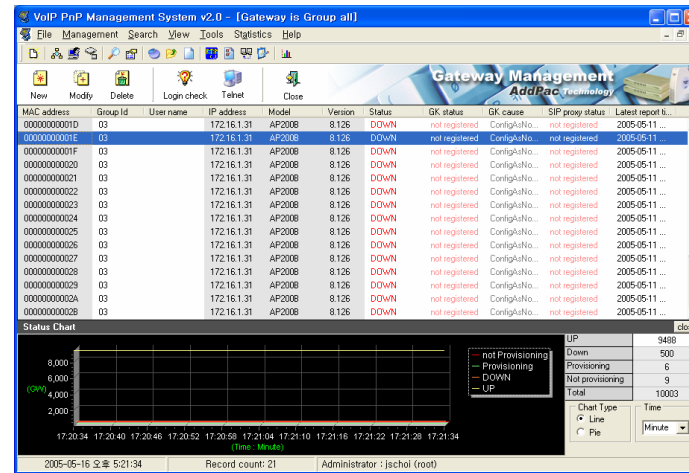


AP-VPMS

VoIP/Video Plug & Play Management System

Next Generation Large Scale VoIP/Video Equipment Management Solution



AddPac

AddPac Technology

2005, Sales and Marketing

www.addpac.com

AP-VPMS

VoIP/Video Plug & Play Management System

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

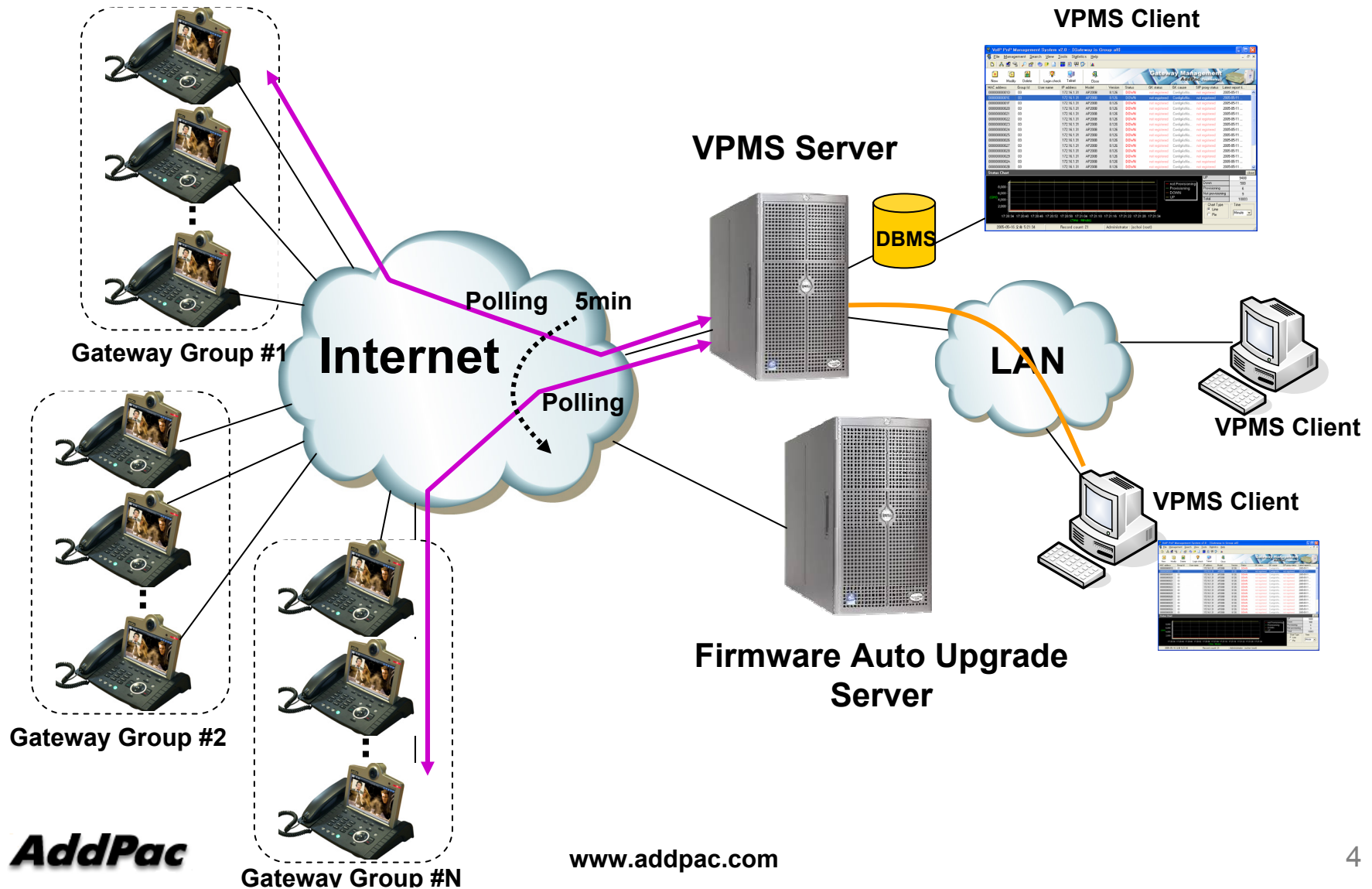
Product Overview

AP-VPMS VoIP/Video 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/Video Plug & Play Management System



AddPac

www.addpac.com

Product Highlights

AP-VPMS VoIP/Video Plug & Play Management System

VoIP/Video 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)

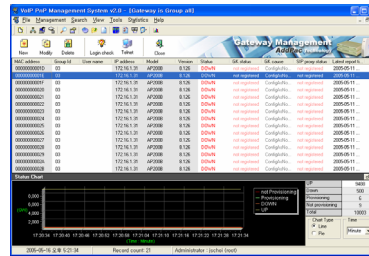
Gateway
Status Monitoring

Gateway
Auto Firmware Upgrade

Gateway Event Log

Account Management

Gateway
Group Management



Hardware Specification

AP-VPMS VoIP/Video Plug & Play Management System

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

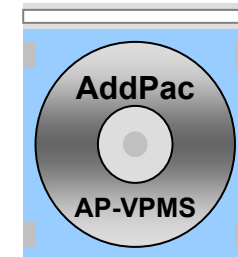
RISC
CPU

- **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/Video 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/Video Plug & Play Management System

The screenshot displays the 'VoIP PnP Management System v2.0 - [Group Summary]' window. A 'Gateway Model Management' dialog box is open, showing a list of gateway models: AP1100_S404, AP200B, and AP200C. The dialog includes fields for 'Model name', 'Slot count', and 'Slot / Port count'. The main window features a table with columns: No, Group Id, Group name, and GW UP. Below the table is a 'Select management' dropdown set to 'Gateway'. A search section includes a 'Search Define' list with '1. MAC address' selected, and a search button. The status bar at the bottom shows the date '2005-05-17 오후 1:46:11', 'Record count: 5', and 'Administrator : jschoi (root)'.

| 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 |

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

Equipment Filter Search (Example)

AP-VPMS VoIP/Video 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/Video Plug & Play Management System

The screenshot shows 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 y-axis labeled '(GW)' ranging from 0 to 8,000 and the x-axis labeled '(Time - Minute)' ranging from 14:40:34 to 14:41:34. A legend indicates four categories: 'not Provisioning' (red), 'Provisioning' (green), 'DOWN' (orange), and 'UP' (yellow). The chart shows a steady state with a high number of 'UP' devices and a low number of 'DOWN' devices.

