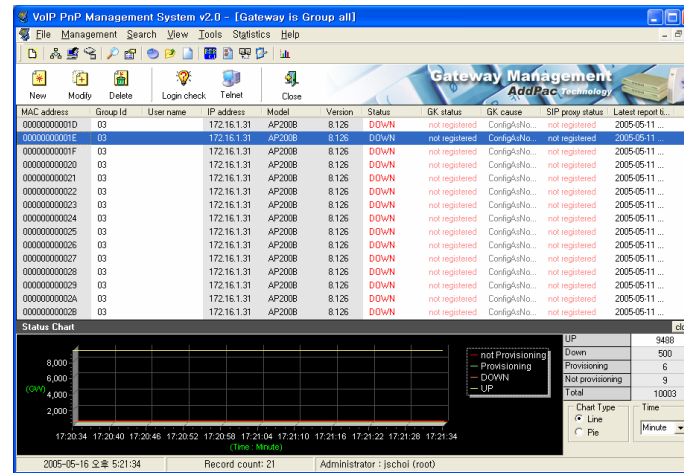




# AP-VPMS

## VoIP Plug & Play Management System Next Generation Large Scale VoIP Equipment Management Solution



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# AP-VPMS

## VoIP Plug & Play Management System

- **Product Overview**
- **Network Diagram**
- **Hardware Specification**
- **Software Requirement**
- **AP-VPMS GUI (Example)**
- **System Performance Evaluation**
- **Ordering Information**

