SOHO VoIP Gateway Solution

AddPac Technology
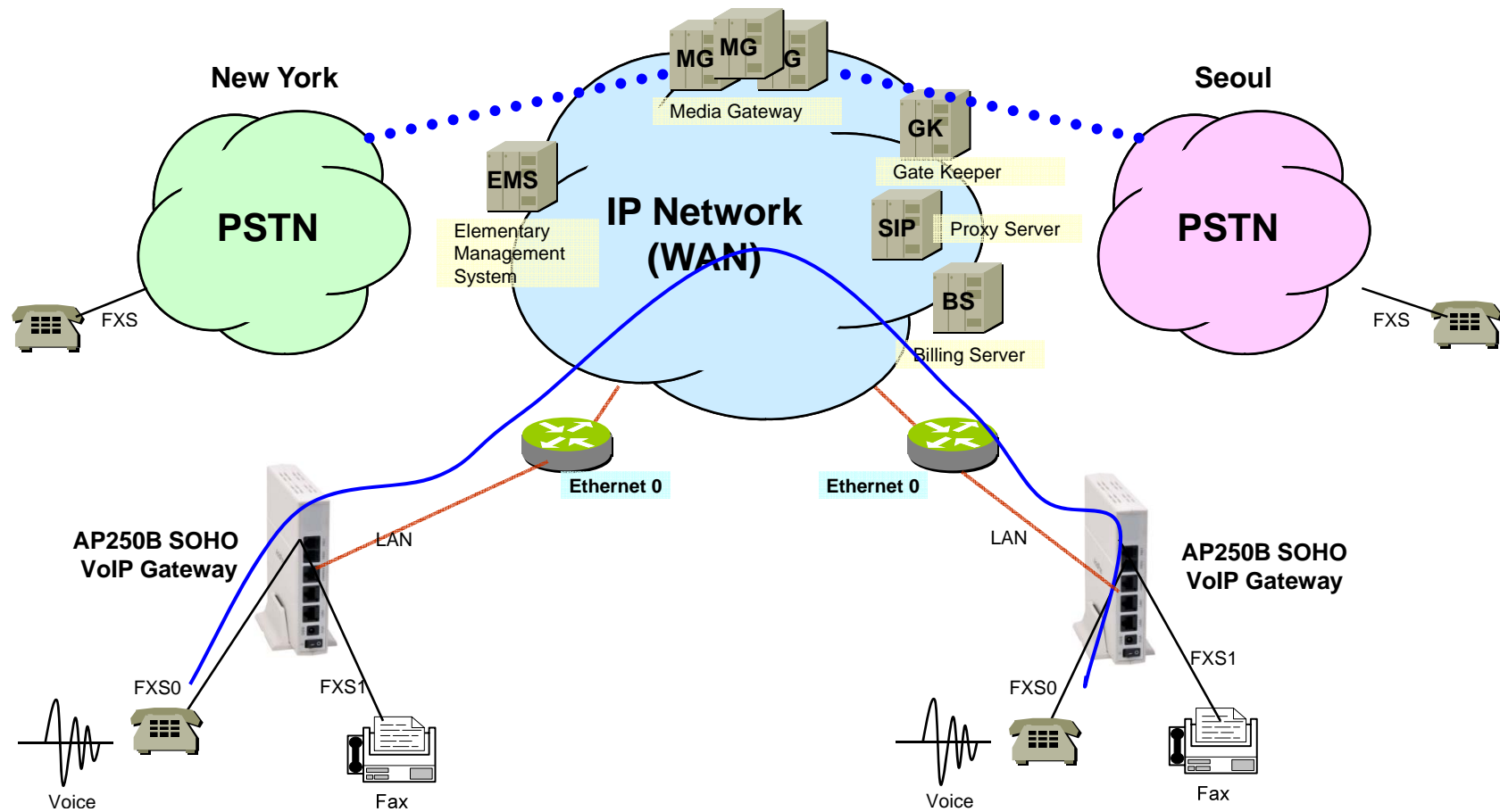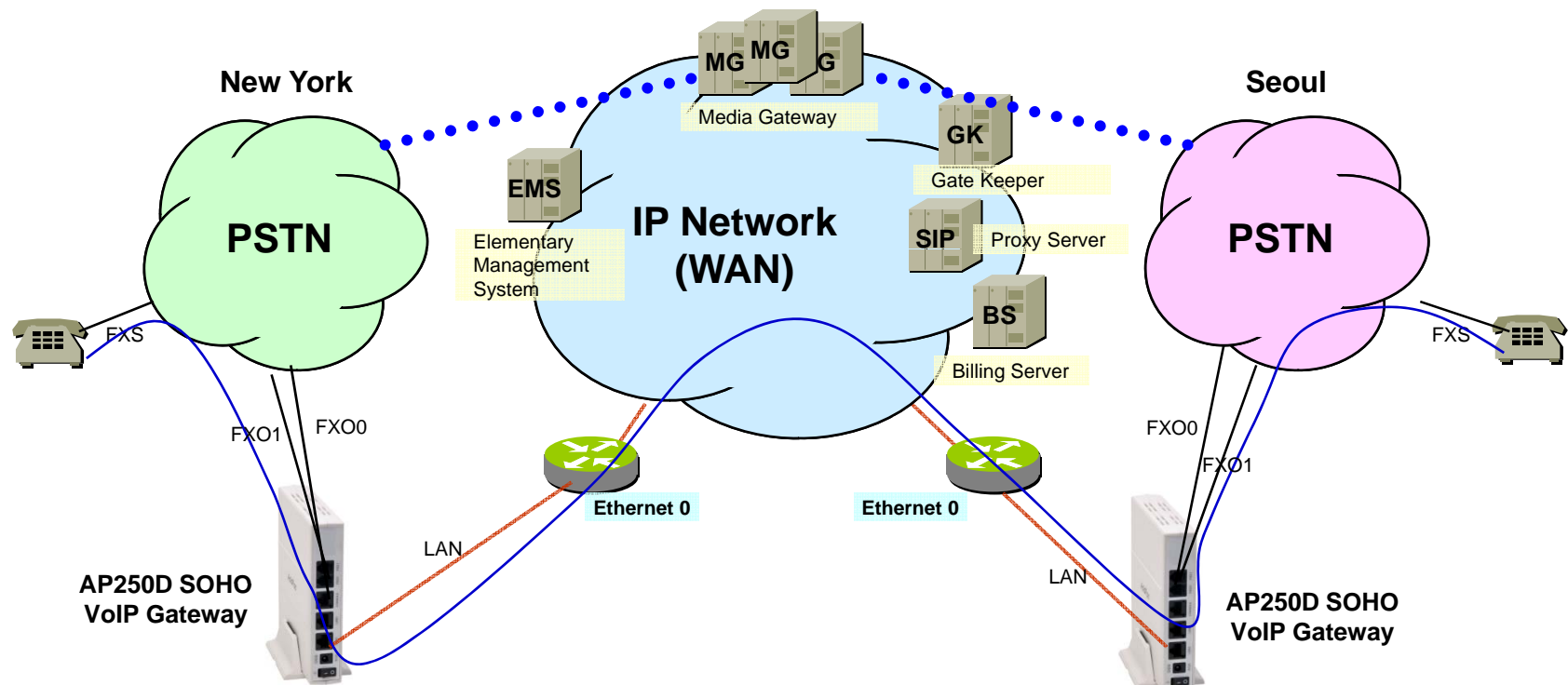
Sales and Marketing

Contents

- VoIP Gateway Service Diagram
- VoIP Gateway Comparison Table
  - VoIP Gateways for SOHO (1~2 Port)
  - VoIP Gateways for SMB (~4 Port)
- VoIP Modules for Rack Mountable Equipment
- VoIP Gateway Service Features
- VoIP Gateway Smart Web Manager
- VoIP Gateway Smart Network Management (AP-SNMS)

VoIP Gateway Service Diagram (FXS Port)

VoIP Gateway Service Diagram (FXO Port)

VoIP Gateways for SOHO(1~2Port)

Product	AP100		AP100B		AP190	AP200		AP250	
Model	Type	VoIP	Type	VoIP		Type	VoIP	Type	VoIP
	P	PSTN Backup	B	2FXS, PSTN Backup		B	2FXS, PSTN Backup	B	2FXS, PSTN Backup
						D	2FXO	D	2FXO
						E	1FXS, 1FXO		
VoIP Ports	1		2		1	2		2	
Signaling	SIP, H.323		SIP, H.323		SIP,H.323	SIP, H.323		SIP, H.323	
Module Slot	N/A		N/A		N/A	N/A		N/A	
LAN Port	2		2		2	2		2	
Console	N/A		N/A		Support	Support		Support	
Power	External Adaptor		External Adaptor		External Adaptor	External Adaptor		External Adaptor	

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VoIP Gateways for SMB (4 Port)

Product	AP700		AP1000	AP1002	AP1005	AP800	
Model	Type	VoIP				Type	VoIP
	P	1-Port PSTN Backup				A	1-Port PSTN Backup
						B	4-Port PSTN Backup
VoIP Ports	4-Port FXS		4-Port FXS	2-Port FXS & 2-Port FXO	4-Port FXO	4-Port FXS	
Signaling	SIP, H.323		SIP, H.323	SIP,H.323	SIP, H.323	SIP, H.323	
Module Slot	N/A		N/A	N/A	N/A	N/A	
LAN Port	2		2	2	2	2	
Console	Support		Support	Support	Support	Support	
Power	External Adaptor		External Adaptor	External Adaptor	External Adaptor	External Adaptor	

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VoIP Gateway
Service Features

VoIP (Voice over IP) Service

- H.323, SIP Concurrent VoIP Stack
- H.323
  - ITU-T Standard H.323 v3 Support
  - Support H.245 Tunneling
  - Including H.235 Security Features
- SIP
  - IETF RFC3261 or RFC2543 SIP Standard

H.323

SIP

IP Network (WAN)