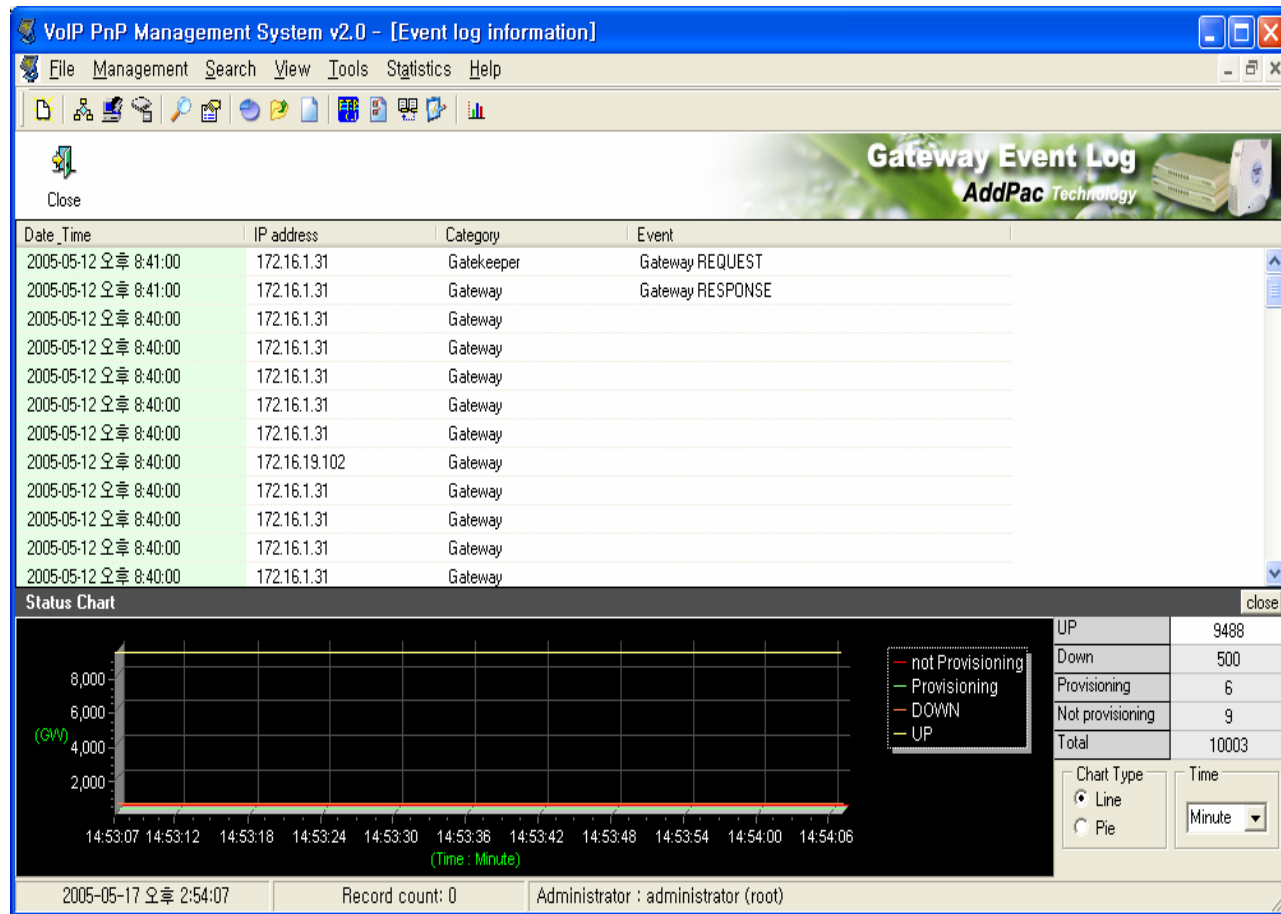
To the right of the chart is a summary table:

| | |
|------------------|-------|
| UP | 9488 |
| Down | 500 |
| Provisioning | 6 |
| Not provisioning | 9 |
| Total | 10003 |

Below the summary table are controls for the chart: 'Chart Type' (Line selected, Pie), and 'Time' (Minute selected).

Event Log (Example)

AP-VPMS VoIP/Video Plug & Play Management System



Report (Example)

