

SBC Routine Maintenance



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- This course is mainly:
 - Introduce how to check the SBC status
 - Introduce the methods of viewing and tracking logs in SBC
 - Introduce the SBC capture method

Course Objective



Understand the normal operation status of SBC



Be familiar with SBC trace log method



Know how to capture packets

Through this course
you will be able to

Contents

- 1 Chapter One Status Check
- 2 Chapter Two View & Track Log
- 3 Chapter Three Capture

Chapter One Status Check

01

1.1 Network port status

1.2 MCU Status

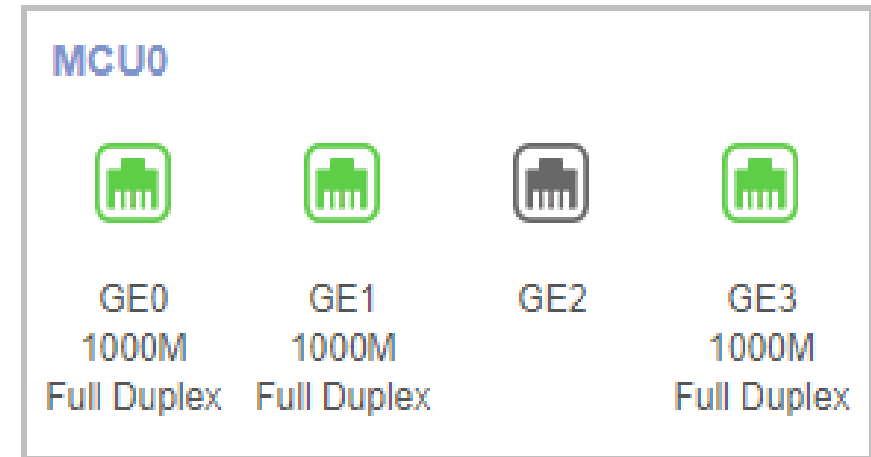
1.3 License Status

1.4 Alarm View

1.5 View trunk status and registration status

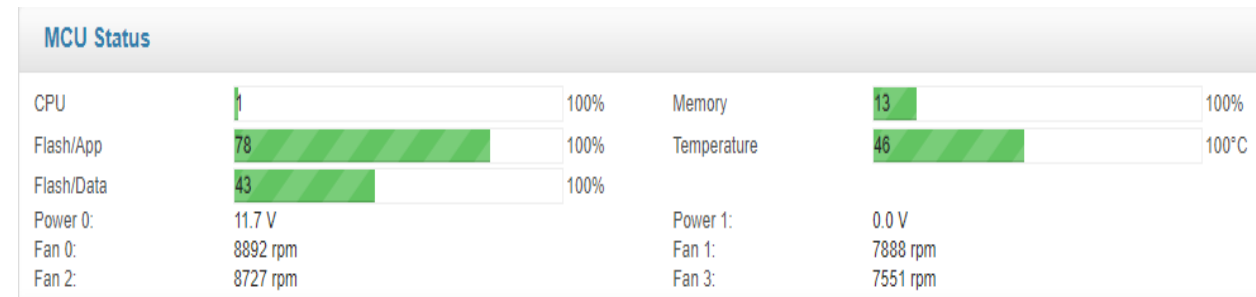
Network Port Status

- **Gray** :represents unconnected network cable
- **Red** : represents that the negotiated network port speed is 100Mbps, which may be connected to a 100Mbps switch
- **Green**: represents the negotiated network port speed is 1000Mbps



MCU Status

































- **CPU/Memory** : attention should be paid when exceeding 90% in the long term
- **Temperature** : Check the temperature of the CPU on the MCU
- **Fan**: Check the operating status of the fan



License Status

- **License Status:** Check if the status is available
- **License Expires :** Pay attention to remaining time, expired requires reauthorization
- **Running Time:** Check the running time to determine if the device has restarted
- **Note :** When SBC8000 call service needs transcoding, check if the MFU status is green

General	
Device Model	SBC3000
Device Name	SBC3000
Software Version	1.90.4.psp3
Version Time	2025-04-03 14:50:54 CST
Device SN	dc28-0711-5031-0023
Hardware SN	B877-2337-1429
License Status	Valid
License Expires	17days 17:24:50
Current Time	2025-04-22 10:57:28
Running Time	10days 23:25:24
Active-Standby Status	Standby


 MFU CPU Call: 0 Slot0	 MFU CPU Call: 0 Slot1	 MFU CPU Call: 0 Slot2	 MFU CPU Call: 0 Slot3	 MFU CPU Call: 0 Slot4	 MFU CPU Call: 0 Slot5	 MFU CPU Call: 0 Slot6	 MFU CPU Call: 0 Slot7
 MFU CPU Call: 0 Slot8	 MFU CPU Call: 0 Slot9	 MFU CPU Call: 0 Slot10	 MFU CPU Call: 0 Slot11	 MFU CPU Call: 0 Slot12	 MFU CPU Call: 0 Slot13	 MFU CPU Call: 0 Slot14	 MFU CPU Call: 0 Slot15
 MFU CPU Call: 0 Slot16	 MFU CPU Call: 0 Slot17	 MFU CPU Call: 0 Slot18	 MFU CPU Call: 0 Slot19	 MFU CPU Call: 0 Slot20	 MFU CPU Call: 0 Slot21	 MFU CPU Call: 0 Slot22	 MFU CPU Call: 0 Slot23
 MFU CPU Call: 0 Slot24	 MFU CPU Call: 0 Slot25	 MFU CPU Call: 0 Slot26	 MFU CPU Call: 0 Slot27	 MFU CPU Call: 0 Slot28	 MFU CPU Call: 0 Slot29	 MFU CPU Call: 0 Slot30	 MFU CPU Call: 0 Slot31


