

MTG Routine Maintenance

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Foreword

- This course is mainly:
 - Guide how to check MTG run normal or not
 - Guide how to check PSTN line in MTG
 - Guide how to check SIP trunk in MTG

Course Objective

Through this course
you will be able to



HOW To check status of MTG



How To check PSTN line status in MTG



How To check SIP turnk status in MTG

Contents

- 1 Chapter One How to Check Status of MTG
- 2 Chapter Two How to Check PSTN Line Status in MTG
- 3 Chapter Three How to Check SIP Trunk Status in MTG
- 4 Chapter Four Capture & Log

Chapter One

How to check status of MTG

01

Check status of MTG

- System Information

Click **Status & Statistics-Syetem**

Information

1. Check if the CPU temperature and usage are too high
2. Check if the network port working mode is normal
3. Check the System Uptime to determine if the device has restarted
4. Check the remaining time of the license
5. There are two MCU to view the Slave Card Communication

The screenshot displays the 'System Information' page of a Dinstar MTG device. On the left is a navigation menu with categories like 'Status & Statistics', 'Network Param Config', and 'Maintenance'. The 'System Information' item under 'Status & Statistics' is selected. The main content area shows various system metrics. At the top, there are two red warning messages: 'Caution: The password current used is a default password, please change to a new password for system security.' and 'Caution: The current network work status is not the best, please check the settings.' The 'General' section lists items such as CPU ID, CPU Temperature (36°C), Userboard CPU Temperature (30°C), GE1 MAC-Work Mode (F8-A0-3D-7E-9A-60), and GE0 MAC-Work Mode (F8-A0-3D-7E-9A-61). The 'System Uptime' is 5 d 21 h 45 m 34 s. The 'License' section shows 'Official'. The 'Current Mcu Card' is 'MCU0' and 'Slave Card Communication' is 'SUCC'. The 'Version' section lists 'Device Model' (MTG2000B), 'Hardware Version' (PCB 05.01, BackBoardID 1, FlashID ef), 'Boot Version' (19), 'Kernel Version' (28), 'Software Version' (02.06.10.30 p2503), and 'Web Version' (02.06.10.30 p2503). The 'Time Built' is '2024-09-30, 18:22:05'.

System Information	
General	
CPU ID	E4-62-A0-55-03-24-34-21
CPU Temperature	36°C Usage(60s) 3%
Userboard CPU Temperature	[30°C 30°C] [0°C 0°C] [0°C 0°C] [0°C 0°C]
GE1 MAC-Work Mode	F8-A0-3D-7E-9A-60 100M/Full-duplex
GE0 MAC-Work Mode	F8-A0-3D-7E-9A-61 down
Service Ethernet Interface(GE1)	172.27.10.2 255.255.0.0 172.27.1.1
Management Ethernet Interface(GE0)	192.168.11.1 255.255.255.0 0.0.0.0
DNS Server	0.0.0.0 0.0.0.0
Device ID	3030-f8a0-3d7e-9a60
Cloud Server Register Status	Not Registered
System Time	2024-10-18 15:52:34
System Uptime	5 d 21 h 45 m 34 s
License	Official
GE1 Network Speed(Kbit/s)	Received 119 Sent 415
GE0 Network Speed(Kbit/s)	Received 0 Sent 0
Current Mcu Card	MCU0
Slave Card Communication	SUCC
Version	
Device Model	MTG2000B
Hardware Version	PCB 05.01, BackBoardID 1, FlashID ef
Boot Version	19 Kernel Version 28
Software Version	02.06.10.30 p2503 Web Version 02.06.10.30 p2503
Time Built	2024-09-30, 18:22:05

Check status of MTG



- DTU Status

Click **Status &Statistics-DTU Status**

- View the status of the DTU card and the number of license
- Check the idle channels and Dspcap

