

Smart GSM NMS

Smart Network Management System

Smart GSM NMS Overview

The screenshot displays two windows from the Smart GSM NMS. The top window, titled 'Status Information - IPNext 3000 Master', shows system status information including Today's Availability, CPU Utilization (95%), Memory Utilization (57%), and Storage Utilization. The bottom window, titled 'Status Information - GS3000 gateway', displays a 'Device Call History' table with the following data:

ID	Create Time	Duration	Caller Type	Caller Number	Called Type	Called Number	Remote IP	GSM Phone N...	Codec	Status
346	11/18/2010 3:54:50 PM	00:00:00	FXS	7000	Unknown	9999	172.16.9.18		g711alaw	Failed
345	11/18/2010 3:50:43 PM	00:00:03	FXS	7000	VoIP	9999			g723163	Success
344	11/18/2010 3:46:54 PM	00:00:16	FXS	7000	GSM	6000			g711alaw	Success
343	11/18/2010 3:45:59 PM	00:00:02	FXS	7000	GSM	5000			g711alaw	Success
342	11/18/2010 3:43:33 PM	00:00:03	FXS	7000	VoIP	9999	172.16.9.18		g723163	Success
341	11/18/2010 3:43:23 PM	00:00:00	FXS	7000	GSM	600			g711alaw	Failed
340	11/18/2010 3:43:16 PM	00:00:00	FXS	7000	GSM	600			g711alaw	Failed
339	11/18/2010 3:43:12 PM	00:00:00	FXS	7000	GSM	500			g711alaw	Failed
338	11/18/2010 3:43:07 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g723163	Failed
337	11/18/2010 3:42:32 PM	00:00:04	FXS	7000	VoIP	9999	172.16.9.18		g723163	Success
336	11/18/2010 3:25:48 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed
335	11/18/2010 3:21:05 PM	00:00:03	VoIP	9999	FXS	7000	172.16.9.18		g723163	Success
334	11/18/2010 3:20:57 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g723163	Failed
332	11/18/2010 3:20:54 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed
330	11/18/2010 3:20:43 PM	00:00:02	FXS	7000	GSM	6000			g711alaw	Success
328	11/18/2010 3:20:30 PM	00:00:02	FXS	7000	GSM	5000			g711alaw	Success
325	11/18/2010 3:05:30 PM	00:00:03	FXS	7000	VoIP	9999	172.16.9.18		g723163	Failed
324	11/15/2010 3:05:22 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g723163	Success
323	11/15/2010 3:05:11 PM	00:00:03	VoIP	9999	FXS	7000	172.16.9.18		g723163	Success
322	11/15/2010 3:05:08 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed

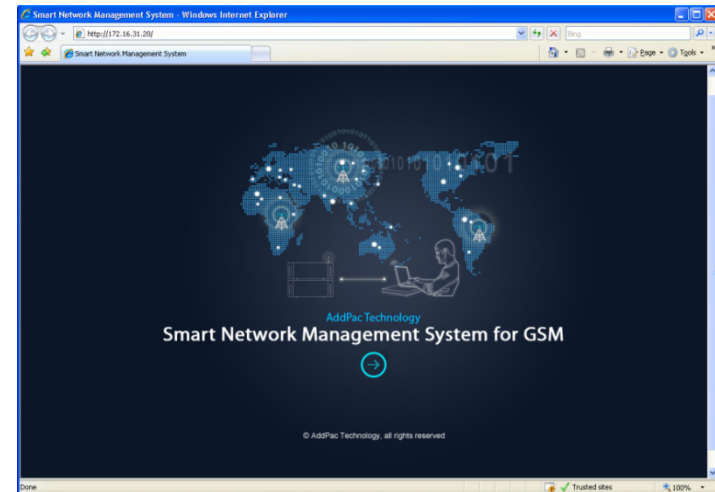
AddPac

AddPac Technology

2010, Sales and Marketing

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System Requirement

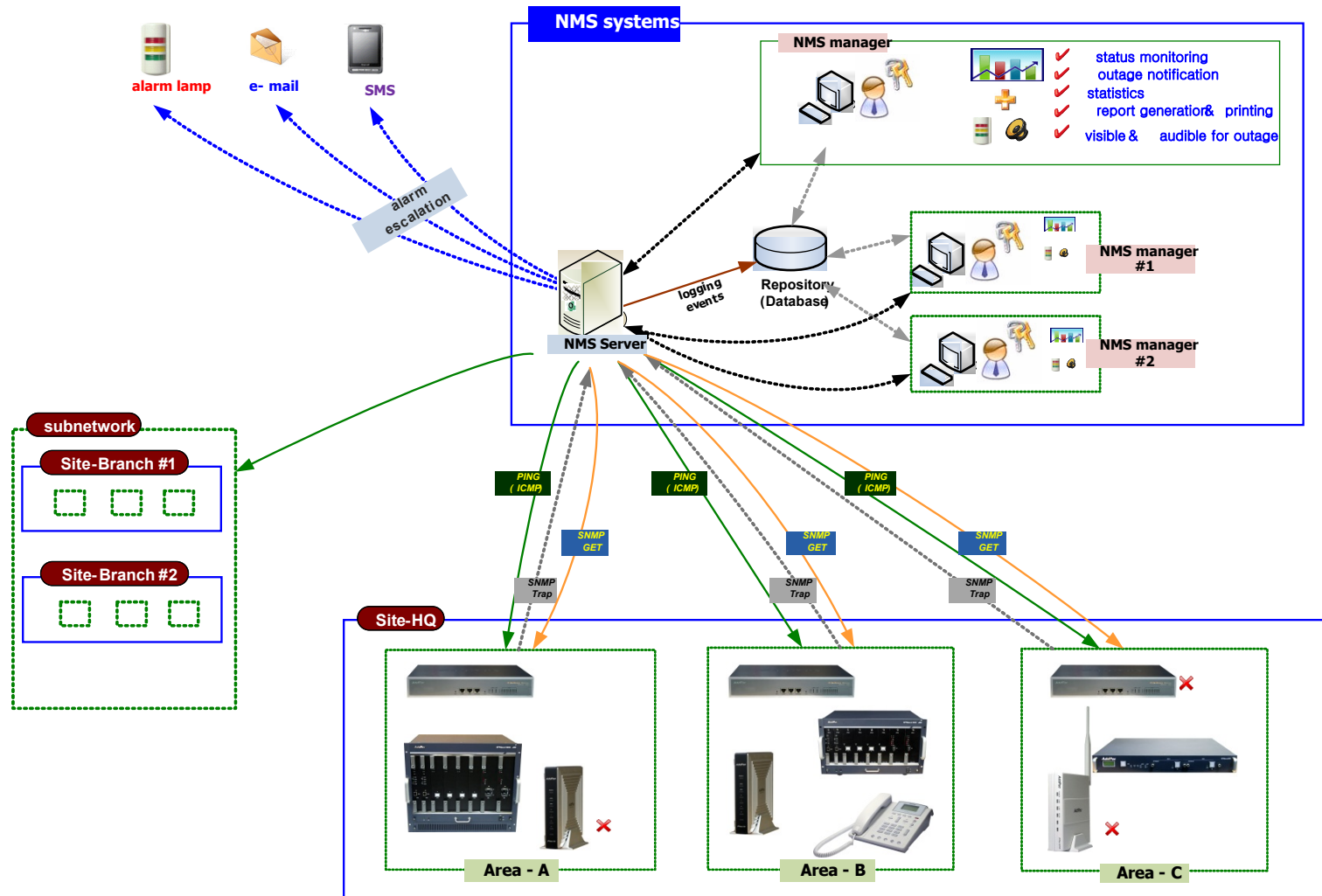
NMS Server

- 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

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

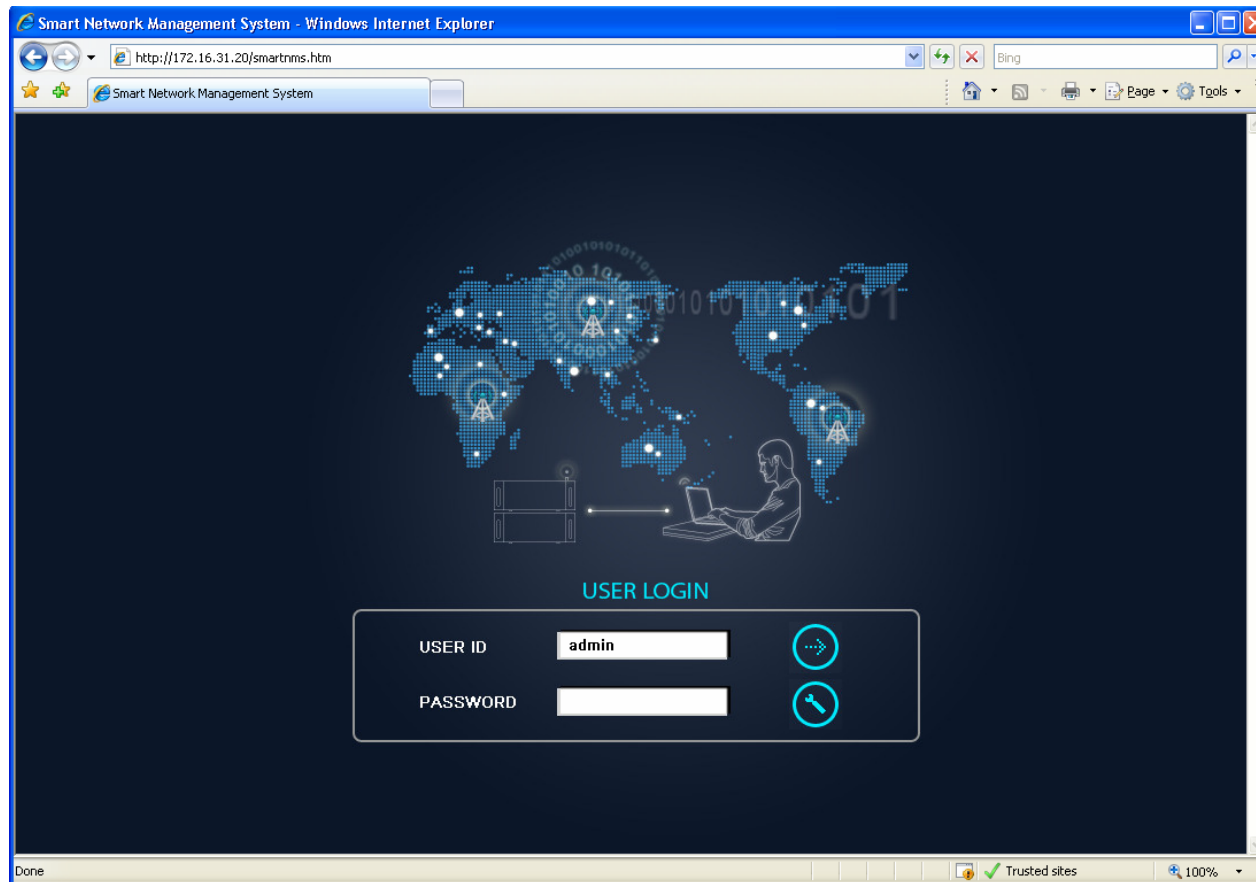
The screenshot displays a Windows Internet Explorer browser window titled "Smart Network Management System - Windows Internet Explorer" with the address bar showing "http://172.16.31.20/". The main content area features a dark blue background with a world map, server racks, and a person at a laptop. The text "AddPac Technology Network Management System for GSM" is prominently displayed. Two dialog boxes are overlaid on the browser:

- Launching Application:** A blue dialog box with a close button. It contains a progress bar and the text: "Verifying application requirements. This may take a few moments."
- (61%) Downloading installnms:** A blue dialog box with a close button. It contains a progress bar and the text: "Downloading installnms. This may take several minutes. You can use your computer to do other tasks during the installation." Below the progress bar, it shows: "Name: installnms", "From: 172.16.31.20", and "Downloading: 6.29 MB of 10.1 MB". A "Cancel" button is at the bottom.

