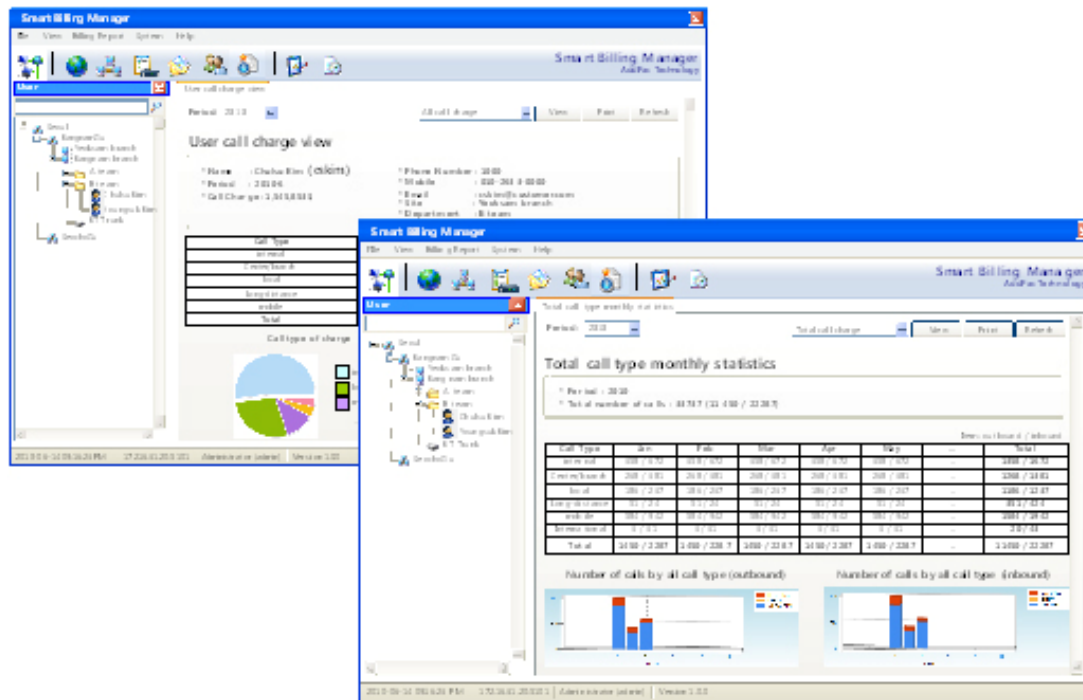




Smart Billing System

Smart Billing System Overview



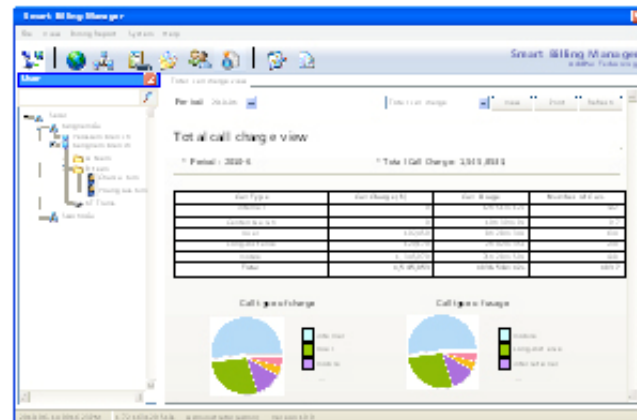
AddPac

AddPac Technology

2010, Sales and Marketing

Contents

- System Requirement
- Main Features
- System Configuration
- Site / Phone User / Department / Trunk Management
- Call Report Generation
- Call Report Notification
- System Performance Monitoring
- Access Level Management



System Requirement

Billing Server

- OS : Linux CentOS 5.4 or higher
- CPU : Intel Quad-Core 2.0 GHz / 1333 MHz FSB 2x4 MB cache
- Physical Memory : 8 GB
- HDD : 300G
- JRE (Java Runtime Environment) 1.5.1 or Higher
- Database : PostgreSQL 8.1.11

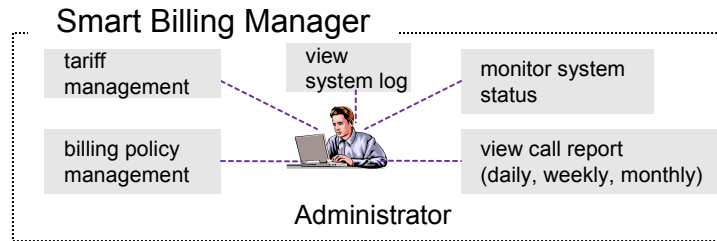
Billing Manager

- Windows XP, Vista, Windows 7, windows Server2000/2003
- Microsoft Internet Explorer 6.0 or higher