- Status & Statistics

- System Information
- DTU Status
- E1/T1 Status
- PSTN Trunk Status
- IP Trunk Status
- SIP Registration Status
- Call Info Status
- PRI Call Statistics
- SS7 Call Statistics
- SIP Call Statistics
- Radius Statistics
- Record Statistics
- Monitoring Information

DTU Card Information

DTU No.	Link Status	DSP	Status	License	Temperature	DSP	Status	License	Temperature
DTU 0	Active	0	Success	256	31°C	1	Success	256	30°C

DTU Channel Information

DTU No.	Active	Book	Idle	DspCap	Port Range
DTU 0	1	0	127	5400	6144-6656

Refresh

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Chapter Two

How to Check PSTN Line Status

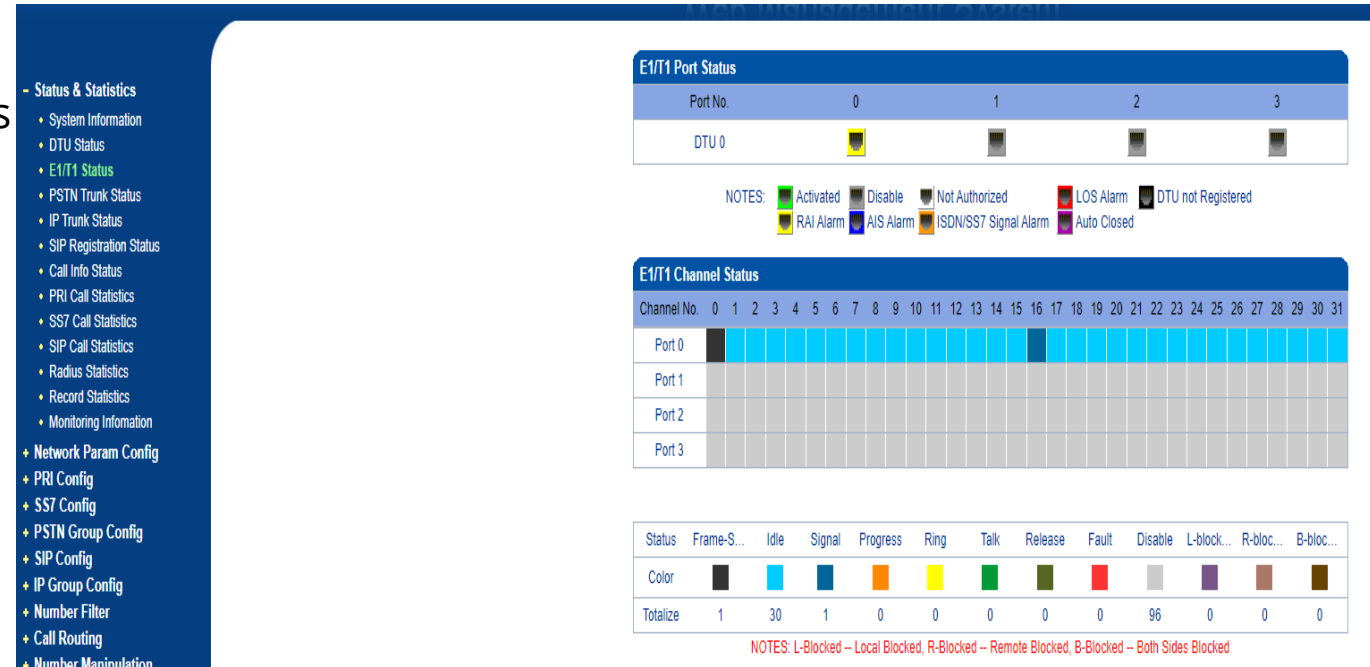
02

Check PSTN Line Status

- E1/T1 Status

Click **Status & Statistics-E1/T1 Status**

1. "LOS Alarm" red alarm: indicates that the E1 line is physically disconnected.
2. "RAI Alarm" yellow alarm: indicates that the underlying E1 port of the device cannot receive data from the other party
3. "AIS Alarm" blue alarm: This type of alarm is usually caused by the other party not activating business data
4. "ISDN/SS7 signal alarm" orange alarm: indicates that the ss7/PRI trunk link has not been successfully established
5. "Activated" green: represents successful establishment of SS7/PRI link



