



ISCOM4300 COMMAND GUIDE

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1 Overview

1.1 Audience

This guide describes the command-line, man-machine interface of ISCOM4300, and as a reference for the users of the device and relevant software version of ISCOM4300.

1.2 Organization

There are 9 chapters in this guide:

Chapter 2: HOW TO USE COMMAND-LINE

Describe how to access, control and configure ISCOM4300 device through ISCOM4300 software command-line.

Chapter 3: SYSTEM MANAGEMENT COMMANDS OF ISCOM4300

Describe the system management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 4: USER MANAGEMENT COMMANDS OF ISCOM4300

Describe the user management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 5: LOG MANAGEMENT COMMANDS OF ISCOM4300

Describe the log management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 6: NETWORK PROTOCOLE CONFIGURATION COMMANDS OF ISCOM4300

Describe the network protocol configuration commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 7: UPGRADE AND CONFIGURATION FILE MANAGEMENT COMMANDS OF ISCOM4300

Describe the upgrade and configuration file management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 8: ETHERNET INTERFACE MENEAGEMENT COMMANDS OF ISCOM4300

Describe the Ethernet interface management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 9: SDH INTERFACE MENEAGEMENT COMMANDS OF ISCOM4300

Describe the SDH interface management commands supported by the ISCOM4300 software in alphabetical sequence.

Chapter 10: ISCOM4300 VCG CONFIGURATION MANAGEMENT COMMANDS OF ISCOM4300

Describe the VCG configuration management commands supported by the ISCOM4300 software in alphabetical sequence.

1.3 Definitions

Describe the definitions of professional terminologies and the original words of the alphabet abbreviations as well as the meaning of some abbreviated

terminologies and special symbols.

| | |
|------|---------------------------------|
| EOS | Ethernet over SDH |
| GFP | Generic Framing Procedure |
| LAPS | Link Access Procedure--SDH |
| LCAS | Link Capacity Adjustment Scheme |
| PPP | Point-to-Point Protocol |
| VCG | Virtual Concatenation Group |

1.4 References

- 1, ISCOM series Ethernet switches
- 2, ISCOM4300 configuration guide

2 How to use command-line

2.1 Requirements of software & hardware

Operation environment of hardware: platform of ISCOM4300,
Computer serial interface;

Operation environment of software: WIN98/WIN2000/WINDOWS XP

2.2 Modes of command-line

| Mode | Mode description | Access | Prompt |
|-----------------------------------|--|---|-------------------------|
| User EXEC | Configuring the basic information and show the parameters and etc. | Login the device and enter the user name and password | iscom4300> |
| Privileged EXEC(enable) | Configuring the basic information such as system time and show the parameters but not the running information of ISCOM4300 | Form user EXEC mode, enter enable command and password | Iscom4300# |
| Global configuration | Configuring all the running parameters of ISCOM4300 | From privileged EXEC mode, enter config command | iscom4300(config)# |
| Interface configuration | Configuring the interface parameters of ISCOM4300 | In global configuration mode, enter interface command. <i>[ETH PORTID /SDH 1-2]</i> | iscom4300(config-if)# |
| SNMP interface configuration mode | Configuring the network management interface parameters of ISCOM4300 | Interface <i>SNMP</i> | iscom4300(config-snmp)# |
| VCG command mode | Configuring the relevant properties of ISCOM4300 VCG | In global configuration mode, enter vcg | iscom4300(config-vcg)# |

2.3 Format explanation of command-line

1. There are only key words before the first parameter in the command-line.
2. The optional parameter or parameters are in the "[]", and the multi parameters will be separated by "|".
3. If there is the possibility that the required parameters and the command key words are optional, the parameters and the key words are in the "{ }", and "|" is used to separate them.

3 System management commands of ISCOM4300

3.1 chinese

[function explanation]

Show help information in Chinese

chinese

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

Show help information in Chinese

[application example]

Show help information in Chinese

*ISCOM4300# **chinese***

Set successfully

[related command]

| Command | Description |
|----------------|----------------------------------|
| english | Show help information in English |

3.2 clear

[function explanation]

Clear the information on the screen.

clear

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Clear the information on the screen.

ISCOM4300# **clear**

[related command]

N/A

3.3 config

[function explanation]

Enter global configuration mode

config

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

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

Information showed after entering global configuration mode

[application example]

Enter global configuration mode

ISCOM4300# **config**

[related command]

N/A

3.4 disable

[function explanation]

Exit from privileged EXEC to user EXEC

disable

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
exit from privileged EXEC
/SCOM4300# disable
/SCOM4300>
```

[related command]

| Command | Description |
|---------------|-----------------------|
| enable | Enter privileged EXEC |

3.5 enable

[function explanation]

Enter privileged EXEC

enable

[parameter explanation]

N/A

[default case]

N/A

[command mode]

User EXEC

[application guide]

N/A

[explanation of command execution echo]

password:

enter the password which is the same as login password

[application example]

enter privileged EXEC

ISCOM4300>**enable**

Password:

ISCOM4300#

[related command]

| Command | Description |
|----------------|---------------------------|
| disable | Exit from privileged EXEC |

3.6 english

[function explanation]

Show help information in English

english

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

set successfully. !
information showed when set successfully

[application example]

show help information in English
*ISCOM4300# **english***
set successfully.

[related command]

| Command | Description |
|----------------|----------------------------------|
| chinese | Show help information in Chinese |

3.7 exit

[function explanation]

Exit from present mode to previous mode

exit

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

Logout when in privileged EXEC and User EXEC mode, the same function as **quit** in this case

[explanation of command execution echo]

N/A

[application example]

Exit from present mode to previous mode

*ISCOM4300 (config)# **exit***
ISCOM4300#

[related command]

| Command | Description |
|-------------|------------------------|
| quit | Logout from this login |

3.8 help

[function explanation]

Show help information

help

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

ISCOM4300 AGENT software provides advanced help feature. When you need help, anytime at the command line please press '?'.

If nothing matches, the help list will be empty and you must backup until entering a '?' shows the available options.
Two styles of help are provided:

1. Full help is available when you are ready to enter a command argument (e.g. 'show ?') and describes each possible argument.
2. Partial help is provided when an abbreviated argument is entered and you want to know what arguments match the input (e.g. 'show me?').

Help information when the command executed successfully

[application example]

show help information
ISCOM4300# help

[related command]

N/A

3.9 history

[function explanation]

Show the command list which has been entered during this login

history

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show the command list which has been entered during this login
*ISCOM4300#**history***

[related command]

| Command | Description |
|-----------------|--|
| terminal | Set the number of commands can be kept in memory |
| history | |

3.10hostname

[function explanation]

Change the system name, use **no** command to restore the default name.

hostname *HOSTNAME***no hostname**

[parameter explanation]

HOSTNAME system name

[default case]

Default case of this command

ISCOM4300;

[command mode]

Privileged EXEC

[application guide]

After change the system name, use **write** command to save it.

[explanation of command execution echo]

set successfully!

Information showed when set successfully

Please specify string starting with alphabet

Information showed when the characters of system name are more than 16

HostName length must less than 16 !

Information showed when the characters in the system name are more than 16

[application example]