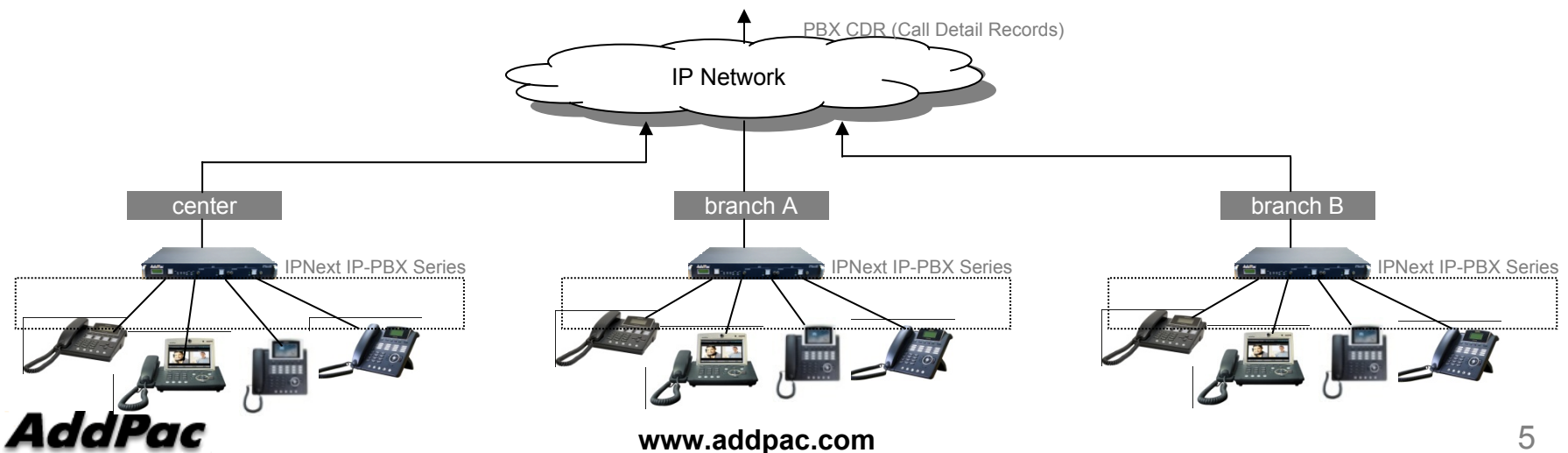
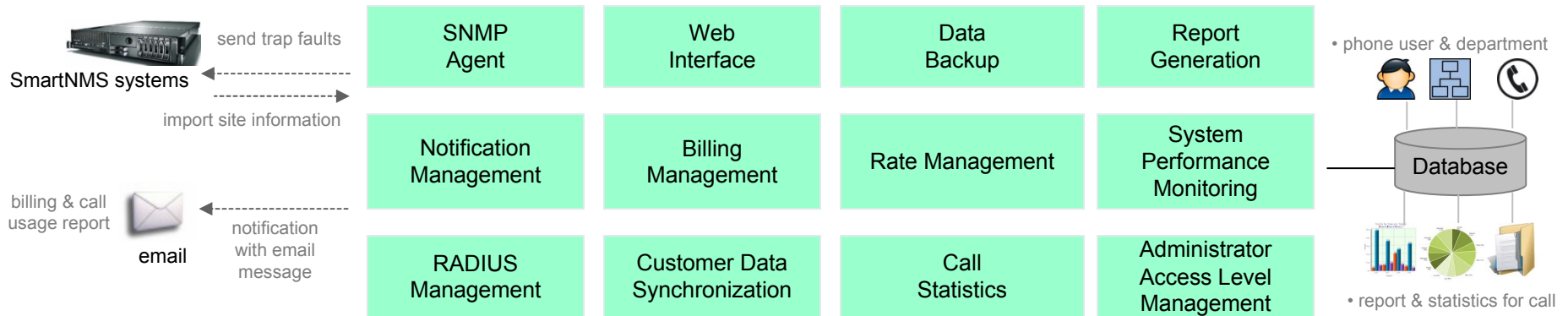
Main Features

- Generate call reports based on daily / weekly / monthly and call type for site, trunk, department and phone user.
- Notify phone user or department of call report through email attachments with various policy.
- Import site / trunk / department / phone user data from NMS and PBX system.
- Manage different levels of administrator access.
- Monitor system performance for cpu utilization, memory and disk usage.
- Provide billing operating database backup with monthly based scheduling.