MGCP

Concurrent VoIP Stack

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VoiceFinder
AP1850

Voice

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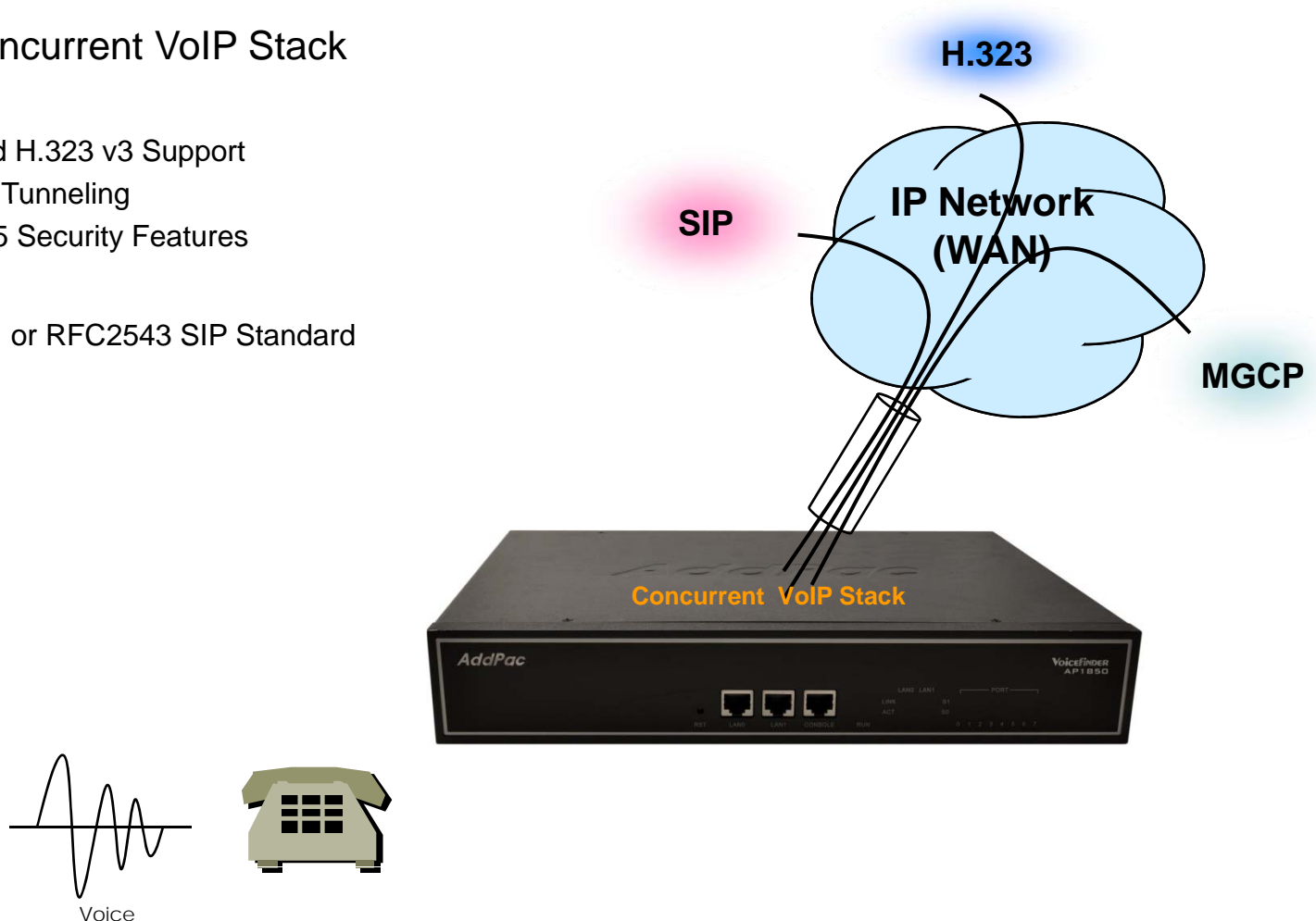
VoIP (Voice over IP) Service

- **H.323**
  - Fast connect, normal connect support
  - H.245 tunneling support
  - Q.931 response message setting for inbound VoIP calls
  - H.245 logical channel open timing selection function
  - Start H.245 procedure support
  - DTMF / Hook flash relay with H.245 alphanumeric / signal
  - Secondary gatekeeper support
  - Gatekeeper assignment according to the domain name
  - Gatekeeper discovery with multicast
  - Lightweight RRQ support
  - Signaling TCP port assignment
  - Resource threshold setting with RAI
  - H.235 clear-token, crypto-token support
  - canMapAlias support
  - Technical prefix (supported prefix) support
  - Public IP assignment in NAT environment

- **SIP**
  - Gateway-based / Endpoint-based registration support
  - Secondary proxy-server assignment function
  - SIP signaling port change function
  - SIP proxy server assignment according to the domain name
  - T.38 real-time fax relay support
  - DTMF relay support with RFC2833 / OPTION message
  - Re-INVITE support

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VoIP (Voice over IP) Service

- Voice Codec
  - G.711 A-Law, G.711 U-Law
  - G.726 r16, G.726 r32
  - G.729A
  - G.723.1 r63, G.723.1 r53
  - VAD (Voice Activity Detection) function support
  - DTMF relay support (H.323, SIP, MGCP common) based on RFC2833

- RTP
  - Redundant RTP packet transmission in case of severe packet loss
  - Dynamic jitter buffer management and RPT packet jitter and loss compensation with heuristic & DSP error concealment
  - Static jitter buffer setting support
  - Voice frame per RTP packet number control for each codec
  - In-band ring-back tone support
  - Virtual ring-back tone support
  - Tone parameter change support

- FAX
  - Fax relay mode supporting T.38, inband-T.38, bypass mode
  - Lost packet compensation with redundant setting in case of T.38 fax relay
  - Fax relay mode, rate setting for remote end

VoIP

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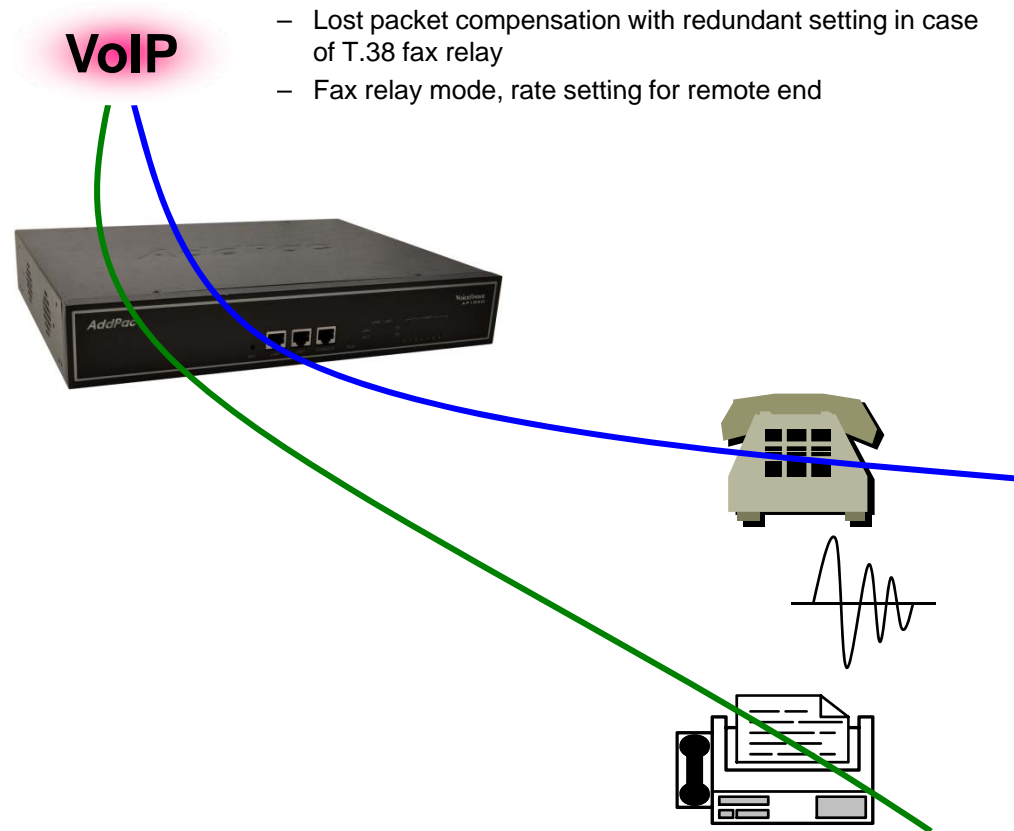
VoIP (Voice over IP) Service

- VoIP Call Controls
  - Hot line connection function with PLAR (Private Line Auto Ring Down)
  - Leased line emulation function
  - Connection monitoring function
  - Fault tolerant with Redundancy and Call Distribution among Gateways for load balancing
  - Call attempt with IP address
  - H.323, SIP inbound call connection for each voice port
  - Multiple E.164 setting for one voice port
  - One E.164 or digit pattern can be assigned to more than one voice port
  - Hunting with Longest match/ priority/ sequence/ random
  - One stage call setup by Digit forwarding
  - Call barring with specific digit patterns
  - Calling and called number conversion for PSTN outbound calls
  - PSTN rerouting in case of VoIP call attempt failure

- VoIP Call Controls (cont.)
  - Call transfer for internal calls
  - Call pickup for internal calls
  - Calling and called number conversion for VoIP outbound calls
  - Calling and called number conversion for VoIP inbound calls
  - Fax broadcasting call control