Alarm View


- Check if the alarm has increased
- Alarm increase can be clicked to view details


SBC


OverviewServiceSecuritySystemMaintenance

4

12

0

1

0

Sync File

System Status

Access Network Status

Access Trunk Status

Core Trunk Status

Calls Status

Register Status

Attack List

SIP Account Status

Statistics

Monitor Status

Calls Statistics

Reset Statistics

General

CPS0200

Peak CPS0

Current Calls02000

Max Calls0

ASR0100%

Average Successful Call Duration(s)0

RPS0200

Peak RPS0

Registered Users010000

Max Registered Users0

Total Calls Forwarded0

MCU Status

CPU1100%

Flash/App78100%

Flash/Data43100%

Power 0:11.7 V

Fan 0:8892 rpm

Fan 2:8727 rpm

Memory13100%

Temperature46100°C

Power 1:0.0 V

Fan 1:7888 rpm

Fan 3:7551 rpm

Device ModelSBC

Device NameSBC

Software Version1.90

Version Time2025-04-22 10:00:00

Device SNdc28888888

Hardware SNB87777777

License StatusValid


License Expires17days


Current Time2025-04-22 10:00:00


Running Time10days


Active-Standby StatusStandby


OverviewServiceSecuritySystemMaintenance

4

12

0

1

0

Sync File

Administrator : lxw123

Logout

Language: English

Login Log

10

Search: NameTypeBegin TimeEnd TimeSource

Submit

Index	Username	Role	Time	Login IP	Source	Description
1	lxw123	admin	2025-04-22 09:44:02	172.28.7.49:63372	web	Login success
2	lxw123	admin	2025-04-22 09:43:51	172.28.7.49:63372	web	Login failed
3	admin	admin	2025-04-22 09:43:28	172.28.7.49:63362	web	EXIT
4	admin	admin	2025-04-22 09:42:23	172.28.7.49:63369	web	Login success
5	yx123	admin	2025-04-21 16:00:55	172.28.56.180:49372	web	Login success
6	admin	admin	2025-04-15 14:31:28	172.23.234.100:65098	cli	Login in
7	admin	admin	2025-04-11 23:44:13	172.28.7.49:1357	web	Login timeout exit
8	admin	admin	2025-04-11 15:43:19	172.28.7.49:58839	web	Login success
9	admin	admin	2025-04-11 15:43:13	172.28.7.49:58839	web	CAPTCHA FAILED
10	admin	admin	2025-04-11 11:35:41	172.28.7.49:58602	web	Login success

