

DAG Basic Configuration Practice Guide

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Foreword

- This course is mainly:
 - Introduce Dinstar DAG series.
 - Guide how to access the DAG
 - Guide how to set network on DAG
 - Guide how to configure DAG with sip server

Course Objective

Through this course
you will be able to



HOW To Access The Device



How To SET Network On Device



How To Make Calls On DAG

Contents

- 1 Chapter One About Dinstar DAG series
- 2 Chapter Two How to access DAG
- 3 Chapter Three How to configure DAG

Chapter One

About Dinstar DAG series

01



Dinstar DAG IPPBX Series



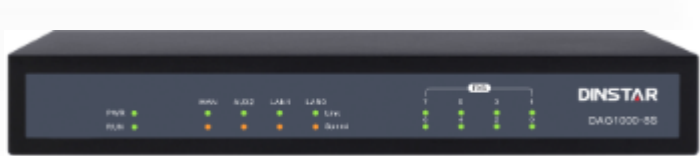
FXS VoIP Gateway



DAG1000-1/2S



DAG1000-4S



DAG1000-8S



DAG2000-16S



DAG2000-24S



DAG2000-32S

Dinstar DAG IPPBX Series

DINSTAR

FXS VoIP Gateway



DAG2500-48/72/96S



DAG3000-128/256/312

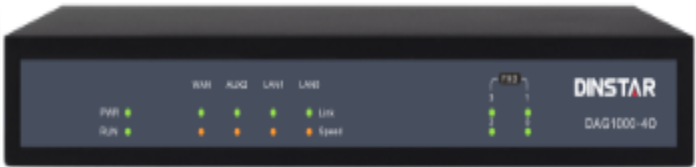
Dinstar DAG IPPBX Series



FXO VoIP Gateway



DAG1000-20



DAG1000-40



DAG1000-80



DAG2000-160

Dinstar DAG IPPBX Series



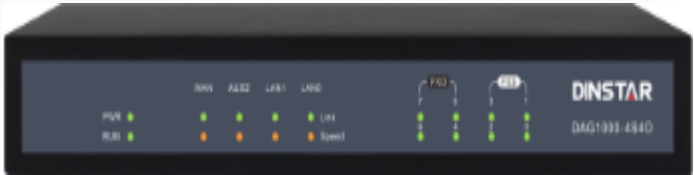
Hybrid VoIP Gateway



DAG1000-1S1O



DAG1000-2S2O



DAG1000-4S4O



DAG2000-8S8O



DAG3000-32S/O



DAG3000-128S/O

Contents

- 1 Chapter One About Dinstar DAG series
- 2 Chapter Two How to access DAG
- 3 Chapter Three How to configure DAG