```
Chage the system name
ISCOM4300# hostname raisecom
set successfully!
raiseccom#
Restore the default name
ISCOM4300#no hostname
```

[related command]

N/A

3.11 list

[function explanation]

List all the commands in this mode

list

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

list all the commands in privileged EXEC
ISCOM4300#list

[related command]

N/A

3.12logout

[function explanation]

Quit from present login

logout

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Quit from present login

*ISCOM4300#**logout***

[related command]

| Command | Description |
|-------------|---|
| exit | Exit from the present mode to the previous mode |
| quit | Logout from the present login mode |

3.13quit

[function explanation]

Logout from present mode

quit

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

logout from privileged EXEC
ISCOM4300#quit

[related command]

| Command | Description |
|---------------|---|
| exit | Exit from present mode to previous mode |
| logout | Quit from present login |

3.14 reboot

[function explanation]

Reset system

reboot

[parameter explanation]

N/A

[default case]

N/A

[command mode]

any mode

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

reset the system
ISCOM4300#reboot

[related command]

N/A

3.15 settime

[function explanation]

Set up system time

settime DATE TIME

[parameter explanation]

DATE date to set.format is <month/day/year>
TIME time to set.format is <hour:munite:second>

[default case]

N/A

[command mode]

privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

System-time changed to xx/xx/xxxx xx:xx:xx !
 Information showed when system time set successfully
The format of time is MM/DD/YYYY HH:MM:SS
Please try again!
 Information showed when wrong format of system time entered

[application example]

Set the time as:11/24/2003 16:41:15
ISCOM4300# settime 11/24/2003 16:41:15

[related command]

| Command | Description |
|---------|-------------|
|---------|-------------|

| | |
|-------------------|---------------------------|
| show clock | Show system date and time |
|-------------------|---------------------------|

3.16 show clock

[function explanation]

Show system date and time

show clock

[parameter explanation]

N/A

[default case]

N/A

[command mode]

privileged EXEC,user EXEC

[application guide]

N/A

[explanation of command execution echo]

Now the time is xx/xx/xxxx xx:xx:xx !

Information showed when show system time successfully

[application example]

Show system date and time

*ISCOM4300# **show clock***

[related command]

| Command | Description |
|----------------|--------------------------|
| settime | Set system date and time |

3.17 show terminal

[function explanation]

Show terminal user information

show terminal

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show terminal user information

ISCOM4300# show terminal

| <i>terminal</i> | <i>stat</i> | <i>time-out</i> | <i>user</i> |
|-----------------|-----------------|-----------------|-------------|
| ----- | | | |
| <i>console</i> | <i>active</i> | <i>600sec</i> | <i>rc</i> |
| <i>telnet-1</i> | <i>active</i> | <i>600sec</i> | <i>rc</i> |
| <i>telnet-2</i> | <i>inactive</i> | <i>-</i> | <i>-</i> |
| <i>telnet-3</i> | <i>inactive</i> | <i>-</i> | <i>-</i> |
| <i>telnet-4</i> | <i>inactive</i> | <i>-</i> | <i>-</i> |
| <i>telnet-5</i> | <i>inactive</i> | <i>-</i> | <i>-</i> |

[related command]

| Command | Description |
|------------|--|
| who | Show the user who connects to system now |

3.18 show version

[function explanation]

Show version of software

show version

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
show present software version
ISCOM4300# show version
RaiseCom Operating System Software
Copyright(c) 2001-2003 by Raisecom Science & Technology CO., LTD.
Product name: ISCOM4300
RaiseComOS Software Version 1.0.1(Compiled Dec 25 2003 17:35:42)
Hardware Version 1.0
FPGA Version 1.2
ISCOM4300 with
32M      bytes DRAM
8M      bytes Flash Memory
```

[related command]

| Command | Description |
|----------------------|-------------|
| show terminal | 显示终端用户信息 |

3.19 terminal history

[function explanation]

Set the number of history commands that can be kept in memory

terminal history <1-20>

[parameter explanation]

<1-20> number of history commands

[default case]

Default case of this command;
Default number of history commands is 20

[command mode]

user EXEC.

[application guide]

N/A

[explanation of command execution echo]

Set successfully!

Information showed when set history command number successfully

[application example]

Set the number of history command as 10
ISCOM4300>terminal history 10

[related command]

| Command | Description |
|--------------------------|---|
| history | Show the list of entered commands during this login |
| terminal time-out | Maximum value of terminal time-out |
| terminal line | Number of terminal rows |

3.20terminal line

[function explanation]

Set the number of rows on terminal, use **no** command to restore the default value

terminal line <5-512>

no terminal line

[parameter explanation]

<5-512> range of the row number

[default case]

Default case of this command;
 The default number is 24.

[command mode]

user EXEC.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Set the number of terminal rows as 50
ISCOM4300>terminal line 50

[related command]

| Command | Description |
|-----------------|---|
| history | Show the list of entered commands during this login |
| terminal | Maximum value of terminal time-out |

| | |
|-----------------|-------------------------|
| time-out | |
| terminal | Number of terminal rows |
| history | |

3.21 terminal time-out

[function explanation]

Maximum value of terminal time-out

terminal time-out <0-65535>

[parameter explanation]

<0-65535> seconds of time-out

[default case]

Default case of this command;
Default seconds is 600.

[command mode]

user EXEC.

[application guide]

N/A

[explanation of command execution echo]

Set successfully!

Information showed when maximum value of terminal time-out set successfully

[application example]

Set the time-out as 900 seconds
ISCOM4300>terminal time-out 900

[related command]

| Command | Description |
|----------------------|---|
| history | Show the list of entered commands during this login |
| terminal | Maximum value of terminal time-out |
| time-out | |
| terminal line | Number of terminal rows |

3.22 who

[function explanation]

Show the user who connects to system now, * before a user indicates the user who is configuring the device now

who

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

show the user who connects to the system currently
ISCOM4300# who

[related command]

| Command | Description |
|----------------------|-----------------------------------|
| show terminal | Show information of terminal user |

3.23end

[function explanation]

Exit to privileged EXEC

end

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
Exit to privileged EXEC
ISCOM4300(config)# end
```

[related command]

| Command | Description |
|-----------------|-------------------------|
| Ctrl + Z | Exit to privileged EXEC |

3.24 sntp

[function explanation]

Configure the *sntp* clients to receive broadcast messages, and IP address of sntp server

sntp broadcast client

sntp server *A.B.C.D* IP address of the interface in decimal with dot

[parameter explanation]

A.B.C.D IP address of the interface in decimal with dot

[default case]

N/A

[command mode]

privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
configure the IP address of SNTP Server as 192.168.4.250
ISCOM4300(config)# sntp server 192.168.4.250
configure the SNTP client to receive broadcast messages
ISCOM4300(config)# sntp broadcast client
```

[related command]

N/A

4 User management commands of ISCOM4300

4.1 password

[function explanation]

Use **password** command to change present login password.

password

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

Use this command to change present login password.

[explanation of command execution echo]

set sucessfully!

please execute "write" to save!

Information showed when change the present password successfully

password not same!

Information showed when change the present password unsuccessfully

[application example]

change the present user password

ISCOM4300# **password**

Please input password:

Please input again:

[related command]

| Command | Description |
|-------------|---------------------------------------|
| user | Add a user and configure the password |

4.2 show user

[function explanation]

Show user information reserved by system

show user

[parameter explanation]

N/A

[command mode]

Privileged EXEC

[application guide]

Use this command to check up how many users can login this system. Use **erase** command to delete this file so that the system can recover to default status.

[explanation of command execution echo]

N/A

[application example]

ISCOM4300#show user

| <i>User name</i> | <i>priority</i> |
|------------------|-----------------|
| ----- | |
| <i>admin</i> | <i>admin</i> |
| <i>aa</i> | <i>admin</i> |

[related command]

| Command | Description |
|-----------------------|--|
| user | Configure user information |
| user privilege | Configure the privilege of special users |

4.3 user

[function explanation]

Add a user and configure password, use **no** command to erase.

user *USERNAME* **password** { **no-encryption** | **md5** } *PASSWORD*

no user *USERNAME*

[parameter explanation]user name

password password

no-encryption password is not enciphered

md5 password is enciphered by MD5

PASSWORD password information

[default case]

Default case of this command;

The default priority of the user configured by this command is ADMINISTRANT, use **user privilege** command to change.

