

Welltech 2424s FXS Gateway User Guide

Contents

CH1 Introduct	tion	
1-1 Physical Inter	rface	
1-2 Environment	al	
1-3 Front Panel:	LED Indicators	5
1-4 Rear Panel:	LED Indicators	6
1-5 QUICK SET	UP	7
CH2 Device Se	ettings	
2-1 Network Con	ifiguration	
2-2 Device Time	Setting	
2-3 Device Advar	nce Setting	
2-4 User Login S	letting	
2-5 Debug Settin	gs	
2-6 Event Notice		
2-7 Auto Provisio	oning	
2-8 SNMP		
CH3 NAT Sett	ting	
3-1 DHCP Ser. (I	DHCP server)	
3-2 UPNP (unive	ersal plug and play server)	
3-3 Bandwidth (I	Bandwidth Control)	
3-4 URL Filter	·	
3-5 IP Filter		
3-6 MAC Filter.		
3-7 APP Filter		
3-8 Port Filter		
3-9 Port Fwd		
CH4 VOIP Set	tting	
4-1 SIP		
4-2 Audio		
4-3 Tone		
4-4 NAT Travers	al	
CH5 VOIP Ad	vance	

5-1 SIP	36
5-2 Audio	38
5-3 Ring	40
CH6 Dialing Plan	41
6-1 General	41
6-2 Dialing Rule	42
6-3 Digit Manipulation	43
6-4 Phone Book	44
CH7 FXS Setting	45
7-2 SIP Proxy	48
7-3 Caller ID	49
7-4 Others	50
CH8 SIP Trunk	51
8-1 Create SIP Trunk	52
CH9 Route Plan	54
9-1 Create Route Plan	55
CH10 Status	57
10-1 Device States	57
10-2 Line States	58
10-3 SIP Trunk States	59
CH11 Maintenance	60
11-1 Firmware Update	60
Appendix A System Recovery	61
Appendix B HTTP auto provisioning	65

WellGate 2424s

CH1 Introduction

2424s Telephony Gateway

The Welltech 2424s is a 24 ports FXS (WellGate 2424s) VoIP gateway which includes 1-WAN/1-LAN (management port) 10/100 base-T network environment. Field-proven quality of Voice communication and Fax transmission over IP broadband access network to makes WellGate 2424s to be an excellent solution for various VoIP applications.

1-1 Physical Interface

- Ethernet port (RJ-45, 10/100 base-T)
 - 1-WAN port, for connect to router, ADSL modem (ATU-R), or switch hub directly.
 - 1-LAN port, for PC, management or other network devices connecting.
- Telephony port (RJ-11)
- > 24-FXS ports, to connect to analog phone.
- Console port (RS232, rate: 115200)
- AC power Jack
- Status indicated LED Indicates Power, Ethernet, Line, SIP and system status

1-2 Environmental

Dimension: 440 × 44 × 262 mm(WxHxD) Weight: 3.25kg (unit) Operating Temp. & Humidity

- Temp.: 0°C~45°C (32°F~113°F)
- Humidity: 10%~85% relative humidity, non-condensing Power Input:
 - INPUT: AC100V~240V, 50/60Hz

1-3 Front Panel: LED Indicators

WellGate 2424s



Figure 1-3-1 front panel

LED	Description
Power	When the power adapter is connected, the LED will light up green.
Status	When system is startup successfully, the LED will light up green.
Proxy	When the gateway is registered successfully to a Proxy, this will light up green.
WAN	This will light up green when the gateway's WAN port is physically connected to the public internet. When data is transmitted through this port, it will flash green. The default IP of WAN port is 10.1.1.3.
LAN	This will light up green when the gateway's LAN port is physically connected to a local network (Refer to Rear Panel section in page number for location of LAN port). When data is transmitted through this port, it will flash green. The default IP of LAN port is 192.168.123.123.
Port1~Port24	The status LED for FXS port 1-24, this will light up amber orange when the connected phone is engaged in a conversation. It will flash amber orange when there is an incoming call.

1-4 Rear Panel: LED Indicators

WellGate 2424s



Figure 1-4 rear panel for FXS

Item	Description
Phone1 - Phone24	The status LED for FXS port 1-24, this will light up amber orange when the connected phone's handset is lifted, or when the connected phone is engaged in a conversation. It will flash amber orange when there is an incoming call. (WellGate 2424s only)
LAN	10/100 Base-T RJ-45 socket for LAN port, connects to PC for management purpose.
WAN	10/100 Base-T RJ-45 socket for WAN port, connects to wide area network.
AC100V~240V	The power socket, input AC 100V~240V, output DC 12V, 6A.
Console Port	This port is for RS-232 cable connected , the baud rate is 115200, data bits is 8, parity is none, stop bits is 1, flow control is none. Normally the port is used for Welltech's engineer debug. Notice: if you want to use it, just could use command "ifaddr –print" (to display IP address of WAN and LAN port on screen) or "passwd" (to change password), other commands are not yet available.
Reset Button	Press and hold over 5 seconds to reload factory default setting, this will erase all existing settings configured on this gateway.

1-5 QUICK SETUP

Note:

<u>Please use Windows XP IE 6.0 web browser or above version to</u> <u>configure FXO gateway webpage setting. Welltech products don't</u> <u>support other Web Browser such as FireFox to configure.</u>

Login :

Setp1: Setup the administrative PC's IP address to be same as WellGate 2424s and connect the Ethernet cable into WAN or LAN port. Start IE6.0 (or later version) to navigate WellGate 2424s web management system by typing the default URL which is <u>http://192.168.123.123</u> (through LAN port) or <u>http://10.1.1.3</u> (through WAN port). The screen will display User Name and Password (the default user id is *root* and user password is *root*). (See figure 1-5-1 web access)

Connect to 192.1	68.17.228	? ×
R		GE
The server 192.10 Center requires a Warning: This ser password be sent without a secure o	58.17.228 at VoIP D username and pass ver is requesting tha in an insecure mann connection).	evice WEB Management word. It your username and ier (basic authentication
User name:	2	-
<u>P</u> assword:		
	🔲 <u>R</u> emember m	ny password
	OF	Cancel

Figure 1-5-1 web access

Step 2: After login, the screen shows the Home page of WellGate 2424s. (See figure 1-5-2 Network configure-1)

	network Time Adva	nce User Login Debug Event Notice Provisioning SNKP	
Device Setting 🛞	Setting :		Second at a second second second as a second at the local second s
NAT Setting 🚯	IP Support :	IPV4 Only 💌	
VOIP Setting 🛞	WAN Setting :		
VOIP Advance	Network Type :	Fixed IP ·	
Dialing Plan 🕕	IP Address :	DHCP PPPoF	
FXS Setting	Netmask :	255.255.255.0	
	Default Gateway :	10 1 1 254	
SIP Trunk	DNS Server1 :	168.95.1.1	
Route Plan ()	DNS Server2 :	168.192.1.12	
Status 🕘	VOIP VLAN :	C Enable @ Disable	
Maintenance 🕑	VOIP VLAN ID(2-4094):		
	VOIP VLAN Priority :		
	LAN Setting :		
	Mode :	O Management @ NAT O Bridge	
	IP Address :	192.168.123.123	
	Netmask :	255.255.255.0	
	DDNS (DynDNS) Setting :		
	DDNS (DynDNS) :	C Enable B Disable	
			Apply Gancel

Figure 1-5-2 Network configure-1

Change Default IP Network:

Step 3: After successfully logon to the system, we need to change the network configuration. Click *Device Setting > Network* to setup the service network interface (WAN) parameters. Enter the deserved IP address, netmask and default gateway or selected to "DHCP" or "PPPOE". Apply the change by clicking *Apply* button as fig (See Figure 1-5-3 Network configure-2).

Note: If Gateway WAN port are setting in the 10.x.x.x segment, please make sure that you also change the LAN port to other segment such as 192.168.x.x

	and de	
ting 🚯 IPS	lapport :	IPV4 Only 💌
tting 🛞 🛛 🗰 🗛	N Setting :	
ance (1) Net	work Type :	Fixed IP ·
Plan ()	Address (DHCP
Net	mask t	255.255.255.0
Def	ault Gateway :	10.1.1.254
runk 🕘 🛛 DNS	Servert :	168.95.1.1
Plan () DNS	Server2 :	168.192.1.12
VOI	P VLAN :	C Enable 9 Disable
ance 🖲 🛛 voi	P VLAN ID(2-4094) :	
VOI	P VLAN Priority :	
LAN	Setting :	
Mod	#1	O Management @ NAT O Bridge
IP A	Address :	192 168 123 123
Net	mask :	255.255.255.0
DD	ts (DynDNS) Setting :	

Figure 1-5-3 Network configure-2

Change Default Time setting:

Step 4: When re-logon to the new IP address, the next is to setup the system time zone. Click *Device Setting > Time* to setup the system. Enter the current SNTP server, time zone and daylight saving parameters. Apply the change by clicking *Apply* button. (See figure 1-5-4 Time setting)

Dentice Section (Network	Time	Advance	User Login	Debug	Event Notice	Provisioning	SNHP	1	
Device setting @	Current Time:			2011/12/1	9 09:01:23					
NAT Setting	NTP Time Servers			168.95.19	5.12					
VOIP Setting	NTP Refresh Inter	val(sec):		43200						
VOIP Advance	Time Zonei			GMT		-				
Dialing Plan 🕘	Daylight Saving 1			() Yes	e No					
FXS Setting 🕘										Apply Cancel
SIP Trunk 🕘										
Route Plan										
Status (
Nated an article (C)										

Figure 1-5-4 Time setting

Modify SIP Account Parameter:

Step 5: The next step is to add a SIP trunk for VOIP calling. For WellGate 2424O, it is necessary for VOIP calling while WellGate 2424S is optional. Click *SIP trunk and new to* create the required sip trunk. Enter the trunk ID to 1 and input those SIP parameters. Apply the change by clicking *Apply* button. (See Figure 1-5-5 SIP Trunk).

Note: please don't delete sip trunk, even it is unless at all, because it have to be used with Route plan.