Chapter Two

How to access DAG

02



Physical Connection

- DAG1000

Support Router and Bridge network mode

Default network mode **Router**

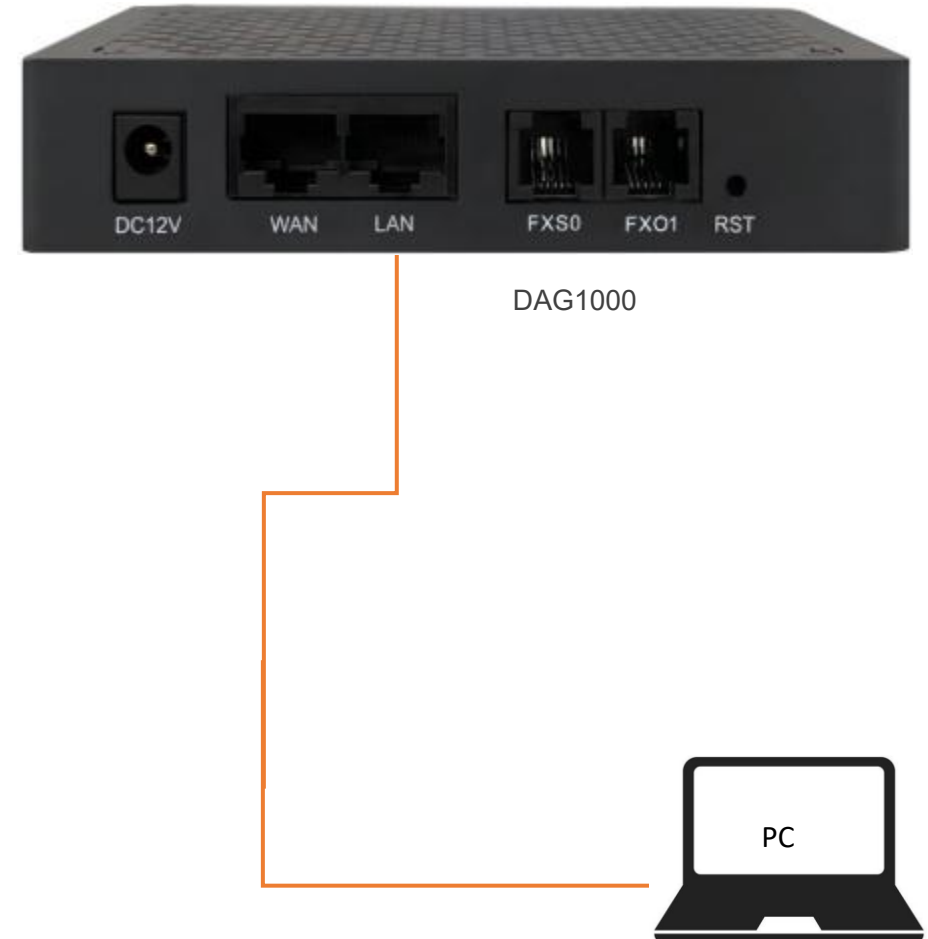
WAN Port DHCP, LAN Port---

192.168.11.1

Default username/password---

admin/admin

Service Port WAN and LAN



Physical Connection

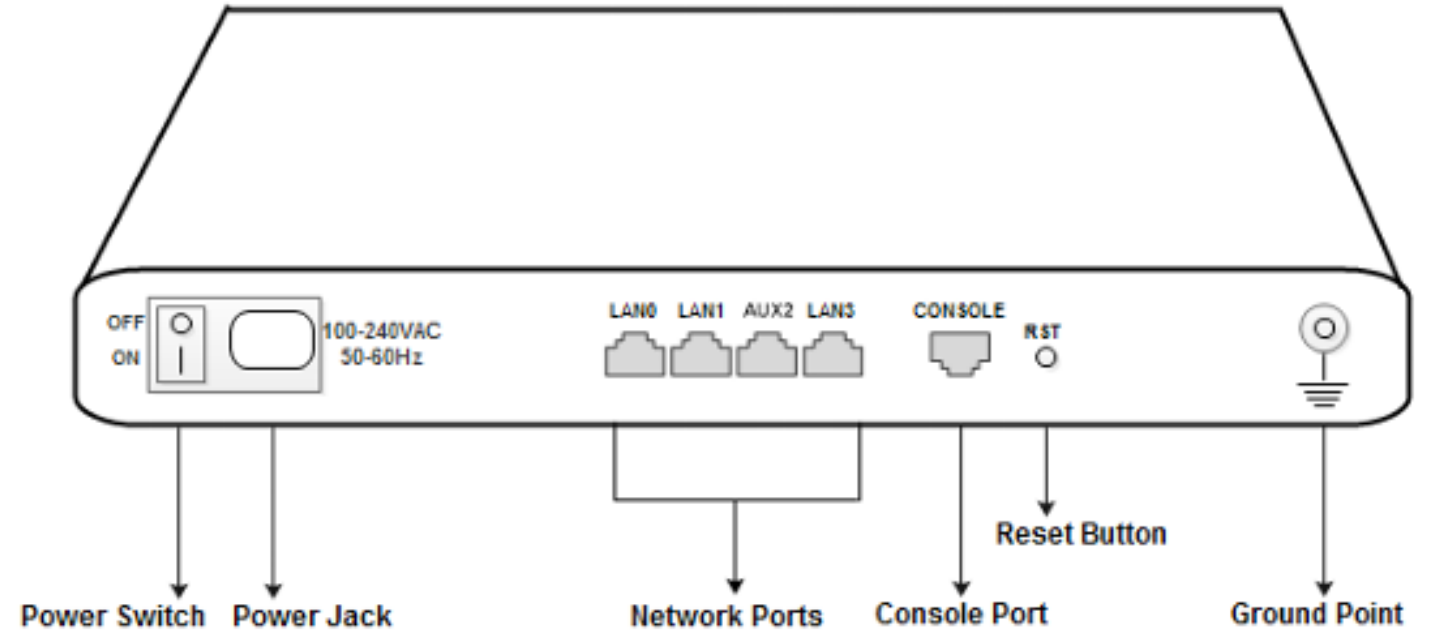
- DAG2000

Lan port--192.168.11.1

Default username/password---**admin/admin**

Ethernet Port LAN0 to LAN3

AUX2 port is reserved port, non-use



Physical Connection

- DAG2500

Support Gigabit Ethernet port

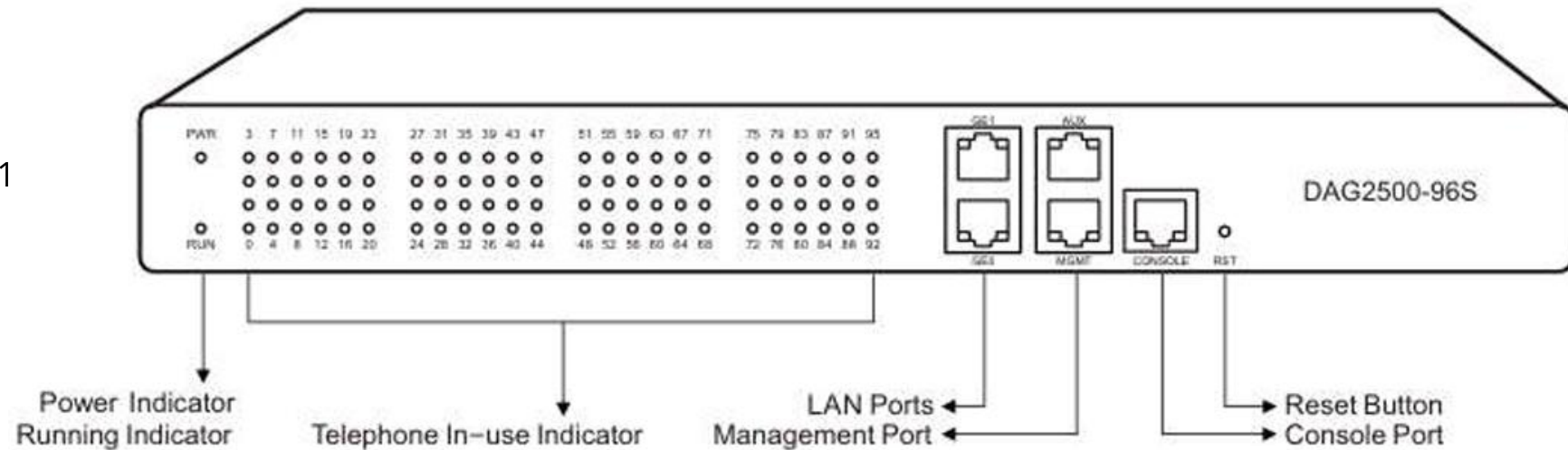
Management port MGMT--192.168.11.1

Default username/password---

admin/admin

Ethernet Port GE0 and GE1

AUX2 port is reserved port, non-use



Physical Connection

- DAG3000

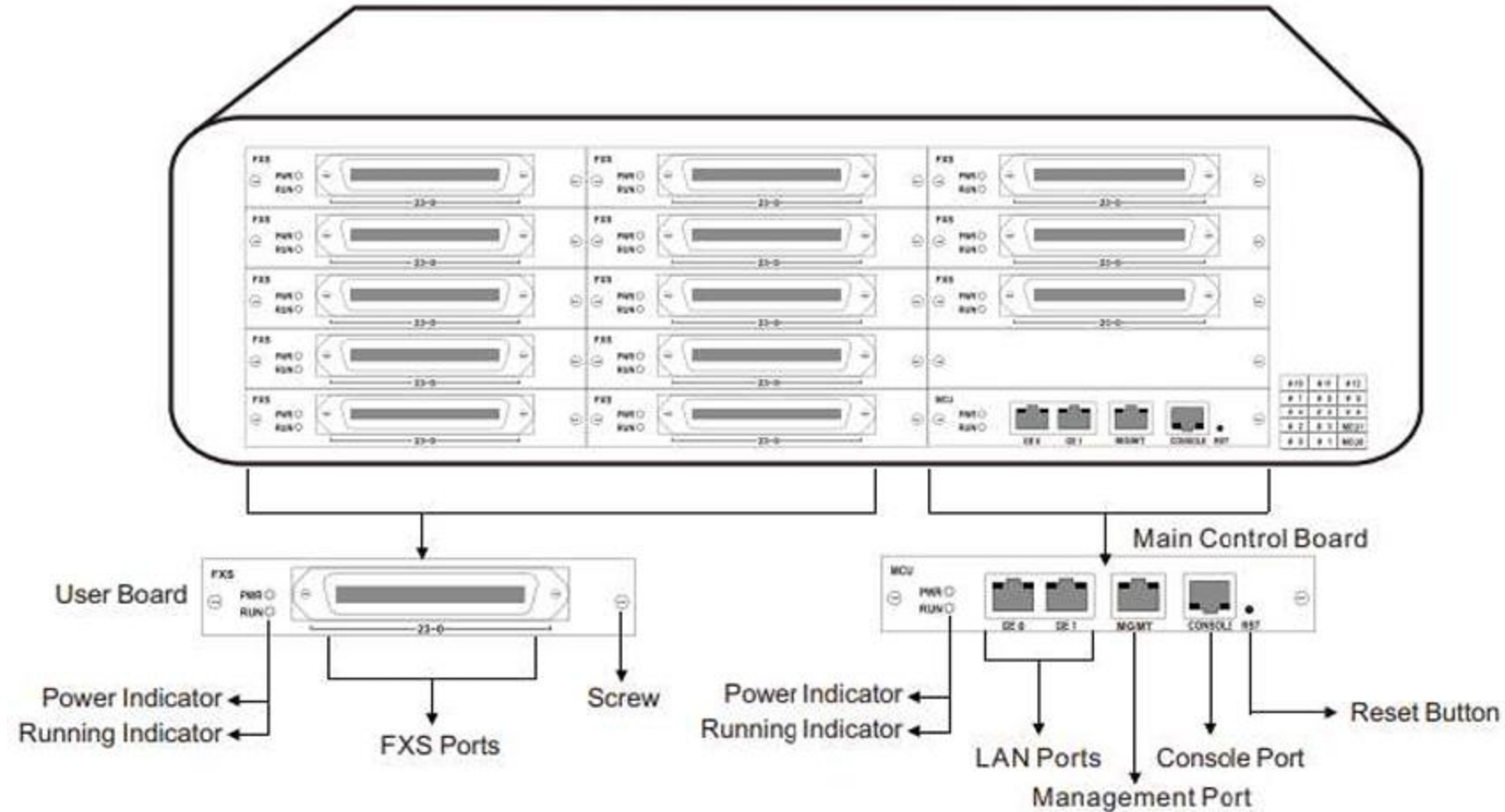
Support Gigabit Ethernet port

Managemet port MGMT--192.168.11.1