[command mode]

Privileged EXEC

[application guide]

There is at least one user's privilege is ADMINISTRANT in the system database,

Only privileged user whose privilege is ADMINISTRANT is able to use this command.

[explanation of command execution echo]

*Set successfully!
please execute "write" to save!!*

Information showed when add user and set the password successfully

[application example]

Add a user named abc, password is 123
ISCOM4300# user abc password no-encrypt 123

Delete a user named abc
ISCOM4300# no user abc

[related command]

| Command | Description |
|-----------------------|--|
| hostname | Revise the host name set by special user |
| user privilege | Revise the privilege of the user |
| password | Revise the present user's password |

4.4 user privilege

[function explanation]

Set the privilege of special user

user USERNAME privilege [ADMINISTRANT | NORMAL | LIMITED]

[parameter explanation]

| | |
|---------------------|----------------------------|
| <i>USERNAME</i> | user name; |
| <i>ADMINISTRANT</i> | privilege of manager; |
| <i>NORMAL</i> | privilege of ordinary user |
| <i>LIMITED</i> | limit the user privilege |

[default case]

The privilege of user by default is ADMINISTRANT

[command mode]

Privileged EXEC

[application guide]

If some user's privilege need to be limited to forbid him executing some commands, this command is available, and only the manager whose privilege is ADMINISTRNT can use this command.

[explanation of command execution echo]

Set successfully!

please execute "write" to save!

Information showed when the privilege of special user set successfully

You need higher priority!

You need higher priority!

The present login user's privilege is not ADMINISTERANT and is not able to revise other users'priority

[application example]

Set the privileger of user abc as normal
*ISCOM4300# **user abc privilege normal***

[related command]

| Command | Description |
|------------------|-------------------------------|
| user | Add user and set the password |
| show user | Show the information of user |

5 Log management commands ISCOM4300

5.1 log

[function explanation]

Enable or disable the log

log [*ENABLE* | *DISABLE*]

[parameter explanation]

ENABLE enable log;

DISABLE disable log

[default case]

Default case of this command;

Default status is: ENABLE.

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Disable the log

ISCOM4300(config)# log disable

[related command]

| Command | Description |
|------------------|----------------------|
| log clean | Cleat the log |
| show log | Show lot information |

5.2 log clean

[function explanation]

Disable the log

log clean

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

disable the log

*ISCOM4300(config)# **log clean***

[related command]

| Command | Description |
|-----------------|---------------------------|
| log | Enable or disable the log |
| show log | Show log information |

5.3 show log

[function explanation]

Show log information

show log

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

show present log information

ISCOM4300# **show log**

Login user:

| DATE | TIME | USER | MODE | ADDRESS | ACTION | LEVEL |
|------|------|------|------|---------|--------|-------|
|------|------|------|------|---------|--------|-------|

Sended trap:

[related command]

| Command | Description |
|------------------|---------------------------|
| log | Enale of disable the log |
| log clean | Clear the log information |

6 Network protocol commands of ISCOM4300

6.1 arp

[function explanation]

Configure a mapping from an IP address to a physical address, use **arp delete** command to erase the mapping.

arp add A.B.C.D MACADDRESS

arp delete A.B.C.D

[parameter explanation]

A.B.C.D IP address of the interface
 MACADDRESS: <AA.BB.CC.DD.EE.FF> physical MAC address that the
 interface has mapped

[default case]

Default case of this command;

The default ARP table is empty for this command, the address mapping can be gotten through the dynamic ARP protocol.

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Successfully add an entry from ARP table!

Information showed when a mapping add successfully

Unsuccessfully add an entry from ARP table!

Information showed when a mapping add unsuccessfully

[application example]

Add a mapping

ISCOM4300(config)# **arp add** 192.168.1.119 00:50:8d:46:fb:03

[related command]

| Command | Description |
|--------------------|--------------------|
| show arp | Show the ARP table |
| arp timeout | Set ARP aging time |

6.2 arp timeout

[function explanation]

Configure ARP aging time

arp timeout <0-14400>

[parameter explanation]

<0-14400> range of aging time, unit is second

[default case]

Default case of this command;

The aging time is 180 seconds by default

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set successfully!

Information showed when ARP time-out set successfully

[application example]

Set the ARP aging time as 200

ISCOM4300(config)# arp timeout 200

[related command]

| Command | Description |
|-------------------|---------------------------|
| show arp | Show ARP table |
| arp add | Add an address mapping |
| arp delete | Delete an address mappinf |

6.3 ip address

[function explanation]

Configure the interface IP address

ip address A.B.C.D { A.B.C.D}

[parameter explanation]

A.B.C.D the IP address of the interface in decimal with dot

{ A.B.C.D} the subnet mask of the interface IP address in decimal with dot

[default case]

N/A

[command mode]

SNMP interface configuration mode

[application guide]

Use this command to configure the IP address of Ethernet network management interface.

[explanation of command execution echo]

Successfully set ip address!

Information showed when IP address configured successfully.

Set ip address failed!

Information showed when IP address configured unsuccessfully.

[application example]

Configure the IP address of Ethernet network management interface
ISCOM4300(config-snmp)# ip address 192.168.2.20 255.255.255.0

[related command]

| Command | Description |
|-----------------------|--|
| show interface | Show status information of the interface |

6.4 ip route

[function explanation]

Add a route, use **no** command to delete a route.

ip route *A.B.C.D A.B.C.D A.B.C.D*

no ip route *A.B.C.D*

[parameter explanation]

A.B.C.D the first parameter is the IP address of the destination subnet or host in decimal with dot

A.B.C.D the second parameter is the IP address subnet mask of the destination subnet or host in decimal with dot

A.B.C.D the third parameter is the IP address of the gateway

[default case]

N/A

[command mode]

Global configuration mode.

[application guide]

The static routing is suitable in simple network environment where routing protocol is not essential or the routing must be configured by hand. The subnet mask is required to be continuous 1s from the most important bit when it is in dot format such as 255.255.0.0 or 255.255.128.0 but not 255.0.255.0 or 255.1.0.0. If the priority is already configured, then the static routing will be replaced by the dynamic routing in the case that the dynamic

routing priority is higher than the default priority of the static routing. The default static routing priority is 1 and is higher than that of any other dynamic routing. The first parameter should be 0.0.0.0 when configure the default routing of the system.

[explanation of command execution echo]

Successfully add a route!

Information showed when add route successfully.

Unsuccessfully add a route!

Information showed when add a route unsuccessfully.

[application example]

Add a route

```
ISCOM4300(config)# ip route 0.0.0.0 0.0.0.0 192.168.1.1
```

Successfully add a route

Delete a route

```
ISCOM4300(config)# no ip route 0.0.0.0 0.0.0.0
```

Successfully delete a route

[related command]

| Command | Description |
|-------------------|--------------------------|
| show route | Show routing information |

6.5 ping

[function explanation]

Test whether the network is connectable.

```
ping A.B.C.D {count <1-65535> | size <8-4076> | timeout <1-255>}
```

[parameter explanation]

A.B.C.D the IP address of the destination host in decimal with dot;

count the ping program will exit automatically after sending certain amount of ICMP echo messages

<1-65535> number of ICMP echo messages will be sent

size size of additional content of the ICMP echo

<1-65535> configured size

timeout the time which the ping program has to wait to decide that the target is not connectable.