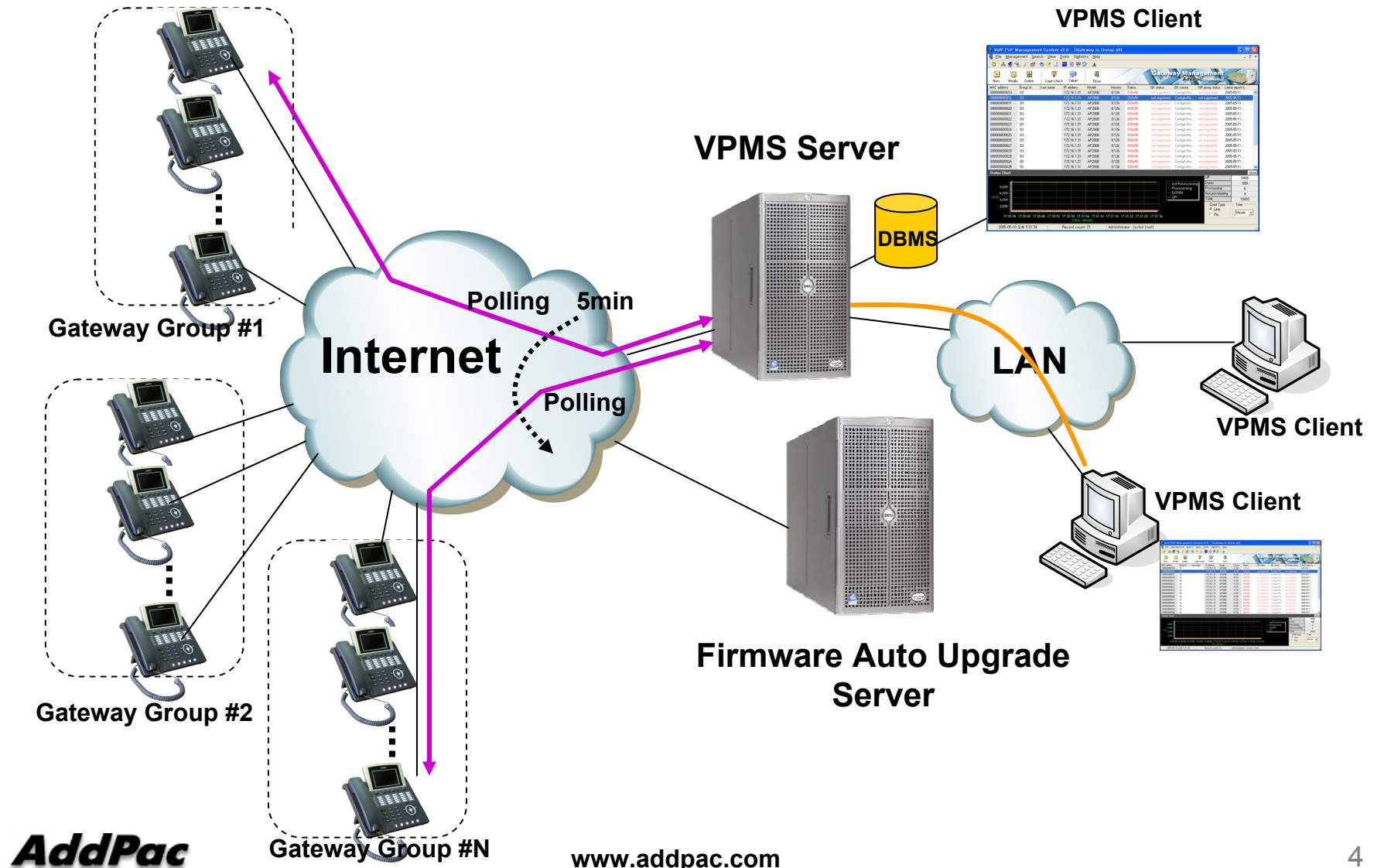
# Product Overview

## AP-VPMS VoIP Plug & Play Management System

- Powerful Management and User Friendly Features
- Graphical VoIP Gateway Plug & Play Manager
- Stability and Reliability Management System
- CLI Interface for Detailed Control
- VPMS Function List
  - Auto Initial Config and Installation
  - Gateway Status Monitoring & Analysis
  - Auto Firmware Upgrade
  - Gateway Management  
(Registration, Modification, Search, Delete, Filtering, etc)
  - Account Management
  - Group Management
  - Event Log View
  - Gateway Status Report

# Network Diagram

## AP-VPMS VoIP Plug & Play Management System



# Product Highlights

AP-VPMS VoIP Plug & Play Management System

## VoIP Plug & Play Management

Window 2000 Server Platform  
(VPMS Server)

Commercial H/W Platform  
(PC, Server Platform)

JAVA & MS-SQL  
Server (DBMS)

Server-Client  
Architecture

Gateway  
Status Report

Gateway Management  
(Registration, etc)

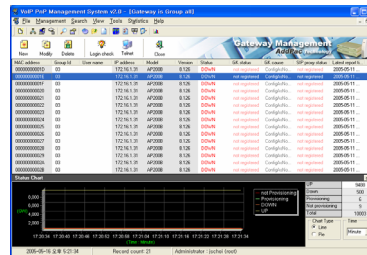
Gateway  
Status Monitoring

Gateway  
Auto Firmware Upgrade

Gateway Event Log

Account Management

Gateway  
Group Management



# Hardware Specification

**AP-VPMS** VoIP Plug & Play Management System

A square logo with a dark blue background and a white border. The text "RISC" is positioned above "CPU" in white, sans-serif font.

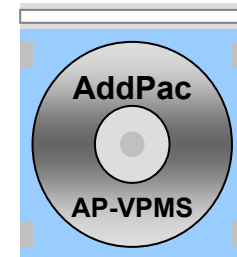
RISC  
CPU

- **Commercial H/W Platform**  
(Dell Server, Desktop PC, etc)
- **AP-VPMS Server H/W Requirement(1,000Ea)**
  - CPU : Intel Pentium 4 1GHz (minimum)
  - MEMORY : 1GByte(minimum)
  - HDD : 40GB
  - OS : Window 2000 Server
- **AP-VPMS Client H/W Requirement**
  - CPU : Intel Pentium Series
  - MEMORY : 256Mbyte, 128Mbyte (minimum)
  - OS : Window XP, Window 2000, Window 9x,etc

# Software Requirement

**AP-VPMS** VoIP Plug & Play Management System

- **DataBase : MS-SQL server 2000 (standard)**
- **Auto-upgrade server :Windows2000 server (IIS, FTP)**
- **VPMS Server :Java JRE 1.4.1(download), VPMS server**
- **VPMS Client :VPMS client**
- **Others : TeraTerm Pro 2.3 (freeware download)**





# AP-VPMS GUI Example



# Model Management (Example)

AP-VPMS VoIP Plug & Play Management System

**VoIP PnP Management System v2.0 - [Group Summary]**

File Management Search View Tools Statistics Help

**AddPac** VoIP Plug & Play Management System  
AddPac Technology

No	Group Id	Group name	GW UP
1	01	Sungnam	11
2	02	Seoul	6634
3	03	Kangnam	0
4	04	Seocho	1782
5	05	kwanak	1001