Default username/password---

admin/admin

Ethernet Port GE0 and GE1



PC Settings

- Add IP

Add 192.168.11.xxx/255.255.255.0 to access the DAG

Note:

1. Optional IP range: 192.168.11.2-192.168.11.254
2. Set the IP address of the PC as shown in the figure on the right . More details, please refer to the following instructions.

<https://www.windowscentral.com/software-apps/windows-11/how-to-configure-a-static-ip-on-windows-10-or-11>

1 On the PC, click 'Network (or Ethernet) → Properties'.

2 Double-click 'Internet Protocol Version 4 (TCP/IPv4)'.

3 Select 'Use the following IP address', and then enter an available IP address '192.168.11.XXX' which is at the same network segment with '192.168.11.1'.

The screenshot shows the Windows Network settings window. On the left, the 'Ethernet' adapter is selected, and the 'Properties' menu is open. In the center, the 'Internet Protocol Version 4 (TCP/IPv4)' property is selected. On the right, the 'Internet Protocol Version 4 (TCP/IPv4) Properties' dialog box is open, showing the 'General' tab. The 'Use the following IP address' radio button is selected, and the IP address, subnet mask, and default gateway are entered as 192.168.11.20, 255.255.255.0, and 192.168.11.1 respectively.

Access Device GUI

DINSTAR

- Access Device

Browser input <https://192.168.11.1> to login interface .

Input Username and Password:

[admin/admin](#),

Click [Login](#) to access the device.

A screenshot of the 'Web Login' form. It is a light gray rectangular box with the title 'Web Login' at the top center. Inside the box, there are two input fields: the first is labeled 'Username' and the second is labeled 'Password'. Below the 'Password' field is a blue button with the word 'Login' in white text.