<1-255> the appointed time

[default case]

Default case of this command;

The count is 4, size is 64 and timeout is 3 by default of this command

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
ping the destination host 192.168.1.119
ISCOM4300#ping 192.168.1.119
(Type CTRL+C break)
PING 192.168.1.119: 56 data bytes
64 bytes from host (192.168.1.119): icmp_seq=0. time=0. ms
64 bytes from host (192.168.1.119): icmp_seq=1. time=0. ms
64 bytes from host (192.168.1.119): icmp_seq=2. time=0. ms
64 bytes from host (192.168.1.119): icmp_seq=3. time=0. ms
----192.168.1.119 PING Statistics----
4 packets transmitted, 4 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/0/0
```

[related command]

N/A

6.6 show arp

[function explanation]

Show present ARP aging time and ARP table.

show arp

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

```
Show present ARP aging time and ARP table
ISCOM4300# show arp
arp timeout is 600
```

LINK LEVEL DYNAMIC ARP TABLE

| <i>ipAddress</i> | <i>macAddr</i> | <i>flags</i> | <i>Refcnt</i> | <i>Use</i> | <i>Interface</i> |
|------------------|-------------------|--------------|---------------|------------|------------------|
| 192.168.4.28 | 00:a0:88:88:88:00 | ffff8405 | 0 | 8 | lo0 |

LINK LEVEL STATIC ARP TABLE

| <i>ipAddress</i> | <i>macAddr</i> | <i>flags</i> | <i>Refcnt</i> | <i>Use</i> | <i>Interface</i> |
|------------------|-------------------|--------------|---------------|------------|------------------|
| 192.168.4.11 | 25:98:76:76:34:01 | c05 | 0 | 0 | sng0 |

[related command]

| Command | Description |
|--------------------|---------------------------|
| arp add | Add an address mapping |
| arp delete | Delete an address mapping |
| arp timeout | Set the ARP aging time |

6.7 show route

[function explanation]

Show route information.

show route

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC, privileged EXEC.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show the present routing information.

```

ISCOM4300# show route
ROUTE NET TABLE
destination      gateway          flags  Refcnt  Use      Interface
-----
0.0.0.0          192.168.1.1    3      0      0        motfec0
192.168.1.0     192.168.1.145 101    0      0        motfec0
-----
    
```

```

ROUTE HOST TABLE
destination      gateway          flags  Refcnt  Use      Interface
-----
127.0.0.1       127.0.0.1      5      1      0        lo0
-----
    
```

[related command]

| Command | Description |
|-----------------|-------------|
| ip route | Add a route |

6.8 show snmp community

[function explanation]

Show SNMP community name list.

show snmp community

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show SNMP community name list

```
ISCOM4300# show snmp community
```

```

ID CONMMUNITYNAME  RIGHT
-----
1    public          ro
    
```


| | | |
|---|----------|----|
| 2 | private | rw |
| 3 | raisecom | rw |

[related command]

| Command | Description |
|---------------------------|--|
| snmp community | Configure SNMP table and the privilege |

6.9 show snmp trap-server

[function explanation]

Show information of SNMP trap-server.

show snmp trap-server

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show information of SNMP trap-server.

ISCOM4300#show snmp trap-server

Trap server:

```

ADDRESS          PORT STATUS
-----
192.168.2.111    162  invalid
192.168.2.121    162  invalid
    
```

[related command]

| Command | Description |
|-----------------------------|--------------------------------|
| snmp trap-server | Configure SNMP trap-server hot |

6.10 show snmp daemon-status

[function explanation]

Show statue of SNMP DAEMON.

show snmp daemon status

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show statue of SNMP DAEMON
 ISCOM4300# **show snmp daemon status**

Snmp Daemon Status: Enable

[related command]

| Command | Description |
|-----------------|--------------|
| snmpd | Enable SNMP |
| no snmpd | Disable SNMP |

6.11 Snmp-server community

[function explanation]

Configure the COMMUNITY table of SNMP and the privilege (read only or both read and write), use **no** command to delete a COMMUNITY name.

Snmp-server community *COMMUNITYNAME* [*RO* | *RW*]

no snmp-server community *COMMUNITYNAME*

[parameter explanation]

COMMUNITYNAME

name of the COMMUNITY

RO

read only

RW

both read and write.

[default case]

Default case of this command;

The default name of the COMMUNITY using this command is: public, private. The privilege of public is RO and the privilege of private is RW. There are at most 10 COMMUNITY names.

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Community name length must less than 25!

Information showed when the characters in the COMMUNITY name is more than 25

Set snmp community name successfully!

Information showed when set SNMP COMMUNITY name successfully

Set snmp community name failure!

Information showed when set SNMP COMMUNITY name unsuccessfully

[application example]

Configure a COMMUNITY named RAISECOM, and privilege is both read and write.

```
ISCOM4300(config)# snmp-server comm raisecom rw
```

Set successfully

[related command]

| Command | Description |
|----------------------------|--|
| show snmp community | Show information of SNMP COMMUNITY name list |

6.12 snmp trap-server

[function explanation]

Configure a SNMP trap-server, use **no** command to delete one, there are at most 8 trap-server hosts