Device Setting	SIP True	-						
	(in the second	Trunk ID	Register Type	TEL No	Proxy Server	Proxy Server Port	Outbound Prexy	Outbound Server Port
NAT Setting	33	1	Register	0700123123	192.168.18.247	5060		5060
VOLP Setting	and a second			ilan adam ana an		New Ex	port Import Total Recon	d: 1 Total Page: 1 Page 1
OIP Advance 🕘								
Dialing Plan 🚯								
FXS Setting 🕘								
SEC. Lines Co.								
Route Plan 🕘								
Status 🕘								
Maintenance 🕘								

Figure 1-5-5 SIP Trunk

Modify FXS SIP Settings: (WellGate 2424s only)

Step 6: Set the SIP proxy server for FXS calling. For WellGate 2424s, the all FXS ports are using the same SIP proxy setting. If you need use different SIP proxy server, please use SIP trunk instead. Click FXS Settings > SIP Proxy to

(9)		
Domain :		
Primary Proxy Server:	10.1.1.2	
Primary Proxy Server Ports	5060	
Outbound Proxy Server:		
Outbound Proxy Server Ports	5060	
Primary Proxy Server Keep Alive:	C Enable @ Disable	
(4) Keep Alive Time (sec):		
0 Secondary Proxy:	C Enable 🔍 Disable	
G Secondary Proxy Server:		
Secondary Proxy Server Ports		
Secondary Dutbound Proxy Server:		
Secondary Dutbound Proxy Server Port:		
Register Expires:	120	
Secondary Proxy Server Keep Alive:	Enable Disable	
Keep Alive Time (sec):		

set the dedicate FXS SIP proxy server. (See Figure 1-5-6 SIP Proxy)

Figure 1-5-6 SIP Proxy

Step 7: Setup each FXS line's parameters by clicking the line ID from FXS settings > FXS Line. Modify the SIP register information and apply it. (See Figure 1-5-7 SIP Proxy)

PKS Line	SIP Proxy Caller ID	Others		
	Line ID	State	TEL No	Hot Line TEL
	1	Active	1000	
ng 🕘 🚽	2	Active	1001	
ance 🕘 🦪 🦪	3	Active	1002	
01 m (1)	4	Active	1003	
2 de 1	5	Active	1004	
ettins 😌 🛛 🛫	6	Active	1005	
Trunk 🕘 🦪	7	Active	1006	
10 10 to 10	8	Active	1007	
2 · · · · · · · · · · · · · · · · · · ·	9	Active	1008	
Status 🚯 🥠	10	Active	1009	
mance 🕘 🛛 🦪	11	Active	1010	
4	12	Active	1011	
1	13	Active	1012	
4.	14	Active	1013	
1	15	Active	1014	
1	16	Active	1015	
	17	Active	1016	
1	10	Active	1017	
1	19	Active	1018	
1	20	Active	1019	
1	21	Active	1020	
1	22	Active	1021	
1	23	Active	1022	
1	24	Active	1023	

Figure 1-5-7 SIP Proxy

Soft Reset WellGate 2424s:

Step 8: After modify basic setting. It is required to reset WellGate 2424s. Click *Maintenance > Maintenance > Soft-Reset or Reboot* to take effect. Apply the change by clicking *Apply* button. (See Figure 1-5-8 Quick-Reset)



Figure 1-5-8 Quick-Reset

Check WellGate 2424s Registered Status:

Step 9: After soft-reset or reboot.

>Click *Status* > *SIP Trunk Status* to check whether registered or not. (See Figure 1-5-9 SIP Trunk States)

and a second		
ng 🕘 Device Status Line Status S10 Trunk Sta	ities	
Account	Registered	Concurrent Call
0700123123	Registered	٥
na 🕘	Refresh Interval (second): 🧧 🔻	
0		
m		
×		
•		
(D)		
0		

Figure 1-5-9 SIP Trunk States

>Click **line status** to check whether registered or not. (Figure 1-5-10 SIP Trunk States)

Line 1 2 3 4 5 6 7	Account 1000 1001 1002 1003 1004 1005	Registered Registered Registered Registered Registered Registered	Call State Ide Ide Ide Ide
1 2 3 4 5 6 7	1000 1001 1002 1003 1004 1005	Registered Registered Registered Registered Registered	Idle Idle Idle Idle
2 3 4 5 6 7	1001 1002 1003 1004 1005	Registered Registered Registered Registered	Idle Idle Idle
3 4 5 6 7	1002 1003 1004 1005	Registered Registered Registered	Idle Idle
4 5 6 7	1003 1004 1005	Registered Registered	Idle
5 6 7	1004	Registered	10
6 7	1005		TQI6
7		Registered	Idle
	1006	Registered	Idle
8	1007	Registered	Idle
9	1008	Registered	Idle
10	1009	Registered	Idle
11	1010	Registered	Idle
12	1011	Registered	Idle
12	1012	Registered	Idle
14	1013	Registered	Idle
15	1014	Registered	Idle
16	1015	Registered	idle
17	1016	Registered	Idle
18	1017	Registered	Idla
19	1018	Registered	Idle
20	1019	Registered	Idle
21	1020	Registered	Idle
22	1021	Registered	Idle
23	1022	Registered	Idle
24	1023	Registered	Idle
	7 8 9 10 11 12 14 15 14 15 16 17 18 19 20 20 21 22 22 22 24	7 1006 8 1007 9 1008 10 1009 11 1010 12 1011 13 1012 14 1013 15 1014 16 1013 17 1046 18 1017 19 1018 20 1019 21 1000 22 1021	7 1006 Registered 8 1007 Registered 9 1008 Registered 10 1009 Registered 11 1010 Registered 12 1011 Registered 13 1012 Registered 14 1013 Registered 15 1014 Registered 16 1013 Registered 17 1014 Registered 18 1017 Registered 19 1018 Registered 20 1018 Registered 21 1020 Registered 22 1021 Registered 23 1022 Registered 24 1022 Registered

Figure 1-5-10 SIP Trunk States

Through the above settings, the WellGate 2424s should able to do the following:

For FXS (WG2424S):

The user can pick up the handset and hear dial tone. Call out and talk.
 For VOIP incoming call to a dedicate FXS number, the dialed phone will ring and can answer to talk.

CH2 Device Settings

From this setting category, all devices related parameters can be found here.

2-1 Network Configuration

> Network

IP Support :	IPV4 Only •	
WAN Setting :	Name and a second s	
Network Type :	Fixed IP -	
IP Address (DHCP 14	
Natural .	PPPot	
and the second s	1001001000	
Default Gateway :	192.168.16.254	
DNS Server1 :	166.95.1.1	
DNS Server3 :	168 95 192 1	
VOIP VLAN -	C Enable 🕈 Disable	
VOIP VLAN ID(2-4094) :		
VOIP VLAN Priority 1		
LAN Setting :		
Hode :	🔿 Management 🖲 NAT 🔿 Bridge	
IP Address t	192.168.123.123	
Netmask :	255 255 255 0	
DDNS (DynONS) Setting :		
00000 (0-0000)		

Figure 2-1 network setting

Parameter Description:

WAN Setting:

- Network Type: support "Fixed IP"; "DHCP"; "PPPOE"
- IP Address: IP address
- **Default Gateway**: Default gateway
- DHCP Tag (option 60): input Vendor class identifier or not.
- DHCP Tag (option 61): input Client identifier or not.
- DNS Server1: Primary DNS Server IP network
- DNS Server2: Secondary DNS Server IP network
- VOIP VLAN: Enable VOIP VLAN or not. When enable VOIP VLAN, the WAN port can be only accessed by VLAN. If it is required to manage the WellGate 2424s, Administrator can use LAN port instead.
- VOIP VLAN ID(2-4096): VLAN ID Used

Note: the default WAN IP address is 10.1.1.3.

LAN Setting:

- Management mode: This LAN port is used for management purpose, not used for register or routing.
- NAT mode: DHCP function on the LAN port. The LAN ports will function as a DHCP server, network devices connected to them will be issued with IP addresses. (On the lift item will add a NAT setting, the information please refer NAT setting)
- **IP Address:** IP address (please set to 192.168.x.x if your WAN port is using 10.x.x.x IP segment).
- Netmask: IP network mask
- **Bridge mode:** At this mode, both WAN and LAN ports are configured to Switch/Hub features. LAN port access to WAN port directly. Note: default LAN IP address is 192.168.123.123

DDNS (DynDNS) Setting:

- **DDNS (DynDNS):** enable or disable dynamic DNS feature.
- **Domain Name:** input your Domain Name
- User Name: input your user name
- **Password:** input your password

2-2 Device Time Setting

WellGate 2424s support SNTP with time zone and daylight saving.

Device Setting > Time

Device Setting	Network	Time	Advance	User Login	Debug	Event Notice	Provisioning	SNMP			
NAT Calling	Current Time:			1970/01/	01 00:41:59						
nut setting e	NTP Time Servers			168.95.1	92.1						
VOIP Setting	NTP Refresh Inte	rval(sec):		43000							
VOIP Advance	Time Zones			GMT							
Dialing Plan 🕘	Daylight Saving :			@ Yez	() No						
FXS Setting	Daylight Blass			+00:00							
SIP Trunk	Daylight Start :			Month 1			•	Week Day :	Sun	•	
Route Plan 🕕				Apply We	alc I	1	•	Hour I	00	•	
Status 🕘	Standard Start :			Month a			•	Week Day :	Sun	•	
Maintenance (0)				Apply We	ek :	1	•	Hour :	00		
										Apply	Cancel

Figure 2-2 Time setting

- **Now:** Current Time (display only)
- NTP Time Server: SNTP time server
- NTP Refresh Interval(sec): The frequency to sync NTP server in seconds
- Time Zone: The time-zone WellGate 2424s is located.
 - ♦ Standard: Use a predefined standard time zone
 - ◆ Customize: Use a user defined time zone
- Daylight Saving: Auto adjust daylight saving timer or not
- **Daylight Bias:** The offset added to the Bias when the time zone is in daylight saving time
- Daylight Start: The date that a time zone enters daylight time
 - ♦ Month: 01 to 12
 - ♦ Week Day: Sunday to Saturday
 - Apply Week (Day:01 to 05, Specifies the occurrence of day in the month; 01 = First occurrence of day, 02 = Second occurrence of day, ...and 05 = Last occurrence of day)
 - ♦ Hour: 00 to 23
- Standard Start: The date that a time zone enters daylight time
 - ♦ Month: 01 to 12
 - ♦ Week Day: Sunday to Saturday
 - Apply Week (Day:01 to 05, Specifies the occurrence of day in the month; 01 = First occurrence of day, 02 = Second occurrence of day, ...and 05 = Last occurrence of day)
 - ♦ Hour: 00 to 23

2-3 Device Advance Setting

> Advance

Dentice Nethern	Network Time Advance	User Login Debug Event Notice Provisioning SNMP	
	HTTP Service:	Ports 80	
HAT Setting	HTTPS Service:	③Enable Ports 443 O Disable	
VOIP Setting	Telnet Service:	⊙ Enable Port: 23 O Disable	
VOIP Advance	HTTP/HTTPS Service Access on WAN:	⊙ Enable O Disable	
Dialing Plan 🕕			Apply Cancel
FXS Setting 🕘			
SIP Trunk 🚯			
Route Plan 🕖			
Status 🚯			
Maintenance (2)			

Figure 2-3 Advance setting

- HTTP Service: The Administrator Web service port (the default is 80)
- HTTPS Service: The https web service port (the default is 443)
- Telnet Service: The telnet service port (the default is 23)
- HTTP/HTTPS Service access on WAN: When click the disable option; The WEB service will be rejected on WAN port, so please be careful with this function. If you wanted to enable WAN port again, you need to access this device from its LAN port to connect to WEB pages and enable WAN port.