Access Device GUI

After login, then will into the Status page, as shown below



Web Management System

- + Status & Statistics
 - Quick Setup Wizard
- + Network
 - SIP Server
 - IP Profile
 - Tel Profile
 - Port
- + Advanced
 - Call & Routing
 - Manipulation
 - Management
- + Security
- + Tools

Device ID	da52-0708-6012-0122		
MAC Address	F8-A0-3D-21-BE-41		
Network Mode	Router		
WAN IP Address	172.19.211.101	255.255.0.0	Static
	172.19.1.1		
LAN Port	192.168.11.1	255.255.255.0	
DNS Server	114.114.114.114	4.4.4.4	
Cloud Register Status	Not Registered		
NMS Register Status	Not Registered		
System Uptime	114 h: 47 m: 48 s		
System Time	2025-2-19 10:29:20		
Traffic Statistics	Received 150167621 bytes		Sent 19299371 bytes
Usage of Flash	87 %(6971392 / 7929856) bytes		
Usage of Backup Flash	34 %(5042176 / 14680064) bytes		
Usage of RAM in Linux	41 %(24764416 / 60112896) bytes		
Usage of RAM in AOS	78 %(13180928 / 16769024) bytes		
Current Software Version	DAG1000-4S4O 2.83.13.03 PCB 3 LOGIC 0 BIOS 1, 2024-12-02 18:05:34		
Backup Software Version	DAG1000-4S4O 2.83.13.03 PCB 3 LOGIC 0 BIOS 1, 2024-12-02 18:05:34		
DSP Version	ARM_32_13 Jan 13 2022 17:39:22		
U-BOOT Version	25		
Kernel Version	29		
Root FS Version	24		
FS Version	23		

Contents

- 1 Chapter One About Dinstar DAG series
- 2 Chapter Two How to access DAG
- 3 Chapter Three How to configure DAG

Chapter Three

How to configure DAG

03

- 1.DAG connect with SIP server by register mode
- 2.DAG connect with SIP server by sip trunk mode

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1.type username and password
default is admin/admin
- 2.click Login

Web Management System

Web Login

1

Username

Password

2

Login

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1&2.click Network->Local network
- 3.configure IP address
- 4.save setting

The screenshot shows the DINSTAR web interface. On the left is a sidebar menu with the following items: Status & Statistics, Quick Setup Wizard, Network (highlighted with a red circle and '1'), Local Network (highlighted with a red circle and '2'), VLAN, DHCP Option, Qos, DHCP Server, DMZ Host, Forward Rule, Static Route, Firewall, ARP, VPN, SIP Server, IP Profile, Tel Profile, Port, Advanced, Call & Routing, Manipulation, Management, Security, and Tools. The main area is titled 'Local Network' and contains the following sections: IP Protocol (set to IPv4), Network Mode (Router selected), WAN Port (Use the following IP address selected, with IP Address 172.19.211.101, Subnet Mask 255.255.0.0, and Default Gateway 172.19.1.1), PPPoE (Account, Password, and Service Name fields), WAN MTU (1500), LAN Port (IP Address 192.168.11.1, Subnet Mask 255.255.255.0, and LAN MTU 1500), and DNS Server (Use the following DNS server address selected, with Primary DNS Server 114.114.114.114 and Secondary DNS Server 4.4.4.4). A red circle and '3' highlights the WAN Port configuration section. At the bottom right, there is a 'Save' button highlighted with a red circle and '4'. A note at the bottom states: 'Note: The device must restart to take effect.'

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1.click SIP Server
- 2.configure your Sip server's ip address and port in the page
- 3.save setting

The screenshot displays the DINSTAR web interface for configuring a SIP Server. The left sidebar contains a menu with the following items: Status & Statistics, Quick Setup Wizard, Network, SIP Server (highlighted with a red box and labeled 1), IP Profile, Tel Profile, Port, Advanced, Call & Routing, Manipulation, Management, Security, and Tools. The main content area shows the 'SIP Server' configuration page. The 'IP Protocol for SIP Stack' is set to 'IPv4'. The 'SIP Server' section (labeled 2) includes fields for 'SIP Server' (172.19.211.135), 'SIP Server Port (Default: 5080)' (5080), 'Registration Expires (Default: 300)' (300), and 'Heartbeat' (checked). The 'Primary Outbound Proxy' section has 'Primary Outbound Proxy Address' and 'Primary Outbound Proxy Port' (5080). The 'Secondary Outbound Proxy' section has 'Secondary Outbound Proxy Address' and 'Secondary Outbound Proxy Port' (5080). The 'Registration' section includes 'Re-registration Percent(Expires)(0: means random, range: 25%-75%)' (0), 'Retry Interval when Registration failed' (30), 'Registration Limit (counts/time, time: 0 means unlimited)' (1 / 0), and 'Send SIP Unregistration Request when the Device Restart' (unchecked). The 'MOH' section has 'MOH Dial Number' (~~mhh~u) and 'MOH' (unchecked). The 'SIP Transport Type' is set to 'UDP'. The 'Local SIP Port' section has 'Use Random Port' (unchecked) and 'SIP UDP/TCP Local Port' (5080). The 'SIP Protocol Stack Startup Protection' section has 'Reboot After Stack Consecutive Startup Failures(0: means no reboot)' (0). A red box and label 3 highlight the 'Save' button at the bottom right.