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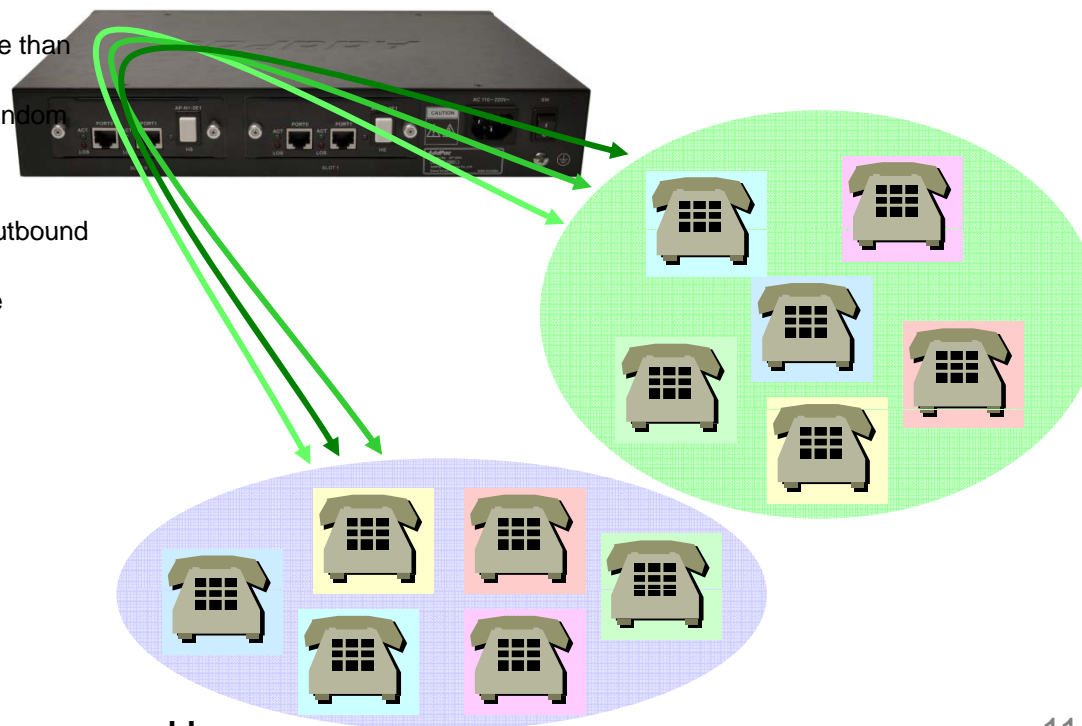
Advanced QoS Features

- **Enhances Transmit Voice QoS Features**
  - Voice Traffic Priority Queuing
  - QoS Service Profiling
  - Providing Virtual Network Transmit Algorithm
  - Real-time Voice Traffic QoS Support
  - RTP Packet Transmit Interval Control
  - Supporting RTP Packet Redundancy Scheme
  - IP Header Control such as ToS, Diffserv

- **Enhances Receive Voice QoS Features**
  - Dynamic Jitter Buffer Management
  - Error Concealment
  - Support T.38 FAX Data Error Recovery Scheme

Best and Optimal Voice Quality

IP Network (WAN)

Voice QoS Features

Voice QoS Features

Voice

Voice
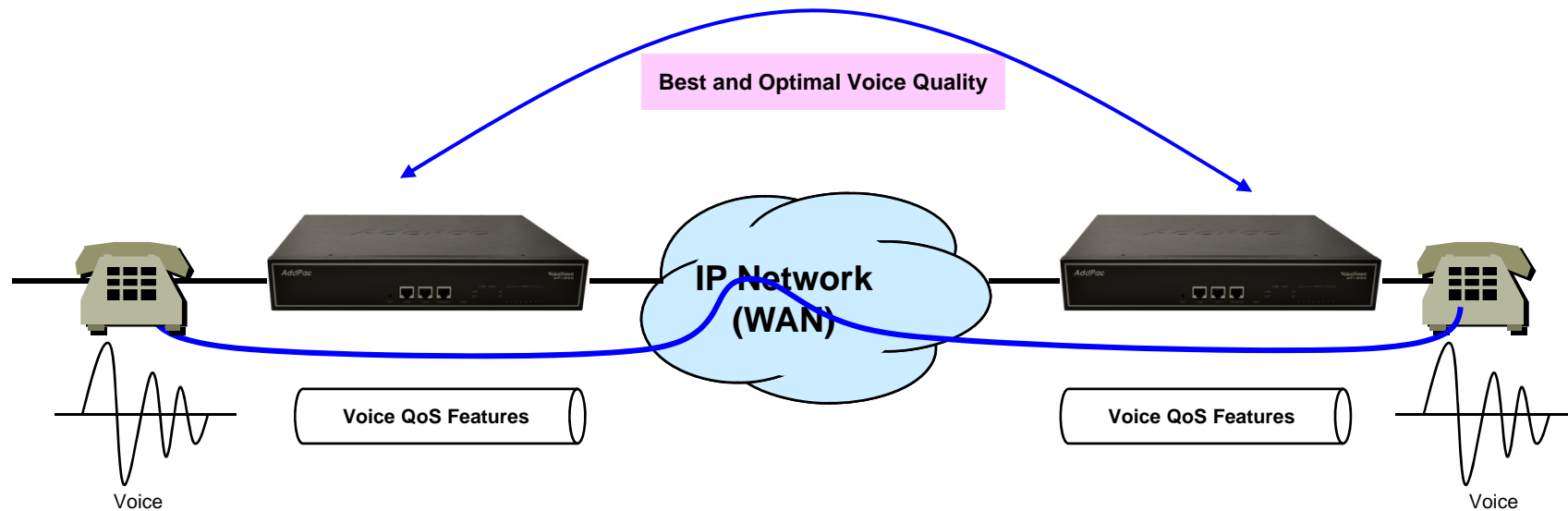
Network Protocols

- **Basic Network Protocols**
 - ARP, IPv4, TCP, UDP, ICMP, SCTP, IGMP, MLD

- **Routing Protocol**
 - IPv4 : Static

- **Service Protocol**
 - FTP, Telnet, TFTP, DHCP Server/Relay, SNMP Server
 - CDP (Cisco Discovery Protocol)
 - DNS Resolver , DDNS(nsupdate)
 - Bridge
 - Syslog

- **IPv4 Address Configuration**
 - Fixed (Static)
 - DHCP
 - PPPoE

- **Miscellaneous**
 -Cisco Style CLI
 - Standard & Extended IPv4 Access List
 - Multi-level User Account Management
 - IP accounting
 - STUN Client

IP

IP

IP Network (WAN)

Internet www

IP

LAN

IP

IP

IP

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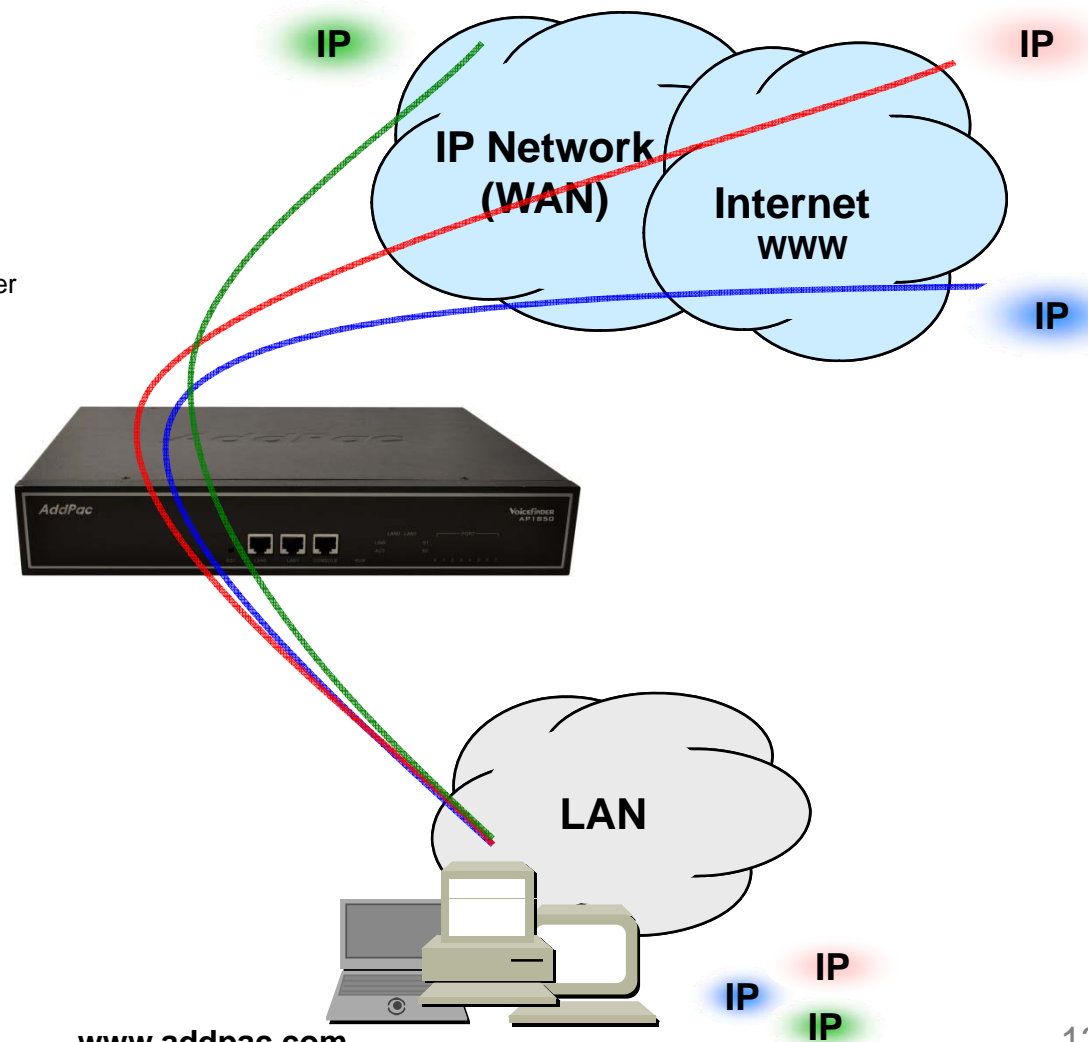
Network Management

- SNMP
  - Standard Simple Network Management Protocol(SNMP) Agent support
  - MIB v1 and v2 Support

- Web-based Management
  - Smart Easy Setup
  - Standard Voice Interface
  - Standard PSTN Back-up Interface

- Watch-dog Function
  - Hardware, Software watch-dog services

- Remote Management
  - Telnet
  - Rlogin

- Auto Upgrade Service
  - HTTP server based APOS image and configuration file auto-upgrade support

- Batch Job Function
  - Text based script downloading

- Interoperable with AP-VPMS Service
  - AddPac VoIP Plug & Play Management System (AP-VPMS)