2-4 User Login Setting

Three level of users can be used, administrator, supervisor, user. Each level of users will have different predefined access level.

>User Login

(1) Administrator	Trans.		
Oser IDi	root		
Passwords			
Confirm Password:			
Languages	English	~	
User ID:	admin		
Passwort			
Confine Descent			
Contrem Password!			
Language:	English	M	
User			
User ID:	user		
Password:			
Confirm Password:			
Languager	English	~	

Figure 2-4 user login setting

- Administrator: The administrator level user which has full access of WellGate 2424s.
- **Supervisor:** The supervisor level user which has limited administrative access right.
- User: The user access right which only allows to setting some user related features.
- User ID: Login User ID
- Password: Login Password
- Confirm Password: Confirm new password again
- Language: The web page language used when the account login. To add a customized local language, please contact Welltech.

2-5 Debug Settings

WellGate 2424s provides the real time debug to syslog or through telnet interface. It generates the debug information based on debug level and modules. Since the generating debug will consume system resource, it is recommended to turn on only for necessary and under Welltech FAE's instruction.

Debug

14	Network Time Advance	User Login Dehug	Event	Notice Provisioning	SNMP	
• 🛛	phoneHgr					
0 🕑	Debug Module:	Device Control		Call Control	Вов	C Verbos
•	Debug Level:	Emergency	•			
	SipNgri					
	Debug Moduler	Register		Cal	Sip Message	C Other
	Debug Level:	Emergency	•			
	SNTP1					
	Debug Level:	Emergency				
e	DevMgri					
2	Debug Level:	Emergency				
intenance 🛞 🔹 emsciti						
	Debug Levels	Emergency				
	SYSLOG	🔿 Enable 🖲 Disable				
L	Check for start from Any Time:	Start from Any Time				
	Sysleg Start(YYYY/MM/DD HHiMM):					
	Syslog Stop(YYYY/MM/DD Hill:MM):					
	Syslog Serveri					
Sysleg Ports DSP Debug:	Syslog Port:					
	OSP Debugi	C Enable @ Disable				
	DSP Capture Server					
	DSP Capture Port:					

Figure 2-5 Debug setting

- **SYSLOG:** Enable or disable to send system information to SYSLOGD server or not
- Check for start from Any Time: Always Send: Always send syslog or only during a specified time range.
- Syslog Start (YYYY/MM/DD HH:MM): Always Send: Always send syslog or only during a specified time range.
- Syslog Stop (YYYY/MM/DD HH:MM): The syslog stop sending time.
- Syslog Server: Syslog server IP address
- Syslog Port: syslog server service port (default is 514)
- **DSP Debug:** Enable or disable to send DSP information to capture log
- DSP Capture server: Syslog capture server IP address
- **DSP Capture port:** syslog capture server service port (default is 50000)

2-6 Event Notice

WellGate 2424s can send Syslog Event Notice when it had the following cases:

- 1. Register Failure or re-registered
- 2. FXO is plug or unplug
- 3. Ethernet reconnected
- 4. System started

	Network	Time	Advance	User Login	Debug	Event Notice	Provisioning	SNMP			
AT Setting ()	Syslog Notice :		OEnable 🕥	Oisable							
Section g	Syslug Serveri										
ting 🚯	Sysleg Ports										
nce 🚯	The second s								A	pply	Cancel
Pian 🕘											
ng 🕔											
•											
C											
• ④)											

Figure 2-6 Event notice setting

- **SYSLOG:** Enable or disable to send system event to SYSLOG server or not
- Syslog Server: Syslog server IP address
- Syslog Port: syslog server service port (default is 514)

2-7 Auto Provisioning

The WellGate 2424s can be provisioned by WellEMS 9510 for large deployment. Please contact Welltech for availabilities.



Figure 2-7-1 Provisioning

Select 9510:

1	Network Time Advance	User Login Dohun Event Natice	Drawis trains	
Device Selling (2)	Provisioning Type:	9510	Belantonine.	
VOTE Setting	EMS:	Enable		
VOIP Advance	EMS Discovery ports	Enable Discovery		
Dialing Plan (1)	EMS IP address:			
FXS Setting 🚯	Data Encrypt :	@ Enable O Disable		
SIP Trunk (1)				Apply Cancel
Route Plan 🕘				
Status 🚳				
Maintenance (8)				

Figure 2-7-2 Provisioning type of 9510

Parameter Description:

(This function is not available yet for WellEMS 9510)

- EMS: Enable auto provisioning service by WellEMS 9510 or not.
- Enable: Enable the service and use manual configured EMS server parameters.
- ◆ **Disable:** Disable the auto provisioning service.
- Discovery: To automatically discover the EMS server or not. By using this mode, WellEMS 9510 need to be the same IP network in order to make the IP broadcasting work.
- EMS Discovery Port: WellEMS 9510 service auto discovery

broadcasting port (default is 61005).

- EMS summary refresh interval: How long the WellGate 2424s will report its summary status to WellEMS 9510 in seconds.
- EMS IP address: The WellEMS 9510 server IP address
- EMS Server Port: The WellEMS 9510 Server port
- Data Encrypt:

Disable: disable encryption function.

Welltech encryption: Enable Welltech proprietary encryption for SIP signaling and RTP. It is required a Welltech SIP proxy server (WS6500 or SIPPBX 6200) to work with this feature. When enable it, you can hide your VOIP traffic from ISP's monitor.

External encryption: for custom encryption, it is valid now, if you want add the function to mach your proxy, please contact with Welltech's sales.

Select Http:

This feature is for feature usage only.



Figure 2-7-3 Provisioning type of Http

- Http config URL: internal used only
- **Refresh interval(minute):** interval to check whether have a new configuration/firmware or not in minutes
- User ID: specify the login id for http authentication
- Password: specify the password for http authentication

2-8 SNMP

e Setting 🕣	Network Time	Advance	User Login	Debug	Event Notice	Provisioning	SNMP	
and the second second	SNMP Agent :							
etting 🚯	SNHP Agent 1	⊕Enable ○0	lisable					
a 🚯 🛛	Read Only Community Name :	public						
	Read Write Community Name	private						
	SNMP Agent Access on WAN	@Enable Or	Disable					
	Trusted Peer :							
	Type 1		Any Address	~				
9	IP Address :		Specify an IP A Specify a Subre	ddress				
	Submet Mask :							
	SNHP Trap :							
	SNHP Trap :		⊙ Enable ○ 0					
L	Destination :							
Community :			public					
				Terri di Serie della di				Apply Cancel

Figure 2-8 SNMP

SNMP Agent:

- **SNMP Agent:** Enable SNMP or not.
- Read Only Community Name: The community name to read through SNMP protocol
- **Read Write Community Name:** The community name to read and write through SNMP protocol.
- **SNMP Agent Access on WAN:** Enable SNMP to be accessed through WAN port or not.

Trusted Peer:

- Type:
 - Any Address: Any address can retrieve the SNMP information.
 - Specify an IP Address: Only the IP address listed can retrieve the SNMP information. Normally, it will be the SNMP manger IP address.
 - **Specify a Subnet:** Only the network specified can retrieve the SNMP information.
- IP address: The IP address for a trusted peer
- Subnet Mask: The network mask for a trusted peer

SNMP Trap:

- SNMP Trap: Enable SNMP trap or not
- **Destination:** The IP address for SNMP manager to receive the SNMP trap
- **Community**: The communicate name for sending the SNMP trap

CH3 NAT Setting

The WellGate 2424s can support NAT, 2 ethernet leg (gw) or bridge mode. Here are the settings for NAT related service.

3-1 DHCP Ser. (DHCP server)

	DIICPSrv. UPeP	Bandwidth URL Filter	1P Filter	MAC Filter	App Filter	Port Filter	Port Fwd.		
Device Setting	DHCP Server :	🖲 Enable 🔘 Disable			n session de la				
NAL Setting @	Client Range Start IP:	192.168.123.1							
VOIP Setting	Client Range End IP:	192.168.123.100							
VOIP Advance	Default Gateway	192.168.123.123							
Dialing Plan 🚯	Submask:	255.255.255.0							
FXS Setting	DNS Server 1:	168.95.1.1							
SIP Trunk	DNS Server 2:	168.95.192.1							
Route Plan 🕘	8							Apply	Cancel
Status 🕘									
Haintenance 🕘									

Figure 3-1 DHCP server

- **DHCP Server:** Enable DHCP server or not.
- Client Range Start IP: specify DHCP client lease start IP
- Client Range End IP: specify DHCP client lease end IP
- **Default Gateway:** specify the default gateway
- Submask: specify the submask.
- DNS Server 1: specify the DNS server
- DNS Server 2: specify the DNS server

3-2 UPNP (universal plug and play server)



Figure 3-2 UPnP

• UPNP IGD: Enable UPNP server or not.

3-3 Bandwidth (Bandwidth Control)

By using bandwidth control feature, the user can manage the traffic based on their needs.

Device Setting	DHCP Sry. UPnP	Bandwidth	URL Filter	IP Filter	MAC Filter	App Filter	Port Filter	Port Fwd.			
Device secting (Bandwidth Control :	Secretation and sec		111 348130300000		10 ST 10 10					
NAT.Setting 😔	Bandwidth Control :		C Enable	e 🖲 Disable							
VOIP Setting 🚳	Download Bandwidth :			Kbps							
VOIP Advance	Upload Bandwidth :			Kbps							
Dialing Plan	Maximum Bandexith and Reserved Bandexith :										
	Setup Hethed :		@ Percer	itage 🔿 specific							
TXS Setting	Priority 1 i		0 %								
SIP Trunk 🕕	Priority 2 1		0 1								
Route Plan 🚯	Priority 3 :		0 %								
Status 🚯	Edit Control List :		Edit								
Haintenance 🚯										Apply Cancel	

Figure 3-3-1 Bandwidth control

Bandwidth Control:

- Bandwidth Control: enable bandwidth control or not.
- **Download Bandwidth:** specify total bandwidth for download (unit: kbps). 0 indicates no limitation.
- Upload Bandwidth: specify total bandwidth for upload (unit: kbps). 0 indicates no limitation.

