WiFiLAN Reporting

An Overview

Helping unwire the World

Introduction

WiFiLAN provides over 35 different reports that provide a consolidated and summarized view of accounting, billing and CRM data. Since these reports may contain sensitive information, WiFiLAN allows administrators to fine tune access control list for each report. This ensures only valid users get access to the reports. The RADIUS reports provide statistical information on user sessions, bandwidth usage, online users and usage based on days of week, hour of the day, unique sessions, session durations, etc. The Network reports provide real-time view of the network status, reliability of gateways and access points and audit reports. The CRM reports provide consolidated summary of problem tickets and other CRM related statistics. Lastly, the billing reports provide information about revenue generated, credited amounts, expense reports, failed transactions, prepaid usage and promotion effectiveness.

RADIUS Reports

RADIUS reports primarily display the summarized accounting information collected during user's sessions. The data is displayed either in tabular or graphical format. The online user report displays the list of all users who have open sessions i.e. they are currently logged in. The users are displayed based on their login location.

The device usage reports are graphical representation of usage data for each location. There are 9 different reports in this category. Administrators can select one or more devices from the list to view comparative reports. The reports can be generated between any date range i.e. the administrator can select the date range along with the time unit for each report. The time unit decides the granularity of the report.

Listed below are some of the reports in this category:

- **User Session Report**

Displays the total number of user sessions at the location within a given time period. The units on X-axis are calculated based on the time duration and time unit of the report. The Y-axis displays the total number of closed sessions.
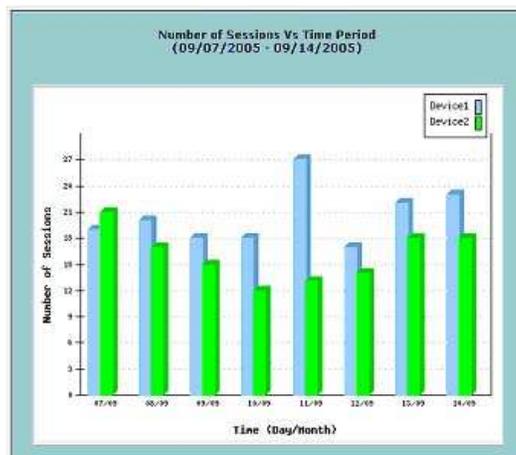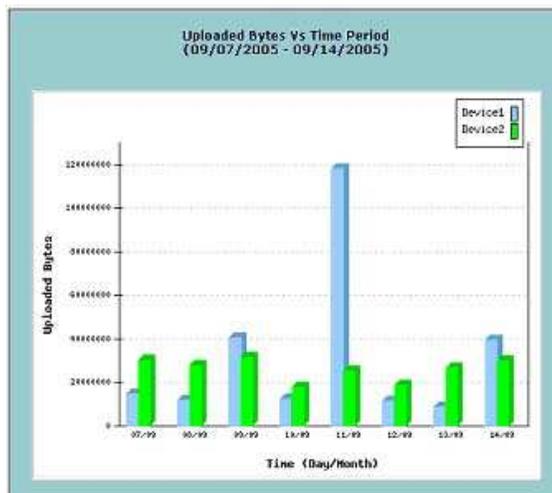

- **Downloaded Bytes Report**

Displays the total number of bytes downloaded at the particular location within a given time period. The X-axis displays the time interval and Y-axis displays the total number of bytes downloaded.
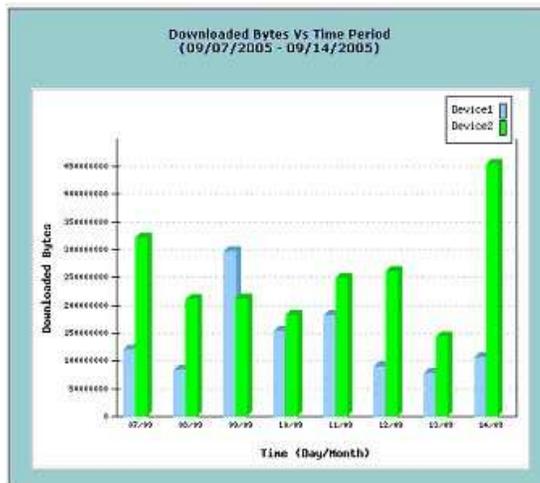

- **Uploaded Bytes Report**

Displays total number of bytes uploaded at a given location within a given time period.