Two yellow callout boxes with arrows point to specific elements:

- Automatic version check:** Points to the "Launching Application" dialog box.
- New S/W version update:** Points to the status bar at the bottom of the browser window, which shows "Done" and "Trusted sites".

Web-based Login



Network Resource Management

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

The screenshot displays the AddPac Network Resource Management interface. On the left, a hierarchical tree structure shows the organization of network resources, including sites like 'AddPac' and 'Seoul', and various sub-networks and centers. A context menu is open over the tree, with 'Execute SMM' highlighted. In the center, a table lists device categories such as Desktop, Network Camera, Phone, Server, Switch, and VoIP Gateway. On the right, a 'User Properties' dialog box is open, showing a selection of site nodes for assignment to a user.

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

main window

current device fault list with hierarchy view

current device fault event message are shown as below

site device fault summary

overall total device fault statistics

device fault summary for category (classification)

Smart Network Management System - Windows Internet Explorer

http://172.16.31.20/smartnms.htm

NMS Account Configuration Monitoring Notification Fault Statistics View Help

Network Management System Smart NMS

Current Outage Devices (11) Site

Name	Service...	Availability
AddPac		
Branch AQ		
NMS Camera	6 of 12	46.937 %
NMS_IP_PBX...	3 of 3	0.000 %
Branch GX		
00_IVR_server	3 of 3	0.000 %
00_IVR_slave...	3 of 3	0.000 %
00_PS_server	3 of 3	0.000 %
00_PS_slave...	2 of 3	32.740 %
IPNext 3000 ...	1 of 3	90.608 %
IPNext 3000 S...	1 of 3	90.623 %
UMS slave	3 of 3	0.000 %
HeadQuarter		
UMS server(o...	3 of 3	0.000 %
Subnetwork #2		
Center		
NMS_SOHO_...	2 of 2	98.115 %

Service Outages

Site	Type	Outages	Availability	Description
AddPac	Sub Netw...	28 / 10 / 32	53%	AddPac Technology C...
Seoul	Sub Netw...	2 / 1 / 2	98%	Seoul subnetwork

Overall Availability: 30 / 11 / 34 78.650 %

Device Categories

Category	Outages	Availability
Desktop	0 / 0 / 1	100%
Network Camera	6 / 1 / 2	54%
Phone	0 / 0 / 3	98%
Server	24 / 10 / 22	58%
Switch	0 / 0 / 0	100%
VoIP Gateway	0 / 0 / 6	98%

Overall Categories Availability: 30 / 11 / 34 61.282 %

Your Outstanding Notices (16)

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Center	NMS_SOHO_PBX			device NMS_SOHO_PBX, all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_31.13			device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or deleted by administrator
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator
<input type="checkbox"/>	9238	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service SNMP not response or deleted by administrator
<input type="checkbox"/>	9237	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator
<input type="checkbox"/>	9236	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator
<input type="checkbox"/>	9235	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service SNMP not response or deleted by administrator

4/10/2009 4:17:43 PM 172.16.31.20:5101 admin Version 1.2.3384

Device Fault Management

Smart Network Management System - Windows Internet Explorer

http://172.16.31.20/smartnms.htm

NMS Account Configuration Monitoring Notification Fault Statistics View Help

Current Outage Devices (12)

Name	Service...	Availability
Branch AQ		
NMS Camera	6 of 12	48.994 %
NMS_IP_PBX...	3 of 3	0.000 %
Branch GX		
00_IVR_server	3 of 3	0.000 %
00_IVR_slave...	3 of 3	0.000 %
00_NR_server	1 of 2	98.015 %
00_PS_server	3 of 3	0.000 %
00_PS_Slave...	2 of 3	32.703 %
IPNext 3000 ...	1 of 3	90.536 %
IPNext 3000 S...	1 of 3	90.584 %
UMS slave	3 of 3	0.000 %
HeadQuarter		
UMS serverfo...	3 of 3	0.000 %
Subnetwork #2		
Center		
NMS_SOHO_...	2 of 2	92.939 %