IP Network (WAN)

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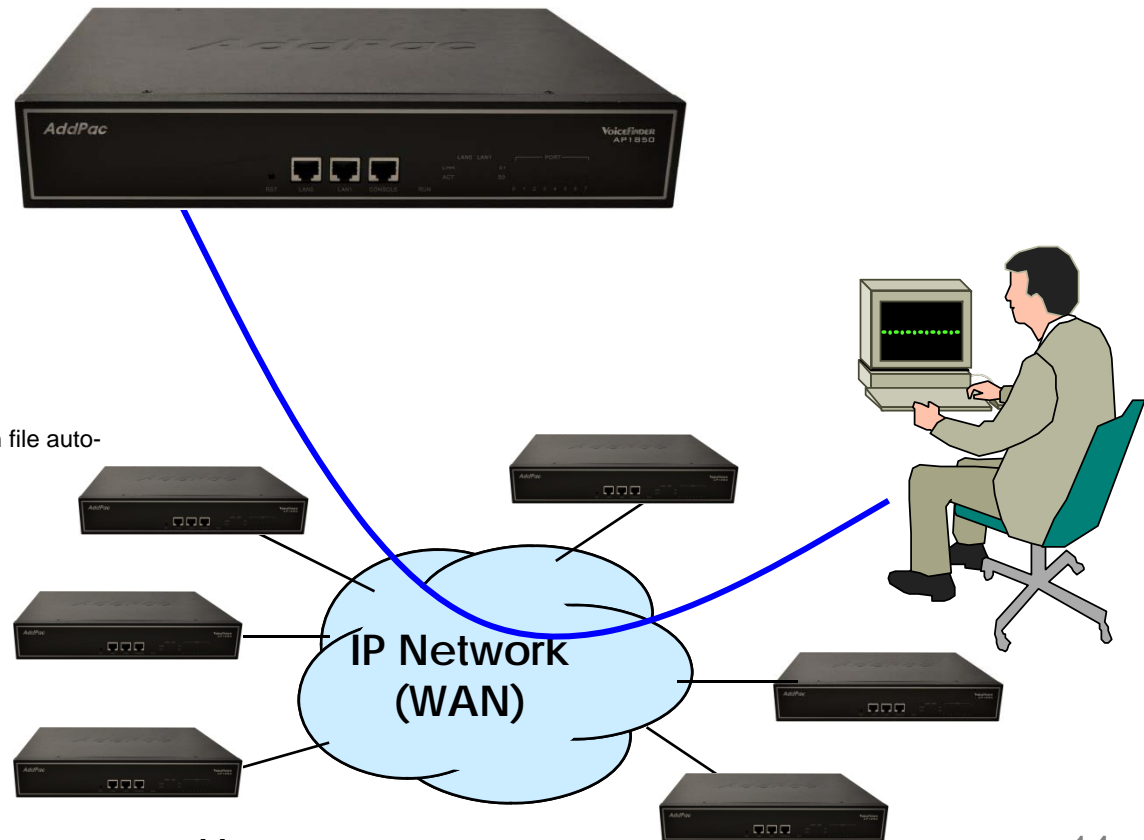
Security Management

- IP packet filtering
- IP access list
- User authentication function
  - Password Authentication Protocol (PAP)
  - Challenge Handshake Authentication Protocol (CHAP)
- Enable/Disable specific protocols
- Auto-square connect of Telnet session
- Account Management function for multi-level user
- SNMP/TELNET/FTP/HTTP/TFTP port assignment function
- SNMP/TELNET/FTP access list management
- Boot mode security checking function

IP Network (WAN)

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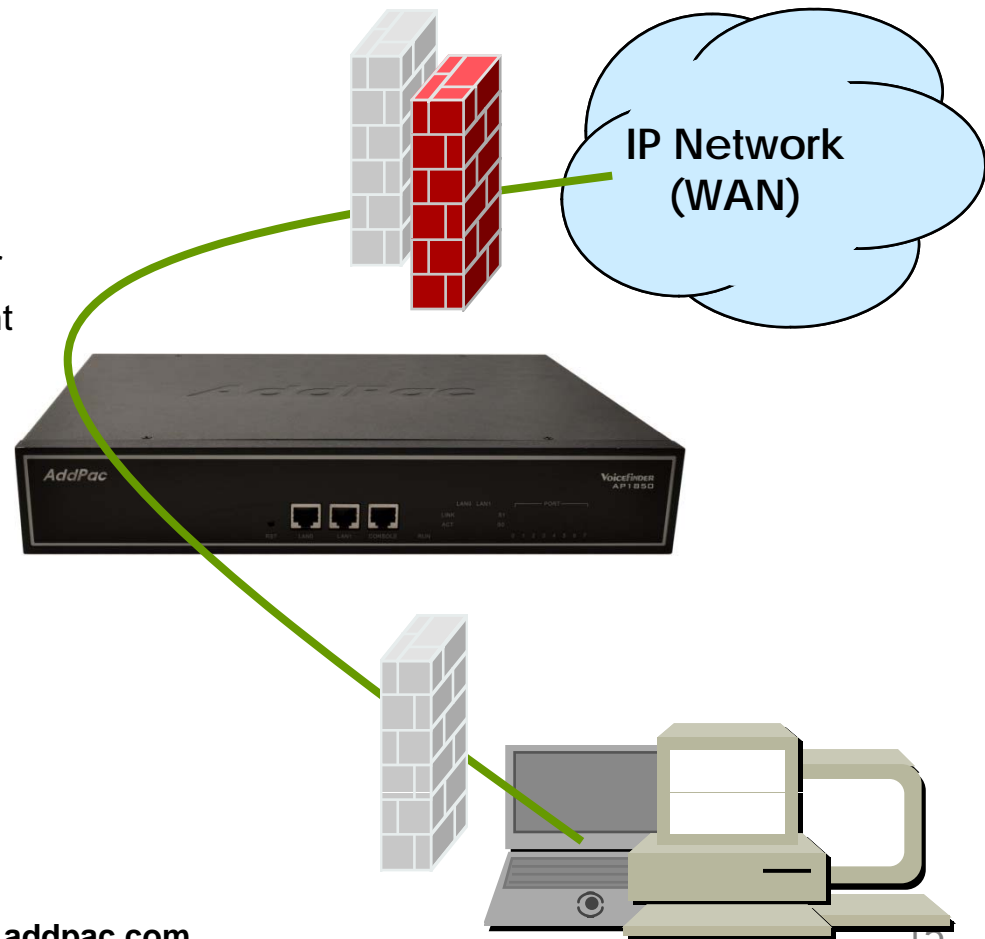
Smart Web Manager
for VoIP Gateway Series

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AddPac Technology

2013, Sales and Marketing

Contents

- Web Connection
- Main Page Layout
- System Configuration
  - Language, WAN Setup, LAN Setup, NAT, NTP, System Time, File Browser
- Basic Configuration
  - Protocol : SIP Server , H.323 Server
  - Analog Port : FXS Extension, FXO Extension, FXO Dial Plan, Hot Line
  - Digital Port : E1/T1 Trunk, E1/T1 Extension
  - VoIP : DTMF/CODEC, VoIP Dial Plan, Static Route
- Advanced Configuration
  - Gain/CID, FAX, Service, Filtering, Security
- Miscellaneous Configuration
  - Port & Call Status, System Status
  - Call Log, System Log, Test Call, Ping

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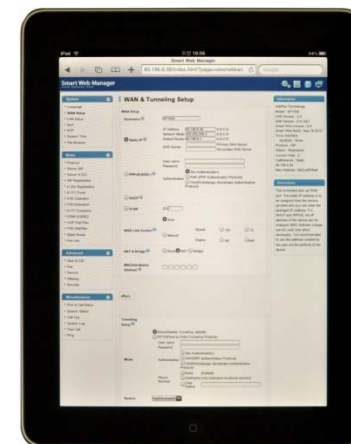
Web Connection

IP Address Configuration via RS232C Console Port

VoIP Gateway

Serial port

Baud rate 9600
No parity
1 stop bit
No flow control
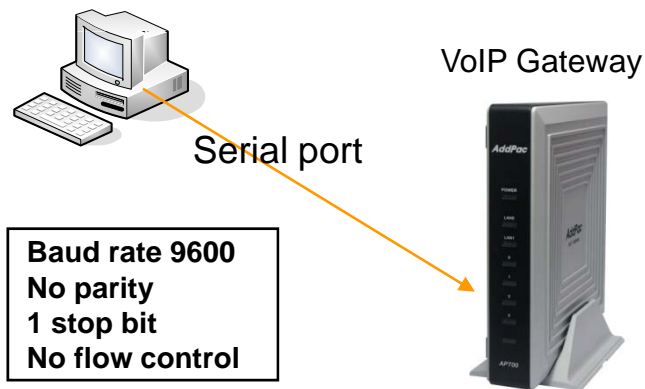
Login ID/Password :
root/router

1. Connect to VoIP Gateway via console port to enter IP address in order to set Interface 0/0
2. Input IP address of interface 0/0 using below command
3. Connect to the IP address via web after saving

Router> enable	=> Enter the enable mode
Router# configure terminal	=> Enter the configuration mode
Router(config)# interface FastEthernet 0/0	
Router(config-if)# ip address <IP Address> <Subnet Mask>	=> Ex) ip address 172.17.109.1 255.255.0.0
Router(config-if)# exit	
Router(config)# ip route 0.0.0.0 0.0.0.0 <Defaullt Gateway>	=> Ex) ip route 0.0.0.0 0.0.0.0 172.17.1.1
Router(config)# write	=> saving
Proceed with write? [confirm]y	