System Configuration

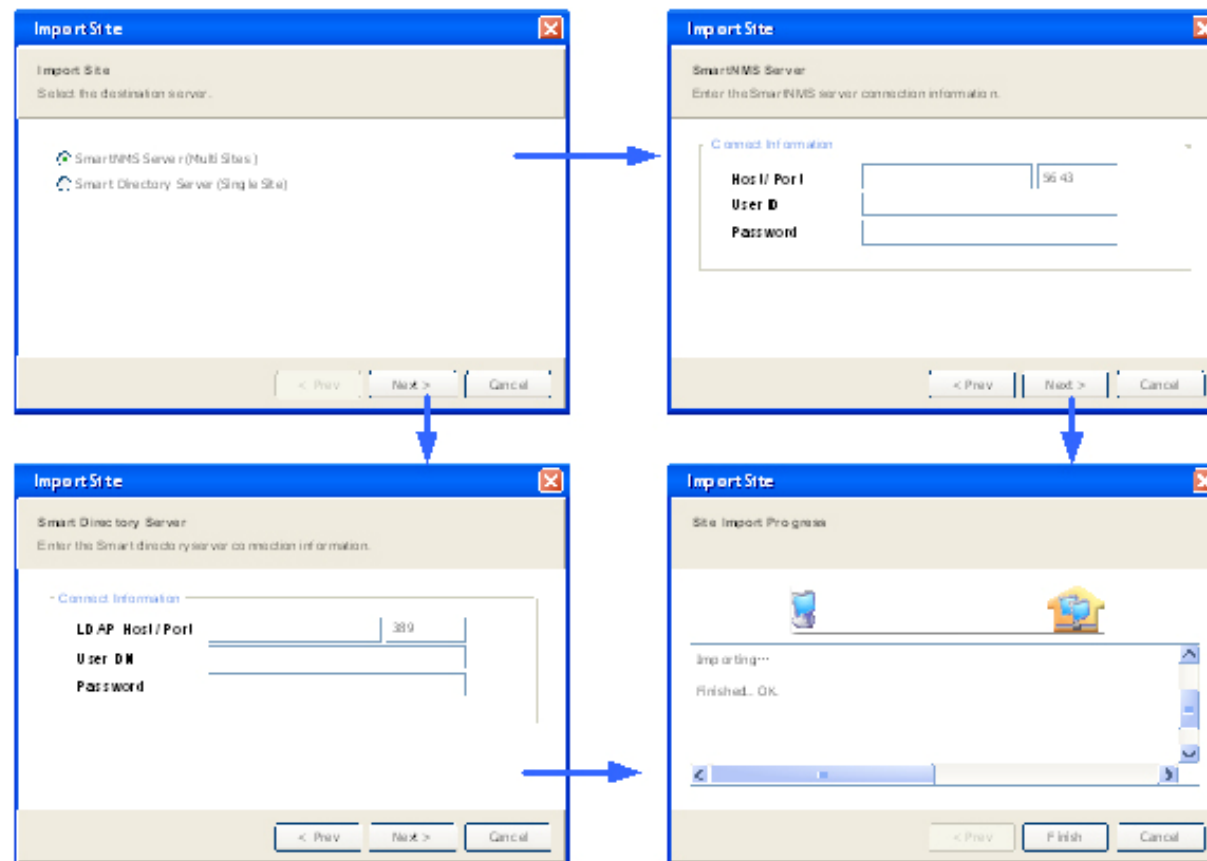


Smart Billing Server



Site / Trunk / Department / Phone User Management

- Import sites information from Smart NMS operating data.
- Get trunk, department and phone user from PBX data through import wizard.





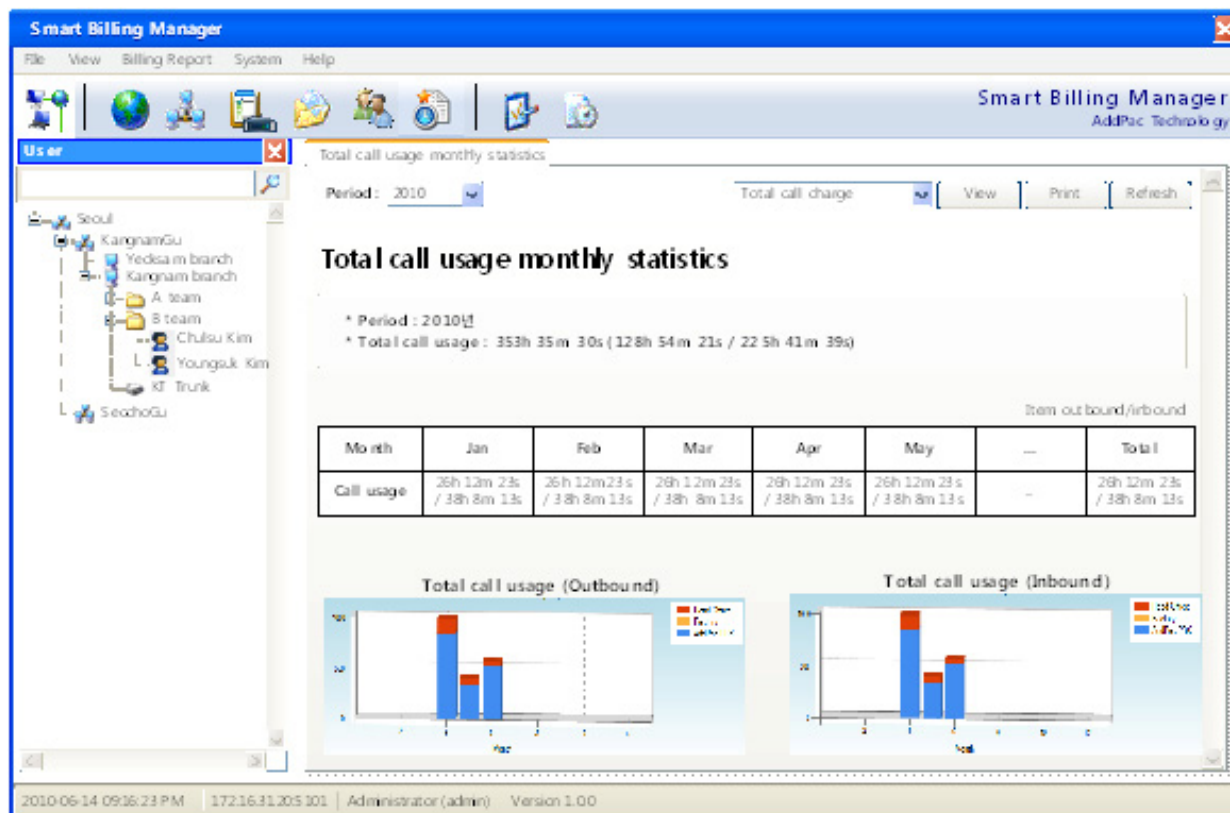
Call Report Generation

Call Report Generation

- Total Call Usage Monthly Statistic
- Total Call Charge View
- Site Call Charge View
- Trunk Call Charge View
- Department Call Charge View
- User Call Charge View
- Total Call Charge Monthly Statistic
- Total Number of Call Monthly Statistic
- Total Call Type Monthly Statistic
- Incompletion Calls by reason for Monthly Statistics of total sites
- Call Charge View for each site
- Call Usage Monthly Statistic for each site
- Number of Calls Monthly Statistic for each site
- Call Charge Monthly Statistic for each site

Call Report Generation

- Generate daily, weekly, monthly call usage report for site, trunk, department and phone users.
- Provide call usage with summary and chart type.