```
snmp trap-server A.B.C.D {<1-65535>}
```

```
no snmp trap-server A.B.C.D
```

[parameter explanation]

A.B.C.D address of trap-server host in decimal with dot.

{<1-65535>} the trap receiving interface of the host

[default case]

Default case of this command;

The default interface number is 162 of this command

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Information showed when a user adds a trap-server host but there are already 8 hosts in the trap-server address pool.

Set trap server successfully!

Information showed when add a new host successfully

Trap server failed!

Information showed when add a new host unsuccessfully

[application example]

Configure SNMP trap-server host

ISCOM4300(config)# snmp trap-server 192.168.1.119

Set successfully

[related command]

| Command | Description |
|------------------------------|---|
| show snmp trap-server | Show information of snmp trap-server host |

6.13 snmpd

[function explanation]

Enable SNMP, so the device has the function of SNMP Agent and can be managed by the network management software.

snmpd

no snmpd

[parameter explanation]

N/A.

[default case]

Enable.

[command mode]

Global configuration mode.

[application guide]

N/A.

[explanation of command execution echo]

Use **snmpd** to enable SNMP

Successfully changed snmp agent service to up.

Use **no snmpd** to disable SNMP

Successfully changed snmp agent service to down.

[application example]

ISCOM4300(config)# snmpd

Enable SNMP

ISCOM4300(config)# no snmpd

Disable SNMP

[related command]

7 Upgrade and configuration file management

commands of ISCOM4300

7.1 erase startup-config

[function explanation]

Erase the configuration file: startup-config.

erase startup-config

[parameter explanation]

N/A

[default case]

N/A

[command mode]

privileged EXEC.

[application guide]

Before operation, system will ask the user whether wants to erase.

[explanation of command execution echo]

Finished erasing!

Information showed when erase initial configuration file successfully

[application example]

Erase the configuration file: startup-config
ISCOM4300# erase startup-config

[related command]

| Command | Description |
|----------------------------|----------------------------------|
| show running-config | Show present running information |

7.2 download

[function explanation]

Copy file from server.

download (SYSTEM-BOOT | STARTUP-CONFIG) (TFTP | FTP)

[parameter explanation]

| | |
|-----------------------|--|
| <i>SYSTEM-BOOT</i> | program file for upgrading present system program; |
| <i>STARTUP-CONFIG</i> | configuration file, to cover <i>startup-config</i> file; |
| <i>TFTP</i> | download protocol is TFTP; |
| <i>FTP</i> | download protocol is FTP; |

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

Characters of entered FTP user name and password are no more than 16, and that of file name is no more than 80 characters. When wrong server IP, ftp(tftp) user name and ftp(tftp) password are entered, use "-" to exit to previous entry to execute again.

[explanation of command execution echo]

*The management port doesn't exist!**Execute command fail!*

Information showed when there is error led by no existing of network management interface

Read error!

Information showed when there is error led by reading data

User name is empty!

Information showed when user name read unsuccessfully

User password is empty!

Information showed when user password read unsuccessfully

Invalid input file name!

Information showed when wrong downloaded file name is entered

Copy files success!

Information showed when download file successfully

Copy file fail!

Information showed when download file unsuccessfully

[application example]

Download the programe : *ISCOM4300 image* from server.*ISCOM4300(config)# download system-boot ftp**Please input server IP Address:192.168.4.250**Please input FTP User name:wrs**Please input FTP Password:wrs**Please input FTP Server File Name:ISCOM4300.z**Loading, please wait...file length = 721337**Please select the disk for saving image**1. core:**2. exit**Please input the number:1**Writing to flash, please wait.....**Copy file success !*

[related command]

N/A

7.3 show running-config

[function explanation]

Show present running configuration information.

show running-config

[parameter explanation]

N/A

[default case]

N/A

[command mode]

user EXEC,Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show present running configuration information.

*ISCOM4300# **show running-config***

current running configuration :

!view

!

!enable

!

!config

!

!interface

interface eth 1

!interface

interface eth 2

!interface

.....

[related command]

| Command | Description |
|-----------------------|--|
| erase | Erase the configuration file of the device: startup-config |
| startup-config | |

| | |
|-----------------------|---|
| show | Show the startup configuration file of the system |
| startup-config | |
| Write | Write the present configuration to the startup configuration file |

7.4 show startup-config

[function explanation]

Show the startup configuration file of the system.

show startup-config

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Show the startup configuration file of the system

*ISCOM4300# **show startup-config***

current running configuration :

!view

!

!enable

!

!config

!

!interface

interface eth 1

!interface

interface eth 2

!interface

.....

[related command]

| Command | Description |
|---------|-------------|
|---------|-------------|

| | |
|-----------------------|---|
| erase | Erase configuration file of device: startup-config |
| startup-config | |
| show | Show present executing configuration |
| running-config | |
| write | Write the present configuration to startup configuration file |

7.5 upload

[function explanation]

Upload files to server

upload (*SYSTEM-BOOT* | *STARTUP-CONFIG*) (*TFTP* | *FTP*)

[parameter explanation]

| | |
|-----------------------|--|
| <i>SYSTEM-BOOT</i> | program file to upgrade present system; |
| <i>STARTUP-CONFIG</i> | configuration file to cover : startup-config |
| <i>TFTP</i> | upload protocol is TFTP |
| <i>FTP</i> | upload protocol is FTP |

[default case]

N/A

[command mode]

Privileged EXEC

[application guide]

N/A

[explanation of command execution echo]

The management port doesn't exist!

Execute command fail!

Information showed when there is error led by no existing of network management interface

Read error!

Information showed when there is error led by reading data

User name is empty!

Information showed when user name read unsuccessfully

User password is empty!

Information showed when user password read unsuccessfully

Invalid input file name!

Information showed when wrong uploaded file name is entered

Copy files success!

Information showed when upload file successfully

Copy file fail!

Information showed when upload file unsuccessfully

[application example]

Upload a file to the server.

ISCOM4300# upload startup-config ftp

Please input server IP Address:192.168.4.250

Please input FTP User name:wrs

