raisecom#config

Raisecom(config)# interface ip 0

Raisecom(config-ip)# ip address 20.0.0.6 255.0.0.0 1

Raisecom(config-ip)#exit

Raisecom(config)#logging on

Raisecom(config)#logging time-stamp date-time

Raisecom(config)#logging rate 2

Raisecom(config)#logging host 20.0.0.168 local0 warings

Raisecom(config)#exit

Raisecom#show logging

Syslog logging:Enable, 0 messages dropped, messages rate-limited 2 per second

Console logging:Enable, level=informational, 16 Messages logged

Monitor logging:Disable, level=informational, 0 Messages logged

Time-stamp logging messages: date-time

```
Log host information:

Target Address         Level           Facility    Sent       Drop

---------------------------------------------------------------

 20.  0.  0.168       warnings         local0       11          0
```

PC 机打印的日志：

07-01-2008 11:31:28   Local0.Debug   20.0.0.6   JAN 01 10:22:15 ISCOM3026:
CONFIG-7-CONFIG:USER ″ raisecom ″ Run ″ logging on ″

07-01-2008 11:27:41   Local0.Debug   20.0.0.6   JAN 01 10:18:30 ISCOM3026:
CONFIG-7-CONFIG:USER ″ raisecom ″ Run ″ ip address 20.0.0.6 255.0.0.0 1 ″

07-01-2008   11:27:35 Local0.Debug 20.0.0.10 JAN   01   10:18:24   ISCOM3026:
CONFIG-7-CONFIG:USER " raisecom "   Run " ip address 20.0.0.6 255.0.0.1 1 "

07-01-2008   11:12:43 Local0.Debug 20.0.0.10 JAN   01   10:03:41   ISCOM3026:
CONFIG-7-CONFIG:USER " raisecom "   Run " logging host 20.0.0.168 local0 7 "

07-01-2008 11:12:37   Local0.Debug   20.0.0.10   JAN 01 10:03:35 ISCOM3026:
CONFIG-7-CONFIG:USER ″ raisecom ″ Run ″ logging on ″