Check PSTN Line Status

- PSTN Trunk Status

Click **Status &Statistics-PSTN Trunk Status**

Check if the PRI/SS7/R2 link status is normal

- Status & Statistics

- System Information
- DTU Status
- E1/T1 Status
- PSTN Trunk Status
- IP Trunk Status
- SIP Registration Status
- Call Info Status
- PRI Call Statistics
- SS7 Call Statistics
- SIP Call Statistics
- Radius Statistics
- Record Statistics
- Monitoring Information

+ Network Param Config

- + PRI Config
- + SS7 Config

PRI Link Status					
PRI Trunk No.	Trunk Name	E1/T1 Port No.	Link Status	Send Frames Num	Recv Frames Num
0	EAPBX	0	Established	160141	74006

Total: 1 1页

SS7 Link Status					
SS7 Trunk No.	Trunk Name	E1/T1 Port No.	Link Status	Send Frames Num	Recv Frames Num
---	---	---	---	---	---

R2 Link Status					
R2 Trunk No.	Trunk Name	E1/T1 Port No.	Link Status	Send Cas Num	Recv Cas Num
---	---	---	---	---	---

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Chapter Three

How to Check SIP Trunk Status

03

Check SIP Trunk Status

- IP Trunk Status

Click **Status & Statistics-IP Trunk Status**

Check the SIP trunk status is normal

- SIP Registration Status

Click **Status & Statistics-SIP Registration Status**

Check if each SIP account is registered properly

The screenshot displays the DINSTAR Web Management System interface. The left sidebar contains a menu with 'Status & Statistics' expanded, showing 'IP Trunk Status' and 'SIP Registration Status' highlighted. The main content area shows the 'SIP Trunk Status' table with one entry and a 'Link Status' button. Below this is the 'SIP Registration Status Stat' table showing counts for registered failures and successes. A 'Filter Condition' section allows filtering by registration status. The 'SIP Account Registration Status' table lists individual accounts with their registration status, all currently 'Disable'. A pagination bar at the bottom shows 'Total: 9' and 'Page 1'.

Web Management System

SIP Trunk Status

Trunk No	Trunk Name	Trunk Mode	Protocol Type	Incoming Authentication Type	Link Status
0	172.27.10.37	Peer	UDP	IP Address	Established

Refresh

SIP Registration Status Stat

SIP Account Count	Registered Fail Count	Registered Succ Count
9	9	0

Filter Condition

Registration Status: All Filter Refresh

SIP Account Registration Status

ID	Account Name	Trunkno	User Name	Max calls	Curr calls	Registration Status
0	+867713480000	0 <172.27.1...	+867713480000	65535	0	Disable
1	+867713480001	0 <172.27.1...	+867713480001	65535	0	Disable
2	+867713480002		+867713480002	65535	0	Disable
3	+867713480003		+867713480003	65535	0	Disable
4	+867713480004		+867713480004	65535	0	Disable
5	+867713480005		+867713480005	65535	0	Disable
6	+867713480006		+867713480006	65535	0	Disable
7	+867713480007		+867713480007	65535	0	Disable
8	+867713480008		+867713480008	65535	0	Disable

Total: 9 Page 1

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Chapter Four

Capture & Log

04

Capture

- Network Capture

When a call or registration fails and network capture need to be obtained

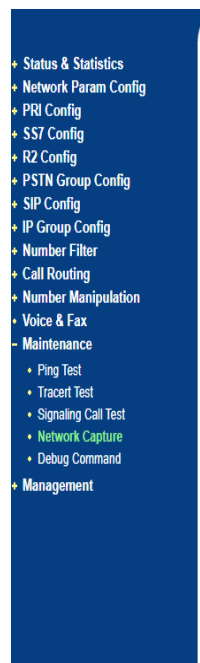
1. Click **Maintenance-Network Capture**