- **Internet Usage Report**

This report displays the total Internet usage (in number of seconds) for the given locations within a given time period. It is useful for hotspots that sell duration based prepaid coupons or time-bound access.

Total Time Usage Vs Time Period
(09/07/2005 - 09/14/2005)
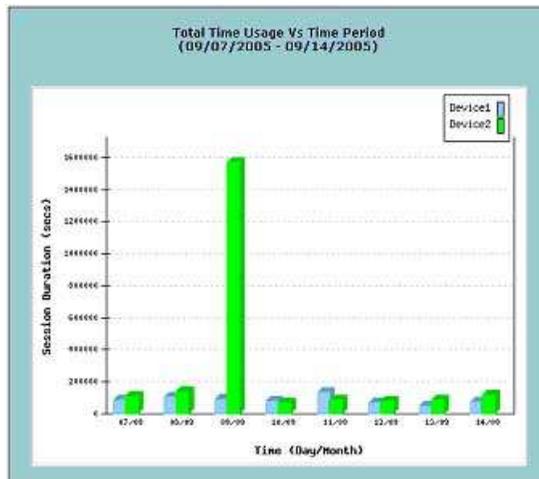
- **Day of the week Report**

This graphs helps in understanding Internet usage over the days of the week. The seven days of the week are plotted on the X-axis and the total number of sessions is plotted on the Y-axis. The graph displays records over the selected time period. Administrators can also plot comparative graphs as shown below.

Number of Sessions Vs Day of Week
(09/07/2005 - 09/14/2005)
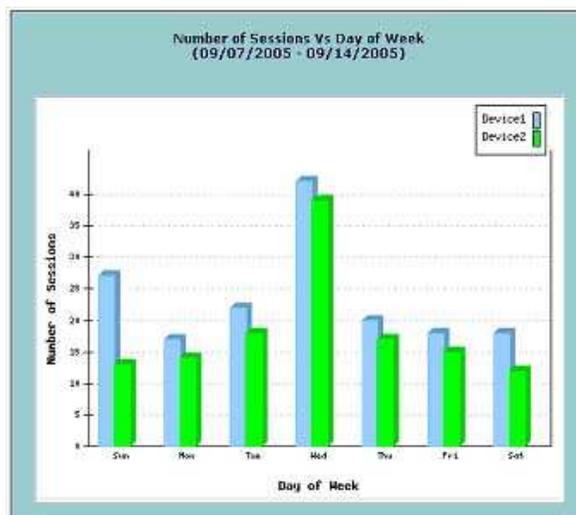
- **Time of the day Report**

Like the previous graph, this graph displays the usage trends over different hours of the day. All 24 hours are plotted on the X-axis and the number of sessions is plotted on the Y-axis. The total number of session for each hour is calculated within the time duration selected in the search query.

Number of Unique Users Vs Hour of Day
(09/07/2005 - 09/14/2005)
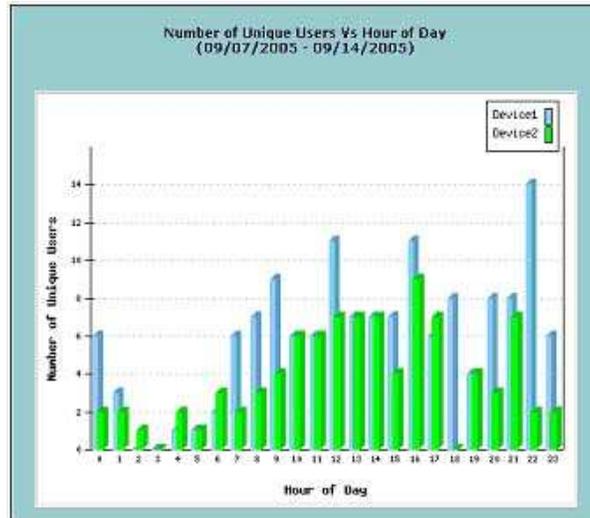
- **Session Length Graph**

This graphs helps administrator understand the trends in session lengths of the hotspot users. The X-axis displays session durations in 15 minutes intervals. The Y-axis displays total number of sessions for the given time interval. For example, the first entry will display number of sessions that last between 0 and 15 minutes and so on.