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Web Connection

Web Connection via LAN 1 Port

VoIP Gateway

Cross Cable   LAN 1
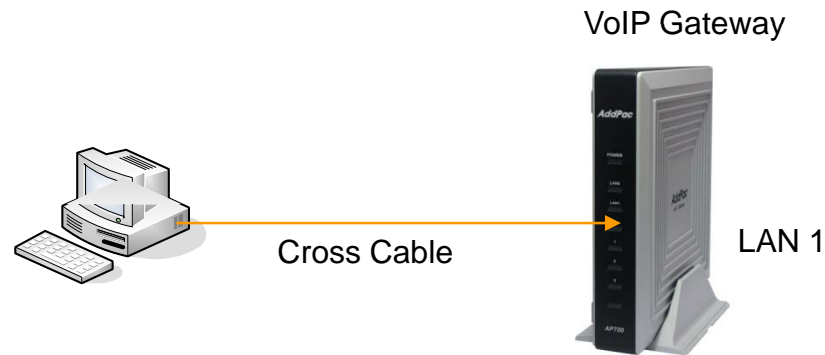
LAN 1 Default IP address
IP Address : 192.168.10.1
Subnet mask : 255.255.255.0

1. It is the way to connect to VoIP Gateway via LAN 1 port
2. The factory default of LAN 1 port
   - IP Address : 192.168.10.1
   - Subnet mask : 255.255.255.0
3. After set PC with same IP address subnet, connect to VoIP Gateway
   - Connect PC to VoIP Gateway using Cross UTP-Cable. You may use Ethernet switch
     with normal UTP-cable
   - Enter IP address 192.168.10.1 on your web browser

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WEB Connection

Connect to VoIP Gateway

Please enter the below log-in information to access Smart Web Manager

ID : root
Password : router

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Main Page Layout

Tool Bar
Provide frequently used tools like as System Update, Configuration Backup, Initialization, Restart, Telnet

Main Menu
For easy system setup, provide the various menu and category

Information
Display the current system version and status summery

Description
Display the help message if you move mouse over main menu

Workspace
Workspace for detailed action

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System
- Language
- WAN Setup
- LAN Setup
- NAT
- NTP
- System Time
- File Browser

Basic
- Protocol
- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan
- FXO DialPlan
- Static Route
- Hot Line

Advanced
- Gain & CID
- Fax
- Service
- Filtering
- Security
- SNMP

Miscellaneous
- Port & Call Status
- System Status
- Call Log
- System Log
- Test Call
- Ping

System Information

H/W Version	2.0
S/W Version	8.41.086
MAC Address	0002.a4ff.f6a4
VoIP Protocol	SIP
Voice Interface Module	S(4)O(4) : None
Registration Status	Unregistered
Supported Codec List	
Network Information	Static 0.0.0.0
WAN LINK Status	100Mbps FULL Duplex Link UP
LAN LINK Status	100Mbps FULL Duplex Link UP
Current Time	Thu Sep 16 14:24:50 2010
System Startup Time	Thu Sep 16 14:23:19 2010
System Running Time	0 days 00:01:31
Total Calls	0

Information
AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
    S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls: 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

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System - Language

System – WAN Setup

Host Name
Create a representative name for the site to be installed

Static IP
This is static IP mode. Specify the addressed IP from the service provider

PPPoE
This is ADSL mode. This mode is used for addressing IP though authentication from the modem.
At this time, the modem must be configured in a way that the device can be authenticated.

DHCP
This is dynamic IP mode which is set at default. The IP can addressed from the external DHCP server.

VLAN
Configure VLAN mode and ID.

WAN Link
Controls and recognizes WAN port
Specify the connection speed of WAN port. connection automatically.

MAC
Change MAC address of WAN interface. Without address entry, use the basic MAC Address.

NAT & Bridge
Configure NAT or Bridge mode

WAN & Tunneling Setup

WAN Setup

Hostname	Router

Static IP
- IP Address — A.B.C.D
- Network Mask — A.B.C.D
- Default Router — A.B.C.D
- DNS Server — Primary DNS Server / Secondary DNS Server

PPPoE(ADSL)
- User name
- Password
- Authentication:
  - (No Authentication)
  - PAP (PPP Authentication Protocol)
  - CHAP(Challenge Handshake Authentication Protocol)

DHCP

VLAN — ID 0

WAN Link Control
- Auto
- Manual — Speed: 100 / 10 — Duplex: full / half

NAT & Bridge — None / NAT / Bridge

MAC(Hardware) Address

Apply

Information

AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
 S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

This command sets up WAN port. The static IP address is to be assigned from the service provider and you can enter the assigned IP address. For DHCP and PPPoE, the IP address of the device can be changed. MAC Address change can be used only when necessary . It is recommended to use the address created by the user not the address of the device

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System – LAN Setup

None
It is configured by default IP.

IP Share
This is sharing of LAN0.

Static
This is configured directly by user.

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LAN Setup

- LAN Setup
- NAT

Basic
- Protocol
- Server SIP
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan
- FXO DialPlan
- Static Route
- Hot Line

Advanced
- Gain & CID
- Fax
- Service
- Filtering
- Security

○ None -

○ IP Share (IP Connect) -

IP Address 192.168.10.1   A.B.C.D (default 192.168.10.1)
Network Mask 255.255.255.0   A.B.C.D (default 255.255.255.0)

○ Static   ☐ Enable DHCP Server
Default Lease time 0   (in seconds, default 43200,1 day)
Address Range [_____] - [_____]
DNS Server [_____] A.B.C.D

✔ Apply

Information
AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
  S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description
This command sets up LAN port. This setting is used for the connected PC internally. It is recommended to use IP share for 1 PC and static for many. For static, the private address band is reuired. The recommended address bands are IP Address 192.168.10.1, Network Mask 255.255.255.0, Address Range 192.168.10.2 - 192.168.10.254. At this time, the internal PC must be set to [Receiving IP address automatically]

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System - NAT

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System
- Language
- WAN Setup
- LAN Setup
- **NAT**
- NTP
- System Time
- File Browser

Basic

- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan

NAT Static Table

IP Protocol	Global Port	Local Address	Local Port	Selection
tcp				Add

NAT Static Table
When many PCs are connected to LAN, create a table for delivering TCP/UDP port to PC
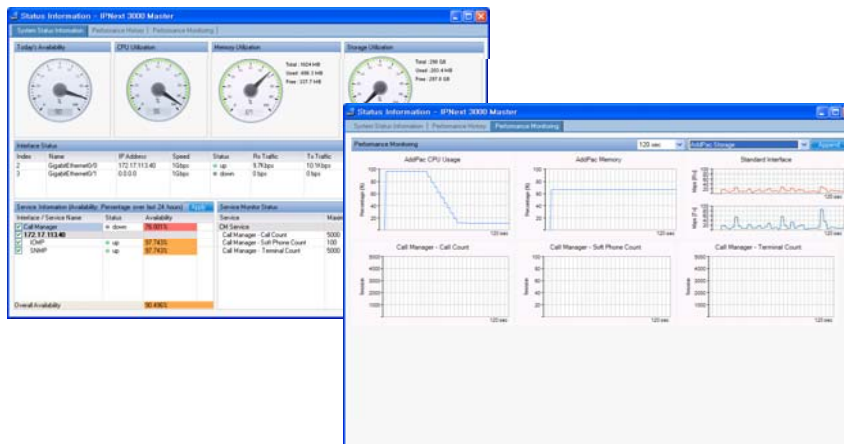
Information

AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
   S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls: 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

When many PCs are connected to LAN, create a table for delivering TCP/UDP port to PC.

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System - NTP

NTP
 Configure NTP server (s) & Options

System – System Time

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System
- Language
- WAN Setup
- LAN Setup
- NAT
- NTP
- **System Time**
- File Browser

Basic
- Protocol
- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC

System Time

Current Time	Thu Sep 16 14:29:54 2010				
Set System Time	Year	1 ▼ Month	1 ▼ Day	1 ▼ Hour	1 ▼ Min	1 ▼ Sec

Apply

System Time
Configure Local Time

Information
AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
   S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

System – File Browser

File Browser
Download and Upload Gateway's firmware or configuration file.

Basic - Protocol

Basic – SIP Server

Basic – SIP Registration

Basic – H.323 Server

H.323 Server
Primary & Secondary server,
H.323 ID
SIP Signaling Port (reboot necessary)
H.323 Call start mode
H.323 Tunnel mode

Basic – H.323 Registration

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System
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Basic
- Protocol
- Server SIP
- Server H.323
- SIP Registration
- **H.323 Registration**
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC

H.323 Registration

H.323 Registration

Pots Num	Port	Number	HuntStop	REG
1000	S0P0		☐	☐
1001	S0P1		☐	☐
1002	S0P2		☐	☐
1003	S0P3		☐	☐

* H323 Registration - Assigned Pots Tag Number : 1000 - 1024

✔ Apply

Information

AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
  S(4)O(4) : None
Protocol : H.323
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address : 0002.a4ff.f6a4

Description

Set up for using FXS port to registration H.323 Server

H.323 Registration
- Number
- Hunt Stop
- Registration checking

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Basic – Analog : FXS Extension

Port Information
voice port type & physical port

FXS Extension
Configure phone-number for using inter-office
Preference (0 : highest)

Basic – Analog : FXO Extension

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System
- Language
- WAN Setup
- LAN Setup
- NAT
- NTP
- System Time
- File Browser

Basic
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- **FXO Extension**
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan
- FXO DialPlan
- Static Route

FXO Extension

Port Information

Port	P0	P1	P2	P3	P4	P5	P6	P7
SLOT 0	FXS	FXS	FXS	FXS	FXO	FXO	FXO	FXO
SLOT 1								

FXO Extension Configration

Pots Num	Port	Numbers	Preference	HuntStop	Control
					Delete
	P0:4 ▾		9 ▾	☐	Apply

* FXO Extension - Assigned Pots Tag Number : 2024 - 2535

Port Information
voice port type & physical port

FXO Extension
Configure phone-number for using PSTN Line
Preference (0 : highest)

Information

AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
 S(4)O(4) : None
Protocol : H.323
Status : Unregistered
Current Calls: 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

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Basic – Analog : FX0 Dial Plan

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FXO Dial Plan / Prefix

Port Information

Port	P0	P1	P2	P3	P4	P5	P6	P7
SLOT 0	FXS	FXS	FXS	FXS	FXO	FXO	FXO	FXO
SLOT 1								

Plan Table

Rule Num	Digits to Insert	Digits to delete	Digit Pattern	Control
				Delete
				Add

FXO Table

Pots Num	FXS	FXO	Number	PlanIndex	Preference	Control
						Delete
		P0:4		N.A.	9	Apply

Assigned Translation-Rule Tag Number Number : 100 - 199
Assigned Pots Tag Number : 3560 - 4071

Information
AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.086
Smart Web Version : 0.4
Smart Web Build : Sep 15 2010
Voice Interface
  S(4)O(4) : None
Protocol : H.323
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address : 0002.a4ff.f6a4

Description

System
- Language
- WAN Setup
- File Browser

Basic
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- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
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- FXO Extension
- E1/T1 Extension
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- VoIP Dial Plan
- FXO DialPlan

Port Information
  voice port type & physical port

Plan Table
 Configure translation rule for FXO Port
  - first, 'Number of Digits to Delete' option is applied.
  - second, 'Digits to Insert' option is applied.