```

Please input FTP Password:wrs
Please input FTP Server File Name:aaa.txt
Are you sure[Y/N]:y
uploading, please wait... finish

```

Copy file success !

[related command]

N/A

7.6 write

[function explanation]

Write the present configuration tho startup configuration file

write

[parameter explanation]

N/A

[default case]

N/A

[command mode]

privileged EXEC.

[application guide]

N/A

[explanation of command execution echo]

Save current configuration successfully!

Information showed when writes successfully

[application example]

Write the present configuration to startup configuration file

ISCOM4300#**write**

Writing running-config to flash, please wait...

...

Successfully write to flash

[related command]

| Command | Description |
|--------------------|-------------------------------------|
| show snmp | Show the information of trap-server |
| trap-server | |

8 Ethernet interface management commands of ISCOM4300

8.1 autonegotiate

[function explanation]

Configuring the Ethernet interface in autonegotiate status, use **no** command to disable the autonegotiate.

[no] autonegotiate

[parameter explanation]

N/A

[default case]

Default case of this command;

The default status of this command is ENABLE.

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set ethernet interface autonegotiate successfully

Information showed when configuring the Ethernet interface in autonegotiate status successfully.

Set ethernet interface autonegotiate set failed

Information showed when configuring the Ethernet interface in autonegotiate status unsuccessfully.

[application example]

Configuring the Ethernet interface in autonegotiate status

*ISCOM4300(config)# **interface eth 2***

*ISCOM4300(config-if)# **autonegotiate***

Set ethernet interface autonegotiate successfully

[related command]

N/A

8.2 description

[function explanation]

Configure the description of Ethernet interface

description *STRING*

[parameter explanation]

STRING string which is no more than 30 characters.

[default case]

Default case of this command;

The default string of this command is raisecom-bj.

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set ethernet interface descriptin successfully

Information showed when Configure the description of Ethernet interface successfully

Set ethernet interface descriptin failed!

Information showed when Configure the description of Ethernet interface unsuccessfully.

[application example]

Configure the description of the interface as *raisecom*.

ISCOM4300(config)# interface eth 2

ISCOM4300(config-if)# description raisecom

Set ethernet interface descriptin successfully

[related command]

N/A

8.3 flow-control

[function explanation]

Enable the flow-control of the interface

flow-control (on| off)

[parameter explanation]

N/A

[default case]

N/A

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set ethernet interface flow-control successfully

Information showed when enable the flow control successfully.

Set ethernet interface flow-control failed

Information showed when configure the flow control unsuccessfully.

[application example]

Enable the flow control.

ISCOM4300(config)# **interface eth 2**

ISCOM4300(config-if)# **flow-control on**

Set ethernet interface flow-control successfully

[related command]

N/A

8.4 speed

[function explanation]

Configure the speed and duplex mode of the interface

speed [*10* | *100*] **duplex** [*FULL* | *HALF*]

[parameter explanation]

10 speed is 10Mbps;

100 speed is 100Mbps;

FULL in full-duplex mode;

HALF in half-duplex mode;

[default case]

N/A

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

set ethernet interface's speed failure.

Information showed when configure the speed and duplex mode of the interface unsuccessfully.

Set successfully!

Information showed when configure the speed and duplex mode of the interface successfully.

[application example]

Configure Etherface 2's speed as 100Mbps and duplex mode as full-duplex.

*ISCOM4300(config)# **interface eth 2***

*ISCOM4300(config-if)# **speed 100 duplex full***

[related command]

N/A

8.5 interface eth

[function explanation]

Enter the Ethernet configuration mode.

interface eth <1-16>

[parameter explanation]

<1-16> serial number of the interface.

[default case]

N/A

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

Enter interface configuration mode of interface 2..

*ISCOM4300(conifg)# **interface eth 2***

ISCOM4300(conifg-if)#

[related command]

N/A

8.6 show interface

[function explanation]

Show information of interface.

show interface [**sdh** <1-2> | **eth** <1-16> | **snmp**]

[parameter explanation]

<1-2> interface serial number of SDH;
 <1-16> interface serial number of Ethernet;
snmp network management interface.

[default case]

N/A

[command mode]

privileged EXEC,interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

show information of Ethernet interface 2.

*ISCOM4300(config)# **interface eth 2***

*ISCOM4300(config-if)# **show interface eth 2***

Interface:eth2 Description:raisecom-bj

AdminStatus:up OperStatus:down

Duplex:half Speed:10 Autonegotiation:enable

FlowControl:off VcgNo:18

InOctets:0 InUcastPkts:0 InNUcastPkts:0

InDiscards:0 InError:0 InPauseFrames:0

OutOctets:0 OutUcastPkts:0 OutNucastPkts:0

OutDiscards:0 OutPauseFrames:0

[related command]

N/A

8.7 show interface

[function explanation]

Show brief information of interface.

show interface

[parameter explanation]

N/A

[default case]

N/A

[command mode]

privileged EXEC,interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

show information of all the interfaces

ISCOM4300# **show interface**

Interface:sdh1 Description:raisecom-bj

AdminStatus:up OperStatus:down

SdhType:stm1 TimeLock:unlock Loopback:noloop

ClkSrc:master B2Threshold:1.0xE^3

ProtectType:1+1mutisection ProtectSwitchSta:working Scramble:enable

J0Enble:enable PSConfig:autops PSRestoreTime:600

Interface:eth1 Description:raisecom-bj

AdminStatus:up OperStatus:down

Duplex:half Speed:10 Autonegotiation:enable

FlowControl:off VcgNo:18

InOctets:0 InUcastPkts:0 InNUcastPkts:0

InDiscards:0 InError:0 InPauseFrames:0

OutOctets:0 OutUcastPkts:0 OutNucastPkts:0

OutDiscards:0 OutPauseFrames:0

Interface:eth2 Status:down Description:raisecom-bj

AdminStatus:up OperStatus:down

Duplex:half Speed:10 Autonegotiation:enable

FlowControl:off VcgNo:18

InOctets:0 InUcastPkts:0 InNUcastPkts:0

InDiscards:0 InError:0 InPauseFrames:0

OutOctets:0 OutUcastPkts:0 OutNucastPkts:0

OutDiscards:0 OutPauseFrames:0

.....

[related command]

N/A

8.8 shutdown

[function explanation]

Configure the interface DOWN, that is to say disable it, and use **no** command to configure the interface UP.

[no] shutdown

[parameter explanation]

N/A

[default case]

N/A

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set ethernet interface shutdown successfully

Information showed when disable the interface successfully

Set ethernet interface shutdown failed

Information showed when disable the interface unsuccessfully

[application example]

Shutdown interface 2.

*ISCOM4300(config)# **interface eth 2***

*ISCOM4300(config-if)# **shutdown***

Set ethernet interface shutdown successfully

[related command]

N/A

9 SDH interface management commands of ISCOM4300

9.1 clksrc

[function explanation]

Configure the clock source as **master** or **slave**
clksrc (*MASTER* | *SLAVE*)

[parameter explanation]

| | |
|---------------|---------------|
| <i>MASTER</i> | master clock; |
| <i>SLAVE</i> | slave clock. |

[default case]

Default case of this command;
 Default case of this command is slave clock.

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set sdh clksrc successfully

Information showed when set the clock source successfully

Set sdh clksrc failed

Information showed when set the clock source unsuccessfully

[application example]

Set the clock source as master..
*ISCOM4300(config)# **clksrc** master*

[related command]

N/A

9.2 hwmode

[function explanation]

Configure the hardware mode as 1+1 protection mode or independent mode A
hwmode (*stm-1*|*twostm-1*)

[parameter explanation]

| | |
|--------------|---|
| <i>stm-1</i> | the 2 155M optical ports are in 1+1 protection mode |
|--------------|---|

twostm-1

the 2 155M optical ports are independent

[default case]

the 2 155M optical ports are independent

[command mode]

Global configuration mode

[application guide]

N/A

[explanation of command execution echo]

Set hardware mode successfully

Information showed when hardware mode set successfully

Set hardware mode failed

Information showed when hardware mode set unsuccessfully

[application example]

Configure the hardware mode in 1+1 protection mode

ISCOM4300(config)# **hwmode** stm-1

[related command]

9.3 sdh loopback

[function explanation]

Set the type of SDH loopback, use **no** command to disable loopback.**sdh loopback** (*LOCAL* | *REMOTE*)**no sdh loopback**

[parameter explanation]

LOCAL loopback locally;*REMOTE* loopback remotely;

[default case]

Default case of this command;

Default case of this command is loopback disable.

[command mode]

Interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set sdh loopback successfully

Information showed when configure loopback successfully.

Set sdh loopback failed

Information showed when configure loopback unsuccessfully.

[application example]

Configure the loopback as local.

ISCOM4300(config)# interface sdh 1

ISCOM4300(config-if)# sdh loopback local

[related command]

N/A

9.4 sdh overhead c2

[function explanation]

Configure HP path label

sdh overhead c2 vc4 1 { expected EXPBYTE } { transmit XMITBYTE }

[parameter explanation]

EXPBYTE expected contents of C2 in heximadecimal;

XMITBYTE transmit contents of C2 in heximadecimal;

[default case]

Default case of this command;

Default value is: 0x01.

[command mode]

Interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set sdh expected C2 byte successfully!

Set sdh transmit C2 byte successfully!

Information showed when set SDH HP label successfully

Set sdh expected C2 byte failed!

Set sdh transmit C2 byte failed!

Information showed when set SDH HP label unsuccessfully

[application example]

Set the value of C2 as 0x2.

ISCOM4300(config)# interface sdh 1

ISCOM4300(config-if)# sdh overhead c2 vc4 1 expected 0x2 transmit 0x2

[related command]

| Command | Description |
|------------------------|----------------------------------|
| sdh overhead j0 | Set regenerator section trace J0 |
| sdh overhead j1 | Set higher order trail trace J1 |
| sdh overhead j2 | Set lower order trail trace J2 |

9.5 sdh overhead j0

[function explanation]

Set regenerator section trace J0, use **no** command to disable J0 and in this case it is considered as C1.

sdh overhead j0 expected EXP-MSG transmit MSG
no sdh overhead j0

[parameter explanation]

EXP-MSG expect message;
MSG transmit message.

[default case]

Default case of this command;
Largest size of this command is 16.

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set sdh overhead expect j0 successfully
Set sdh overhead transmit j0 successfully

Information showed when configure J0 successfully;

Set sdh overhead expect j0 failed
Set sdh overhead transmit j0 failed

Information showed when configure J0 unsuccessfully

Set sdh overhead expected j0 failed
Message that expected is too long

Information showed when characters in overhead of expected J0 are too long;

Set sdh overhead transmit j0 failed
message that transmit is too long

Information showed when characters in overhead of transmitted J0 are to long;

[application example]

Configure the size as 20 and both of the expect and transmit message is aa.
 ISCOM4300(config-if)# **sdh overhead j0 expected aa transmit aa**
sdh overhead expect j0 set successfully
sdh overhead transmit j0 set successfully

[related command]

| Command | Description |
|------------------------|-------------------------------------|
| sdh overhead c2 | Set the SDH HP path label |
| sdh overhead j1 | Set the higher order trail trace J1 |
| sdh overhead j2 | Set the lower order trail trace J2 |

9.6 sdh overhead j1

[function explanation]

Set the higher order trail trace J1

sdh overhead j1 {(vc4 1| vc3 <1-3>)} **expected EXP-MSG transmit MSG**

[parameter explanation]

EXP-MSG expect message;
MSG transmit message.
 <1-3> timeslot of VC3.

[default case]

Default case of this command;

The largest message size of this command is 16.

[command mode]

interface configuration mode.

[application guide]

If a VC4 or a VC3 is not appointed particularly, this configuration is available for all the J1.

[explanation of command execution echo]

Set sdh overhead expect j1 successfully
Set sdh overhead transmit j1 successfully

Information showed when configure SDH J1 successfully.

Set sdh overhead expect j1 failed
Set sdh overhead transmit j1 failed

Information showed when configure SDH J1 unsuccessfully.

*Set sdh overhead expected j1 failed
message that expected is too long*

Information showed when expected SDH message is too long.

*Set sdh overhead transmit j1 failed
message that transmit is too long*

Information showed when transmitted SDH message is too long;

[application example]

Configure both the expected and transmitted message of J1 as aa.
*ISCOM4300(config-if)# **sdh overhead j1 expected aa transmit aa**
 sdh overhead expect j1 set successfully
 sdh overhead transmit j1 set successfully*

[related command]

| Command | Description |
|------------------------|--------------------------------------|
| sdh overhead c2 | Set SDH HP path label |
| sdh overhead j0 | Set SDH regenerator section trace J0 |
| sdh overhead j2 | Set SDH lower order trail trace J2 |

9.7 sdh overhead j2

[function explanation]

Set SDH lower order trail trace J2

sdh overhead j2 { vc4 1 vc12 <1-63>} expected EXP-MSG transmit MSG

[parameter explanation]

EXP-MSG expect message;
MSG transmit message.
 <1-63> timeslot of VC12.

[default case]

Default case of this command;

The largest message size of this command is 16

[command mode]

interface configuration mode.

[application guide]

If the slottime of VC12 is not appointed particularly, this configuration is available for all the

J2.

[explanation of command execution echo]

Set sdh overhead expect j2 successfully
Set sdh overhead transmit j2 successfully

Information showed when set SDH J2 successfully;

Set sdh overhead expect j2 failed
Set sdh overhead transmit j2 failed

Information showed when set SDH J2 unsuccessfully;

Set sdh overhead expected j2 failed
message that expected is too long

Information showed when expected SDH message J2 is too long.

Set sdh overhead expect j2 failed
message that expected is too long

Information showed when transmitted SDH message J2 is too long.

[application example]

Configure both the expected and transmitted message of J2 as aa.
 ISCOM4300(config-if)# **sdh overhead j2 expected aa transmit aa**
sdh overhead expect j2 set successfully
sdh overhead transmit j2 set successfully

[related command]

| Command | Description |
|------------------------|--------------------------------------|
| sdh overhead c2 | Set SDH PH path label |
| sdh overhead j0 | Set SDH regenerator section trace J0 |
| sdh overhead j1 | Set SDH higher trail trace J1. |

9.8 sdh psconfig

[function explanation]

Configure SDH protection type.

sdh psconfig (AUTOPS | COMPLUSIONPS)

[parameter explanation]

AUTOPS automatic type ;
 COMPLUSIONPS compulsion type.

[default case]

Default case of this command;
The default case is *AUTOPS*.

[command mode]

interface configuration mode.

[application guide]

This command is available just in work mode: **stm-1**

The system will automatically restore to the previous SDH line if configured in *AUTOPS*, and will not if configured in *COMPLUSIONPS*.

[explanation of command execution echo]

Set sdh psconfig successfully

Information showed when set SDH protection type successfully

Set sdh psconfig failed

Information showed when set SDH protection type unsuccessfully

[application example]

Configure SDH protection type as *AUTOPS*

ISCOM4300(config)# interface sdh 1

ISCOM4300(config-if)# sdh psconfig autops

Set sdh psconfig successfully

[related command]

N/A

9.9 sdh ps-restore-waiting-time

[function explanation]

Set SDH restoring time of protection switch.

sdh ps-restore-waiting-time *TIME*

[parameter explanation]

TIME restoring time of protection switch

[default case]

Default case of this command;

Default time is 600s.

[command mode]

interface configuration mode.

[application guide]

This time is available only when the protection switch type is *AUTOPS*.

[explanation of command execution echo]

Set sdh ps-restore-waiting-time successfully!

Information showed when set SDH restoring time of protection switch successfully.

Set sdh ps-restore-waiting-time failed!!

Information showed when set SDH restoring time of protection switch unsuccessfully.

[application example]

Set SDH restoring time of protection switch as 900 seconds.

ISCOM4300(config)# interface sdh 1

ISCOM4300(config-if)# sdh ps-restore-waiting-time 900

[related command]

N/A

9.10sdh scramble

[function explanation]

Enable SHD scramble.

sdh scramble (*ENABLE* | *DISABLE*)

[parameter explanation]

ENABLE enable;

DISABLE disable.

[default case]

Default case of this command;

Default status is: enable.

[command mode]

interface configuration mode.

[application guide]

N/A

[explanation of command execution echo]

Set sdh scramble successfully!

Information showed when set SDH scramble successfully.

Set sdh scramble failed!

Information showed when set SDH scramble unsuccessfully.

[application example]

Enable SHD scramble.

ISCOM4300(config)# interface sdh 1

ISCOM4300(config-if)# sdh scramble enable

[related command]

N/A

9.11 sdh timeslot

[function explanation]

Configure status of SDH timeslot.

sdh timeslot (*LOCK* | *UNLOCK*)

[parameter explanation]

LOCK timeslot is locked;
UNLOCK timeslot is unlocked.

[default case]

Default case of this command;
Default status is: unlock.

[command mode]

interface configuration mode.

[application guide]

In **lock** mode, protection switch and timeslot configuration are not available.

[explanation of command execution echo]

Set sdh timeslot successfully!

Information showed when lock SDH timeslot successfully.

Set sdh timeslot failed!

Information showed when lock SDH timeslot unsuccessfully.

[application example]

Configure SDH timeslot **lock**.
ISCOM4300(config)# interface sdh 1
ISCOM4300(config-if)# sdh timeslot lock

[related command]

N/A

9.12 show timeslot

[function explanation]

Show configuration information of present timeslot

show interface sdh <1-2> timeslot

[parameter explanation]

<1-2> serial number of SDH.

[default case]

N/A

[command mode]

privileged EXEC,interface configuration mode.

[application guide]

Only SDH 1 is meaningfull in 1+1 protection mode.

[explanation of command execution echo]

N/A

[application example]

Show configuration information of SDH 1 timeslot.

ISCOM4300# **show interface sdh 1 timeslot**

| <i>SdhNo</i> | <i>Timeslot</i> | <i>Vc3No</i> | <i>VcgNo</i> | <i>EthPort</i> | <i>Status</i> |
|--------------|-----------------|--------------|--------------|----------------|---------------|
| 1 | 1 | 1 | 1 | 1 | <i>inuse</i> |
| 1 | 2 | 2 | 1 | 1 | <i>inuse</i> |
| 1 | 3 | 3 | 1 | 1 | <i>inuse</i> |
| 1 | 4 | 1 | 1 | 1 | <i>inuse</i> |

[related command]

N/A

10 Vcg configuration management commands

ISCOM4300

10.1 gfp

[function explanation]

Configure relevant properties of GFP.

gfp crc vcg VCGNO

gfp no crc vcg **VCGNO**

[parameter explanation]

VCGNO index of VCG;

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

N/A

[explanation of command execution echo]

Set crc enable successfully

Information showed when configure relevant properties of GFP successfully;

Set crc disable successfully

Information showed when configure relevant properties of GFP successfully;

[application example]

Enable crc in GFP properties of VCG1.

*ISCOM4300(config-vcg)# **gfp crc vcg 1***

Set crc enable successfully

Disable crc in GFP properties of VCG1.

*ISCOM4300(config-vcg)# **gfp no crc vcg 1***

Set crc disable successfully

[related command]

N/A

10.2encapsulation

[function explanation]

Set encapsulation mode of VCG.

encapsulation (GFP|LAPS|PPP) vcg VCGNO

[parameter explanation]

| | |
|--------------|--------------------------|
| <i>VCGNO</i> | index of VCG; |
| <i>GFP</i> | GFP encapsulation mode; |
| <i>LAPS</i> | LAPS encapsulation mode; |
| <i>PPP</i> | PPP encapsulation mode. |

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

N/A

[explanation of command execution echo]

Argument:xx is wrong

Information showed when there are wrong parameters.

Set vcg encapsulation successfully

Information showed when set vcg encapsulation successfully;

Set vcg encapsulation failed

Information showed when set vcg encapsulation unsuccessfully;

[application example]

Set encapsulation mode of VCG1 as LAPS.
*ISCOM4300(config-vcg)# **encapsulation laps vcg 1***
Set vcg encapsulation successfully

[related command]

N/A

10.3lcas

[function explanation]

Set encapsulation mode of VCG.

lcas (ON | OFF) vcg VCGNO

[parameter explanation]

| | |
|--------------|---------------|
| <i>VCGNO</i> | index of VCG. |
|--------------|---------------|

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

N/A

[explanation of command execution echo]

Argument:xx is wrong

Information showed when there are wrong parameters.

Set lcas successfully

Information showed when configure lcas successfully;

Set lcas failed

Information showed when configure lcas unsuccessfully;

[application example]

Enable LCAS of VCG1.

ISCOM4300(config-vcg)# lcas on vcg 1

Set lcas successfully

[related command]

N/A

10.4map

[function explanation]

Map VCG to Ethernet, use **no** command to delete.

map ethport PORTNO vcg VCGNO

no map ethport PORTNO

[parameter explanation]

PORTNO

serial number of Ethernet interface;

VCGNO

. serial number of VCG.

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

N/A

[explanation of command execution echo]

vcg xx has been used

Information showed when the VCG mapped to Ethernet interface has been used.

vcg xx isn't completed

Information showed when the timeslots of VCG mapped to Ethernet interface are not completed;

Map successfully

Information showed when map successfully;

Map failed

Information showed when map unsuccessfully.

[application example]

Map CVG1 to Ethernet interface 1.

ISCOM4300(config)# vcg

ISCOM4300(config-vcg)# map ethport 1 vcg 1

Map successfully

[related command]

N/A

10.5set vcg

[function explanation]

Establish a VCG.

set vcg VCGNO encapslation (GFP|LAPS|PPP) lcas (ON|OFF) vctype (VC12|VC3)

sdh <1-2> vc4 VC4NO vcstr VCSTRING

[parameter explanation]

| | |
|----------------|--|
| VCGNO | index of VCG; |
| GFP | GFP encapsulation mode; |
| LAPS | LAPS encapsulation mode; |
| PPP | PPP encapsulation mode; |
| VC4NO 155M) | serial number of VC4(only 1 is available for device of |
| VCSTRING | string of timeslot. |

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

“-” means there are many continuous timeslots, for example: 1-40 means there are 40 timeslots from 1 to 40;

“,” means the uncontinuous timeslots, for example: 1, 3,5,6,7 mean there are 5 timeslots;

[explanation of command execution echo]

Argument:xx is wrong

Information showed when there are wrong parameters.

Set vcg successfully

Information showed when set VCG successfully;

Set vcg failed

Information showed when set VCG unsuccessfully;

[application example]

Configure properties of VCG 1.