Call Report Generation

Smart Billing Manager

File View Billing Report System Help

Smart Billing Manager
Add Pac Technology

User

Seoul
KangnamGu
Yeoksam branch
Kangnam branch
A team
B team
Chulsu Kim
Youngsuk Kim
KT Trunk
SechoGu

Total call charge view

Period: 2010-06 Total call charge View Print Refresh

Total call charge view

^ Period : 2010-6 ^ Total Call Charge : 1,545,853 \$

Call Type	Call Charge (\$)	Call Usage	Number of Calls
internal	0	12h 51m 12s	342
Center/branch	0	10h 39m 9s	97
local	102,450	8h 28m 34s	134
Long-distance	129,170	2h 42m 35s	234
mobile	1,345,970	71h 28m 50s	438
Total	1,545,853	103h 54m 12s	1037

Call type of charge

Call type of usage

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager

File View Billing Report System Help

Smart Billing Manager
Add Pac Technology

User

Seoul
KangnamGu
Yeoksam branch
Kangnam branch
A team
B team
Chulsu Kim
Youngsuk Kim
KT Trunk
Seochogu

Site call charge view

Period: 2010 Total call charge View Print Refresh

Site call charge view

^ Name : Yeoksam branch
 ^ Period : 2010-6
 ^ Call Charge : 1,545,853 \$

^ Location : Yeoksam 769-12
 ^ Address : Yeoksam 1dong KangnamGu Seoul

Call Type	Call Charge (\$)	Call Usage	Number of Calls
internal	0	12h 51m 12s	342
Center/branch	0	10h 39m 9s	97
local	102,450	8h 28m 34s	134
Long-distance	129,170	2h 42m 35s	234
mobile	1,345,970	71h 28m 50s	438
Total	1,545,853	103h 54m 12s	1037

Call type of charge

Call type of usage

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

Trunk call charge view

Period: 2010 Total call charge View Print Refresh

Trunk call charge view

- Name : **KT Trunk**
- IP Address : 172.16.250.252
- Period : 2010-6
- Prefix : 8T
- Call Charge : 1,545,853\$
- Protocol : SIP
- Site : Yeoksam branch

Call Type	Call Charge (\$)	Call Usage	Number of Calls
internal	0	12h 51m 12s	342
Center/branch	0	10h 39m 9s	97
local	102,450	8h 28m 34s	134
long-distance	129,170	2h 42m 35s	234
mobile	1,345,970	71h 28m 50s	438
Total	1,545,853	103h 54m 12s	1037

Call type of charge

Call type of usage

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

Department call charge view

Period: 2010 Total call charge View Print Refresh

Department call charge view

^ Name : A team ^ Site : Yeoksam branch
 ^ Period : 2010-6
 ^ Call Charge : 1,545,853 \$

Call Type	Call Charge (\$)	Call Usage	Number of Calls
internal	0	12h 51m 12s	342
Center/branch	0	10h 39m 9s	97
local	102,450	8h 28m 34s	134
Long-distance	129,170	2h 42m 35s	234
mobile	1,345,970	71h 28m 50s	438
Total	1,545,853	103h 54m 12s	1037

Call type of charge

Call type of usage

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

File View Billing Report System Help

User

- Seoul
 - KangnamGu
 - Yeoksam branch
 - Kangnam branch
 - A team
 - B team
 - Chulsu Kim
 - Youngsuk Kim
 - KT Trunk
- SeochoGu

User call charge view

Period: 2010 Total call charge View Print Refresh

User call charge view

^ Name : Chulsu Kim (cskim)
 ^ Phone Number : 1000
 ^ Period : 2010-6
 ^ Call Charge : 1,545,853\$
 ^ Mobile : 010-2633-0000
 ^ Email : cskim@customer.com
 ^ Site : Yeoksam branch
 ^ Department : B team

Call Type	Call Charge (\$)	Call Usage	Number of Calls
internal	0	12h 51m 12s	342
Center/branch	0	10h 39m 9s	97
local	102,450	8h 28m 34s	134
Long-distance	129,170	2h 42m 35s	234
mobile	1,345,970	71h 28m 50s	438
Total	1,545,853	103h 54m 12s	1037

Call type of charge

Call type of usage

2010-06-14 09:16:23 PM 172.16.31.205:101 Administrator (admin) Version 1.0.0

Call Report Generation

The screenshot displays the 'Smart Billing Manager' application window. The title bar reads 'Smart Billing Manager' and 'Add Pac Technology'. The menu bar includes 'File', 'View', 'Billing Report', 'System', and 'Help'. The toolbar contains various icons for navigation and actions. On the left, a tree view shows a hierarchy starting with 'Seoul', followed by 'KangnamGu', 'Yeoksam branch', 'Kangnam branch', 'A team', 'B team', 'Chulsu Kim', 'Youngsuk Kim', 'KT Trunk', and 'Seochogu'. The main area is titled 'Total call charge monthly statistics' and shows a dropdown for 'Period' set to '2010'. Below this, a summary box indicates '* Period : 2010' and '* Total call charge : 12,345,853 \$'. A table below the summary shows call charges by month for 2010. At the bottom of the main area, a bar chart titled 'Total call charge of monthly' shows data for January, February, and March. The status bar at the bottom displays the date '2010-06-14 09:16:23 PM', IP address '172.16.31.20-5101', user 'Administrator (admin)', and 'Version 1.0.0'.

Month	Jan	Feb	Mar	Apr	May	...	Total
Call charge	1,120,490	928,483	971,392	1,072,345	1,145,900	...	12,345,853

Call Report Generation

Smart Billing Manager
Add Pac Technology

File View Billing Report System Help

User

Seoul
KangnamGu
Yeoksam branch
Kangnam branch
A team
B team
Chulsu Kim
Youngsuk Kim
KT Trunk
SechoGu

Total number of calls monthly statistics

Period: 2010 Total call charge View Print Refresh

Total number of calls monthly statistics

^ Period : 2010
^ Total number of calls : 5768 (2234 / 3534)

구분 : 발신/착신

Month	Jan	Feb	Mar	Apr	May	...	Total
completion	123 / 456	123 / 456	123 / 456	123 / 456	123 / 456	..	2003 / 3100
incompletion	12 / 5	21 / 17	6 / 18	14 / 34	26 / 19	..	231 / 434
Total	235 / 451	235 / 451	235 / 451	235 / 451	235 / 451	..	2234 / 3534

Total number of calls (outbound)

Total number of calls (inbound)