Maximum Bandwidth and Reserved Bandwidth:

• Setup Method: bandwidth control method, percentage or specify

the required bandwidth

- percentage : total bandwidth
 - **priority 1**: highest priority percentage
 - **priority 2**: Normal priority percentage
 - **priority 3**: low priority percentage

D	DHCP Srv.	UPnP	Bandwidth	URL Filter	1P Filter	HAC Filter	App Filter	Port Filter	Port Fed.		
Device setting	Bandwidth Control	le.	1.44	Contraction of the local division of the loc	al a station in the same	and the state of the second state of the	an electron or		11 - 11 - 12 - 14 - 14 - 14 - 14 - 14 -		jį
NAT Setting 😂	Bandwidth Control	0		O Enable	9 Disable						
VOIP Setting 🕘	Download Bandwin	debi v		0	0 Kbps						
VOIP Advance	Upload Bandwidth	1		0	0 Kbps						
Dialing Plan 🚯	Haximum Bandwidth and Reserved Bandwidth :										٩
FXS Setting	Setup Method :			C Percen	tage & specific						
	Priority 1 - Downlo	Priority 1 - Download :			0 Klep	, Reserved 0	Kbps				
SIP Trunk	Priority 2 - Downle	ad :		Maximum	0 Kbp	. Reserved 0	Kbps				
Route Plan	Printity 3 - Downle	r bot		Maximum	0 Кірр	. Reserved 0	Kbps				1
Status 🕚	Priority 1 - Upload	hi i		Maximum	0 Кър	. Reserved 0	Къре				
Maintenance 🚳	Priority 2 - Upload	íř.		Maximum	0 Кар	. Reserved 0	Kbps				1
	Priority 3 - Upload	62 - C		Maximum	0 Кър	, Reserved 0	Kbps				
	Edit Control List :			Edit							1
										Apply Cance	

Figure 3-3-2 Bandwidth control

- > specific :
 - **priority 1 Download:** highest priority download bandwidth
 - priority 2 Download: normal priority download bandwidth
 - priority 3 Download: low priority download bandwidth
 - priority 1 Upload: highest priority upload bandwidth
 - priority 2 Upload: normal priority upload bandwidth
 - **priority 3 Upload:** low priority upload bandwidth

Device Setting	Edit Control List			
NAT Setting G	Summer Street Street	Priority	Type	Detail
VOIP Setting	and the summer of the state of the			New Trisert Back Total Records 9
VOIP Advance				
Dialing Plan 🕢				
FXS Setting ④				
SIP Trunk 🕔				
Route Plan 🕘				
Status 🕘				
Maintenance 🕘				

Figure 3-3-3 Edit control list

In order to set which target is belonged to which priority, the following is the setting method for target's priority.

IP Target	t		
Device Setting	Create Control List		
NAT Settion	Priority :	1.*	
	Type :	Ib .	
VOIP Setting 🕑	Configure Type :	9 Unique 🗇 1P Range	
VOIP Advance 🛞	IP Address :	none	
Dialing Plan 🕕			Apply Cancel Back
FXS Setting 🕕			
SIP Trunk			
Route Plan 🕘			
Status 🕘			
Maintenance 🛞			

Figure 3-3-4 IP Target 1

Device Setting	Create Control List		
MAX CARDING CO.	Priority :	1.*	
	Туре :	IP •	
VOIP Setting	Configure Type :	O Unique 🔮 EP Range	
VOIP Advance	Start IP :	none	
Dialing Plan ④	End IP :	none	
FXS Setting 🕘			Apply Cancel Back
SIP Trunk			
Route Plan 🛞			
Status 🚯			
Maintenance 🛞			

Figure 3-3-5 IP Target 2

- **Priority:** Priority value for the target
- Type: The target type is set to IP
- Configure Type: unique IP or a range of IP address
- Unique:
 - ♦ IP Address: the IP address to be set
- IP Range:
 - **Start IP:** The starting IP for a range
 - End IP: The stopping IP for a range

Port Target

Device Setting	Create Control List		
NAT Settion G	Priority :	1.*	
HOLD COLUMN (D)	Туре і	Port ·	
voir setting	Configure Type :	🖲 Unique 🔘 Port Range	
VOIP Advance	Part I	none	
Dialing Plan 🛞	Protocol :	TCP -	
FXS Setting 🛞		UDP	Apply Cancel Back
SIP Trunk 🚇		BUTH	
Route Plan 🕚			
Status 🕕			
Haintenance (4)			



• Priority: Priority value for the target

• **Type**: The target type is set to port number

Configure Type: unique port number or a range of port number
 Unique:

- **Port:** the port number to be added
- **Protocol:** protocol for the port
- Port Range:
 - Start port: the starting port number
 - End port: the stop port number
 - Protocol: protocol for the port range

Application Target

Create Control List
Priority :
Type :
Application :

Figure 3-3-7 Application Target

- **Priority:** Priority value for the target
- **Type:** Application
- Application: the list for the application

DSCP target

Device Setting	Create Control List						
and a second of the	Priority :	1 *					
	Туре і	DSCP					
VOIP Setting	DSCP :	none	16				
VOIP Advance					App	ly Canoi	el Back
Dialing Plan 🛞							
FXS Setting 🚯							
SIP Trunk 🕘							
Route Plan 🔕							
Status 🚯							
Maintenance 🕘							

Figure 3-3-8 DSCP Target

- **Priority:** Priority value for the target
- Type: DSCP value
- DSCP: The DSCP will be mapped to the priority

The WellGate 2424s support firewall features as below.

3-4 URL Filter



Figure 3-4 URL Filter

• URL Filter: the specified url will be blocked

3-5 IP Filter



Figure 3-5 IP Filter

- IP Filter: The specified IP address to be blocked
- Local IP address: The LAN side IP address to be forwarded
- Protocol: TCP, UDP or both are used for port forward

3-6 MAC Filter

vice Setting (D)	DHCP Sev.	UPnP	Bandwidth	URL Filter	1P Filter	MAC Filter	App Filter	Port Filter	Port Fwd.	
NAT Follow	HAC Filter :			C Enable	R Disable A	pply				
	-							MAC		
OIP Setting 🕑									[Apply]	Cancel
P Advance 🚯										NOW Total Record
aling Plan 🛞										
(S Setting 🕘										
IP Trunk 🕘										
oute Plan 🚯										
Status 🚯										
ntenance 🚯										

Figure 3-6 MAC Filter

• MAC Filter: The MAC address to be blocked

3-7 APP Filter

Applic.	tion Filter I		C Enable	e Otsable A	ylqc						
							Application				
19 🕀					select				Apply	Cancel	
0					select	a la Chinasa Di	D Den geram)	-			NEW Total Record
					applejuice (Appl	le Juice - P2P file	esharing)	- 1			
					bittorrent (Bitto	rrent - P2P files	haring. Ex: BT)				
					directconnect (D	Direct Connect	P2P filesharing)				
					fasttrack (FastT	rack - P2P filesh	aring)				
					ftp (FTP - File Tr anutella (Gnute	ansfer Protocol) IIa - P2P fileshar	ing, Ex: foxy)				
					goboogy (GoBo	ogy – a Korean	P2P protocol)				
					kugoo (Kuggo -	a Chinese P2P	program)				
					msn-filetransfer	(MSN file transf	fer)				
					poco (POCO ani	d PP365 - Chine	se P2P fileshann	9)			
					pop3 (POP3 – P gg (Tencent OO	ost Office Proto protocol)	col version 3)				
					rtp (Real-Time T	ransport Protoc	(10				
					skypeout (Skyp	e to Phone)					
					skypetoskype (Skype to Skype)					
					smp (SMIP - S	imple Mail Irans	ter Protocol)				

Figure 3-7 App Filter

• **APP Filter:** application to be blocked

3-8 Port Filter

DHCP Srv. UPnP	Bandwidth URL Filter IP Filter MAC Filte	App Filter Fort Filter Port Fwd.
Port Filter :	C Enable @ Disable Apply	
	Port Range	Protocol
		TCP Apply Cancel
		UDP Now Total Record: 0
		BOTH

Figure 3-8 Port Filter

- Port Filter: enable port Filter or not.
- **Port Range:** Starting and stopping port to be forward. If you are using only 1 port, please set the starting equal to stopping port.
- **Protocol:** TCP, UDP or both are used for port blocked.

3-9 Port Fwd

The WellGate 2424s support port forward feature as below



Figure 3-9 Port Fwd

- Port Fwd: enable port forward feature or not
- **Port Range:** Starting and stopping port to be forward. If you are using only 1 port, please set the starting equal to stopping port.
- **Protocol:** TCP, UDP or both are used for port forward
- Local IP address: The LAN side IP address to be forwarded
- Local Port: The LAN side port to be forwarded. If you are using the port range, this port indicates the starting port.

VOIP Parameters Setting **SIP Parameters**:

CH4 VOIP Setting

4-1 SIP

Device Setting	SIP Audio Tone	NAT Traversal	
NAT Catting	Session Timer:	O Enable @ Disable	
nort betting	Session Expires(sec):		
VOIP Setting @	Hin SE(sec):		
VOIP Advance	PRACK:	None +	
Dialing Plan 🚯	SIP Local Ports	8090	
FXS Setting 🕘	51P QoS Type:	None •	
SIP Trunk 🕕	Accept Proxy Only:	W Yes O No	
Route Plan (Apply Cancel
Status @			
Maintenance 🕢			

Figure 4-1 SIP setting

- Session Timer: Enable session timer or not (RFC 4028)
- Session Expires (sec): This is the setting of initial session timer expires time according to RFC4028 Session Timers in the Session Initiation Protocol.
- Min SE (sec): The minimum session timer allowed when receiving a call with session timer value according to RFC 4028.
- **PRACK**: Enable provisioning ACK or not (RFC 3262)
- ♦ None: Disable PARCK
- Supported: When select this mode, 100rel will be added to the support list. It indicates WellGate 2424s can support the PRACK but not mandatory.
- ◆ Require: PRACK is mandatory required.
- SIP Local Port: The SIP local service port (default is 8080)
- SIP Qos Type: Quality of Service Type for SIP signaling
- None: Not using QOS Tag and not enables QOS.
- DiffServ: Differentiated Services Value. Input DSCP value 0-63 for DSCP
- **TOS:** Type of Service which include IP precedence value and TOS.
- Accept Proxy Only: Only accept the call coming from the SIP proxy.Not accept peer to peer call at this mode.