```
ISCOM4300(config-if)#set vcg 1 encapsulation gfp lcas on vctype vc12 sdh 1  
vc4 1 vcstr 1-4
```

Set vcg successfully

[related command]

N/A

10.6 show mappingtable

[function explanation]

Show the mapping table .

show mappingtable

[parameter explanation]

N/A

[default case]

N/A

[command mode]

privileged EXEC,VCGcommand mode.

[application guide]

10.8 timeslot add

[function explanation]

Add VC timeslot to VCG.

timeslot add sdh 1 vc4 1 TIMESLOTSTR vcg VCGNO

[parameter explanation]

| | |
|-------------|------------------------|
| VCGNO | serial number of VCG; |
| TIMESLOTSTR | timeslot string of VCG |

[default case]

“-” means there are many continuous timeslots, for example: 1-40 means there are 40 timeslots from 1 to 40;

“,” means the uncontinuous timeslots, for example: 1, 3,5,6,7 mean there are 5 timeslots;

[command mode]

VCG command mode.

[application guide]

N/A

[explanation of command execution echo]

timeslot is locked

Information showed when timeslot is locked.

*Lcas of the vcg is off
Timeslot add failed*

Information showed when VCG is **enable** but LCAS is off

This timeslot can't be added.Conflicting!

Information showed when the added timeslot is already used.

Timeslot add successfully

Information showed when add a timeslot successfully;

Timeslot add failed

Information showed when add a timeslot unsuccessfully

[application example]

Add timeslot 2 to VCG1.