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

File View Billing Report System Help

User

Seoul
KangnamGu
Yeoksam branch
Kangnam branch
A team
B team
Chulsu Kim
Youngsuk Kim
KT Trunk
SechoGu

Total call type monthly statistics

Period: 2010 Total call charge View Print Refresh

Total call type monthly statistics

^ Period : 2010
^ Total number of calls : 33737 (11450 / 22287)

Item: outbound / inbound

Call Type	Jan	Feb	Mar	Apr	May	...	Total
internal	358 / 672	358 / 672	358 / 672	358 / 672	358 / 672	-	1358 / 1672
Center/branch	268 / 381	268 / 381	268 / 381	268 / 381	268 / 381	-	1268 / 1381
local	186 / 237	186 / 237	186 / 237	186 / 237	186 / 237	-	1186 / 1237
Long-distance	51 / 24	51 / 24	51 / 24	51 / 24	51 / 24	-	351 / 424
mobile	584 / 942	584 / 942	584 / 942	584 / 942	584 / 942	-	1584 / 1942
International	3 / 31	3 / 31	3 / 31	3 / 31	3 / 31	-	20 / 43
Total	1450 / 2287	1450 / 2287	1450 / 2287	1450 / 2287	1450 / 2287	-	11450 / 22287

Number of calls by all call type (outbound)

Number of calls by all call type (inbound)

2010-06-14 09:16:23 PM 172.16.31.20-5101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

Reason by incomplection calls monthly statistics of total sites

Period: 2010 Total call charge View Print Refresh

Incomplection calls by reason for monthly statistics of total sites

^ Period : 2010
^ Incomplection Calls : 9232 (3623 / 5609)

Item: inbo und/ou tbound

Month	Jan	Feb	Mar	Apr	May	...	Total
No Answer	1 / 2	0 / 0	2 / 3	1 / 1	0 / 0	...	1203 / 1234
Busy	234 / 123	123 / 456	234 / 123	123 / 456	234 / 123	...	123 / 456
Unallocated N.	0 / 0	2 / 0	1 / 5	0 / 0	0 / 0	...	123 / 456
Call Rejected	12 / 8	5 / 12	123 / 456	123 / 456	123 / 456	...	2234 / 3534
Network failed	5 / 1	0 / 0	0 / 0	1 / 0	0 / 3	...	16 / 12
Others	4 / 2	1 / 3	0 / 0	2 / 1	0 / 0	...	11 / 15
합계	256 / 141	261 / 470	358 / 593	252 / 913	357 / 582	...	3623 / 5609

Reason by incomplection calls of total sites (outbound)

Reason by incomplection calls of total sites (inbo und)

2010-06-14 09:16:23 PM 172.16.31.205:101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager

File View Billing Report System Help

Smart Billing Manager
Add Pac Technology

User

Seoul
KangnamGu
Yeoksam branch
Kangnam branch
A team
B team
Chulsu Kim
Youngsuk Kim
KT Trunk
SechoGu

Site by call charge view

Period: 2010-6 Total call charge View Print Refresh

Call charge view for each site

* Period : 2010-6 * Total Call Charge : 3,486,657 \$

Item: \$

Site	internal	Center/br...	local	long -dist..	mobile	Internation..	Total
Yeoksam branch	0	0	512,457	512,457	512,457	0	1,531,231
Kangnam branch	0	0	321,750	321,750	321,750	0	1,024,231
Samsung branch	0	0	302,450	302,450	302,450	0	939,200
Total	0	0	1,136,657	1,136,657	1,136,657	0	3,486,657

Site Call Charge (Top 10)

Call type charge

2010-06-14 09:16:23 PM 172.16.31.205 101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager

File View Billing Report System Help

Smart Billing Manager
AddPac Technology

User

- Seoul
 - KangnamGu
 - Yeoksam branch
 - Kangnam branch
 - A team
 - B team
 - Chulsu Kim
 - Youngsuk Kim
 - KT Trunk
 - SeochoGu

Site by call usage monthly statistics

Period: 2010 Total call charge View Print Refresh

Call usage monthly statistics for each site

Period : 2010
All call usage : 353h 35m 30s (128h 54m 21s / 225h 41m 39s)

Item: outbound/inbound

Site	Jan	Feb	Mar	Apr	May	—	Total
Yeoksam branch	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	--	26h 12m 23s / 38h 8m 13s
Kangnam branch	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	--	26h 12m 23s / 38h 8m 13s
Samsung branch	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	--	26h 12m 23s / 38h 8m 13s
Total	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s	26h 12m 23s / 38h 8m 13s		26h 12m 23s / 38h 8m 13s

Site by call usage - Top 10 (outbound)

Site by call usage - Top 10 (inbound)

2010-06-14 09:16:23 PM 172.16.31.205:101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

File View Billing Report System Help

Site by number of calls monthly statistics

Period: 2010 Total call charge View Print Refresh

Number of calls monthly statistics for each site

^ Period : 2010
^ All number of calls : 5768 (2234 / 3534)

Item: outbound/inbound

Site	Jan	Feb	Mar	Apr	May	...	Total
Yeoksam bra..	123 / 456	123 / 456	123 / 456	123 / 456	123 / 456	...	1203 / 1234
Kangnam bra..	123 / 456	123 / 456	123 / 456	123 / 456	123 / 456	...	123 / 456
Samsung bra..	123 / 456	123 / 456	123 / 456	123 / 456	123 / 456	...	123 / 456
Total	123 / 456	123 / 456	123 / 456	123 / 456	123 / 456	...	2234 / 3534

Site by number of calls - Top 10 (outbound)

Site by number of calls - Top 10 (inbound)