Select management Gateway

Search Define

- MAC address
- 
- 
- 
- 

1 2 3 4 5  
6 7 8 9 10

Delete

Ascending Descending

Group Id

Search

2005-05-17 오후 1:46:11 Record count: 5 Administrator : jschoi (root)

**Gateway Model Management**

Gateway Model

- AP1100\_S404
- AP200B
- AP200C

Model name

Slot count

Slot / Port count

ster	SIP Register	SIP not Register	Group all
	0	16	16
	0	7168	7168
	0	21	21
	0	1797	1797
	0	1001	1001

close

New Delete Ok Close

# Equipment Filter Search (Example)

AP-VPMS VoIP Plug & Play Management System

The screenshot displays the 'VoIP PnP Management System v2.0 - [Group Summary]' window. It features a menu bar (File, Management, Search, View, Tools, Statistics, Help) and a toolbar. The main content area includes the 'AddPac' logo and the system title 'VoIP Plug & Play Management System'. Below this is a table with the following data:

No	Group Id	Group name	GW UP	GW Down	GW Provisioning	GW Not provision	GK Register	GK not Register	SIP Register	SIP not Register	Group all
1	01	Sungnam	11	3	0	2	1	15	0	16	16
2	02	Seoul	6694	474	0	0	6688	480	0	7168	7168
3	03	Kangnam	0	21	0	0	0	21	0	21	21
4	04	Seocho	1782	2	6	7	1797	0	0	1797	1797
5	05	kwanak	1001	0	0	0	1001	0	0	1001	1001

Below the table is a 'Select management' dropdown set to 'Gateway'. The 'Search Define' section includes five filter rows with dropdown menus and comparison operators. A 'Sort Type' section has radio buttons for 'Ascending' (selected) and 'Descending'. A 'Search' button and a 'Group Id' dropdown are also present. The 'Status Chart' section shows a line graph with a legend for 'not Provisioning' (red), 'Provisioning' (green), 'DOWN' (orange), and 'UP' (blue). A summary table on the right of the chart shows:

UP	9488
Down	500
Provisioning	6
Not provisioning	9
Total	10003

The status bar at the bottom indicates the date and time '2005-05-17 오전 10:14:35', a record count of 5, and the administrator 'jschoi (root)'.

# Firmware Upgrade (Example)

## AP-VPMS VoIP Plug & Play Management System

The screenshot displays the 'Upgrade Information' window of the VoIP PnP Management System v2.0. The window title is 'VoIP PnP Management System v2.0 - [Upgrade Information]'. The menu bar includes 'File', 'Management', 'Search', 'View', 'Tools', 'Statistics', and 'Help'. The main content area features a table with the following data:

No	Group code	Type	Old version	New version	Operator ID	Upgrade time	Comment
1	kor_02	BIN	6.12	6.12	root	2003-06-09 오후 4:41:56	FTP upload
2	kor_02	INF	20030609	20030609	root	2003-06-09 오후 4:36:23	test
3	kor_02	INF	20030609	20030609	root	2003-06-09 오후 4:35:27	z
4	kor_02	BIN	6.12	6.12	root	2003-06-09 오후 4:34:48	FTP upload
5	kor_02	BIN	6.12	6.12	root	2003-06-09 오후 4:31:48	FTP upload
6	kor_02	INF		20030609	root	2003-06-09 오후 4:29:13	dir test.
7	kor_02	BIN		6.12	root	2003-06-09 오후 4:28:01	FTP upload

Below the table is a 'Status Chart' section. The chart displays a line graph with the following legend:

- not Provisioning (red line)
- Provisioning (green line)
- DOWN (orange line)
- UP (yellow line)

The chart shows a steady state with approximately 9488 UP devices, 500 Down devices, 6 Provisioning devices, and 9 Not provisioning devices. The total number of devices is 10003. The chart type is set to 'Line' and the time interval is 'Minute'.