2. Default Setting select custom

3. Click on start

4. Reproduce the problem

5. Click stop, the browser will prompt to download the captured file



The 'Network Capture' window contains the following fields and controls:

- Default Setting: Custom (dropdown)
- Network Interface: ☐ GE1 ☐ GE0
- Source Host: [Empty text box]
- Destination Host: [Empty text box]
- Protocol(s): ☐ TCP ☐ UDP ☐ RTP ☐ RTCP ☐ ICMP ☐ ARP
- DTU: DTU 0 (dropdown)
- Capture Size: 20M (dropdown)
- Buttons: Start, Stop, Reset

NOTE: All the items can be left it empty, it means get all the packets on the available interfaces.
Use '*' division multiple IP
If you want get the syslog packets, please make sure syslog is enabled.
If you want get RTP or RTCP packets, please make sure select UDP concurrently.
If you want get RTP or RTCP packets, please pick a DTU.
If Current Call larger than 15 and get RTP or RTCP packets, may cause SIP Trunk fault.

Capture

- RTP Capture

During the call process, there may be voice issues such as one way voice or both side have no voice that require obtaining RTP messages between the SIP server and MTG

1. Click **Maintenance-Network Capture**

2. Default Setting select RTP special

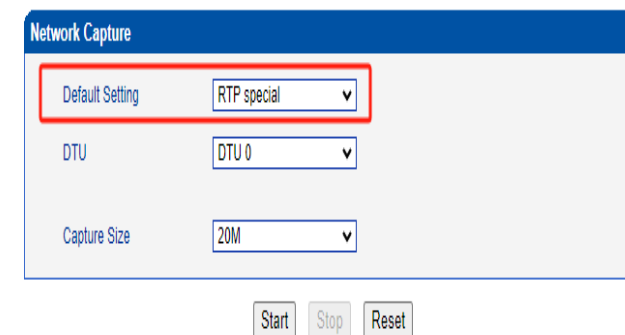
DTU: select a user board that can reproduce the problem

3. Click on start

4. Reproduce the problem

5. Click stop, the browser will prompt to download the captured file

- + Status & Statistics
- + Network Param Config
- + PRI Config
- + SS7 Config
- + R2 Config
- + PSTN Group Config
- + SIP Config
- + IP Group Config
- + Number Filter
- + Call Routing
- + Number Manipulation
- + Voice & Fax
- Maintenance
 - Ping Test
 - Tracert Test
 - Signaling Call Test
 - Network Capture
 - Debug Command
- + Management



Network Capture

Default Setting: RTP special ▼

DTU: DTU 0 ▼

Capture Size: 20M ▼

Start Stop Reset

NOTE: All the items can be left it empty, it means get all the packets on the available interfaces.
Use *, division multiple IP
If you want get the syslog packets, please make sure syslog is enabled.
If you want get RTP or RTCP packets, please make sure select UDP concurrently.
If you want get RTP or RTCP packets, please pick a DTU.
If Current Call larger than 15 and get RTP or RTCP packets, may cause SIP Trunk fault.

Capture

- PCM Capture

During the call process, there may be voice issues such as one way voice or both side have no voice that require obtaining RTP messages between the SIP server and MTG