4-2 Audio

(1) SIP Audio	Tone	NAT Traversal			
Codec 1:		G.729A	•		
Codec 2:		G.723.1			
Codec 3:		G.711 u	•		
Codec 4:		G.711 a			
Codec 5:		N/A			
G.711s Payload Size:		20ms			
GSM Payload Size:		20ms			
G.723 Payload Sizes		30ms	•	Bit Rates	© 5.3K ₿ 6.3K
G.711a Payload Size:		20ms	•		
G.729 Payload Sizer		20ms	•		
Codec Priority:		8 Local O Remote			
DTHF Relays		RFC 2833/Fall Back to SIP	INFC +		
Silence Suppression:		🔿 Enable 🖷 Disable			
RTP Basic Ports		16384			
RTP QoS Type:		None			

Figure 4-2 Audio setting

- **Codec 1~5**: The preferred codec priority
- G.711u Payload Size: G.711 u-Law payload size
- G.711a Payload Size: G.711 A-law payload size
- G.729 Payload Size: G.729A payload size
- G.723.1 Payload Size: G.723.1 payload size
- Bit Rate: G.723.1 bit rate used
 - 5.3K bit rate is used
 - 6.3K bit rate is used
- Codec Priority: Selection order to match the remote SDP for codec selection.

Local SDP Order: Use local SDP order to match codec

Remote SDP Order: Use Remote SDP order to match codec • DTMF Relay:

In-Band DTMF: use inband DTMF instead of out of band.

RFC 2833(fall back to SIP-INFO): Use RFC 2833 if the SDP negotiation could be done. Or use SIP INFO for DTMF relay.

SIP INFO: Use SIP-INFO DTMF relay

RFC 2833(fall back to Inband): Use RFC 2833 if the SDP negotiation could be done. Or use inband DTMF transmission.

• Silence Suppression:

Enable: Start the voice activity (silence) detection when detect silence for 60 seconds, it will hang up the call (For FXO use)Disable: Send silence packet as normal voice packet (no silence detection)

- **RTP Basic Port:** The RTP starting port. Each channel will be add additional 10. For example, the RTP basic port is 16384, thus call 1 will use 16384 while call 2 will use 16394 etc.
- RTP Qos Type: IP QoS tag for RTP stream
 DiffServ: The differentiated service QoS tag will be used. Input DSCP value 0-63 for DSCP.
 TOS: Type of Service which include IP precedence value and TOS.

The setting page is used to setup the tone to be generated or detected. The detected tone is the Disconnect 1 & 2 (for FXO use) and the others are for generating (when FXS received the "bye" from IP side or waiting time out by analog phone which keeps handset pick up, it will send busy tone to analog phone). The disconnect tone is very important for PSTN status supervision.

Country Template	-Select Country- V Use										
Tone \ Setting	Signal Type	Freq 1 (0,300~1980#z)	Freq 2 (0,300~1900Hz)	Level 1 (0~63db)	Level 2 (0~63db)	On 1 (0~10230ms)	Off 1 (0~10230ms)	On 2 (6~10230ms)	Off 2 (0~10230ms)	Devia	
Dial	Continuous 👻	350	440	13	13	500	0	0	0	10	
Stutter Dial	Cadence 👻	350	440	13	13	1000	100	0	0	10	
Ring Back	Cadence 💌	440	480	13	13	1000	2000	0	0	10	
Busy	Cadence 💌	480	620	13	13	500	500	0	0	10	
Call Waiting	Cadence 💌	350	440	13	13	250	250	250	0	10	
ROH	Continuous 🛩	1400	1750	13	13	10000	0	0	0	10	
Warning	Cadence 🛩	900	0	13	13	500	0	0	0	10	
Holding	Cadence 🖌	900	0	13	13	500	500	0	0	10	
Disconnect 1	Cadence 💌	480	620	13	13	500	500	0	0	10	
Disconnect 2	Cadence M	480	620	13	13	250	250	0	0	10	

Figure 4-3 Tone setting

Please use Country Template to select the country profile which will be applied. Click Use to load those country tone parameters to system and change if necessary. For those countries are not showed in the list, please select a closed country and edit to match your country. You can send an email with the tone definition to Welltech if you would like to put your country into the list.

4-4 NAT Traversal

The WellGate 2424s support the following NAT traversal methods



Figure 4-4 NAT Traversal

- NAT Traversal:
 - **Disable:** Disable NAT traversal features
 - STUN (Type 1,2): Enable STUN for NAT traversal. Since STUN can be used only for type 1 and type 2 NAT server, it is recommended to use this option. When STUN client detect the used NAT is type 3 NAT, it will stop the STUN feature.
 STUN Server: STUN Server IP address
 - STUN (AII): No matter which NAT type server are used, STUN is always to be used for NAT traversal.

♦ STUN Server: STUN Server IP address

- UPNP: Enable UPnP client for NAT traversal. Please note that the IP sharing box need support uPnP feature.
- Behind NAT: Use DMZ for NAT traversal
 - IP Sharing Address: public IP sharing address. You need to specify the port mapping or DMZ for all required port.

CH5 VOIP Advance

5-1 SIP

SIP Hold Type:	Send only	-	
SIP Compact Forms	Over Pho		
Session Refresher:	UAC		
SIP TI(maec):	500		
SIP T2(msec):	4000		
SIP T4(maec):	5000		
Invite Linger Timer(msec):	32000		
General Linger Timer(msec):	32000		
Cancel General No Response Timer(msec)s	5000		
General Request Timeout Timer(msec):	5000		
Cancel Invite No Response Timer(msec):	15000		
Provisional Timer(mses):	150000		
First Response Timer(sec):	10		
MWI Subscript Expires(sec):	600		
Line Congestion Code:	600		
SIP-Info Flash Mode:	C Enable @ Disable		

Figure 5-1 SIP

- **SIP Hold Type:** SIP on hold message sending method.
 - **Send Only:** Set the SDP media to sendonly when send an on-hold SIP message.
 - **0.0.0.0:** Set the SDP connection to 0.0.0.0 when send an on-hold SIP message.
 - **Inactive:** Set the SDP media to inactive when send an on-hold SIP message.
 - **SIP Compact Form:** Enable SIP compact form or not. When enable this feature, the connected SIP proxy is required to support compact form.
 - Session Refresher: Who will send dialog keep alive message (re-invite or update).
 - ◆ UAC: User Agent Client will do the refresh (default setting)
 - ◆ UAS: User Agent Server will do the refresh
 - SIP T1 (msec): T1 determines several timers as defined in RFC3261. For example, when an unreliable transport protocol is used, a Client Invite transaction retransmits requests at an interval that start at T1 seconds and doubles after every retransmission. A Client General transaction retransmits requests at an interval that starts at T1 and doubles until it reaches T2. (Default Value: 500ms) **

- **SIP T2 (msec):** Determines the maximum retransmission interval as defined in RFC3261. For example, when an unreliable transport protocol is used, general requests are retransmitted at an interval which starts at T1 and doubles until reaches T2. If a provisional response is received, retransmission continue but at an interval of T2. (Default Value: 4000ms) **
- SIP T4 (msec): T4 represents the amount of time the network takes to clear message between client and server transactions as defined in RFC3261. For example, when working with an unreliable transport protocol, T4 determines the time that UAS waits after receiving an ACK message and before terminating the transaction. (Default Value: 5000) **
- Invite Linger Timer: After sending an ACK for an INVITE final response, a client cannot be sure that the server has received the ACK message. The client should be able to retransmit the ACK upon receiving retransmissions of the final response for this timer. This timer is also used when a 2xx response is sent for an incoming Invite. In this case, the ACK is not part of the Invite transaction.
- General Linger Timer: After a UAS sends a final response, the UAS cannot be sure that the client has received the response message. The UAS should be able to retransmit the response upon receiving retransmissions of the request based on this timer.
- Cancel General No Response Time (msec): When sending a CANCEL request on a General transaction, the User Agent waits cancel General No Response Timer milliseconds before timeout termination if there is no response for the cancelled transaction(Default Value: 10000ms).**
- General Request Timeout Timer (msec): After sending a General request, the User Agent waits for a final response general Request Timeout Timer milliseconds before timeout termination (in this time the User Agent retransmits the request every T1, 2*T1,...T2,...milliseconds)**
- Cancel Invite No Response Timer (msec): When sending a CANCEL request on an Invite request, the User Agent waits this timer before timeout termination if there is no response for the cancelled transaction.
- **Provisional Timer (msec):** The provisionalTimer is set when receiving a provisional response on an INVITE transaction. The transaction will stop retransmissions of the INVITE request and will wait for a final response until the provisionTimer expires. If you set the provisionTimer to 0, no timer is set. The INVITE transaction will wait indefinitely for the final response.
- First Response Timer (msec): When sending a request out, the User Agent waits this timer for any response received from UAS. If timer is expired and no any SIP message is received, the User Agent

will think the request is failed. The default is 5 seconds.

- MWI Subscript Expires (sec): You can Enable or Disable the MWI subscribe. The default is 600 sec. If a new voice mail is arrived, the stutter tone will be used instead of regular dial tone. This feature is dedicate to FXS only.
- Line Congestion Code: when callee's end system was contacted successfully but the callee is busy and does not wish to take the call at this time, the system wills response the code, default is 600. (FXO use)
- SIP-Info Flash Mode: when you enable the feature, system will make flash key to send SIP message by sip-info.

5-2 Audio

The setting page includes the device related audio settings.