AP-VPMS VoIP/Video Plug & Play Management System

The screenshot shows a 'Print Preview' window for an 'Upgrade Information Report' generated by AddPac. The report is presented as a table with the following columns: Area, Date, Type, Old version, New version, Operation, Upgrade date, and User email. The data consists of multiple rows of upgrade records, including entries for areas like '1120', '1200', '1201', '1202', '1203', '1204', '1205', '1206', '1207', '1208', '1209', '1210', '1211', '1212', '1213', '1214', '1215', '1216', '1217', '1218', '1219', '1220', '1221', '1222', '1223', '1224', '1225', '1226', '1227', '1228', '1229', '1230', '1231', '1232', '1233', '1234', '1235', '1236', '1237', '1238', '1239', '1240', '1241', '1242', '1243', '1244', '1245', '1246', '1247', '1248', '1249', '1250', '1251', '1252', '1253', '1254', '1255', '1256', '1257', '1258', '1259', '1260', '1261', '1262', '1263', '1264', '1265', '1266', '1267', '1268', '1269', '1270', '1271', '1272', '1273', '1274', '1275', '1276', '1277', '1278', '1279', '1280', '1281', '1282', '1283', '1284', '1285', '1286', '1287', '1288', '1289', '1290', '1291', '1292', '1293', '1294', '1295', '1296', '1297', '1298', '1299', '1300', '1301', '1302', '1303', '1304', '1305', '1306', '1307', '1308', '1309', '1310', '1311', '1312', '1313', '1314', '1315', '1316', '1317', '1318', '1319', '1320', '1321', '1322', '1323', '1324', '1325', '1326', '1327', '1328', '1329', '1330', '1331', '1332', '1333', '1334', '1335', '1336', '1337', '1338', '1339', '1340', '1341', '1342', '1343', '1344', '1345', '1346', '1347', '1348', '1349', '1350', '1351', '1352', '1353', '1354', '1355', '1356', '1357', '1358', '1359', '1360', '1361', '1362', '1363', '1364', '1365', '1366', '1367', '1368', '1369', '1370', '1371', '1372', '1373', '1374', '1375', '1376', '1377', '1378', '1379', '1380', '1381', '1382', '1383', '1384', '1385', '1386', '1387', '1388', '1389', '1390', '1391', '1392', '1393', '1394', '1395', '1396', '1397', '1398', '1399', '1400', '1401', '1402', '1403', '1404', '1405', '1406', '1407', '1408', '1409', '1410', '1411', '1412', '1413', '1414', '1415', '1416', '1417', '1418', '1419', '1420', '1421', '1422', '1423', '1424', '1425', '1426', '1427', '1428', '1429', '1430', '1431', '1432', '1433', '1434', '1435', '1436', '1437', '1438', '1439', '1440', '1441', '1442', '1443', '1444', '1445', '1446', '1447', '1448', '1449', '1450', '1451', '1452', '1453', '1454', '1455', '1456', '1457', '1458', '1459', '1460', '1461', '1462', '1463', '1464', '1465', '1466', '1467', '1468', '1469', '1470', '1471', '1472', '1473', '1474', '1475', '1476', '1477', '1478', '1479', '1480', '1481', '1482', '1483', '1484', '1485', '1486', '1487', '1488', '1489', '1490', '1491', '1492', '1493', '1494', '1495', '1496', '1497', '1498', '1499', '1500'. The report is titled 'Upgrade Information Report' and 'AddPac'. The status at the bottom of the report is 'Page 1 of 1'.

Report Preview (Example)