1. Click **Maintenance-Network Capture**

2. Default Setting select PCM only

E1: select a E1 port that can reproduce the problem

3. Click on start

4. Reproduce the problem

5. Click stop, the browser will prompt to download the captured file

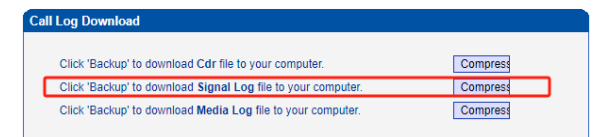
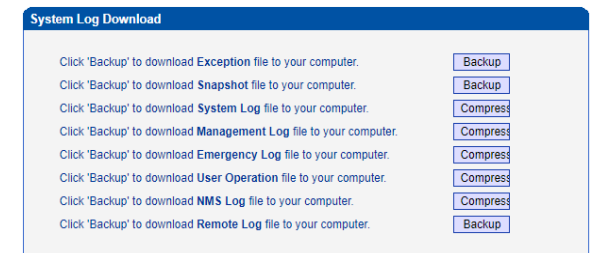
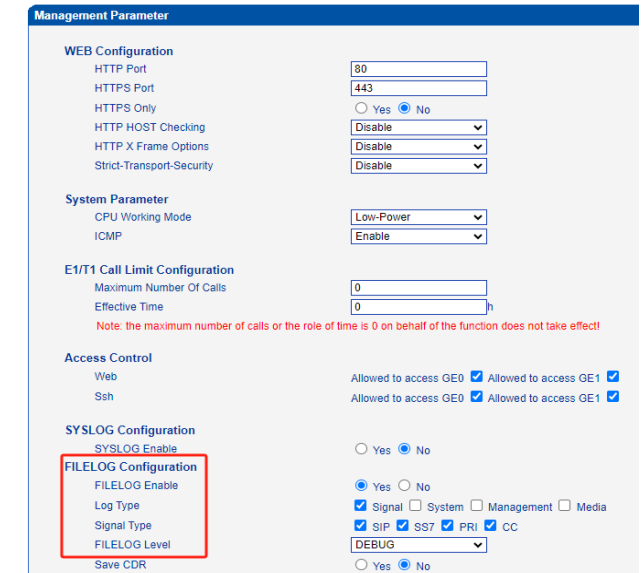
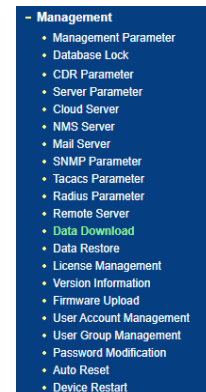
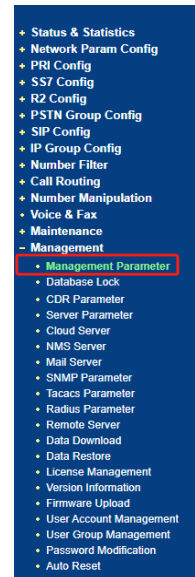
The screenshot shows the 'Network Capture' configuration page in the DINSTAR web interface. On the left is a blue sidebar with a menu containing: Status & Statistics, Network Param Config, PRI Config, SS7 Config, R2 Config, PSTN Group Config, SIP Config, IP Group Config, Number Filter, Call Routing, Number Manipulation, Voice & Fax, Maintenance (highlighted), Ping Test, Tracerf Test, Signaling Call Test, Network Capture (highlighted in green), Debug Command, and Management. The main content area has a title bar 'Network Capture'. Below it, there are four rows of settings: 'Default Setting' (with a red box around the text and a dropdown menu set to 'PCM only'), 'E1' (with a dropdown menu set to 'E1 0'), 'Ts' (with a dropdown menu set to 'Ts all'), and 'Capture Size' (with a dropdown menu set to '20M'). At the bottom of the settings area are three buttons: 'Start', 'Stop', and 'Reset'. Below the buttons is a red 'NOTE' section with the following text: 'NOTE: All the items can be left it empty, it means get all the packets on the available interfaces. Use \':\' division multiple IP. If you want get the syslog packets, please make sure syslog is enabled. If you want get RTP or RTCP packets, please make sure select UDP concurrently. If you want get RTP or RTCP packets, please pick a DTU. If Current Call larger than 15 and get RTP or RTCP packets, may cause SIP Trunk fault.'