# Event Log (Example)

## AP-VPMS VoIP Plug & Play Management System

Date_Time	IP address	Category	Event
2005-05-12 오후 8:41:00	172.16.1.31	Gatekeeper	Gateway REQUEST
2005-05-12 오후 8:41:00	172.16.1.31	Gateway	Gateway RESPONSE
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.19.102	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	
2005-05-12 오후 8:40:00	172.16.1.31	Gateway	

State	Count
UP	9488
Down	500
Provisioning	6
Not provisioning	9
Total	10003



# Report Preview (Example)

AP-VPMS VoIP Plug & Play Management System

Print Preview

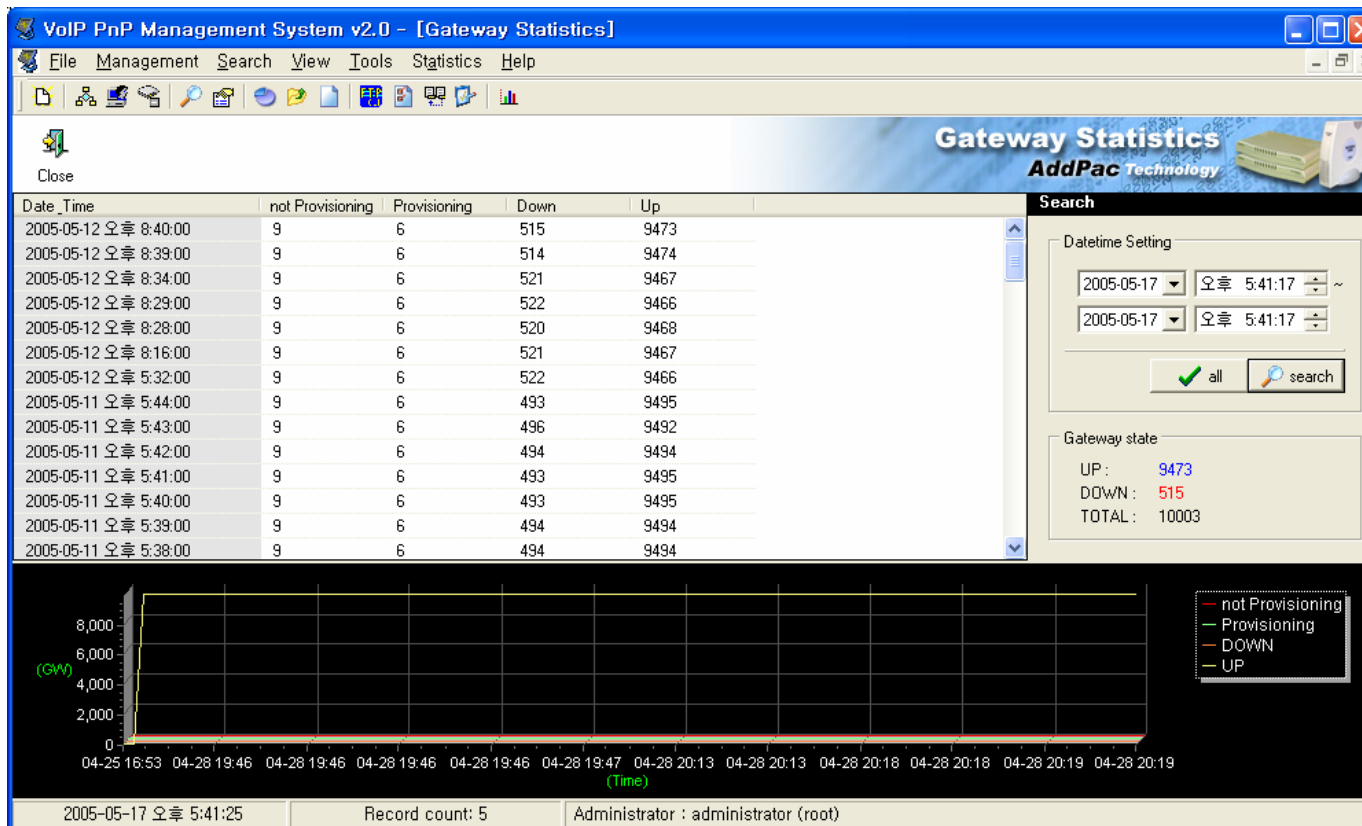
Upgrade Information Report **AddPac**

Area code	Type	Old version	New version	Operator ID	Upgrade time	comment
02	BN	ap1100rom.bin	ap1100rom.bin	root	2003-04-01 오전 10:12:47	FTPupload
02	BN	03 20 2003 2:03PM	ap1100rom.bin	root	2003-04-01 오전 10:06:37	FTPupload
02	BN	03 20 2003 2:00PM	03 20 2003 2:03PM	daw ndew	2003-03-20 오후 2:03:26	bin upgrade
area_id	part	ver_1	ver_2	operator_id	2003-03-20 오후 2:03:26	comment
02	INF		03 20 2003 1:12PM	root	2003-03-20 오후 2:03:26	rule 수정
02	INF		03 20 2003 2:00PM	daw ndew	2003-03-20 오후 2:03:26	file upload test
02	INF	03 20 2003 2:03PM	03 27 2003 3:04PM	root	2003-03-20 오후 2:03:26	
02	BN		ap1100rom.bin	root	2003-03-20 오후 2:03:26	
02	BN	ap1100rom.bin	ap3120romV6_071.bin	root	2003-03-20 오후 2:03:26	