Device Setting	SIP Audio Ring			
NAT Setting	RFC 2833 Payload Type:	101	•	
	DTMF Send On Time(msec):	70		
vor Setting	DTMF Send Off Time(msec):	20		
XOIP. Advance	DTMF Detect Hin On Time(maec):	60		
Dialing Plan 🕕	DTMF Detect Hin Off Time(msec):	60		
FXS Setting 🚳	DTME Relay Volume:	0 dBm	•	
SIP Trunk 🕘	T.38 Fax Volume:	-12 dBm	*	
Route Plan 🕘	T-38 Redundant Depthi	2	•	
Status 🕘	T.38 ECH:	🛛 🖓 Enable 🔿 Dizable		
Maintenance (1)	Hin Jitter Buffer(msec):	60		
	Hax Jitter Buffer(msec):	150		
	Hax Echo Tail Length(G. 168):	128ms	•	
	Jitter Opt. Factor:	7	19	
	Impedance:	Global		
	internet de la constant	ndi - nonononinina		Apply Cancel

Figure 5-2 Audio setting

- RFC 2833 Payload Type: 96 or 101. It is recommended to use 101.
- **DTMF Send On Time(msec):** When generate DTMF, the DTMF on time will be send (default value is 70 ms)
- **DTMF Send Off Time(msec):** When generate DTMF, the DTMF off time will be send (default value is 70 ms)
- **DTMF Detect Min on Time (msec):** The minimum DTMF on time will be processed as a regular DTMF event. Smaller than it will be ignored. The default value is 60ms.
- **DTMF Detect Min off Time (msec):** The minimum DTMF off time for the same DTMF value. Smaller than it and the new DTMF digit is the same as previous one will be handled as 1 digit only.

- DTMF Relay Volume: The DTMF relay volume
- T.38 Fax Volume: The T.38 fax relay volume
- **T.38 Redundant Depth:** The T.38 redundant packet depth. It could 0 (no redundant), 1 or 2. It is recommended to set to 2.
- **T.38 ECM:** The t.38 error correction mode. Default value is ON.
- Min Jitter Buffer (msec): The minimum delay time of Jitter buffer.
- Max Jitter Buffer (msec): The Maximum delay time of Jitter buffer.
- Max Echo Tail Length (G.168): Enable the echo cancellation feature. The default setting is "128ms".
- Jitter Opt. Factor: Jitter buffer dynamic factor for optimize. Please set to 7 unless under Welltech's instruction to change.
- Impedance: selected analog phone's impedance. (for FXS port use)

5-3 Ring

51P Audio	ting	
Ring Setting		
Frequency (10~70Hz):	20	
Ring On (0~8000ms):	1000	
Ring Off (0~8000ms):	2000	
Ring Level (10-95volt):	94	
		Apply Can

The ring cadence, voltage and frequency for the phone

Figure 5-3 Ring setting

- Frequency (10~70HZ): Specify the ringing frequency value (default is 20HZ)
- Ring on (0~8000ms): Specify the ringing on value (default is 1000msec)
- Ring off (0~8000ms): Specify the ringing off value (default is 2000msec)
- Ring level (10~95volt): Specify the ringing level (default is 94 volt)

CH6 Dialing Plan

6-1 General



Figure 6-1 General setting

- First Digit Time Out: Specify the duration of dial waiting when the receiver is off hook. The range is 1~60 sec.
- Inter Digit Time Out: Specify the interval of input digits, if the interval is over the setting, the system will end the dial and send out the DTMF. The limitation range is 1~10sec.
- End of Digit: The assigned key will be tread as end of dial.
- **Retrieve Number:** it will forced to get back line, if used WellGate 2424s make transfer to other devices but the devices no answer and into voice mail,

You can press the code forced to get back line. Default is "*#".

6-2 Dialing Rule



Figure 6-2 Dialing Rule setting

Dialing rule is used to speed up the dialing procedure. Some user don't like to use the end of dialing digit such as "#", the administrator can use dialing rule instead. The longest prefix will be matched first.

- **Dialed Prefix:** The prefix to be matched
- Max Digits: The digits will be received based on the Dialed Prefix.

The following is an example for dialing rule:

Mobile call is started with 09 and it is 10 digits Long distance call is started with 0 and it is 10 digits International call is started with 00 and its max digit should be less than 32 The others are local call and 8 digits Emergency call is started with 1 and 3 digits

The Dialing rule can be set as follows:

Prefix, max digits 09, 10 0, 10 00, 15 1, 3 2, 8 3, 8 4, 8 5, 8 6, 8 7, 8 8, 8 9, 8

6-3 Digit Manipulation

The Digit Manipulation will be processed based on prefix and DM group after the DNIS is determined.



Figure 6-3 Digit Manipulation setting

- DM Group: Different DM group have different case to be used.
 - **FXS:** This DM group is used for FXS dialing out.
 - VOIP: This DM group is used for VOIP incoming call. After the DNIS is collected in 2 stage dialing or 1 stage dialing DNIS, this DM group will be processed before enter the routing procedure.
 - 1-4: These DM groups are used for backup routing purpose.
 When a backup routing is used, the administrator can select a DM group to be processed before start the backup route.
- Matched Prefix: The prefix to be matched for DM. The longest prefix will be matched first.
- Matched Length: Set to 0 for ignoring the length. The other 1-32 are the length to be matched as a condition.
- Start Pos: The start position to be replaced.
- **Stop Pos:** The stop position to be replaced.
- **Replace Value:** The value to replace.

Example of Digit Manipulation Settings:

Prefix	Len	Start Pos	Stop Pos	Replace Value	Test DNIS	Result DNIS
886	0	0	0	002	8862123456	0028862123456
886	12	0	0	002	8862123456	8862123456
886	0	2	5	002	8862123456	8800223456
886	0	30	30	002	8862123456	8862123456002
886	0	1	6		8862123456	83456

6-4 Phone Book

Phone Book is used for peer to peer call.



Figure 6-4 Phone Book setting

- Name: This field supports called number only. If you enter words or text here, it will routes to proxy server automatically.
- **Tel No:** Enter called number and IP address. Please follow this sample of picture, as the format of "number@uri:port". (default port is 5060)
- **Export:** To backup the phone book records.
- Import: To reload setting of phone book.

CH7 FXS Setting

	Line ID	State	TEL No	Hot Line TEL
	1	Active	1000	
· · ·	2	Active	1001	
9	3	Active	1002	
a 3		Active	1003	
	5	Active	1004	
3	6	Active	1005	
④ 3	7	Active	1006	
a 7	8	Active	1007	
1 ?	9	Active	1008	
• 🦿	10	Active	1009	
() · · · ·	11	Active	1010	
1	12	Active	1011	
1	12	Active	1012	
1	14	Active	1013	
1	15	Active	1014	
1	16	Active	1015	
1	17	Active	1016	
1	10	Active	1017	
1	19	Active	1018	
1	20	Active	1019	
1	21	Active	1020	
1	22	Active	1021	
1	23	Active	1022	
1	24	Active	1023	

The FXS line setting includes each line number and SIP proxy settings.

Figure 7-0 FXS setting

- Line ID: FXS line (T1 to T24)
- State: The line is active or not
- TEL No: The telephone number
- Hotline TEL: If hot line is set, this field shows the hot line number.
- Export: backup all lines setting.
- Import: reload all line setting.

7-1 FXS line

	Modify Line Setting		
	Line ID :	1	
	Line Type :	FX5	
	Line State :	Active O Inactive	
•	Forward Reason 1	Unconditional Busy No Answer	
	Forward TEL:		
a 1	No Answer Timeout(sec):	120	
	Call Waiting :	Disable 💌	
	Reject Anonymous Call:	Oves Ono	
	Hot Line:	O Enable	
	Hot Line TEL :		
	Polarity Reversal Generation :	Oves One	
	Current Drop Generation :	⊙ Yes O No	
	Input(Encode) Gain:	Odb 💌	
	Dutput(Decode) Gain:	odb 💌	
	FAX Relay :	T.38 💌	
	Voice Mail Subscription:	O Enable O Disable	
	Caller ID Mode :	Transparent 💌	
	SIP Caller ID Hode :	Transparent 💌	
	Register Type :	Register 💌	
	TEL Not	1001	
	User ID:	1001	
	User Password:	••••	
		the second se	

Figure 7-1 FXS setting

- User ID: FXS Line number (T1 to T24)
- User Type: The line type, FXO or FXS
- Line State: Set to active if you would like to use this line. Otherwise, set to Inactive.
- Forward reason:
 - Unconditional forward: forward the call all the time
 - **Busy forward:** Forward the call when phone is busy.
 - No answer forward: forward the call when the call does not answered after no answer timeout.
 - Forward TEL: The forward telephone number for the selected reason
- No answer timeout: sec The no answer timeout will be used (default is 120 sec)
- **Call waiting:** Enable call waiting or not. When disable call waiting features, the second incoming call will be rejected.
- Reject Anonymous Call: Reject the anonymous incoming call or not
- Hot line: Enable to disable hot line feature
- Hot line TEL: The number to be dialed automatically after the user pickup the phone.
- **Polarity Reversal generation:** Enable Polarity Reversal for FXS as billing signal or not. When a FXS calls to VOIP and answered by the VOIP, WellGate 2424s will generate reverse signal to FXS as a billing

start. When VOIP side disconnect first, WellGate 2424s will reverse back as a billing stop signal.

- **Current Drop generation:** Enable current drop (0 voltage) when VOIP is disconnected or not.
- Input(Encode)Gain: Adjust the volume from FXS to VOIP (default is 0 db)
- Output (Decode) Gain: Adjust the volume from VOIP to FXS (default is 0 db)
- FAX Relay: Enable T.38 Fax Relay or not
- Voice mail subscription: enable voice mail subscription (MWI) or not.
- Caller ID mode:
 - Inhibit: don't send caller ID to analog phone.
 - **Transparent:** send caller ID to analog phone.
- SIP caller ID mode:
 - Inhibit: don't send caller ID to VOIP SIP
 - Transparent: send caller ID to VOIP SIP
- Register Type:
 - Register: register to proxy. If it is not registered to SIP proxy, the FXS line still can use SIP trunk for VOIP call.
 - Predefine: When it is set to predefine, WellGate 2424s will not send register message out.
 - Internal: When it is set to internal, WellGate 2424s does not send register message out, the FXS line still can use SIP trunk for VOIP call or call locally.
- **TEL No:** The registrar telephone number
- User ID: The SIP user ID for register and call making
- User Password: The SIP password for register and call making
- Display Name: The SIP display name

7-2 SIP Proxy

The SIP proxy server defined here is dedicated used for FXS lines.