2010-06-14 09:16:23 PM 172.16.31.205 101 Administrator (admin) Version 1.0.0

Call Report Generation

Smart Billing Manager
Add Pac Technology

File View Billing Report System Help

Period: 2010 Total call charge View Print Refresh

Call charge monthly statistics for each site

^ Period : 2010
^ All call charge : 43,480,920\$

Unit : \$

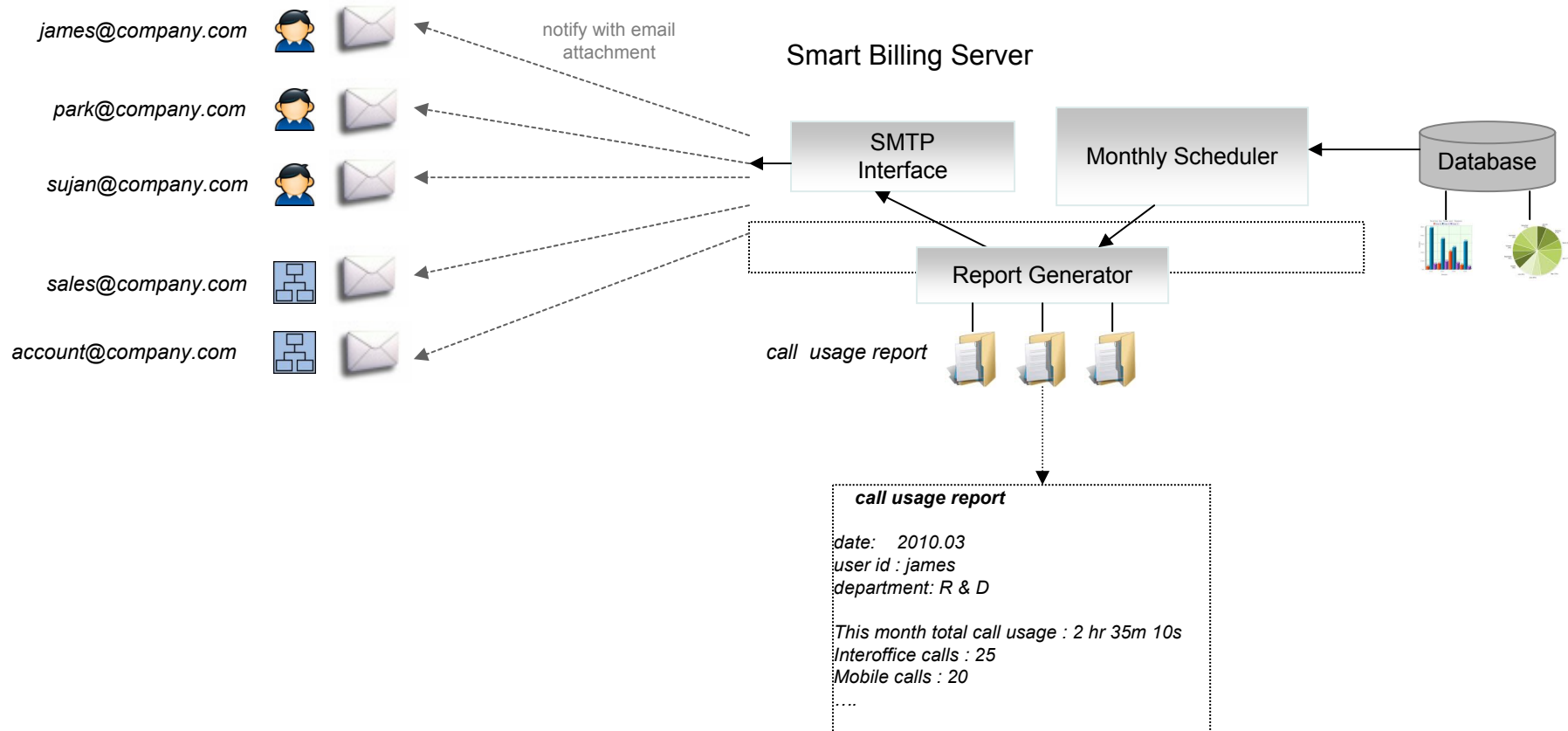
Site	Jan	Feb	Mar	Apr	May	...	Total
Yeoksam bra..	1,234,900	1,234,900	1,234,900	1,234,900	1,234,900	...	19,234,900
Kangnam bra..	1,087,230	1,087,230	1,087,230	1,087,230	1,087,230	...	20,643,000
Samsung bra..	962,000	962,000	962,000	962,000	962,000	...	962,000
Total	3,182,630	3,182,630	3,182,630	3,182,630	3,182,630		43,480,920

Site by call charge - Top 10

2010-06-14 09:16:23 PM 172.16.31.205 101 Administrator (admin) Version 1.0.0

Call Report Notification

- Notify phone user or department with email attachment for call usage report.
- Manage notification list such as all, phone user or department.