02	INF	03 27 2003 3:04PM	03 27 2003 4:16PM	root	2003-03-20 오후 2:03:26	test
02	INF	03 27 2003 4:16PM	03 27 2003 5:53PM	root	2003-03-20 오후 2:03:26	
02	INF	03 27 2003 5:53PM	03 27 2003 5:54PM	root	2003-03-20 오후 2:03:26	Area code test 일니
02-01	INF		03 28 2003 4:52PM	root	2003-03-20 오후 2:03:26	
02-01	INF	03 28 2003 4:52PM	03 28 2003 4:52PM	root	2003-03-20 오후 2:03:26	
02-01	INF	03 28 2003 4:52PM	03 28 2003 4:53PM	root	2003-03-20 오후 2:03:26	
02-01	BN		ap1100rom.bin	root	2003-03-20 오후 2:03:26	
02-01	BN	ap1100rom.bin	ap1100rom.bin	root	2003-03-20 오후 2:03:26	
02-01	BN	ap1100rom.bin	ap1100rom.bin	root	2003-03-20 오후 2:03:26	
02	INF		03 20 2003 2:00PM	daw ndew	2003-03-20 오후 2:00:10	file upload test
02	INF		03 20 2003 1:12PM	root	2003-03-20 오후 1:12:29	rule 수정
02-01	INF	03 28 2003 4:53PM	03 28 2003 6:02PM	root		BMS client autoscri
02-01	INF	03 28 2003 6:02PM	03 28 2003 6:04PM	root		
02-01	INF	03 28 2003 6:04PM	03 28 2003 6:08PM	root		
02-01	INF	03 28 2003 6:08PM	03 28 2003 6:08PM	root		
02-01	INF	03 28 2003 6:08PM	03 28 2003 6:09PM	root		
02-01	INF	03 28 2003 6:09PM	03 28 2003 6:09PM	root		BMS client test..
02	INF	03 28 2003 7:07PM	03 28 2003 7:09PM	root		upgrade 2
02-01	BN	ap2520rom.bin	ap3120romV6_071 bin	root		FTPupload
02	INF	03 27 2003 5:54PM	03 28 2003 7:07PM	root		upgrade 1
02	INF	03 28 2003 7:09PM	03 28 2003 7:13PM	root		