Access Network Status

- Check if the status is true
- Check if the registered quantity is correct

DINSTAR SBC

Overview

Service

Security

System

Maintenance

0

34127

0

AutoRefresh OFF

Sync File

Administrator : admin

Logout

English

System Status

Access Network Status

Access Trunk Status

Core Trunk Status

Calls Status

Register Status

SIP Account Status

Statistics

Monitor Status

CDR

Radius server status

SIP anti-attack status

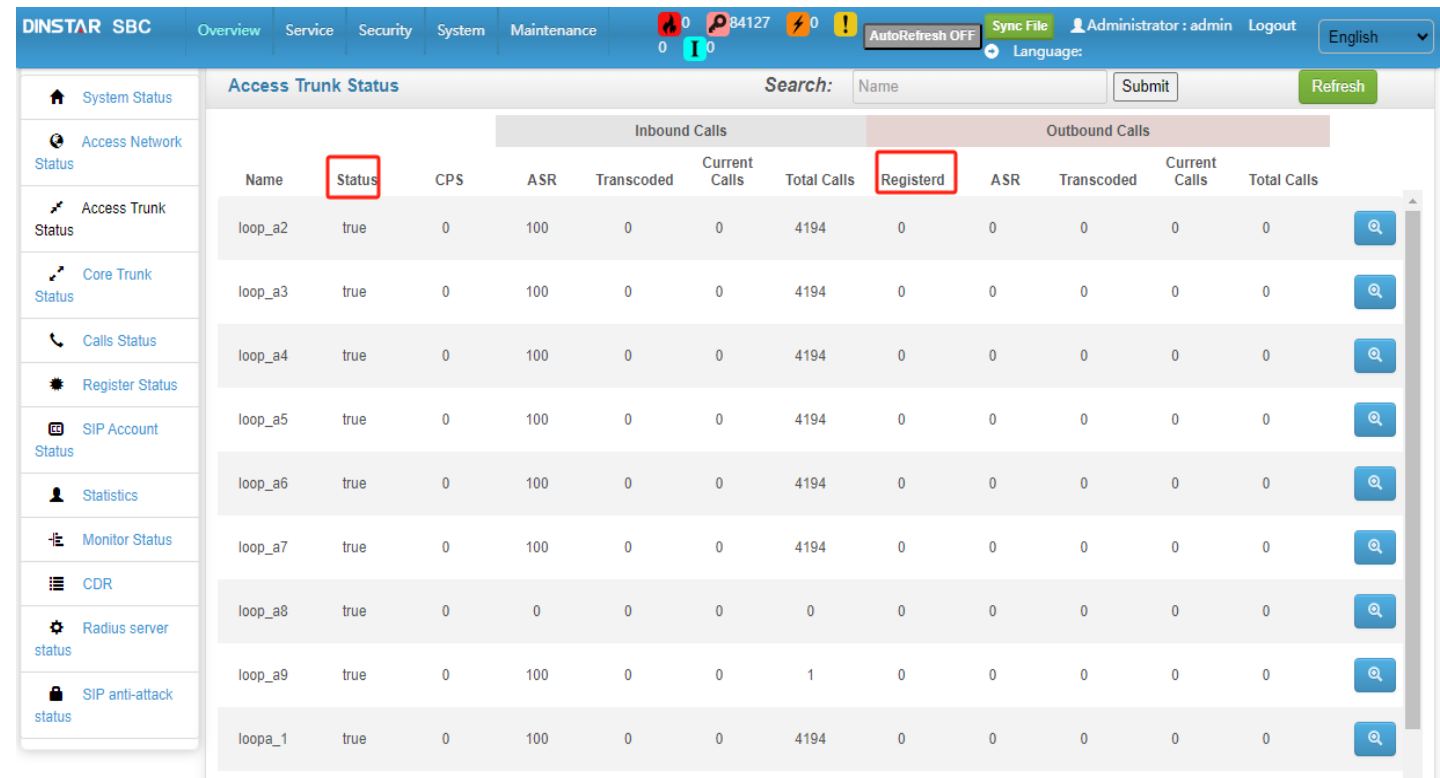
Access Network Status

Search:

Name	Status	CPS	Registered	Inbound Calls				Outbound Calls			
				ASR	Transcoded	Current Calls	Total Calls	ASR	Transcoded	Current Calls	Total Calls
ces	true	0	1	50	0	0	2	0	0	0	0

Access Trunk Status

- Check if the status is true
- Check if the number of registrations is correct when registered



DINSTAR SBC Overview Service Security System Maintenance 0 34127 0 ! AutoRefresh OFF Sync File Administrator : admin Logout English

Access Trunk Status Search: Name Submit Refresh

Name	Status	CPS	ASR	Transcoded	Inbound Calls		Registerd	Outbound Calls			
					Current Calls	Total Calls		ASR	Transcoded	Current Calls	Total Calls
loop_a2	true	0	100	0	0	4194	0	0	0	0	0
loop_a3	true	0	100	0	0	4194	0	0	0	0	0
loop_a4	true	0	100	0	0	4194	0	0	0	0	0
loop_a5	true	0	100	0	0	4194	0	0	0	0	0
loop_a6	true	0	100	0	0	4194	0	0	0	0	0
loop_a7	true	0	100	0	0	4194	0	0	0	0	0
loop_a8	true	0	0	0	0	0	0	0	0	0	0
loop_a9	true	0	100	0	0	1	0	0	0	0	0
loopa_1	true	0	100	0	0	4194	0	0	0	0	0

Core Trunk Status

- Check if the status is true
- Check if the number of registrations is correct when registered

The screenshot displays the DINSTAR SBC Core Trunk Status page. The left sidebar contains a list of navigation items: System Status, Access Network Status, Access Trunk Status, Core Trunk Status (highlighted with a red box), Calls Status, Register Status, SIP Account Status, Statistics, Monitor Status, CDR, Radius server status, and SIP anti-attack status. The main content area shows the Core Trunk Status table. The table has a search bar and a refresh button. The table columns are: Name, Status (highlighted with a red box), CPS, ASR, Transcoded, Current Calls, Total Calls, Registered (highlighted with a red box), ASR, Transcoded, Current Calls, and Total Calls. The table contains one data row for 'uc' with the following values: Status: true, CPS: 0, ASR: 0, Transcoded: 0, Current Calls: 0, Total Calls: 2, Registered: 1, ASR: 50, Transcoded: 0, Current Calls: 0, Total Calls: 2.

Name	Status	CPS	ASR	Transcoded	Inbound Calls		Registered	Outbound Calls			
					Current Calls	Total Calls		ASR	Transcoded	Current Calls	Total Calls
uc	true	0	0	0	0	2	1	50	0	0	2

Register Status

- Display the registration status of terminal devices with SBC devices
- Check if the status is registered

The screenshot displays the DINSTAR SBC web interface. The top navigation bar includes tabs for Overview, Service, Security, System, and Maintenance. The left sidebar contains a menu with items like System Status, Access Network Status, Access Trunk Status, Core Trunk Status, Calls Status, Register Status (highlighted with a red box), SIP Account Status, Statistics, Monitor Status, CDR, and Radius server. The main content area is titled 'Register Status' and features a search bar with fields for Username and SourceName, and a Submit button. Below the search bar is a table with columns for Source and Destination. The table contains one row of data for a device with Username '8006' and Name 'ces'. The Status column for this row is highlighted with a red box and contains the text 'registered'. The table also includes columns for Registered Interval, IP Addr./NAT, and Transport.