Call History

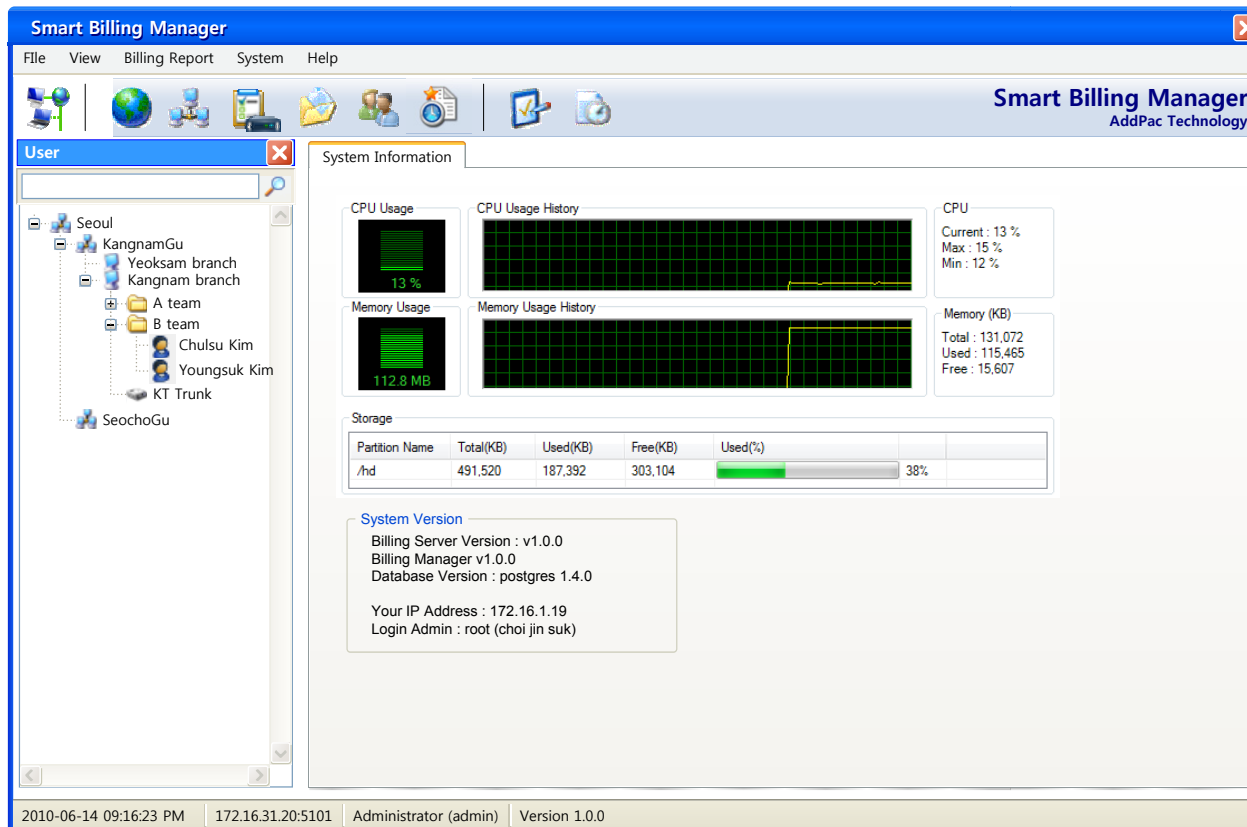
- View call detail record history with various search conditions.
- Export call history data to MS-Excel, PDF and HTML.

The screenshot displays the 'Smart Billing Manager' application window. The title bar reads 'Smart Billing Manager' and 'AddPac Technology'. The menu bar includes 'File', 'View', 'Billing Report', 'System', and 'Help'. The interface features a tree view on the left under the 'User' tab, showing a hierarchy: Seoul > KangnamGu > Yeoksam branch > Kangnam branch > A team > B team > Chulsu Kim > Youngsuk Kim > KT Trunk > SeochoGu. The main area is titled 'Call History' and shows a table of call records for the date '2010-06-04'. The table has columns for 'Number', 'User', 'Call Type', 'Call Category', 'Called Number', and 'Duration'. The status bar at the bottom indicates the date and time '2010-06-14 09:16:23 PM', the IP address '172.16.31.20:5101', the user 'Administrator (admin)', and the version 'Version 1.0.0'.

	Number	User	Call Type	Call Category	Called Number	Duration	..	
00	jschoi	internal	PSTN	#2	23	..		
1	jhwon	local	PSTN	#1	123	..		
3	2010-06-09 12:00:12	1002	hkwon	Internati..	Internet	03121012213	21	..
4	2010-06-09 12:00:12	1003	hyhan	mobile	PSTN	01036589521	566	..
5	2010-06-09 12:00:12	1004	..	internal	Internet	07025511321	432	..
6	2010-06-09 12:00:12	1005	..	local	PSTN	025683848	24	..
7	2010-06-09 12:00:12	1006	..	local	PSTN	1010	120	..
8	2010-06-09 12:00:12	1007	..	local	PSTN	2010	154	..