Log

- FILELOG

When a call exception occurs , SIP and SS7/PRI logs need to be viewed, the FILE LOG can be enabled

1. In the **Management - Management Parameter**, enable FILELOG and check the box as shown
2. Reproduce the problem
3. In **Management - Data Download**, compress signaling logs and download them

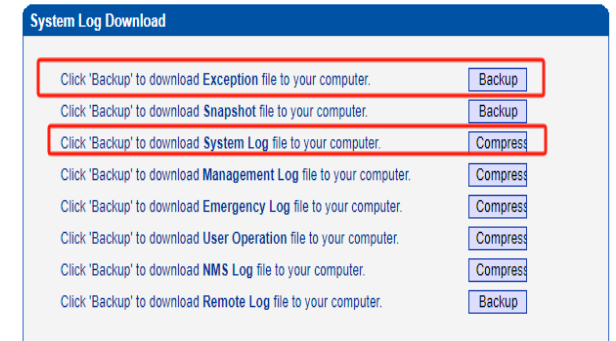
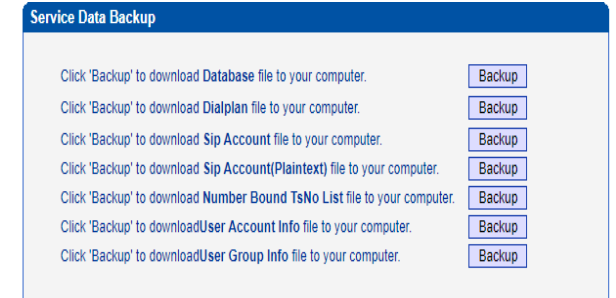
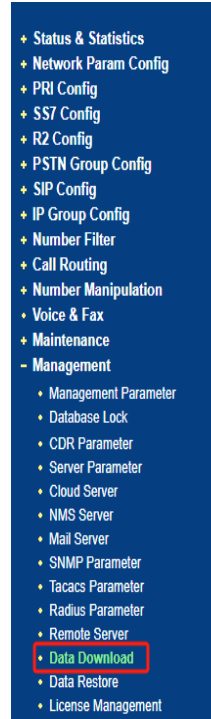


Log

- Exception & System Log

When the device suddenly cannot be accessed, restart or recover on its own after a period of time; Equipment abnormal restart and other situations:

1. In **Management - Data Download**, download system log
2. In **Management - Data Download**, download exception

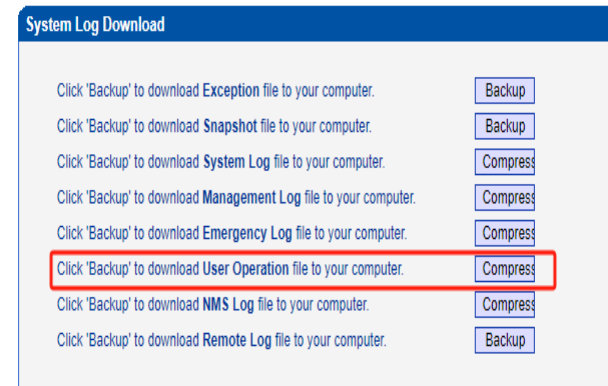
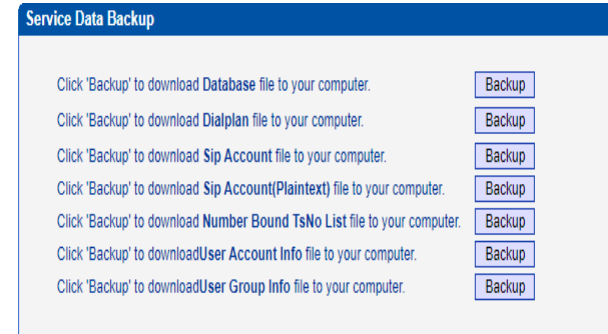
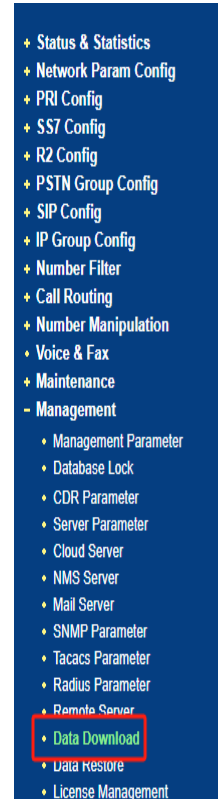