Number of Sessions Vs Session Duration
(09/07/2005 - 09/14/2005)
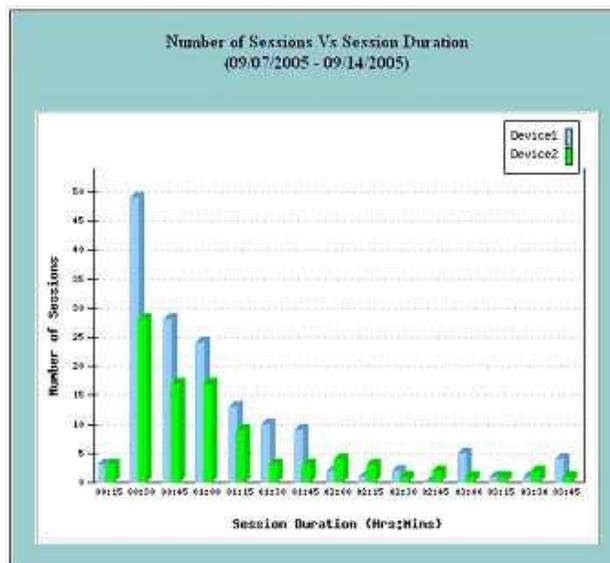
- **Cumulative Usage Duration Report**

This graph displays the cumulative time users spent at the hotspot location over a given time period. Typically it indicates the stickiness of the users. The total number of users is plotted on the Y-axis and session duration (in hours) is plotted on the X-axis. For example, the first entry displays the number of users who used Internet service for 0-1 hour (cumulative). A user can have one or more sessions. The graph adds up the usage duration over a given time period.

Number of Users Vs Usage Duration
(09/07/2005 - 09/14/2005)
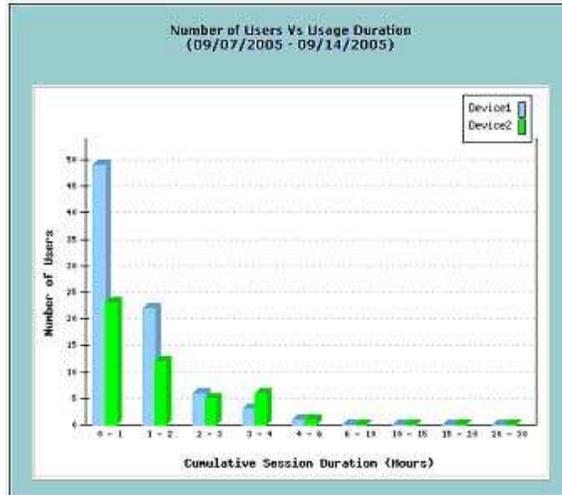
Network Reports

Network reports displays the real-time status of the network, reliability report for each device on the network and configuration audit report.

The real-time status report is generated based on the monitoring data collected by WiFiLAN monitoring server. The monitoring server periodically scans the network and determines whether the network elements are alive or dead. It scans both the gateway/router and the internal access points (APs) and notifies the administrator when it detects a device failure.

The network status report displays the monitoring status in a tabular format. Each entry in the table is given a specific color based on its status.

Similarly, the reliability report calculates the reliability of each network device over a given period of time. The reliability is indicated in percentage.

Graph from (09/08/2005 - 09/15/2005)

Finally, the audit report helps administrator to periodically check the configuration of all remote device by running an audit check for each configured parameter. For example, the administrator can run an audit check to determine whether all the remote gateways are upgraded to latest firmware or whether all the gateways are running on appropriate frequency channels.

CRM Reports

The problem ticket reports provide range of statistics for the tickets submitted by the end users. Generally these reports help management in reviewing the nature of problems submitted, the quality of service, effectiveness of the customer support staff and track trends in problems. This data is extremely helpful in improving processes, solving problems within IT and network infrastructure and streamlining operations.

Summary Reports

The summary report display summarized information of all tickets based on various display options. Administrators can view summary based on:

1. Agent
2. Category
3. Severity
4. Location
5. Resolution

Each table displays number of tickets in different states – New, Assigned, Resolved and Closed – against the criteria selected from the list.

The table below displays various tickets in the database based on the category of the ticket.