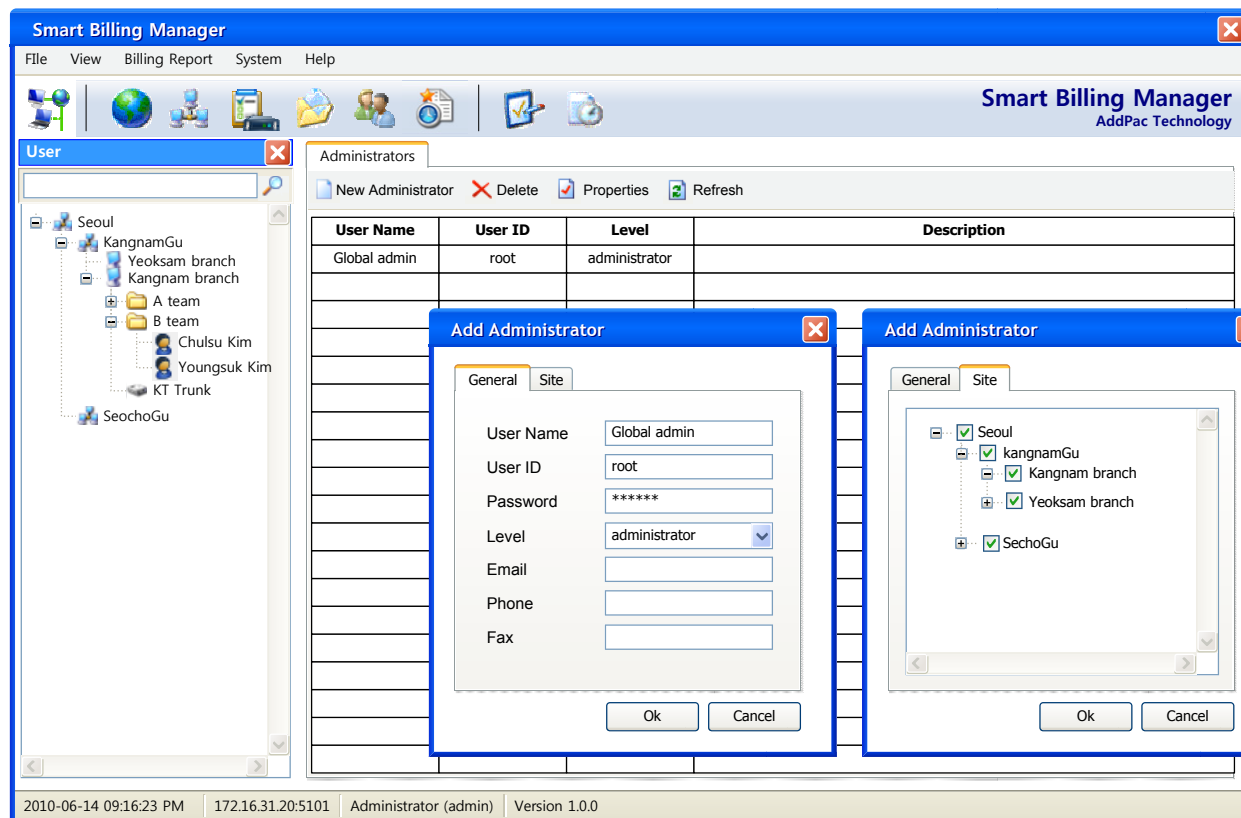
System Performance Monitoring

- Monitor system performance such as CPU utilization, memory usage and disk space.



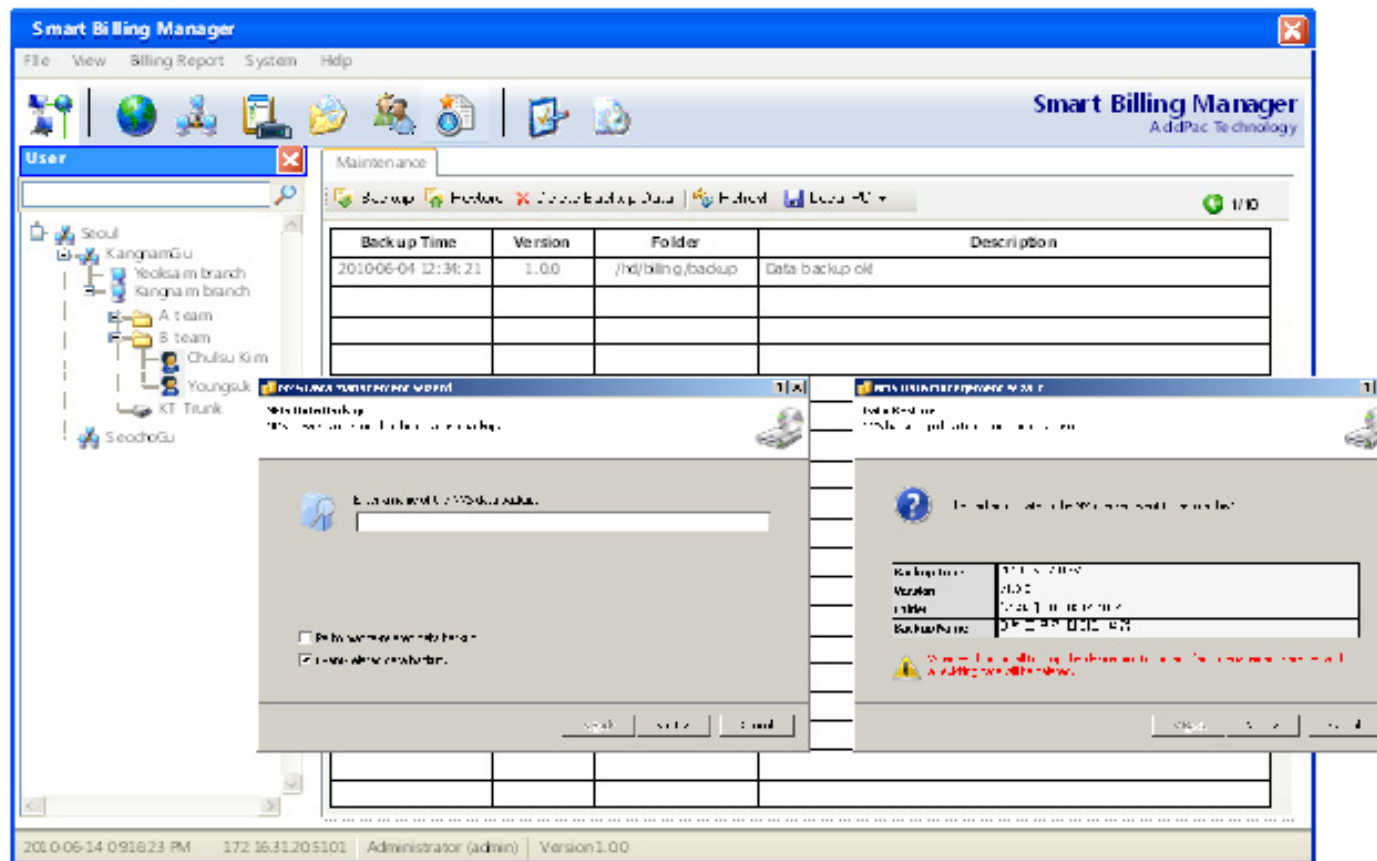
Administrator Access Level Management

- Provide different levels of administrator access in view and menus.
- Manage multiple site and assign resources to administrator.



Billing Operating Database Backup

- Provide schedule-based monthly backup of operating billing data.
- Backup manually with wizard style if need arise.





Thank you!

AddPac Technology Co., Ltd.
Sales and Marketing

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