Source				Destination					
Status	Username	Name	Registered Interval	IP Addr./NAT	Transport	Name	Registered Interval	IP Addr./NAT	Transport
registered	8006	ces	3600	172.28.7.49:32910/172.28.7.49:32910	udp	uc	3600	172.28.5.135:5060/172.28.5.135:5060	udp

SIP Account Status

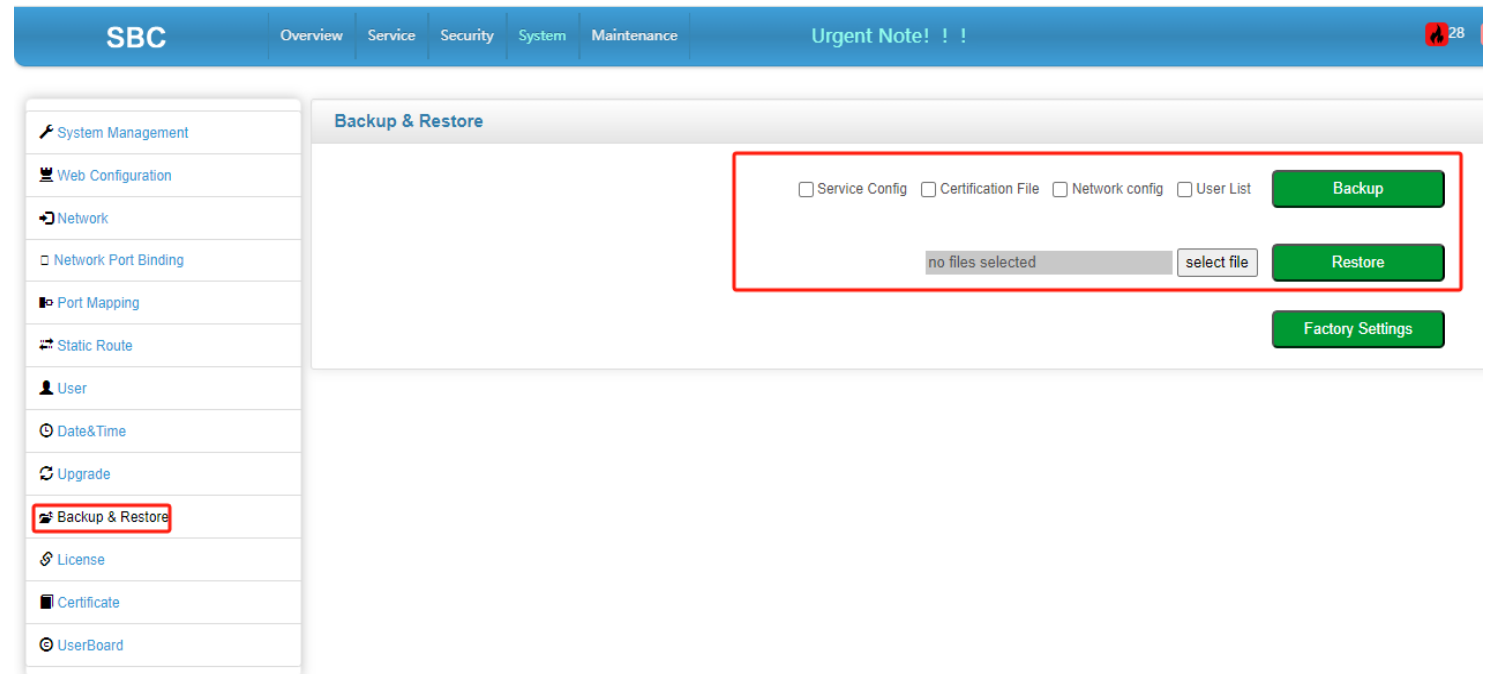
- Display the registration status of SIP accounts registered by SBC to SIP servers
- Check if the status is registered

The screenshot displays the DINSTAR SBC web interface. The top navigation bar includes tabs for Overview, Service, Security, System, and Maintenance. The left sidebar contains a list of system status options: System Status, Access Network Status, Access Trunk Status, Core Trunk Status, Calls Status, Register Status, SIP Account Status (highlighted with a red box), Statistics, Monitor Status, and CDR. The main content area is titled 'SIP Account Status' and features a search bar with a dropdown set to '10' and a 'Submit' button. Below the search bar, it shows 'Total:1' and 'Total Successful Calls:1'. A table lists the SIP account details:

Index	Status	Name	Username	Endpoint	Current Concurrency	Max Concurrency	Times of Use
1	registered	ces	8010	uc	0	1	0

Backup & Restore

- Click on System - Backup & Restore ,
Select the files that need to be backed up and click on 'Backup'
- Select the backup file, click on 'restore', and if the restore is successful, the SBC will automatically restart



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Chapter Two View & Track Log

02

2.1 Login Log

2.2 Operational Log

2.3 Log Management

2.4 Signal Track Log

2.5 Command Line Trace Log

Login Log

- Application scenarios

1. Suddenly jumping to the login window during use, users can check here to see if the same account is logged in at the same time and where the source is
2. The device has restarted, users can check if it was caused by someone operating it

Login Log						
10	Search: Name	Type	Begin Time	End Time	Source	Submit
Index	Username	Role	Time	Login IP	Source	Description
1	admin	admin	2025-04-23 09:47:40	172.28.7.49:20425	web	Login success
2	admin	admin	2025-04-23 09:47:18	172.28.7.49:20425	web	Login failed
3	hwx123	admin	2025-04-22 22:39:01	172.28.7.49:63368	web	Login timeout exit
4	yx123	admin	2025-04-22 21:59:46	172.28.56.180:49372	web	Login timeout exit
5	hwx123	admin	2025-04-22 09:44:02	172.28.7.49:63372	web	Login success
6	hwx123	admin	2025-04-22 09:43:51	172.28.7.49:63372	web	Login failed
7	admin	admin	2025-04-22 09:43:28	172.28.7.49:63362	web	EXIT
8	admin	admin	2025-04-22 09:42:23	172.28.7.49:63369	web	Login success
9	yx123	admin	2025-04-21 16:00:55	172.28.56.180:49372	web	Login success
10	admin	admin	2025-04-15 14:31:28	172.23.234.100:65098	cli	Login in