Service Outages

Device Monitoring - <All>

Group Type Value View Mode Refresh Import

Site <All>

display message icon when the device have a notification for event

device status matrix with several severity such as critical, major, minor

- * severity color
- 1) red : critical
- 2) orange : major
- 3) light blue : normal

Total Monitoring Devices : 34

ACK ID	Send Time	Site	Device Name	IP Address	Service	Message
9525	4/10/2009 5:21:06 PM	/AddPac/Branch GX	00_IVR_server	172.17.111.21	SNMP	인터페이스 172.17.111.21 (172.17.111.21)의 장비명(00_IVR_server)의 서비스 SNMP가 2009년 4월 10일 금요일 오후 5시 21분 06초에 실패함.
9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Center	NMS_SOHO_PBX			device NMS_SOHO_PBX, all services are down
9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed.
9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed.
9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down.

Your Outstanding Notices (17)

4/10/2009 5:16:30 PM 172.16.31.20:5101 admin Version 1.2.3384

Device Fault Management

The screenshot displays the Smart NMS interface in a Windows Internet Explorer browser window. The main content area shows a 'Device Monitoring' view with a grid of device status icons. A red arrow points to the 'NMS Camera' devices, which are highlighted with a red box. A callout box contains the text: "device status matrix with small view mode".

Below the device status matrix, there is a table titled "Your Outstanding Notices (18)".

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RBT_server			device 00_RBT_server's all services are down.
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meeting room phone device, all services are down.
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent.	NMS_SOHO_PBX			device NMS_SOHO_PBX, all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down.
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_31.13 all services down.
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator
<input type="checkbox"/>	9238	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator

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)

The screenshot displays the Smart Network Management System (NMS) interface. The main window is titled "Smart Network Management System - Windows Internet Explorer" and shows the URL "http://172.16.31.20/smartnms.htm". The interface includes a navigation menu with options like "NMS", "Account", "Configuration", "Monitoring", "Notification", "Fault", "Statistics", and "View".

The "Notification Summary" section shows a table with columns for "Date/Time", "Outstanding", and "Acknowledge". The data is summarized by date, showing the number of outstanding and acknowledged notifications for each day from 2009-03-04 to 2009-04-10.

The "Service Outages" section displays a detailed list of fault events. The table includes columns for "Ack", "ID", "Send Time", "Site", "Device Name", "IP Address", "Service", "Message", "Status", and "Respond Time". The list shows various events such as "NMS Camera", "5th floor meeting room phone device", and "00_NR_server" with their respective IP addresses and service types.

An "Advanced Search" dialog box is open, allowing users to filter fault events based on various criteria:

- Sub Network:** A dropdown menu with options like "<All>", "AddPac", "GangNamGu", "Gangseo Area", "MokDong Area", "SeoChoGu", and "Seoul East Area".
- Site:** A dropdown menu with "<All>" selected.
- IP Address Contains:** A text input field.
- Notice Status Type:** A dropdown menu with "<All>" selected.
- Message Contains:** A text input field.
- Level (Severity):** A dropdown menu with "<All>" selected.
- Notices After:** A date and time selector set to "11/10/2008 17:20:49".
- Notices Before:** A date and time selector set to "11/10/2008 17:20:49".
- Sort By:** A dropdown menu with "ID" selected and a "Descending" sort order.

At the bottom of the interface, there is a section for "Your Outstanding Notices (17)" which provides a detailed view of the currently active fault events, including their IDs, send times, sites, device names, IP addresses, services, and messages.