 (ex) Origin called Number = 123456
       Number of Digits to Delete = 2
       Digits to Insert = "88"
       ----
        result = 883456

FXO Table
  Configure FXO Port with translation rule.

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Basic – Digital : E1/ T1 Trunk

E1/T1 Port
Configure E1 channel & group

E1/T1 value
Clock-Source
Framing
Line Code
Signaling type

E1/T1Sub function
ISDN-PRI
  - Protocol-emulate
  - virtual-Connect
  - immediate-disconnect
  - dial-tone generate
  - Compand type
  - Q931 Timer
R2-MFC
  - Get calling number
Busyout
  - monitoring E1/T1 port status

Basic – Digital : E1/ T1 Extension

Port Information
voice port type & physical port

E1/T1 Extension
Configure phone-number for using PABX
- Forward-Digits (from / last)

Basic – DTMF/CODEC

CODEC
 Configure voice codec preference
  (g711a, g711u, g729, g7231, g726)

DTMF
 Configure DTMF relay method
  (in-band, RFC2833, out-of-band, CISCO type out-of-band)

Basic – VoIP Dial Plan

VoIP PLAN
Configure translation rule for VOIP Peer.
- first, 'Number of Digits to Delete' option is applied.
- second, 'Digits to Insert' option is applied.

(ex)   Origin called Number = 123456
       Number of Digits to Delete = 2
       Digits to Insert = "88"
       ----
       result = 883456

Prefix Table
Configure VoIP Peer with translation rule.
(Serviced by SIP SERVER)

Basic – Static Route

Static Route
Configure Static VoIP Peer for using Inter-Office .
 (Already, I know IP & phone-number)

Basic – Hot Line

Hot Line
- Used as incoming direct call of FXO port(Connection PLAR)
- Timer (FXS port only : No Digit event is occurred for configured timer value, Auto-Dialing will be started)

Advanced – Gain & CID

Gain & CID
Configure Input-gain, output-gain and caller-ID.

Advanced - Fax

Advanced - Service

Advanced - Filtering

Advanced - Security

Security
- IP Filtering   : Allowing only the inbound call which is registered to Call-Routing of
                       the server by static IP.
- Allowed IP address list : Allowing only inbound call which is added ip address.
- WarDialing   : Allowing only the inbound call with the number registered to Inter-
                       Office and phone-number.
- Digit Length   : Allowing only the inbound call with the number registered to
                       Inter-Office and phone-number
- H.323   : H.323 signaling packets are filtered.
- SIP   : SIP signaling packets are filtered.

Miscellaneous – Port & Call Status

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Port & Call Status

Analog/Digital Port
Real-time display about analog or digital port status (occupation, call status). Provide a specific port blocking function

Active Call Status
Real-time display about current active call status (calling party addr, called party addr. Codec, etc)

Port Status

SLOT	Port Group								
SLOT	Port	0(FXS)	1(FXS)	2(FXS)	3(FXS)	4(FXO)	5(FXO)	6(FXO)	7(FXO)
SLOT 0	Status	I	I	I	I	I	I	I	I
	Select	☐	☐	☐	☐	☐	☐	☐	☐

Unblock Block

Connection State : (Connected) (Disconnected || Blocked)
Call State : (Idle) (Ring || Dial) (Called) (Calling) (Blocked)

Call State

Port	Direction	Established Time	Calling Number	Called Number	CODEC	Src/Dest. IP

System
- Language
- WAN Setup

- Protocol
- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- FXO Extension

Information

AddPac Technology
Model : AP1800
H/W Version : 2.0
S/W Version : 8.41.027
Smart Web Version : 0.4
Smart Web Build : Sep 16 2010
Voice Interface
  S(4)O(4) : None
Protocol : SIP
Status : Unregistered
Current Calls : 0
CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description

Verify port status and retrieve the present call information

Miscellaneous – System Status

System Status
- voice port status & information
- SIP-UA status & information
- gateway status & information
- system utilization information

Miscellaneous – Call Log

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System
- Language
- WAN Setup
- LAN Setup
- NAT
- NTP
- System Time
- File Browser

Basic
- Protocol
- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan
- FXO DialPlan
- Static Route
- Hot Line

Advanced
- Gain & CID
- Fax
- Service
- Filtering
- Security

Miscellaneous
- Port & Call Status
- System Status
- Call Log
- System Log
- Test Call
- Ping

Call Log

CallNum EventTime	Descript	CallingPartyNum	CalledPartyNum	RemoteInfo	SetupTime	Dur	Reason

Call Log
Show call history information
  * call number
  * event time
  * description
  * calling number
  * called number
  * remote IP information
  * call setup time
  * call duration
  * call clear reason

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Miscellaneous – System Log

Miscellaneous – Test Call

Test Call
 remote diagnose the proper operation of VoIP call
   - Test Phone Number
   - Digits
   - Start / Voice / Digit / End Button

Miscellaneous - Ping

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Ping

PING
You can diagnose network status by PING.

Host address [   ] [Start]

PING
Show real time ping status.

System
- Language
- System Time
- File Browser

Basic
- Protocol
- Server SIP
- Server H.323
- SIP Registration
- H.323 Registration
- E1/T1 Trunk
- FXS Extension
- FXO Extension
- E1/T1 Extension
- DTMF/CODEC
- VoIP Dial Plan
- FXO DialPlan
- Static Route

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CallNetwork : Static 0.0.0.0
Mac Address: 0002.a4ff.f6a4

Description
Verify the outgoing Ping to the outside from the device by entering IP address and URL
Verify network status of the location in where the terminal is located

Smart NMS
Smart Network Management System for Large Scale VoIP Gateway Deployment

Contents

- System Requirement
- Smart NMS Networking Diagram
- Web-based Management
- Network Resource Management
- Device Fault Management
- Device Fault History Management
- Device Status Information
- Notification Management
- Fault Statistics
- Model & Service Management
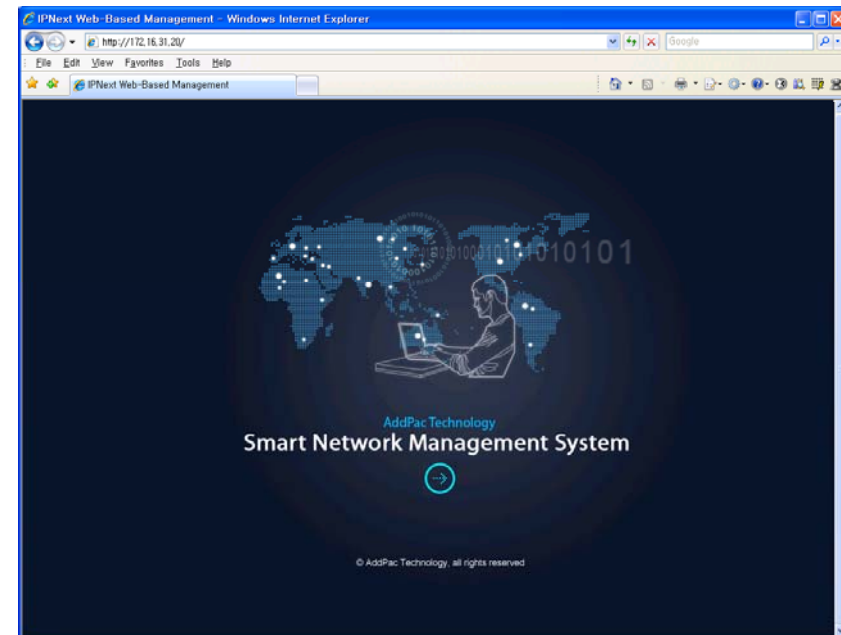
System Requirement