AP-VPMS VoIP/Video Plug & Play Management System

Print Preview

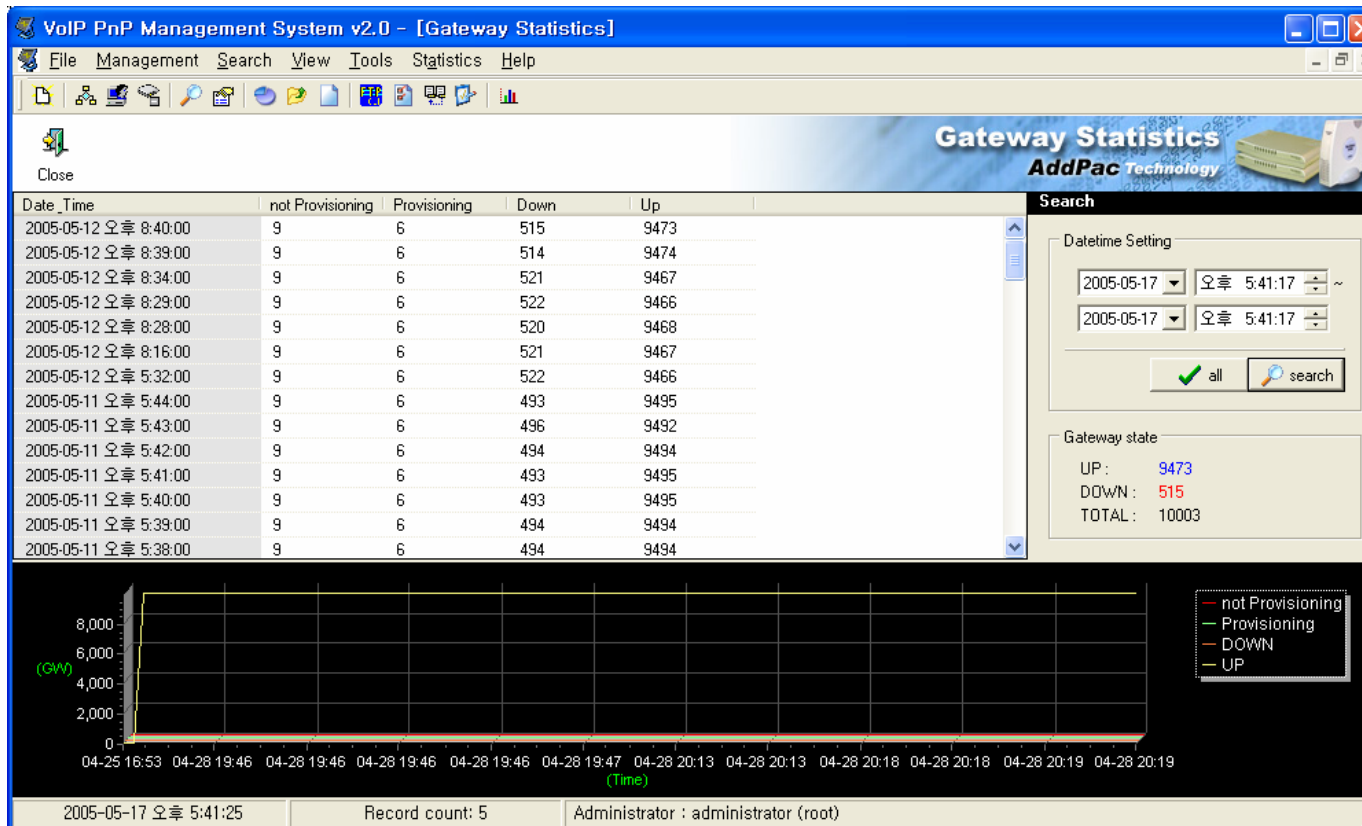
Upgrade Information Report **AddPac**

| 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/Video Plug & Play Management System