Trouble Ticket Report

Display : By Category ▾ Submit

#	Name	New	Assigned	Resolved	Closed	Total
1	Billing Problem	1	1	-	1	3
2	Email Problem	-	1	1	-	2
3	General Problem	-	1	-	-	1
4	Login Problem	1	2	-	1	4
5	Registration Problem	1	-	-	-	1
6	Virus Problem	2	-	-	-	2
7	Weak Signal	2	-	1	-	3

Ticket Vs Time Reports

The summary reports provide statistics on total number of tickets in the system. However, they do not give any idea on when the tickets were submitted, resolved or closed. To view the time based reports, click on the Ticket By Date tab. This report page allows administrators to select a particular time interval and view the tickets in graphical format within the selected date range. Each bar in the graph corresponds to the number of tickets in a particular state (New, Assigned, Resolved, Closed) on the given date.
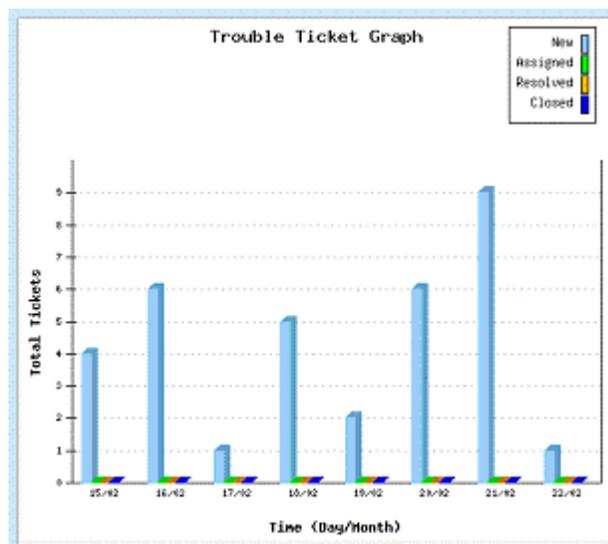
Billing Reports

WiFiLAN provides over 12 different billing reports to review and monitor the billing data of the subscribers. Three different types of revenues reports are provided to view the revenues generated within a given time duration or by plan or location. Similarly, the credit report displays refunds made by administrators to the customer. For recurring subscribers, the declined card report and receivable report provide a summary of declined transactions and the amount pending from the subscriber.

Billing reports also display reports to analyze prepaid card usage and effectiveness of promotional campaigns. Administrators can provide specific parameters to generate customized reports based on the requirements.

Revenue Reports

WiFiLAN displays three different types of revenue reports based on time duration, plan type and hotspot location. The revenue against time graph is plotted as shown below. Administrators need to select the date range along with the time unit to generate a histogram as shown below. The revenues in given currency are plotted on the Y-axis and date intervals are plotted on the X-axis.
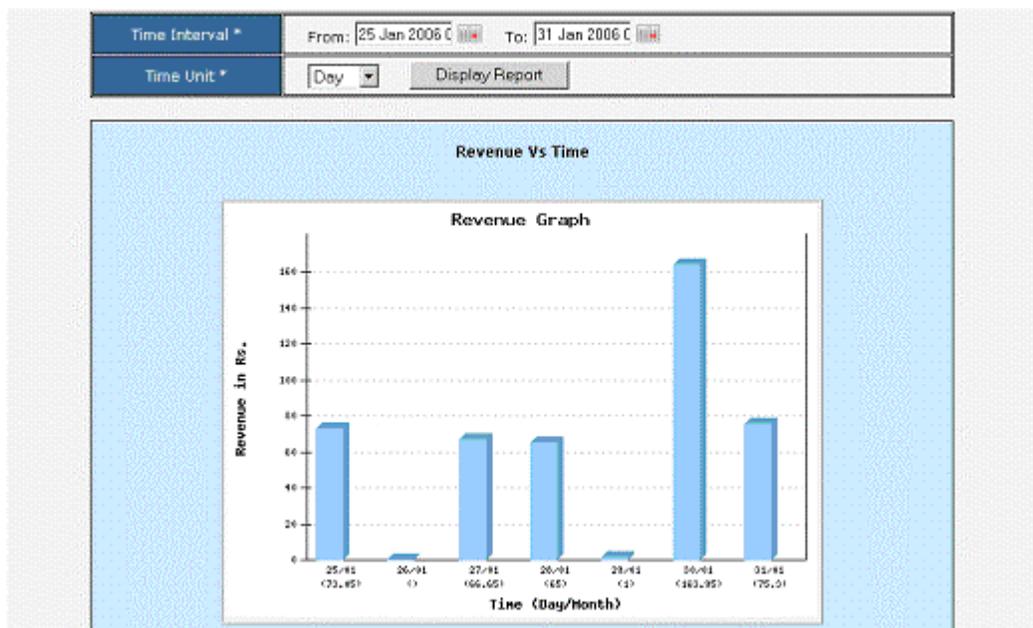
Revenue Vs Plan Report

The graph displays revenue generates over a given time period for each active plan.