FXS Line STD Proxy Caller 10	Others
Domain :	
9 Primary Proxy Servers	10.1.1,2
ng 🛞 Primary Proxy Server Ports	5060
ce 🚯 Outbound Proxy Server:	
Outbound Proxy Server Port:	5060
Primary Prexy Server Keep Alives	O Enable 💿 Disable
Keep Alive Time (sec)	
Secondary Proxys	Enable O Disable
Secondary Proxy Server:	
Secondary Proxy Server Ports	5060
• 🕘 Secondary Outbound Proxy Servers	
Secondary Outbound Proxy Server Port:	0
Register Expires:	120
Secondary Proxy Server Keep Alive:	O Enable
Keep Alive Time (sec):	

Figure 7-2 FXS setting

- **Domain:** The SIP domain for register or call making
- Primary proxy server: Primary SIP registrar server address
- Primary proxy server port: Primary SIP registrar server port number
- Outbound Proxy server: Primary outbound proxy server address
- **Outbound Proxy server port:** Primary outbound proxy server port number
- Primary Proxy server keep Alive: using through NAT and keep the port.
- Keep Alive Time (sec): Specify of times send sip register message to proxy server.
- Secondary Proxy: Enable secondary proxy or not. When enable it, the primary and secondary proxy will be registered at the same time.
- Secondary proxy server: Secondary SIP registrar server address
- Secondary proxy port: Secondary SIP registrar server port number
- Secondary outbound Proxy server: Secondary outbound proxy server address
- Secondary outbound Proxy server port: Secondary outbound proxy server port number
- Register Expire: SIP register time to live
- Primary Proxy server keeps Alive: using through NAT and keep the port.
- Keep Alive Time (sec): Specify of times send sip register message to proxy server.

7-3 Caller ID

The call ID stand for the phone



Figure 7-3 Caller ID setting

- Caller ID Mode: Caller ID mode to be used for phone (FSK Bellcore/FSK ETSI/DTMF)
- Polarity Reverse before caller ID: start polarity reverse before send the caller ID
- **Dual tone before caller ID:** Send dual tone before caller ID (for FSK ETSI use only)
- Caller ID present: The timing to send the caller ID (Before first ring/after first ring/after first short ring)
- **DTMF caller ID start digit:** specify the DTMF caller ID start digit (default is D, the range is A to D and #)
- **DTMF caller ID stop digit:** specify the DTMF caller ID start digit (default is C, the range is A to D and #)

7-4 Others

Flash time and current drop generation time

Device Setting @	FXS Line SIP Prexy Caller 10	Others	
	Hin Flash Time(80~800msec):	400	
NAT Setting	Max Flash Time(80~800msec):	800	
VOIP Setting (4)	Current Drop Time(msec):	300	
OIP Advance 🚯			Apply Cancel
Dialing Plan 🕚			
CXS.Settion 👄			
SIP Trunk			
Route Plan			
Status (B)			
Maintenance 🕘			

Figure 7-4 Others setting

- Min flash time(80~800msec): Specify the value of the flash (low), If the phone-set's flash time is smaller than the Flash Low setting, the flash will be ignored.
- MAX flash time (80~800msec): Specify the value of the flash (high), if the phone-set's flash time is larger than the Flash high setting, the flash will be handled as hang-up.
- Current Drop Times (msec): Specify the value of the current drop times (generate for FXS / detect for FXO).

CH8 SIP Trunk

The administrator needs to set the SIP trunk for VOIP outgoing call and incoming call. There are up to 16 SIP trunk can be used for whole system.

Device Setting	SIP Tru							
		Trunk 10	Register Type	TEL No	Proxy Server	Proxy Server Port	Outbound Proxy	Outbound Server Port
NAT Setting	32	1	Register	1024	10.1.1.2	5060		5060
VOIP Setting	The second second					New	Export Import Total Record	1:1 Total Page: 1 Page 1
VOIP Advance 🚯								- 24
Dialing Plan 🚯								
FXS Setting 🚯								
SILImik 😌								
Route Plan								
Status 🙆								
Maintenance 🕖								

Figure 8-0 SIP Trunk setting

- Trunk ID: SIP trunk ID 1 to 16
- Register Type: Register type is predefine or register
- TEL No: The Tel no for the SIP account
- Proxy Server: The SIP proxy server
- **Proxy Server port:** The SIP proxy server port
- Outbound Proxy: The SIP outbound proxy sever
- Outbound Server Port: The SIP outbound proxy server port

8-1 Create SIP Trunk

Modify SIP Trunk	
Trunk ID :	1
Register Type :	🖲 Register 🙁 Predefine
Domain :	
Proxy Server:	10.1.1.2
Proxy Server Port:	3060
Outbound Proxy Servers	
Outbound Proxy Server Ports	5060
Register Expires:	120
TEL Nor	1024
User IDi	1024
User Password:	****
Display Name:	1024
Reject Anonymous Calls	O Yes R No
Outgoing Caller ID:	
- Display Name:	SIP Display Name 🔻
- User ID:	SIP User ID ·
Keep Alive:	O Enable 🖲 Duable
Keep Alive Time (sec):	
Marilling and an and a second second	Apply Cancel Bac

Figure 8-1 SIP Trunk page

- Trunk ID: SIP trunk ID 1-16
- Register Type: Whether this account need register or not
 - **Register:** When it is set to register, WellGate 2424s will send REGISTER message to SIP proxy server for registration.
 - Predefine: When it is set to predefine, WellGate 2424s will NOT send REGISTER message out.
- Domain: The SIP domain for register or call making
- Proxy Server: SIP registrar server address
- Proxy Server Port: SIP registrar server port number
- Outbound Proxy Server: outbound proxy server address
- Outbound Proxy server port: outbound proxy server port number
- Register Expires: the default register expires for negotiation
- TEL No: The registrar telephone number
- User ID: The SIP user ID for register and call making
- User Password: The SIP password for register and call making
- Display Name: The SIP display name
- Reject Anonymous Call: Reject the anonymous call
- Outgoing Caller ID: The outgoing SIP caller ID mode.
 - Display Name: The display name will be set according to the following type.
 - None: No display name will be used
 - SIP display name: The display name will be the Display Name set in this SIP trunk.
 - SIP user ID: If the SIP user ID is set, the SIP user ID set in this SIP trunk will be used and the domain/SIP proxy will be the host

part. The SIP FROM header's URL will be the SIP_User_ID@Domain or SIP_User_ID@SIP_Proxy_Server.

- Keep Alive: Enable or Disable it.
- Keep Alive Time (sec): Specify of times send sip register message to proxy server.

Note: please don't delete sip trunk, even it is unless at all, because it have to be used with Route plan.

CH9 Route Plan

The core of WellGate 2424s is the routing policy. The policy is based on incoming call type/target, length and prefix to determinate the outgoing call process. For VOIP incoming call, it can send to FXS interface and vice versa.

For FXS interface, it could be routed to VOIP and vice versa. You can ignore the routing plan if you don't need it for FXS interface.



Figure 9-0 Route Plan page

- Incoming Call Type: Incoming call type (VOIP or FXS)
- Matched Prefix: matched DNIS (called number) prefix
- Matched Incoming List: matched DNIS incoming interface target
- Matched Length: matched DNIS (called number) length
- Outgoing Type: The outgoing call type (FXS or VOIP)
- Export: backup route plan setting.
- Import: reload route plan setting.

9-1 Create Route Plan

Click Route Plan and Click new to create a new routing policy.

Incoming Call Type :	
Matched Prefix (
Match of Free Participation	
matched incoming List i	Li Trunki Select All Unselect All
Matched Length :	
No Answer Timeout :	
Primary Route	
Outgoing Type :	FXS ¥
Hunting Type:	Cyclic Ring 🖌
Routing List :	01. TEL1 © 02. TEL2 © 03. TEL3 © 04. TEL4 © 05. TEL5 © 06. TEL6 © 07. TEL7 © 06. TEL6 09. TEL9 © 10. TEL10 © 11. TEL11 © 12. TEL12 © 13. TEL12 © 14. TEL14 © 15. TEL5 © 16. TEL6 17. TEL17 © 15. TEL15 © 16. TEL16 © 17. TEL19
Hunting Cycle :	1 🗸
OH Group I	None 💌
Backup Route	
Backup Route Active:	Active O Inactive
Outgoing Type :	FXS V
Hunting Type:	Cyclic Ring
Routing List :	01. TELL V 02. TEL2 V 03. TEL3 V 04. TEL4 V 05. TEL3 V 04. TEL6 V 07. TEL7 V 06. TEL6 09. TEL9 V 10. TEL10 V 11. TEL11 V 12. TEL12 V 13. TEL13 V 14. TEL14 V 15. TEL15 V 04. TEL4 17. TEL17 V 16. TEL16 V 15. TEL15 V 16. TEL19 V 20. TEL21 V 23. TEL22 V 23. TEL23 V 24. TEL24
Hunting Cycle :	1 .
	Manage and

Figure 9-1 Route Plan setting

- Incoming Call Type: Incoming call type
 - VOIP: The incoming SIP call type
 - **FXS:** The FXS extensions incoming call type
- Matched Prefix: matched DNIS (called number) prefix
- Matched Incoming List: matched DNIS incoming interface target
 - For VOIP incoming call type, the incoming target will be the SIP trunk ID. Only the call from the selected SIP Trunk will be accepted for this route.
 - For FXS incoming call type, the incoming target will be the line ID (T1 to T24). Only the call is coming from the selected line will be accepted for this route.
- Matched Length: matched DNIS (called number) length. For ignoring the length, please set to 0.
- No Answer Timeout: How long the hunting will continue to next when the called target doesn't answer.

Create Route Plan>Primary Route

• Outgoing Type: Outgoing call type (FXS or VOIP)

- Hunting Type: The hunting method will be used for this route.
 - Priority Ring: The call will be hunted based on the routing list order one by one.
 - Cyclic Ring: The call will be hunted based on the cyclic basis. This is the recommended method.
- Routing List:
 - The routing target list will be used for this route.
- **DM Group:** Select DM group 1 to 4 in case it requires a DM (for example remove the prefix) before to make the call.

Create Route Plan>Backup Route

- Backup Route Active: Active the backup route or not.
- **Outgoing Type:** The backup route outgoing call type.
- Hunting Type: The hunting method will be used for this route. Please refer to the Primary Route.
- Routing List: The backup routing target list will be used for this route.
- Route DM Group: Select DM group 1 to 4 in case the backup required the DM before to make the call. The DNIS is unchanged by the primary route DM and same as the DNIS before routing. For example, the DNIS is 886282265699 and primary DM group remove 886 and use it (DNIS = 282265699) to make call. When backup route is started, the DNIS is still unchanged as 886282265699. This makes the DM easy to predict and implement.

2 special default route, "VOIP Default Route" and "FXS default Route", are used as the default routing when there is no any other routing are matched. It is not recommended to disable these 2 default route. The FXS default route is used when a FXS outgoing call's default routing. VOIP default route is used for a VOIP incoming call's default routing.

CH10 Status

WellGate 2424s provides the system status here.