NMS Server

- OS : RHEL (Redhat Enterprise Linux) 5.0 or higher

- CPU : Quad-Core 2.0 GHz / 1333MHz FSB 2x4 MB cache

- Physical Memory : 4 GB

- HDD : 300 G

- JRE (Java Runtime Environment) 1.5.1 or Higher

- Database : PostgreSQL 8.1.11

NMS Client

- Windows XP, Vista, Windows Server 2000/2003

- Microsoft Internet Explorer 6.0 or higher

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NMS Networking Diagram
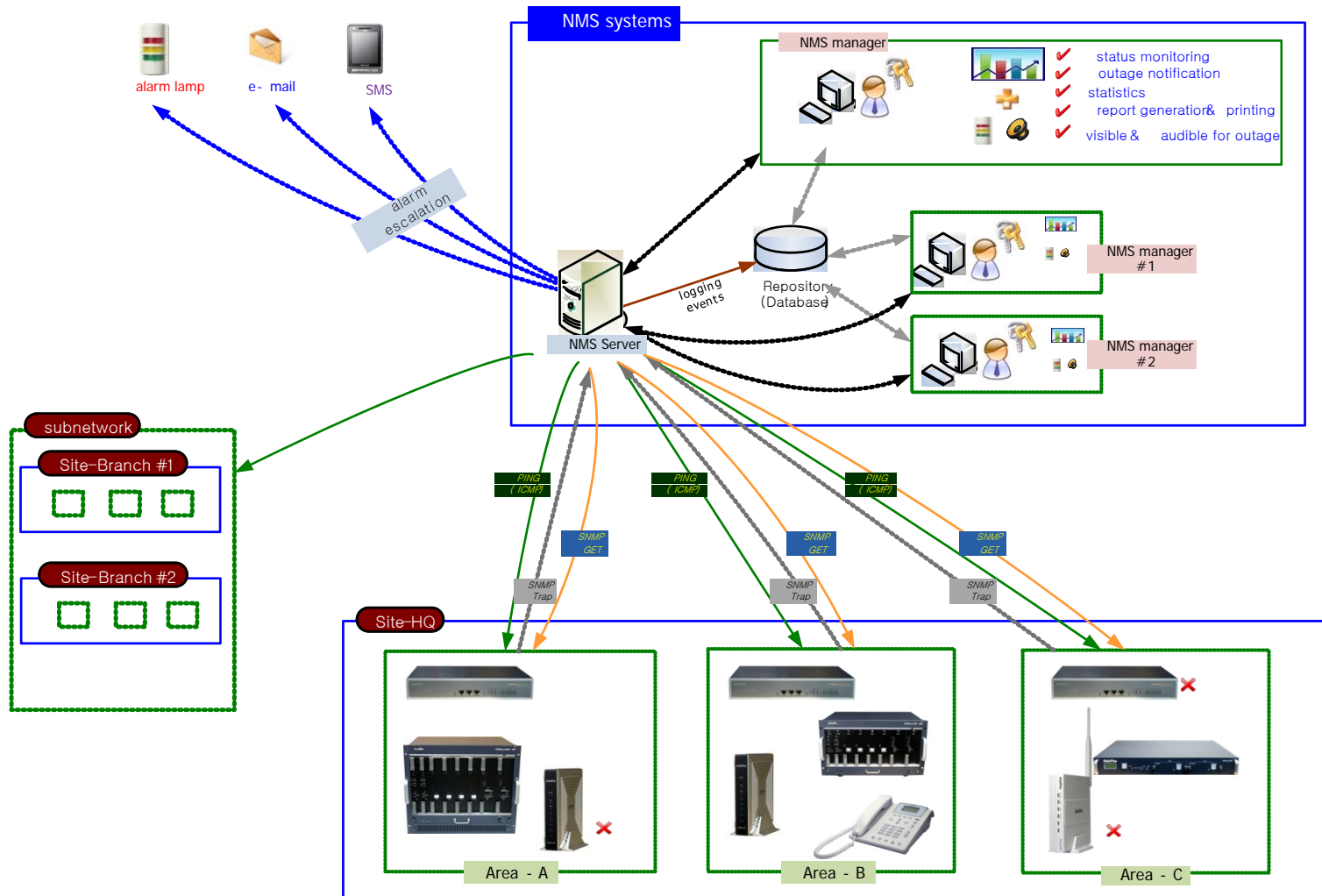
Web-based Management

- **Easy Access via Web browser**
  - Microsoft Internet Explorer 6.0 or higher compatible

- **Version Control**
  - Automatic version check
  - New version software download feature

- **UI control**
  - User friendly GUI management

Version Control

Automatic version check

New S/W version update

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Web-based Login

Network Resource Management

- Network resource management with hierarchical structure
- Role-based resource management for each administrator

manage the complex network with a structured, hierarchical form

can assign the hierarchical node to the operator and manage role-based policy

can cooperate with the application executables such as SMM

Device Fault Management

- Centralized fault summary information in main window
- Display current fault device through tree view
- Notify administrator with detailed fault information
- Provide device availability information for 24hrs

Device Fault Management

Device Fault Management

Device Fault Management

device status matrix with small view mode

Device Fault History Management

- Provide both summary view and detailed event message
- Can Write troubleshooting job note for each event manually
- Administrator can query for a history fault with search condition
- Each fault is related to the several raw events

Device Fault History Management

daily fault event summary statistics information

detail fault event history list up with filter condition (advanced search)

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Device Fault History Management

Current Device Fault (Outage)

Device Event History

Can view all events for devices with search condition

summarize daily event statistics data

Device Status Information

- System Performance Information (CPU, HDD, Memory,…)
- Provide device current service status (up/down)
- Provide device main status (max value vs current value)
- Display Graph Series with System Performance Information
- Monitor Main Status Flow with System Monitoring View

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Device Status Information
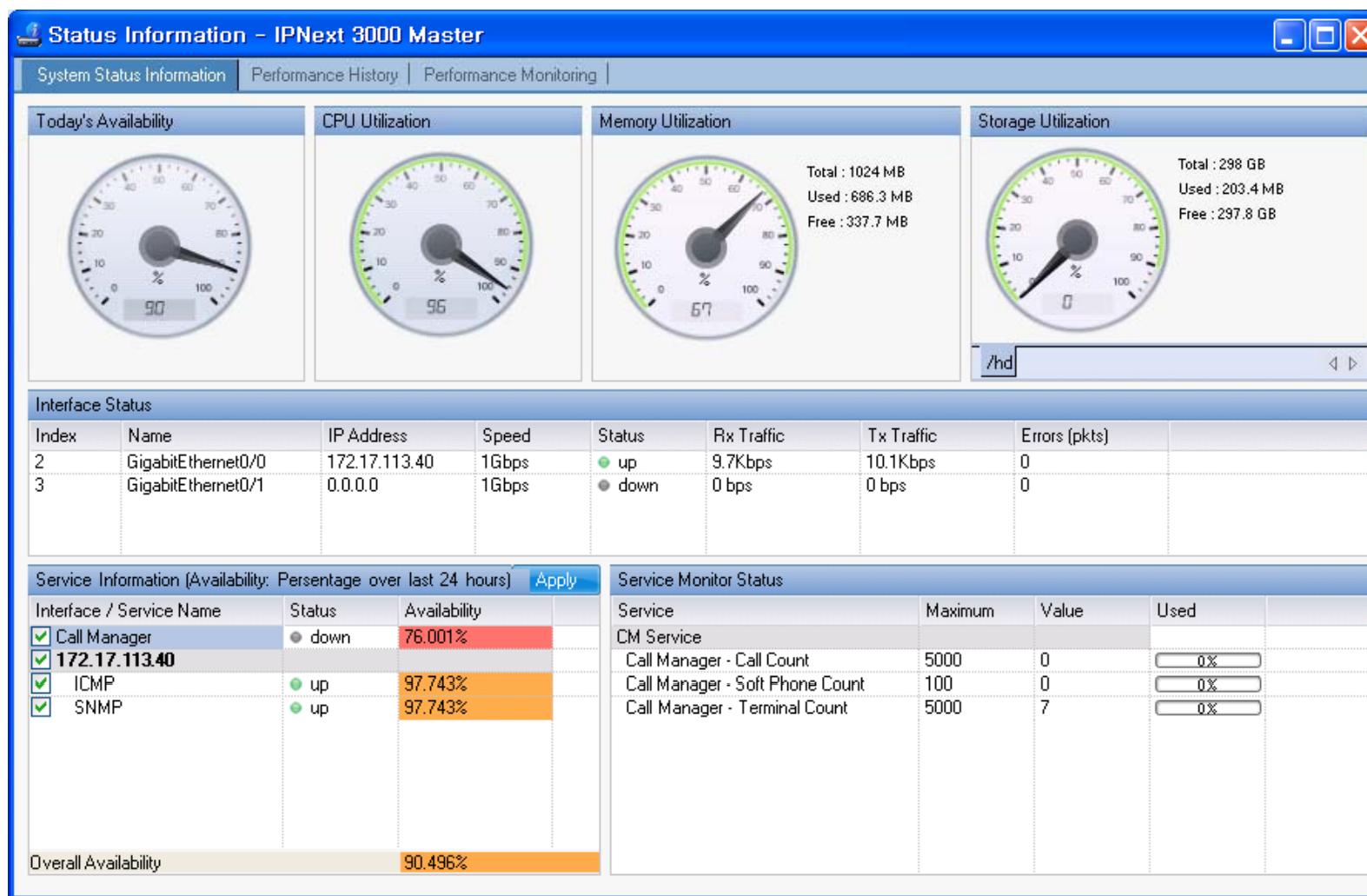
Device Status Information