Operational Log

- Application scenarios

The call suddenly doesn't work, Check if the configuration has been changed

Operational Log							
10	Search: Name	Type	Begin Time	End Time	Source	Submit	
Index	Username	Role	Time	Login IP	Source	Operation	Content
1	admin	admin	2025-04-15 14:31:28	172.23.234.100:65098	cli	Command	startup
2	admin	admin	2025-04-11 15:43:47	172.28.7.49:1365	web	Apply	BFD
3	admin	admin	2025-04-11 15:43:45	172.28.7.49:1363	web	Add	BFD/1024:172.28.3.70:172.28.3.80
4	admin	admin	2025-04-11 11:31:29	172.28.7.49:58043	web	Reboot	System
5	admin	admin	2025-04-11 11:31:27	172.28.7.49:58437	web	Reboot	User Board
6	admin	admin	2025-04-10 01:21:05	172.28.30.166:49916	cli	Command	sh

Log Management

- **Direct export** : can obtain system logs for analyzing system abnormalities
- **Online tracking**: Select the DEBUG level, set the time, start tracking, and wait for the call to complete and then export the call log immediately for tracking

Log Management

Log Record

Level

Warning

Time

5

 min

Start

Log Export

Export

Signal Track configuration

1. **SBC:** Enable signaling tracking in **Maintenance-Signaling Tracking Configuration**, select the network port, and configure the port
2. **Signaling tracking tool:** Windows, Linux or Mac, choose the corresponding system to install, add the device after successful installation
3. **Strat tracking:** Fill in the port set on SBC, SBC login account and password

Signal Track configuration

Enable ☒

Interface

Device port

Save

Equipment List

delete Added

sbc8000

Device Name *

ip *

SN *

Add Cancel

port *

username *

password *

Caller

Being called

Open Cancel

Start Tracking Stop tracking

Hang up party

Signal Track Log

- 1. Click Stop Tracking to see the log
- 2. Click Details to see the specific signaling process

Equipment Details

ip172.28.80.200

SND38E-C329-8808-9152

Start Tracking

Stop tracking

SIP signaling

10

search: Caller

Being called

IP

submit

Delete all signaling

Caller	source	Being called	Purpose	Start time	End Time	Call duration(s)	Hang up party	
8006	172.28.80.200:5070	8006	172.28.5.135:5060	2025/4/23 15:41:20				Details
8006	172.28.7.49:24588	8006	172.28.80.200:5060	2025/4/23 15:41:20				Details
8006	172.28.80.200:5070	8006	172.28.5.135:5060	2025/4/23 15:41:20				Details
8006	172.28.7.49:24588	8006	172.28.80.200:5060	2025/4/23 15:41:20				Details
8006	172.28.80.200:5070	8006	172.28.5.135:5060	2025/4/23 15:41:16				Details
8006	172.28.7.49:15182	8006	172.28.80.200:5060	2025/4/23 15:41:16				Details
8006	172.28.80.200:5070	8002	172.28.5.135:5060	2025/4/23 15:39:41	2025/4/23 15:39:48	3	Being called	Details
8006	172.28.7.49:15182	8002	172.28.80.200:5060	2025/4/23 15:39:41	2025/4/23 15:39:48	3	Being called	Details