Hodel	W024248
HAC-Address:	WAN: 00:03:47:0F:32:48 LAM: 00:03:47:0F:32:48
Network Type:	Fixed IP
P-Address:	WAN: 192.160.10.24
IPV0 IP-Addressi	
iroware:	wg24.2.03f.bin

Figure 10-0 Device Status

10-1 Device States

See the figure 10-0 Device Status

- Model: The model number
- MAC-Address: The MAC address of WellGate 2424s
- Network Type: The Network Interface Type Settings
- IP-Address: IP address is using
- IPV6 IP-address: display IPV6 address
- Firmware: The firmware version and release information

10-2 Line States

This page shows the each line's current status.

and the second se	Account 1	allowing second	Coll State
(B)	Account	Registerro	Carl Mart
1	1000	Registered	Idle
4) z	1001	Registered	Idle
0	1002	Registered	Idle
4	1003	Registered	Idle
(b) 5	1004	Registered	Idle
a •	1005	Registered	Idle
7	1006	Registered	Idle
0	1007	Registered	Idle
2	1000	Registered	Idle
10	1009	Registered	Idle
E) 11	1010	Registered	Idle
12	1011	Registered	Idle
13	1012	Registered	Idle
14	1013	Registered	Idle
15	1014	Registered	Idle
16	1015	Registered	Idle
17	1016	Registered	Idle
18	1017	Registered	Idle
19	1018	Registered	Idla
20	1019	Registered	Idle
21	1020	Registered	Idle
22	1021	Registered	Idle
23	1022	Registered	Idle
24	1023	Registered	Idle

Figure 10-2 Line Status

- Line: L1 to L24
- Account: display each line number
 Registered: display each line register status.
- Call State: The line status for this line
- Refresh Interval (second): The time to refresh the status

10-3 SIP Trunk States

Device Setting	Device Status Une Status CIP Inc. Store	3	
	Account	Registered	Concurrent Call
NAT Setting	1024	Not Register	0
VOIP Setting		Refresh Interval (second): 💈 💌	
VOIP Advance			
Dialing Plan 🛞			
FXS Setting 🕘			
SIP Trunk 🕀			
Route Plan 🚇			
trong (O			
Maintenance 🚯			

Figure 10-3 SIP Trunk Status

- Account: SIP trunk account
- **Registered:** The SIP trunk register status
- **Concurrent Call:** The concurrent calls are used for this SIP trunk
- Refresh Interval (second): The time to refresh the status

CH11 Maintenance

WellGate 2424s can be managed by this management page for upgrading firmware or reset.



Figure 11-0 Maintenance

- **Backup:** Backup the system settings for restoring purpose
- Restore: Restoring the backup setting back to WellGate 2424s
- Reset to Default: Reset system setting to factory default
- Quick-Reset: Warm Reset without reboot WellGate 2424s
- Reboot: reboot WellGate 2424s

11-1 Firmware Update

This maintenance page provides the firmware upgrade features.

evice Setting ()	Maintenance Firmware Update									
	Firmware Update:	[X78]								
			Import							
Advance 🚯										
ling Plan 🕘										
ietting 🕘										
unk 🕘										
Plan @										
itatus 🕘										



• Firmware Update: Upgrade the new firmware through web page

Appendix A--- System Recovery

WellGate 2424s use dual firmware image to ensure the system stabilities. In most of case, you will not encounter the system failed to boot issue. Normally, the user should able to use Web page to login and upgrade the firmware through it. If you are not able to do it, please following the following steps for recovery.

- 1. Start the Welltech 2424s and to check the STATUS led is up or not. If STATUS led is ON, please press the reset button for 5 seconds to reset to default. After all LED are light up, the system is back to factory settings.
- 2. Change your PC IP address to 192.168.123.1
- 3. Connect your PC to LAN port and use http://192.168.123.123 to upgrade the firmware
- If you cannot login to the web page through 192.168.123.123. Open a command line windows and type "telnet 192.168.123.123". You also can to use RS-232 console port, the baud rate is 115200, data bits is 8, parity set to none, stop bits set to 1, flow control set none. If you can see the following go to next step. Otherwise, please contact Welltech FAE for RMA.
- 5. Prepare a TFTP server for firmware download as follows
 - download tftp server <u>http://www.welltech.com/support/voip/TFTP/TFTP_Server.zip</u> or http://tftpd32.jounin.net/tftpd32_download.html
 - start tftp server

🕀 Tftpd32 by P	h. Jounin	
Current Directory Server interfaces Tftp Server Tftp	D:\Welltech\TFTP\TFTP_284 192.168.123.1 Client Syslog server	Browse Show Dir
•	III	Þ
Clear Copy	Current Action wg24.2.03f.b	in>: sent 4850 blks,
About	Settings	Help

- download the firmware into tftp data directory
- 6. In the telnet terminal or console port, do the following command
 - 1. input login and password
 - 2. input __dmctw
 - 3. cd /config_fs
 - 4. rm f $wg24^*$.bin
 - 5. tftp -g -r wg24.2.03f.bin 192.168.123.1 (see figure update firmware by tftp)

User: root Password: User "root" logged in. [root#]dmctw							
BusyBox v1.1.3 (2010.04.12-09:08+0000) Built-in shell (ash) Enter 'help' for a list of built-in commands.							
# cd /config_fs # rm −f wg24*.bin # tftp −g −r wg24.2.03f.bin 192.168.123.1							
Y Tftpd32 by Ph. Jounin							
Current Directory D:\Welltech\TFTP\TFTP_284							
Server interfaces 192.168.123.1							
Tftp Server Tftp Client Syslog server							
Read request for file <wg24.2.03f.bin>. Mode octet [19/12 11:20:04.785] Using local port 51837 [19/12 11:20:04.786]</wg24.2.03f.bin>							
wg24.2.03f.bin to 192.168.123							
File size : 2482772 754176 Bytes sent 44363 Bytes/sec							
Clear Copy Current Action sing local port 51837							
About Settings Help							

Figure - update firmware by tftp

- 6. copy firmware successfully
- 7. Check whether the system was recovered or not
 - 1. Enter "Is" of command
 - 2. Check firmware name. (see Figure update firmware successfully)
 - 3. Reboot it.

User: root Password: User "root" logged in. [root#] __dmctw BusyBox v1.1.3 (2010.04.12-09:08+0000) Built-in shell (ash) Enter 'help' for a list of built-in commands. # cd /config_fs # rm −f wg24*.bin # tftp -g -r wg24.2.03f.bin 192.168.123.1 #ls wg24.2.03f.syn greeting.pcm app2.sh net wg24.2.03f.bin DBwe<u>e</u>kday₊ini export #

Figure – update firmware successfully

Appendix B --- HTTP auto provisioning

Get the http provisioning packet from Welltech and start the provisioning as follows:

Step 1: build mac list for mass configuration file generation

Please open the "wg2424s MAC.csv gotten from Welltecg by using Microsoft Excel. You can refer the picture below. Normally, you should get all required configuration mac list from Welltech and use it for configuration file generation.

For FXS>

	A	В	С	D	E	F	0	H	1	1	K	L	М	N	0	P
1	\$MACAddress	fxs1.displayname	fzs1.password	fxs1.telno	fxs1.userid	fxs2.displa	fxs2.passw1	xs2.telno	fzs2.userid f	xs3.displa	fxs3.passw	fxs3.telno	fxs3.userid	fxs4.displa;	fxs4.passwfz	cs4.tela
2	000347df32a8	1001	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	10
3																
4																
5																
6																

The wg2424s MAC.csv contains most frequently changed parameters as following:

MACAddress: WellGate 2424s MAC Address

fxs1.displayname ~ **fxs24.displayname**: display name for each line **fxs1.password** ~ **fxs24.password**: user password for register to SIP proxy for each line

fxs1.telno ~ fxs24.telno: tel no for each line

fxs1.userid ~ fxs24.userid: user id for register to SIP proxy for each line

Please save and close it.

Step 2: create a template configuration file

Open the "wg2424s Parameter.txt" getting from Welltech and make the required change. Please at least make the changes for those provisioning and SIP proxy settings. For detail, please refer the comments of "wg2424s Parameter.txt".

Step 3: Make the change for wegencfg.ini as follows if necessary

Template File
BaseFile=.\wg2424s Parameter.txt
MAC list file
ListFile=.\wg2424s MAC.csv
0: Off, 1: On
Encrypt=0

Step 4: Generate the individual configuration file.

Double click the "wtgencfg.exe", it will generate the configuration file for each MAC list in "MAC address.cfg" as the following pictures.

💽 wtgencf	g.exe 1.0	.0 (R09100	D6)		1	X	<u> </u>
11:33:23	L0114	Notice	:	wtgencfg.exe 1.0.0 (R091006) start.			*
11:33:23	L0270	Info	:	Read ".\wtgencfg.ini".			
11:33:23	LØ271	Info	-	[System].			
11:33:23	LØ289	Info	-	Action=0.			
11:33:23	L0304	Info	-	ToCase=0.			
11:33:23	LØ315	Info	-	BaseFile=.\wg2424s Parameter.txt.			
11:33:23	LØ327	Info	-	ListFile=.\wg2424s MAC.csv.			
11:33:23	LØ340	Info	÷	HeadTagPrefix=FmtNo=_wtcfg			
11:33:23	LØ348	Info	Ξ	HeadTagSuffix=wg24xx.			
11:33:23	LØ355	Info	Ξ	Encrypt=0.			
11:33:23	LØ364	Info	Ξ	Default EncryptKey= ***** .			
11:33:23	LØ397	Info	÷	Read ".\wg2424s Parameter.txt" 48834 element(s).			
11:33:23	LØ454	Info	÷	Read ".\wg2424s MAC.csv" 1863 element(s).			
11:33:23	LØ665	Info	÷	Opened ".\000347df32a8.cfg".			
11:33:23	L0703	Info	Ξ	".\000347df32a8.cfg" finished 725 record(s).			
11:33:23	LØ563	Info	÷				
11:33:23	LØ154	Notice	÷	Total 1 file(s) generated.			
請按任意	鍵繼續						
							Ŧ

Step 5:

Put the "*.cfg" file into http or ftp directory. Set the provisioning settings in WellGate 2424s and reboot to test it. You can use the hfs for http file server. It can be download from http://www.rejetto.com/hfs/.

Note: please link it to download provision file. More information please refers "wg2424s Parameter.txt".

http://www.welltech.com/support/voip2/SIP%20series/FXSO%20series/24x x/provision/WG2424s_provision.zip