Revenue Vs Plan Report

Time Interval *	From: 24 Jan 2006 C To: 31 Jan 2006 C
Time Unit *	Day Display Report

Revenue by Plan
(24 Jan 2006 00:00:00 - 31 Jan 2006 00:00:00)

#	Plan Name	Day								Total
		24/01	25/01	26/01	27/01	28/01	29/01	30/01	31/01	
1	Daily Plan	0	0	0	0	0	0	0	0	0
2	Monthly Plan	251.1	24.65	0	37.65	0	0	112.95	75.3	501.65
3	ThreeMonthPlan	188.81	48.4	0	0	0	0	0	0	237.21
4	Weekly Plan	0	0	0	0	0	0	50	0	50
5	Hourly Plan	0	0	0	0	50	0	0	0	50
	Total									Rs. 838.86

Declined Card Report

Displays list of declined cards along with the error description in reverse chronological order.

Declined Cards Report

From: 01/01/2006   To: 02/09/2006   Display Report

Declined Cards
(01/01/2006 - 02/09/2006)

#	Billing Name	Error Description	Card Number	Date & Time	Amount ($)
1	Andrew Ku	The transaction has been declined.	************3220	2006-02-07 00:30:05	19.95
2	STEVEN Braden	AVS mismatch. Address does not match	************6370	2006-01-12 00:08:10	6.95
3	Pamela OKehie	The transaction has been declined.	************4495	2006-01-12 00:08:09	19.95
4	DongWook Hwang	AVS mismatch. Address does not match	************3055	2006-01-01 20:04:32	23.19
5	DongWook Hwang	AVS mismatch. Address does not match	************3055	2006-01-01 20:03:07	23.19

Payment Receivable Report

Like declined card report, the payment receivable report displays the list of all pending payments in the system. A payment is marked pending when the card is declined by the payment gateway.

Payment Receivable Report

From: 01 Jan 2006 ☐   To: 09 Feb 2006 ☐   Display Report

Receivable payment for
(01 Jan 2006 00:00:00 - 09 Feb 2006 00:00:00)

#	Billing Name	Plan Name	Card Number	Date & Time	Amount (Rs.)	Late By
1	Jack Maung	Monthly Plan	************0019	2006-02-03 00:00:00	19.99	6 days
3	Lisa Miller	ThreeMonthPlan	************0019	2006-02-02 11:30:00	9.99	6 days
5	John Harper	ThreeMonthPlan	************0019	2006-01-31 11:30:00	23.95	8 days

Credit/Refund Report

Like revenue report, the refund report display a bar graph of refunds made by the administrator over a given time period.
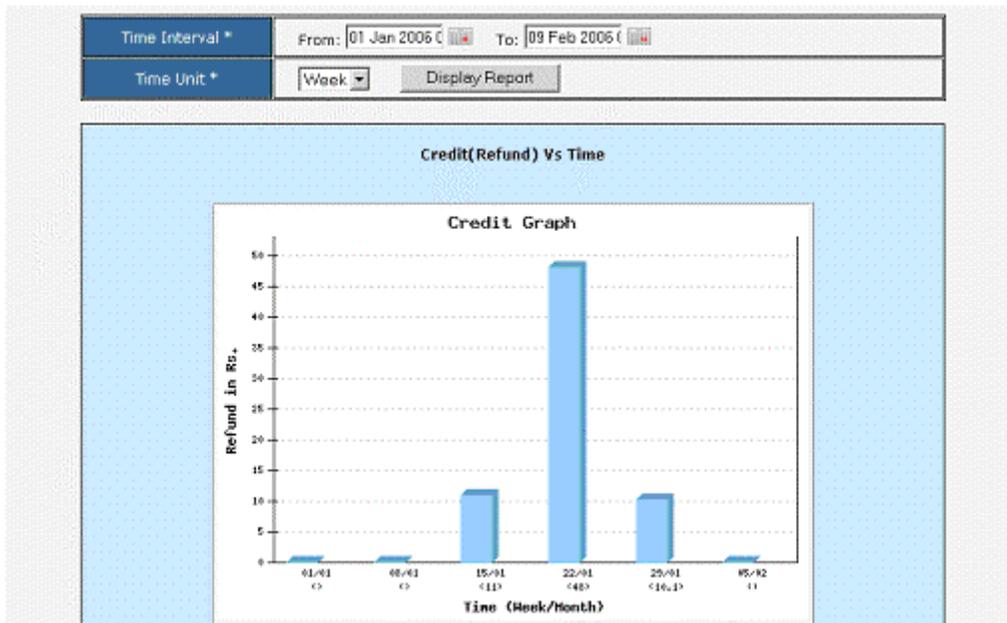
Expense Report