Page 1 of 1

# Gateway Statistics (Example)

AP-VPMS VoIP Plug & Play Management System





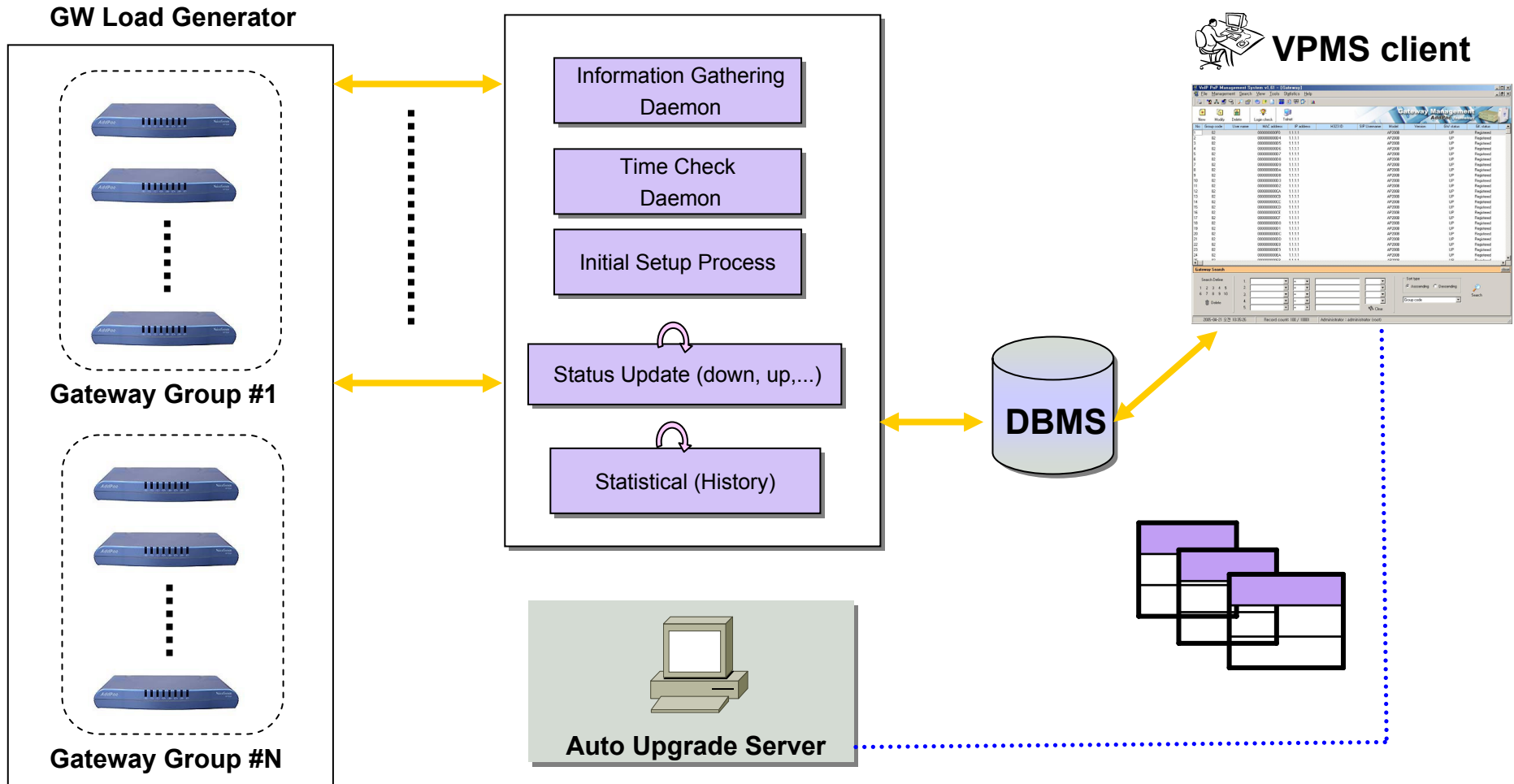
# AP-VPMS Performance Analysis



# System Performance Simulation Env.

AP-VPMS VoIP Plug & Play Management System

## VPMS Server



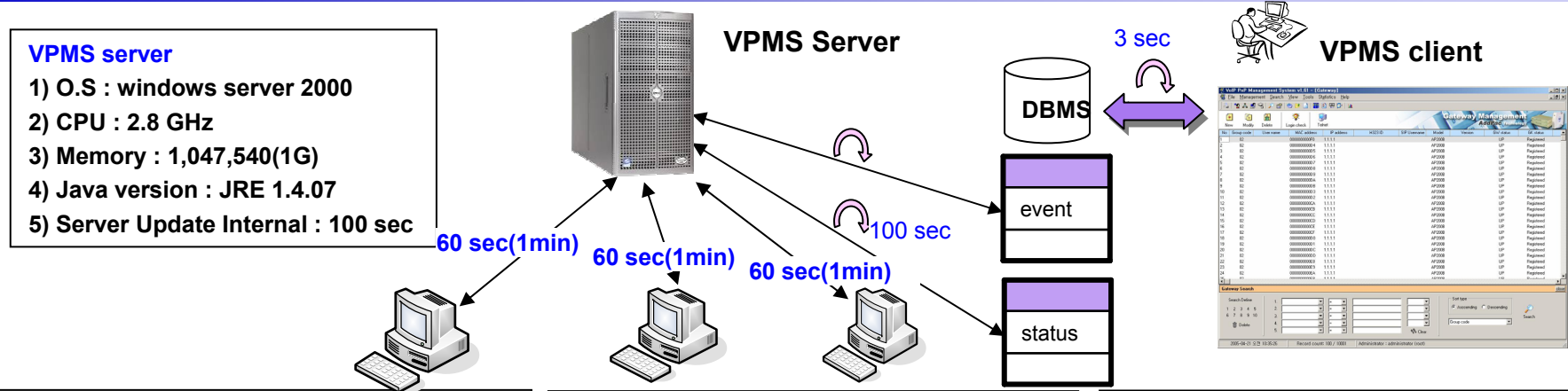
# Simulation Parameters

## AP-VPMS VoIP Plug & Play Management System

Item		Item	Contents		Comments
GW Simulator	Number of Gateway	machine 1	1000	Total 2000 GW, 3 machine	
		machine 2	500		
		machine 3	500		
	GW->VPMS Server	Transmission Method	Socket Type		
		Packet Type	UDP		
		Transmission Interval	60 sec		
		Packet size	63 octet ( Radius Status Report)		
VPMS Server	Transmission Method	Socket Type			
	Packet Type	UDP			
	Socket Type	Non-Blocking Mode (selector)			
VPMS Client	Status Check Interval	3 sec (default value) – adjustable			
	Group Management	Maximum Depth One(1)			
DBMS (Database Mgt System)	DBMS Type	Microsoft MS SQL Server 2000 with sp3			
	Server-> DBMS Connection	JDBC Driver Type 4			
	TABLE	Total 11 Table ( 9 Master + 2 Hisory Data)			
	TABLE INCREMENT Rate	Management GW # = 2,000, Number of Status Change is 5 time per day			
		History Data (Table)	event	2,000 x 5 x 27(byte per event) = 270,000 = 270k/day	Total= 300K per day
	status	24 Hour / server status update Interval (ex: 60 sec) = 1,440 event per day 1,440 x 24 byte (byte per evenet) = 34,560 = 34 K/day			

# Simulation Result

## AP-VPMS VoIP Plug & Play Management System



**GW simulator #1**

- 1) O.S : windows server 2003