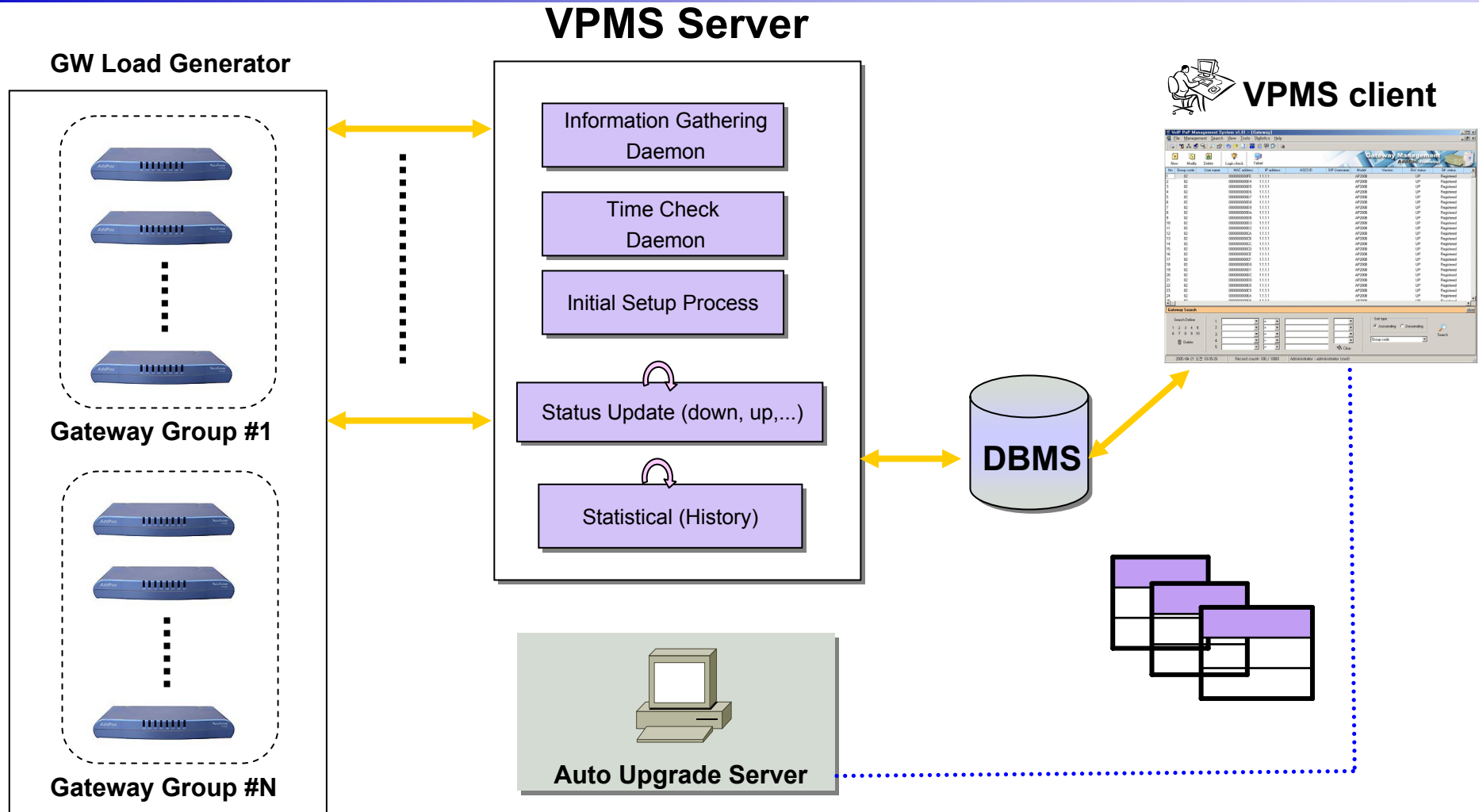




AP-VPMS Performance Analysis

System Performance Simulation Env.

AP-VPMS VoIP/Video Plug & Play Management System



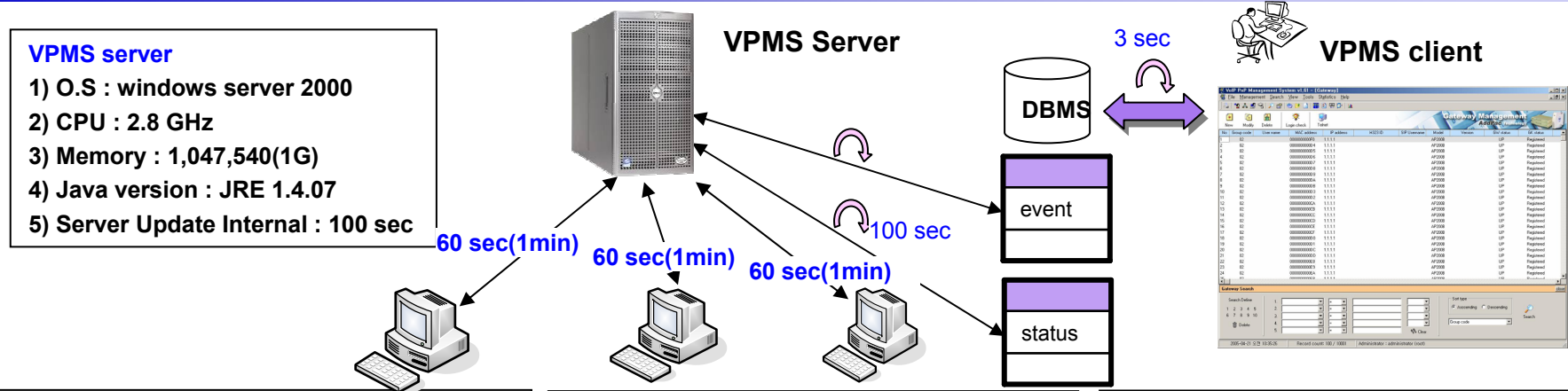
Simulation Parameters

AP-VPMS VoIP/Video 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/Video Plug & Play Management System



VPMS server

- 1) O.S : windows server 2000
- 2) CPU : 2.8 GHz
- 3) Memory : 1,047,540(1G)
- 4) Java version : JRE 1.4.07
- 5) Server Update Internal : 100 sec

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 | Duration = 65 hrs |
| CPU | 2% under | 2 % under | |
| Memory | 12,136 KB(12 M) | 13,368 KB (13 M) | |
| GW down (data loss) | Not Occurred | | |
| 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/Video 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

AP-VPMS VoIP/Video Plug & Play Management

Thank you!

AddPac Technology Co., Ltd.
Sales and Marketing

Phone +82.2.568.3848 (KOREA)

FAX +82.2.568.3847 (KOREA)

E-mail:sales@addpac.com