<<

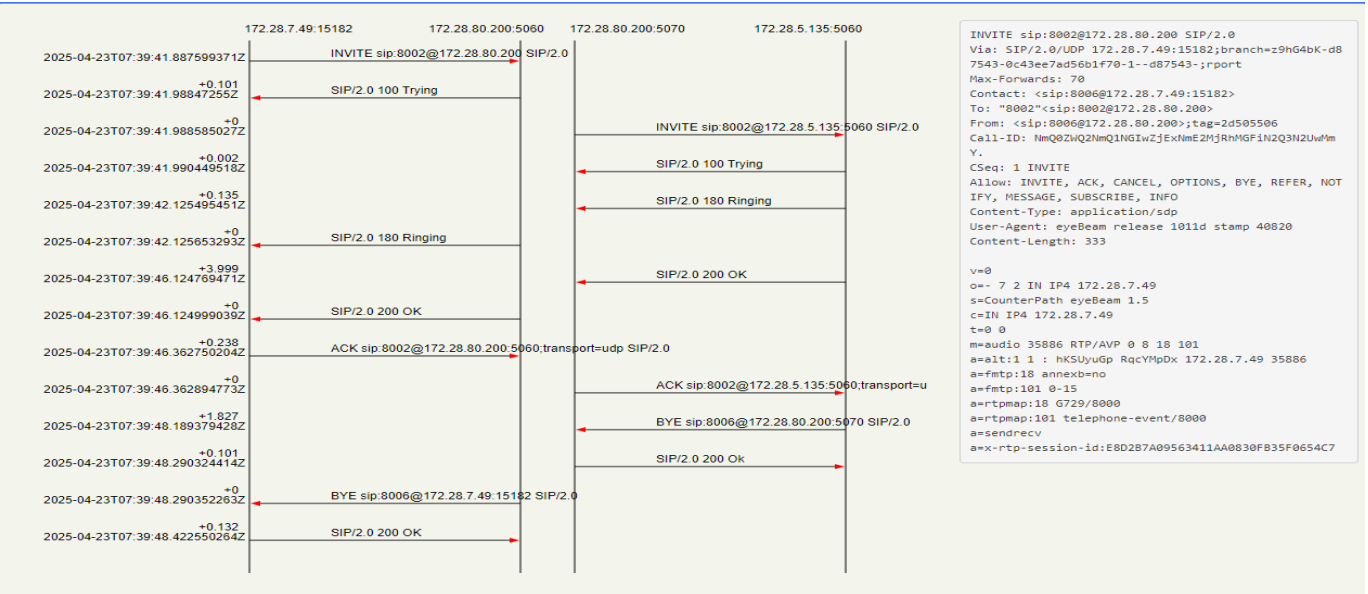
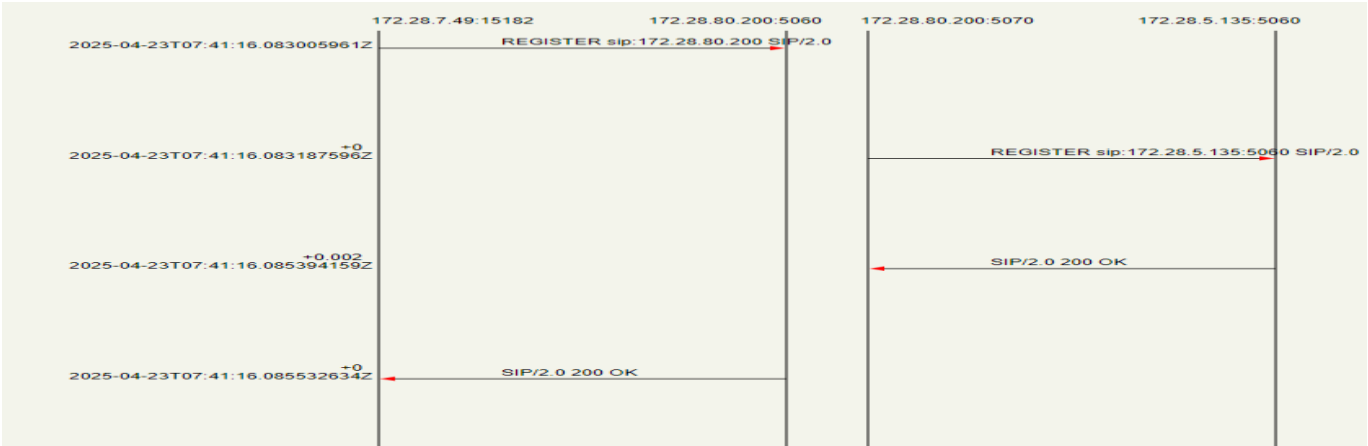
1

>>

Signal Track Log



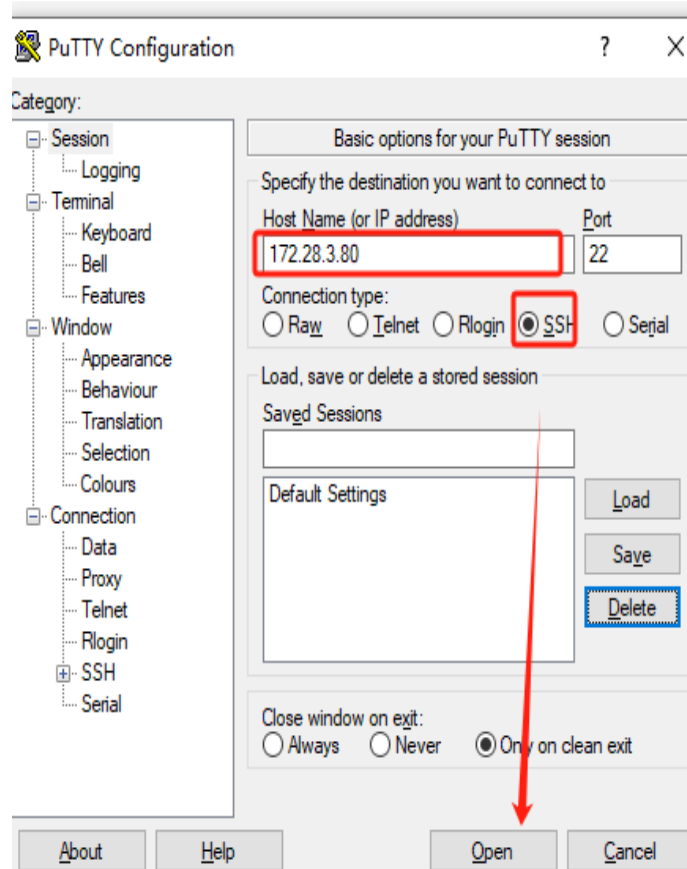
- 1. Registration signaling process
- 2. Call signaling process