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1.click Port and add new sip account
- 2.choose the port number
- 3.configure sip account which Sip server side provide
- 4.save setting

1

2

3

4

Port Add

Port: 0

Disable Port: ☐

Registration: ☒ Enable

IP Profile: 0 <default>

Tel Profile: 0 <default>

Display Name: 6002

SIP User ID: 6002

Authenticate ID: 6002

Authenticate Password:

Offhook Auto-Dial:

Auto-Dial Delay Time: s

DND(Do Not Disturb): ☐ Enable

Caller-ID: ☒ Enable

Number for CFU(Call Forwarding Unconditional):

Number for CFB(Call Forwarding Busy):

Number for CFNRy(Call Forwarding No Reply):

Call Waiting: ☐ Enable

Play Call Waiting Tone: ☐ Enable

Call Waiting Send CID: ☐ Enable

Save Cancel

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1.click Call&Routing
- 2.add IP->Tel Routing
- 3.configure IP->Tel Routing
- 4.save setting

+ Status & Statistics
+ Quick Setup Wizard

+ Network

+ SIP Server

+ IP Profile

+ Tel Profile

+ Port

+ Advanced

- Call & Routing

+ Wildcard Group

+ Port Group

+ IP Trunk

+ Routing Parameter

+ IP->Tel Routing

+ Tel->IP/Tel Routing

+ Call Limit

+ Manipulation

+ Management

+ Security

+ Tools

1

2

3

IP->Tel Routing Add

Index 127
Description out
Calls from ☐ IP Trunk Any ☒ SIP Server
Caller Prefix any
Called Prefix any
Calls to ☒ Port 0 ☐ Port Group

4

Save

Reset

Cancel

NOTES:'any' in 'Called Prefix' or 'Caller Prefix' means wildcard string.

DAG connect with SIP Server(Register mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Port setting

Route setting

- 1.click Call&Routing
- 2.add Tel->IP/Tel Routing
- 3.configure Tel->IP/Tel Routing
- 4.save setting

- + Status & Statistics
- + Quick Setup Wizard
- + Network
- + SIP Server
- + IP Profile
- + Tel Profile
- + Port
- + Advanced
- Call & Routing
 - + Wildcard Group
 - + Port Group
 - + IP Trunk
 - + Routing Parameter
 - + IP->Tel Routing
 - + Tel->IP/Tel Routing
 - + Call Limit

1

2

3

Tel->IP/Tel Routing Add

Index	127
Description	inoming
Calls from	☒ Port 0 ☐ Port Group
Caller Prefix	any
Called Prefix	any
Calls to	☐ Port 0 ☐ Port Group ☐ IP Trunk ☒ SIP Server

4

Save

Reset

Cancel

NOTES:'any' in 'Called Prefix' or 'Caller Prefix' means wildcard string.

DAG connect with SIP Server(Trunk mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Route setting

- 1.type username and password
default is admin/admin
- 2.click Login

Web Management System

Web Login

1

Username

Password

2

Login

DAG connect with SIP Server(Trunk mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Route setting

- 1&2.click Network->Local network
- 3.configure IP address
- 4.save setting

The screenshot displays the DINSTAR web interface for configuring the Local Network. The sidebar on the left contains a menu with the following items: Status & Statistics, Quick Setup Wizard, Network (highlighted with a red circle and number 1), Local Network (highlighted with a red circle and number 2), VLAN, DHCP Option, Qos, DHCP Server, DMZ Host, Forward Rule, Static Route, Firewall, ARP, VPN, SIP Server, IP Profile, Tel Profile, Port, Advanced, Call & Routing, Manipulation, Management, Security, and Tools. The main configuration area is titled 'Local Network' and contains the following sections:

- IP Protocol:** A dropdown menu set to 'IPv4'.
- Network Mode:** Radio buttons for 'Router' (selected) and 'Bridge'.
- WAN Port:** Radio buttons for 'Obtain an IP address automatically' and 'Use the following IP address' (selected). Below this are input fields for IP Address (172.19.211.101), Subnet Mask (255.255.0.0), and Default Gateway (172.19.1.1). There are also input fields for Account, Password, and Service Name.
- WAN MTU:** An input field set to 1500.
- LAN Port:** Input fields for IP Address (192.168.11.1) and Subnet Mask (255.255.255.0). There is also an input field for LAN MTU set to 1500.
- DNS Server:** Radio buttons for 'Obtain DNS server address automatically' and 'Use the following DNS server address' (selected). Below this are input fields for Primary DNS Server (114.114.114.114) and Secondary DNS Server (4.4.4.4).

At the bottom right, there is a 'Save' button (highlighted with a red circle and number 4) and a note: 'Note: The device must restart to take effect.'

DAG connect with SIP Server(Trunk mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Route setting

- 1.click Call&Routing
- 2.add sip trunk
- 3.configure sip trunk
- 4.save setting

- + Status & Statistics
- + Quick Setup Wizard
- + Network
 - + SIP Server
 - + IP Profile
 - + Tel Profile
 - + Port
- + Advanced
 - Call & Routing
 - + Wildcard Group
 - + Port Group
 - + IP Trunk
 - + Routing Parameter
 - + IP->Tel Routing
 - + Tel->IP/Tel Routing
 - + Call Limit
 - + Manipulation
 - + Management
 - + Security
 - + Tools

1

2

3

IP Trunk Add

Index	311
IP Profile	0 <default>
Description	trunk mode
Remote Address	172.19.211.135
Remote Port	5060
Heartbeat	☐ Enable

4

Save

Reset

Cancel

DAG connect with SIP Server(Trunk mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Route setting

- 1.click Call&Routing
- 2.add IP->Tel Routing
- 3.configure IP->Tel Routing
- 4.save setting

- ♦ Status & Statistics
- ♦ Quick Setup Wizard
- ♦ Network
- ♦ SIP Server
- ♦ IP Profile
- ♦ Tel Profile
- ♦ Port
- ♦ Advanced
- ♦ **Call & Routing**
- ♦ Wildcard Group
- ♦ Port Group
- ♦ IP Trunk
- ♦ Routing Parameter
- ♦ **IP->Tel Routing**
- ♦ Tel->IP/Tel Routing
- ♦ Call Limit
- ♦ Manipulation
- ♦ Management
- ♦ Security
- ♦ Tools

1

2

3

IP->Tel Routing Add

Index: 127
Description: out
Calls from: ☒ IP Trunk 311 <trunkmode> ☐ SIP Server
Caller Prefix: any
Called Prefix: any
Calls to: ☒ Port 0 ☐ Port Group

4

Save

Reset

Cancel

NOTES: 'any' in 'Called Prefix' or 'Caller Prefix' means wildcard string.

DAG connect with SIP Server(Trunk mode)

DINSTAR

login web page

network
setting

FXS/O
configure

Route setting

- 1.click Call&Routing
- 2.add Tel->IP/Tel Routing
- 3.configure Tel->IP/Tel Routing
- 4.save setting

1 Call & Routing

- Status & Statistics
- Quick Setup Wizard
- Network
- SIP Server
- IP Profile
- Tel Profile
- Port
- Advanced
- Call & Routing**
- Wildcard Group
- Port Group
- IP Trunk
- Routing Parameter
- IP->Tel Routing
- Tel->IP/Tel Routing**
- Call Limit
- Manipulation
- Management
- Security
- Tools

2 Tel->IP/Tel Routing

3 Tel->IP/Tel Routing Add

Index	127
Description	inoming
Calls from	☒ Port 0
	☐ Port Group
Caller Prefix	any
Called Prefix	any
Calls to	☐ Port 0
	☐ Port Group
	☒ IP Trunk 311 <trunkmode>
	☐ SIP Server

4 Save Reset Cancel

NOTES:'any' in 'Called Prefix' or 'Caller Prefix' means wildcard string.

Summary

- This course we already learn:
 - ▣ How to access the device .
 - ▣ How to set network on device .
 - ▣ How to make calls through device .



THANKS



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