```
ISCOM4300(config-vcg)# timeslot add sdh 1 vc4 1 2 vcg 1
Timeslot add successfully
```

[related command]

| Command | Description |
|------------------------|-------------------|
| timeslot delete | Delete a timeslot |

10.9 timeslot delete

[function explanation]

Delete VC timeslot in VCG.

```
timeslot delete sdh 1 vc4 1 TIMESLOTSTR vcg VCGNO
```

[parameter explanation]

| | |
|--------------------|------------------------|
| <i>VCGNO</i> | serial number of VCG; |
| <i>TIMESLOTSTR</i> | string of VCG timeslot |

[default case]

N/A

[command mode]

VCGcommand mode.

[application guide]

“-” means there are many continuous timeslots,for example: 1-40 means there are 40 timeslots from 1 to 40;

“,” means the uncontinuous timeslots, for example: 1, 3,5,6,7 mean there are 5 timeslots;

[explanation of command execution echo]

```
timeslot is locked
```

Information showed when timeslot is locked.

```
Lcas of the vcg is off
Timeslot delete failed
```

Information showed when VCG is **enable** but LCAS is off

```
Timeslot delete successfully
```

Information showed when delete a timeslot successfully;

Timeslot delete failed

Information showed when delete a timeslot unsuccessfully;

[application example]

Add timeslot 2 in VCG1.

ISCOM4300(config-vcg)# **timeslot delete sdh 1 vc4 1 2 vcg 1**

Timeslot delete successfully

[related command]

| Command | Description |
|---------------------|----------------|
| timeslot add | Add a timeslot |

10.10 vcg

[function explanation]

Enter VCG command mode.

vcg

[parameter explanation]

N/A

[default case]

N/A

[command mode]

Global configuration mode.

[application guide]

N/A

[explanation of command execution echo]

N/A

[application example]

enter VCG command mode.

ISCOM4300(config)# **vcg**

ISCOM4300(config-vcg)#

[related command]

N/A

10.11 vctype

[function explanation]

Configure timeslot and type of VC in VCG.

vctype (VC12 | VC3) {**sdh 1 vc4 1 vcstr** VCSTRING} **vcg** VCGNO

[parameter explanation]

| | |
|----------|------------------------|
| VC12 | timeslot type of VC12; |
| VC3 | timeslot type of VC3; |
| VCSTRING | timeslot type of VC; |
| VCGNO | serial number of VCG. |

[default case]

N/A

[command mode]

VCG command mode.

[application guide]

“-” means there are many continuous timeslots,for example: 1-40 means there are 40 timeslots from 1 to 40;

“,” means the uncontinuous timeslots, for example: 1, 3,5,6,7 mean there are 5 timeslots;

[explanation of command execution echo]

timeslot is locked

Information showed when timeslot is locked.

Argument:xx is wrong

Information showed when there are wrong parameters.

Set successfully

Information showed when set sucessfully;

Set failed

Information showed when set unsuccessfully;

.

[application example]

Configure VC type as VC12 and timeslots as 1-4,6.

ISCOM4300(config-vcg)# vctype vc12 sdh 1 vc4 1 vcstr 1-4,6 vcg 1

Set successfully

[related command]

N/A

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