Command Line Trace Log

- **SBC1000/SBC3000Pro**

1. Open tools like Putty, enter the SBC IP and select ssh
2. After opening, enter the SBC login account and password
3. Enter the “enable”, “trace all”, and “ada” commands in sequence to track the log



```
login as: admin
admin@172.28.3.80's password: 
BusyBox v1.22.1 (2023-07-11 15:15:32 CST) built-in shell (ash)
Enter 'help' for a list of built-in commands.

*****
Welcome to Command Shell
*****

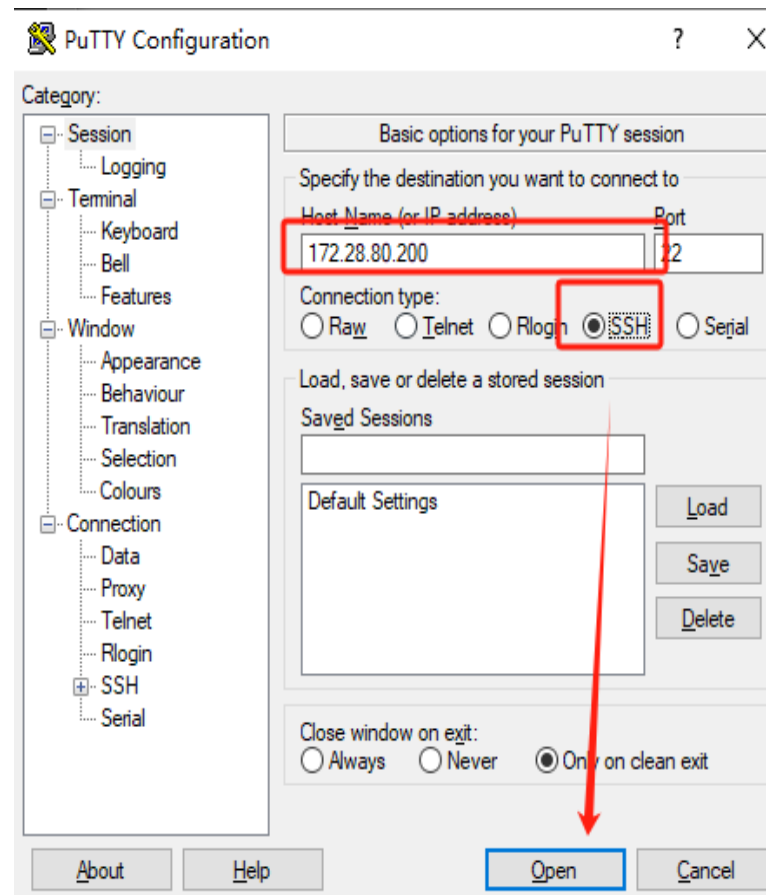
WARNING: Authorised Access Only
*****

> enable
admin@SBC3000 enable# trace all
admin@SBC3000 enable# ada
ada> 2025-04-25 15:28:15.884071413 [ Info]: transport_udp.go:212 sigtrackid:,
udp 172.28.3.82:5063 --> 172.28.21.111:6666, len:474, msg:
OPTIONS sip:Heartbeat@172.28.21.111:6666 SIP/2.0
Via: SIP/2.0/udp 172.28.3.82:5063;branch=z9hG4bK-QNM6QE1fgld8t4NV
To: <sip:Heartbeat@172.28.3.82:5063>
From: <sip:Heartbeat@172.28.3.82:5063>;tag=RvUCswdN
Contact: <sip:Heartbeat@172.28.3.82:5063>
Call-ID: Ua0irK5N0Rila6W58F9mhbUIGlnp1ph3T
```


Command Line Trace Log

- SBC8000

1. Open tools like Putty, enter the IP and SSH port of the server
2. After opening, enter the SSH login account and password for the server
3. Enter the “/home/sbc/bin/cli”、“trace all” commands in sequence to track the log



```
login as: root
root@172.28.80.200's password:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-57-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Apr 25 03:38:41 PM CST 2025

System load:          0.0
Usage of /:            13.2% of 97.87GB
Memory usage:         8%
Swap usage:           0%
Processes:            248
Users logged in:      1
IPv4 address for eth0: 172.28.80.200
IPv6 address for eth0: 2020::5d
IPv6 address for eth0: 2020::be24:11ff:fea2:81fb
IPv6 address for eth0: 2020::80:200

Expanded Security Maintenance for Applications is not enabled.

139 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Thu Apr 24 17:49:22 2025 from 172.28.10.127
root@sbc8000:~# /home/sbc/bin/cli
sbc > trace all
Ada : 2025-04-25 15:39:24.433 [ Info]: transport_udp.go:235 udp 172.28.80.200:
5070 --> 172.28.5.135:5060,len:580,msg:
REGISTER sip:172.28.5.135 SIP/2.0
Via: SIP/2.0/UDP 172.28.80.200:5070;branch=z9hG4bK-97gxUOqBbyLnspML
To: <sip:8010@172.28.5.135>
From: <sip:8010@172.28.5.135>;tag=aKUmHrcw
```

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Chapter Three Capture

Chapter Three Capture

03

Capture

- **SBC1000/SBC3000Pro**

1. Click on **Maintenance – Capture**
2. On demand or default configuration, click **Start**
3. Reproduce the problem
4. Click **Stop&Download** to stop packet capture and download files

The screenshot shows a web-based configuration interface for packet capture. It includes several sections: 'Server Type' with a dropdown set to 'Local Server'; 'Filter Group' with a 'Type' dropdown set to 'Customization value' and a 'Delete' button; 'Port Range' with input fields for '1' and '65535'; 'IPv4/IPv6' with a dropdown set to 'IPV4'; 'Source IP' and 'Destination IP/Domain' with empty input fields; 'Transport' with checkboxes for TCP, UDP, ICMP, and ARP, all of which are checked; a '+ Add' button; 'Time' with a dropdown set to '5' and a 'min' label; 'File Max Size' with a dropdown set to '20' and a 'MB' label; and two green buttons labeled 'Start' and 'Stop & Download'. Below these fields is a red 'Note' section with three instructions, followed by a large empty rectangular area for a log or capture data.