performance analysis graph for last 24 hours

Device Status Information

performance monitoring
with proper time interval
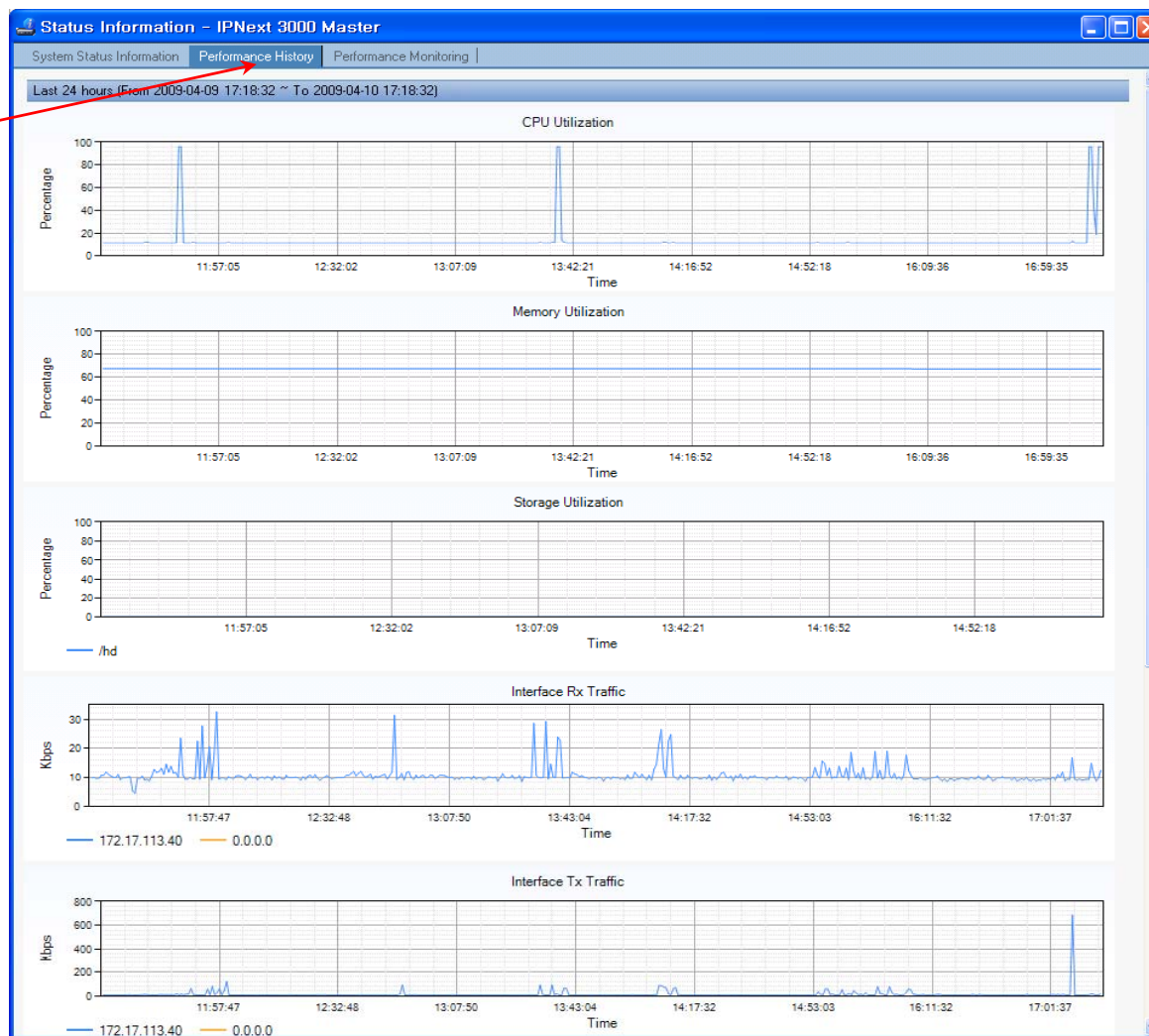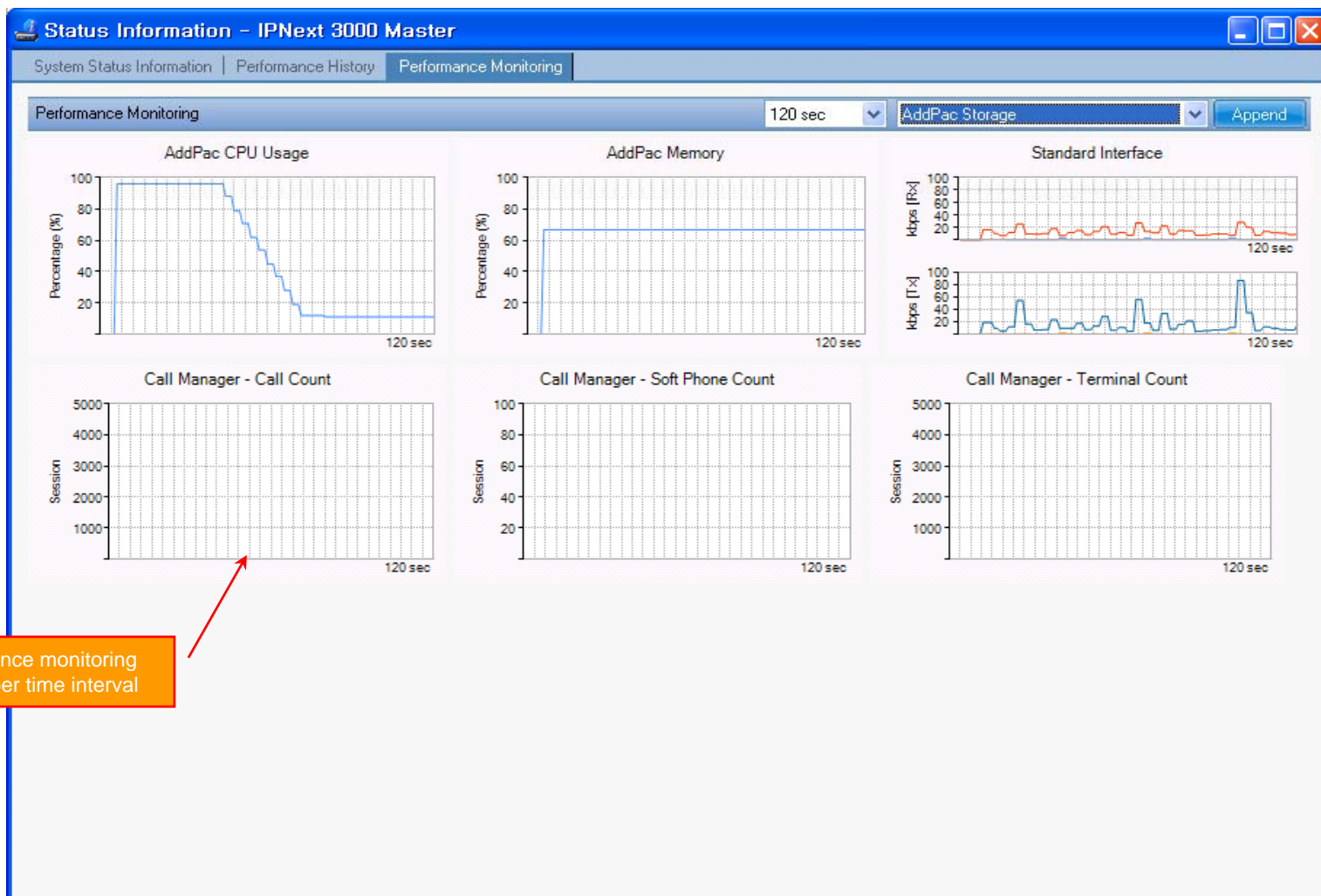
Notification Management

- Notify administrator for important event such as critical device fault when proper action needs
- Provide several notification channel such as SMS, e-mail, alarm lamp
- Notification channel configuration for each event
- Manage notification with device category such as Server, Terminal, PC, etc
- Provide Alarm with audible (play sound), visible (alarm lamp) form

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Event Notification Management

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Event Notification Management

Event Notification Management

Configuration

Audible & Visible Alarm

Fault Statistics

- analyze for a fault event with graph and detailed list data
- Report form generation and print out for statistics result

Fault Statistics

display graph for fault statistics with various search condition

display detailed data for fault statistics

Fault Statistics – Report Generation

report generation for fault statistics and print out the result
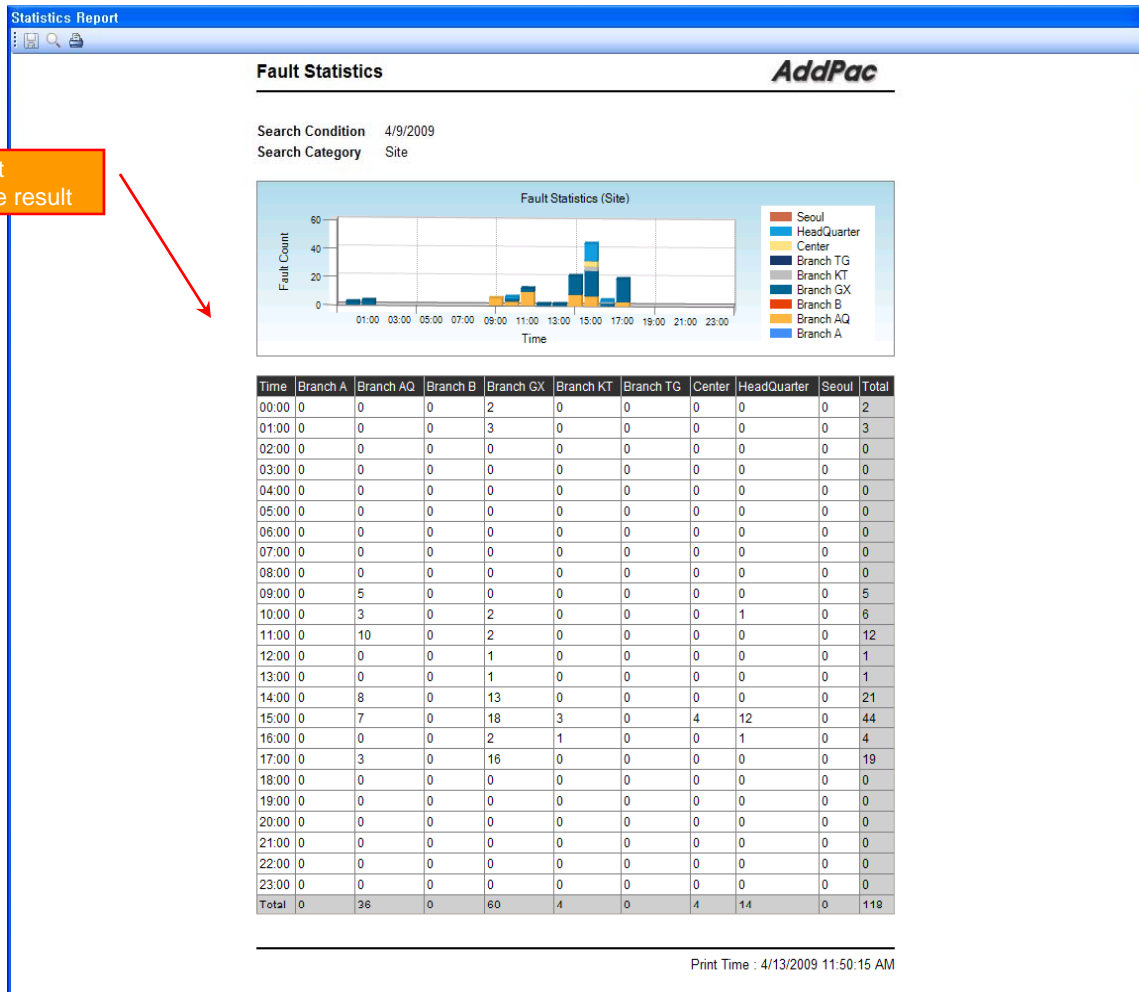
Model & Service Management

- Define new model with provided template image & properties
- Customize data collection with standard protocol such as TCP, SNMP

Device Model Management

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Service Definition

define the service for data collection, current status with standard protocol such as TCP or SNMP

Thank you!

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