Log

- User Operation

When a device its configuration is changed:

In **Management - Data Download**, download user operation logs

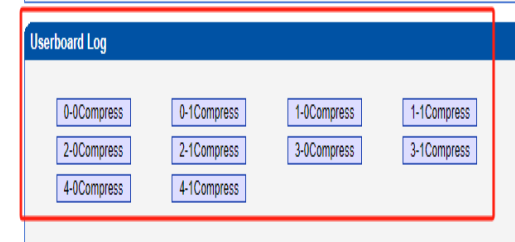
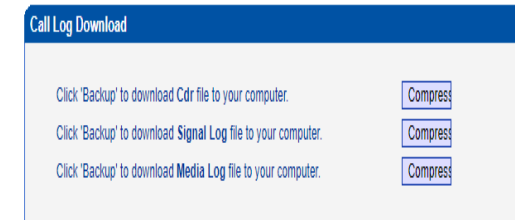
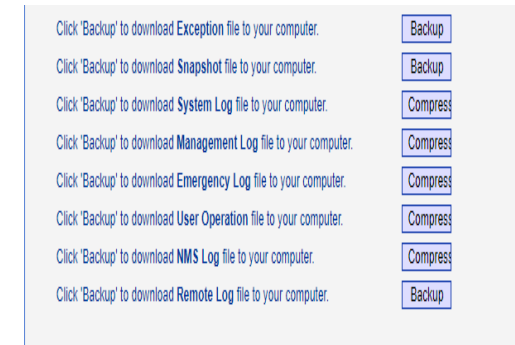
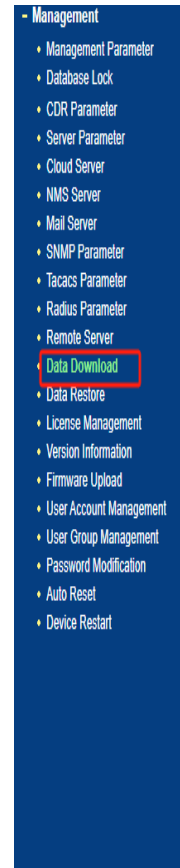


Log

- Userboard log

When there are situations such as device userboard registration failure, automatic restart, or abnormal userboard status after replacing the board:

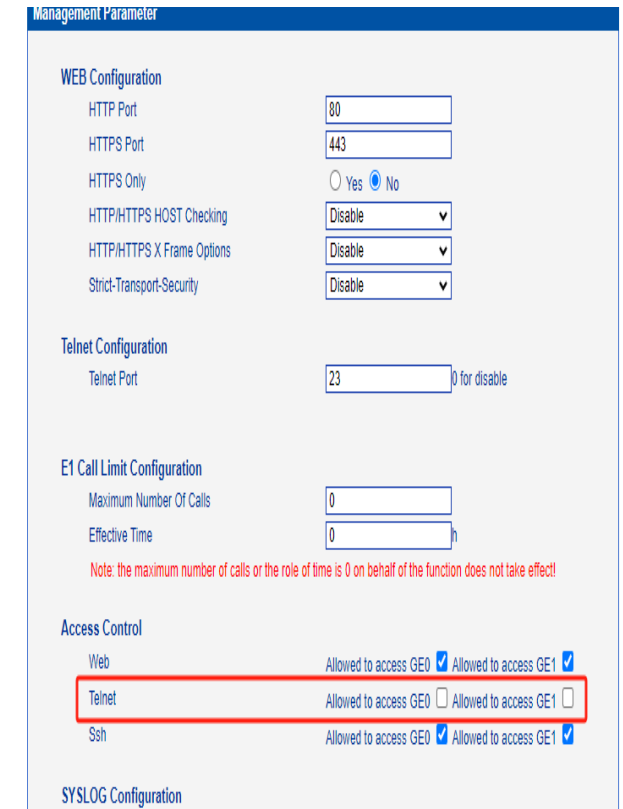
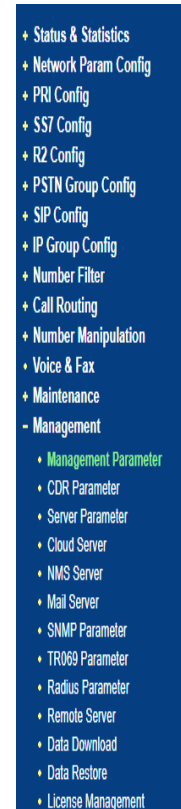
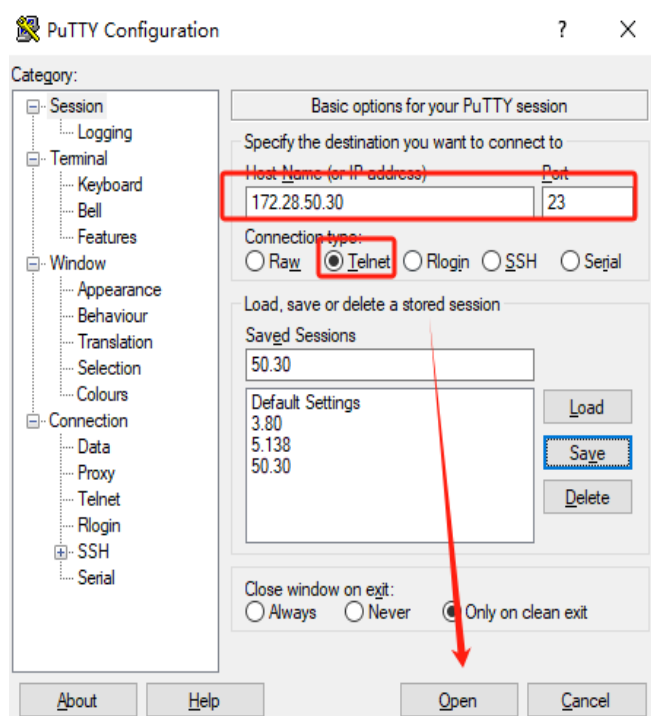
In **Management - Data Download**, download userboard log



Log

- trace log by telnet

1. Click **Management-Management Parameter** ,Enable Telnet permission
2. Enter the MTG device IP and log in via telnet



Log

- trace log by telnet

3. Enter the MTG login username and password, determine the protocol that needs to be tracked for the call, and enter the tracking command according to the corresponding picture 4. Reproduce the problem and view the logs

```
172.16.65.23 - PuTTY
Welcome to Command System!
Username:admin
Password:*****
ROS>en
ROS#^config
ROS(config)#debug sip msg all
ROS(config)#debug cc detail all

Set successfully! current:0

ROS(config)#debug q931 detail
q931 debugging detail is on.
ROS(config)#ex
ROS#^ada
ROS(ada)#[184-17:07:46:640]ADA CONNECTED ...,WELCOME!

ROS(ada)#turnon 71
ROS(ada)#turnon 27
ROS(ada)#turnon 64
ROS(ada)#
```

PRI&SIP

```
172.19.211.135 - PuTTY
Welcome to Command Shell!
Username:admin
Password:*****
ROS>en
ROS#^config
ROS(config)#debug sip msg all
ROS(config)#debug cc detail all

Set successfully! current:0

ROS(config)#debug ss7 0 5
ROS(config)#ex
ROS#^ada
ROS(ada)#19 18:50:42.110 mpe_dbg: <176> [ DEBUG] ADA CONNECTED ...,WELCOME!

ROS(ada)#turnon 27
ROS(ada)#turnon 96
ROS(ada)#turnon 71
```

SS7&SIP

Summary

- This course we already learn:
 - How to check status of MTG.
 - How to check PSTN line status in MTG.
 - How to check SIP trunk status in MTG.



THANKS



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