- 2) CPU : 3.6 GHz (Xeon CPU)
- 3) Memory : 2 G
- 4) GW# : 10 Group X 100 GW# per Group = **1000**

**GW simulator #2**

- 1) O.S : windows XP Home Edition with sp2
- 2) CPU : 1.69 GHz
- 3) Memory : 1 G
- 4) GW# : = 10 Group X100 GW# per Group = **500**

**GW simulator #3**

- 1) O.S : windows server 2003 Enterprise Ed.
- 2) CPU : centrino 1.4 G
- 3) Memory : 256 M
- 4) GW# : = 10 Group X100 GW# per Group = **500**

Item	Start	End	Comments
Time	D-2 16:35 min	D+0 09:35 min	<b>Duration = 65 hrs</b>
CPU	2% under	2 % under	
Memory	12,136 KB( 12 M)	13,368 KB ( 13 M )	
GW down (data loss)	<b>Not Occurred</b>		
History table	Number of Event Table : 103,174, Number of GW status : 9,721		
VPMS Server Setting	1) socket receiver buffer : 5,000,000 byte( 5M ), 2) socket type : Non-Blocking (Selector)		
VPMS Client (Test Result)	1) Memory : OK (No Leaked), 2) Program Termination (abnormal, normal) : OK, 3) Program Processing Speed : OK (No Delay) 4) if Polling Interval is 5 min or longer than 5min, GWs more than 10000 Ea are supported or controlled by VPMS		

# Ordering Information

- **AP-VPMS VoIP Plug & Play Management S/W**
  - VPMS Server Program
  - VPMS Client Program
- **Including 1 Year Hardware Warranty**
- **Product Documents**
  - Install and Operation Guide (PDF)
- **Pricing**
  - AddPac Technology Regional Sales Manager
  - Authorized Sales and Marketing Representatives
  - Please Contact [www.addpac.com](http://www.addpac.com)

# AP-VPMS VoIP Plug & Play Management

# Thank you!

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