Server Type: Local Server

Filter Group Type: Customization value [Delete]

Port Range: 1 ~ 65535

IPv4/IPv6: IPV4

Source IP:

Destination IP/Domain:

Transport: ☒ TCP ☒ UDP ☒ ICMP ☒ ARP

+ Add

Time: 5 min

File Max Size: 20 MB

Start Stop & Download

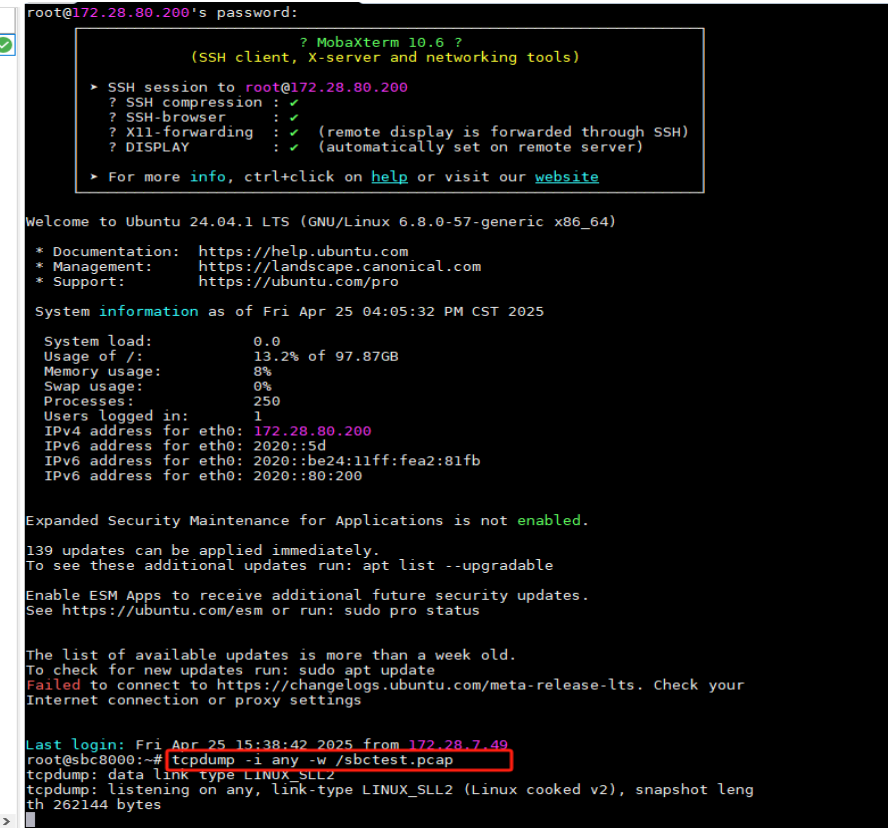
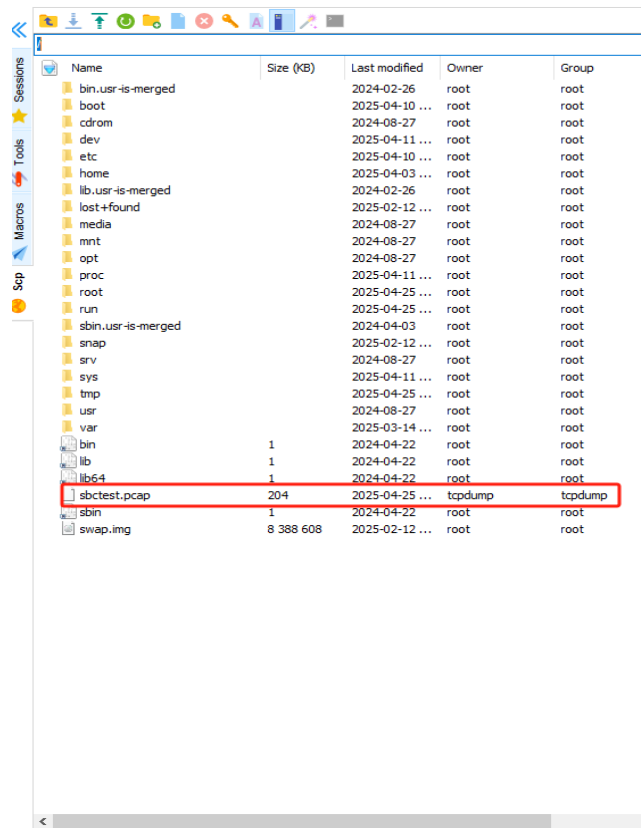
Note: 1.Click the Add button to add filtering group. You can set filtering rule for each group.
2.After selecting MFU, the corresponding port range will be configured by default.
3.When the set time expires, packet capturing will automatically stop.

Capture

- SBC8000

Sbc8000 cannot directly capture packets on the web interface and needs to capture server network port messages

tcpdump -i network port name -w file name





THANKS



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