Administrators can review the expenses (WiFiLAN usage fees) for the selected month. The expenses are calculated based on the number of active users, hotspot locations and credit card transactions done during the month. An example of expense report is displayed below.

Expense Report

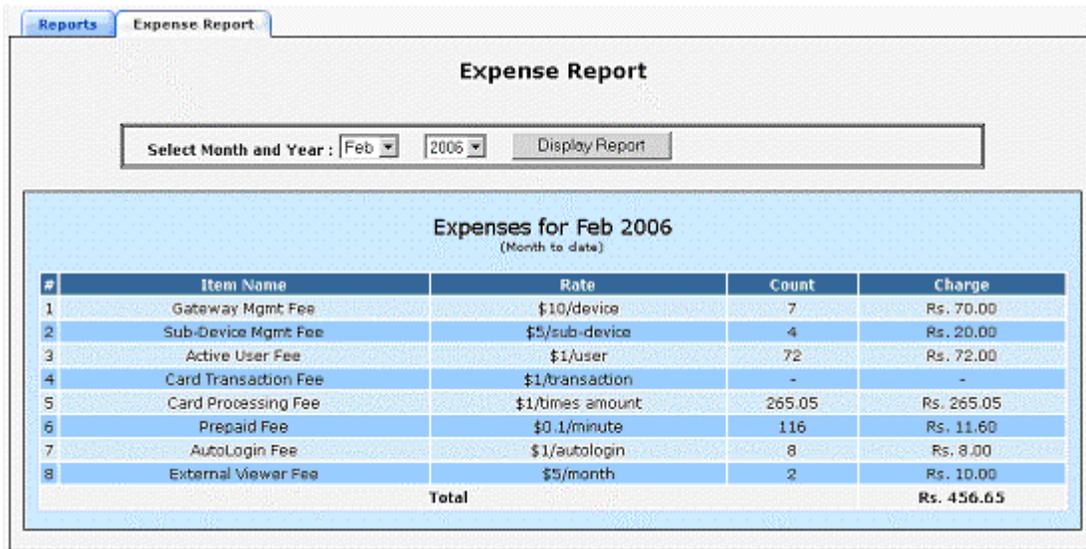Select Month and Year : Feb ▼   2006 ▼   Display Report

Expenses for Feb 2006
(Month to date)

#	Item Name	Rate	Count	Charge
1	Gateway Mgmt Fee	$10/device	7	Rs. 70.00
2	Sub-Device Mgmt Fee	$5/sub-device	4	Rs. 20.00
3	Active User Fee	$1/user	72	Rs. 72.00
4	Card Transaction Fee	$1/transaction	-	-
5	Card Processing Fee	$1/times amount	265.05	Rs. 265.05
6	Prepaid Fee	$0.1/minute	116	Rs. 11.60
7	AutoLogin Fee	$1/autologin	8	Rs. 8.00
8	External Viewer Fee	$5/month	2	Rs. 10.00
		Total		Rs. 456.65

**Promotion Reports**

Administrators can run different promotional offers to increase the subscriber count or hotspot usage. The promotion reports help administrator analyze the effectiveness of the promotions and review how the promotions were used within the given time period.
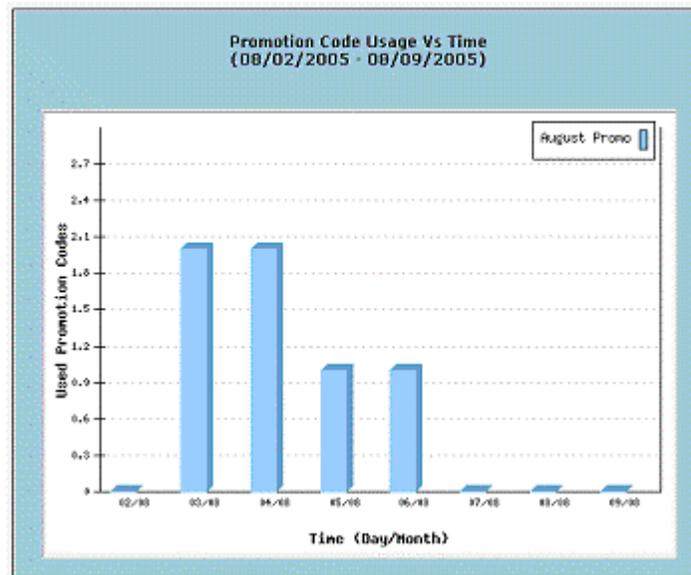
Prepaid Usage Reports

Prepaid reports displays the usage statistics of prepaid coupons over the given time period.

Prepaid Users Vs Time
(07/06/2005 - 07/15/2005)
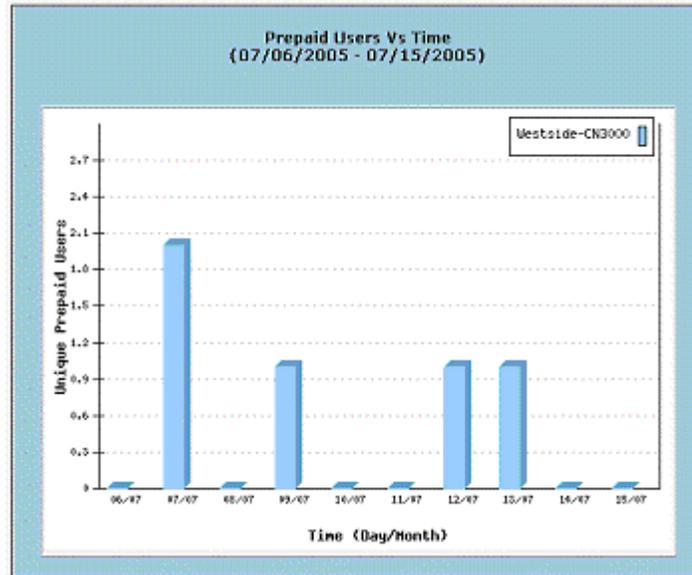
Plan Fraud Report

This report is useful for service providers who have regular subscribers and charge a recurring fee for the usage. Although a plan could be charge for specific number of subscribers, it is possible that some people might misuse the plan by sharing their username and password with other people.

This report helps administrators to identify the subscribers who are committing such fraud and take corrective action if necessary.

Users exceeded limits of maximum clients in period
(01/01/2006 00:00:00 - 01/31/2006 00:00:00)

#	Billing Name	Plan Name	Maximum Clients permitted	Usage MacAddress	Usage Sessions	List
1	A... ... Ku	Single User	1	00-0E-35-4E-17-B9	60	View
				00-12-F0-0A-C3-A6	24	
				00-90-48-14-78-13	85	
2	C... ... Miller	Two User	2	00-09-58-63-2C-6A	15	View
				00-09-58-A0-66-C9	8	
				00-0F-B5-90-D7-20	32	
3	D... S...	Railyard One User	1	00-02-2D-B2-96-E9	65	View
				00-0C-41-69-93-4C	4	
4	Daniel Abrego	Single User	1	00-11-50-43-36-A9	30	View
				00-40-D5-B3-C4-80	8	
5	... ...	Railyard One User	1	00-90-48-7D-7A-A2	10	View
				00-D0-59-6C-39-6A	37	
6	... ...	Railyard Two Users	2	00-0F-B5-DD-46-77	10	View
				00-14-A5-36-33-D0	45	
				00-90-48-80-21-36	20	
7	... ...	Two User	2	00-0E-35-36-E1-5C	14	View
				00-0E-35-37-2A-D1	45	
				00-13-CE-95-92-0C	4	
				00-13-CE-E3-2C-87	18	
				00-14-BF-22-78-42	26	
8	... ...	Railyard Two Users	2	00-11-50-1D-6E-E3	24	View
				00-13-46-0E-4C-25	11	
				00-13-CE-51-50-2C	6	