Device Fault History Management

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a table of device fault history with the following columns: Ack, ID, Send Time, Site, Device Name, IP Address, Service, Message, Responder, and Respond Time. The table lists various events, including failures of NMS Camera, IPNext 3000 Master, and NMS Camera 2. Two pop-up windows are overlaid on the main table:

- Troubleshooting Note (Event ID : 45393):** This window displays a log message: "interface 172.16.4.180 (172.16.4.180) device(NMS Camera) service SNMP failed at 2009-4-10 5:51:06 PM". It also includes a table for "Troubleshooting Note List" with columns for Time, User, Status, and Note.
- Troubleshooting Note:** This window shows a status of "Cleared" and a text area containing the message: "Fixed it manually. 2009-04-10 PM by Administrator." An orange callout box points to this window with the text "Can write troubleshooting note if needed".

The interface also features a navigation menu at the top with options like NMS, Account, Configuration, Monitoring, Notification, Fault, Statistics, View, and Help. A toolbar below the menu includes icons for various functions. The bottom status bar shows the current date and time (4/10/2009 6:10:35 PM), IP address (172.16.31.20:5101), user (admin), and version (1.2.3384).

Current Device Fault (Outage)

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a tree view of network devices and a table of current outages. An 'Event Detail' window is open, showing information for a specific event (ID: 45412).

Current Outage Devices Table:

Name	Service...	Availability
AddPac		
Branch AQ		
NMS Camera	6 of 12	50.000 %
NMS_IP_PBX...	3 of 3	0.000 %
Branch GX		
00_IVR_server	3 of 3	0.000 %
00_IVR_slave...	3 of 3	0.000 %
00_PS_server	3 of 3	0.000 %
00_PS_slave...	2 of 3	33.333 %
00_RBT_server	3 of 3	0.000 %
IPNext 3000 ...	1 of 3	66.667 %
IPNext 3000 S...	1 of 3	66.667 %
UMS slave	3 of 3	0.000 %
HeadQuarter		
5th floor meeti...	1 of 1	0.000 %
UMS serverfo...	3 of 3	0.000 %
Subnetwork #2		
Center		
NMS_SOHO_...	2 of 2	0.000 %

Service Outages Table:

Outage ID	Site	Device Name	IP Address	Service	Time Down
13968	/AddPac/Branch GX	00_RBT_server	172.17.114.60	Media	4/10/2009 9:26:04 PM
13967	/AddPac/Branch GX	00_RBT_server	172.17.114.60	ICMP	4/10/2009 9:26:04 PM
13966	/AddPac/Branch GX	00_RBT_server	172.17.114.60	SNMP	4/10/2009 9:26:04 PM
13948	/AddPac/HeadQuarter	5th floor meeting room p...	172.16.53.101	ICMP	4/10/2009 5:34:10 PM
13907	/Subnetwork #2/Cent...	NMS_SOHO_PBX	172.16.19.50	ICMP	4/10/2009 3:34:29 PM
13906	/Subnetwork #2/Cent...	NMS_SOHO_PBX	172.16.19.50	SNMP	4/10/2009 3:34:29 PM

Event Detail (ID: 45412) Window:

Event Time: 4/10/2009 9:26:04 PM
 Site: /AddPac/Branch GX
 Device Name: 00_RBT_server
 Service:
 IP Address:
 Severity: Critical
 Device Model: AP-RBT1000
 Status:
 Acknowledged By:
 Log Message: device 00_RBT_server down
 Description: device 00_RBT_server's all interface down. A new Outage record has been created and service level availability calculations will be impacted until this outage is resolved.

Your Outstanding Notices (18) Table:

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RBT_server		device	device
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...		device	device
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent...	NMS_SOHO_PBX		interf	interf
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager_2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server		device	device 00_IVR_server all services are down
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...		device	device NMS_IP_PBX_31.13 all services down
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	device	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator

Device Event History

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a list of events with columns for Event Time, Outsta., Ackno., Not Clea., Cleared, and In Pr. Below this is a detailed view of an event log with columns for Ack, ID, Severity, Event Time, Site, Device Name, IP Address, Service, and Message. An orange callout box points to the search bar and filters, stating "Can view all events for devices with search condition". Another orange callout box points to the summary table, stating "summarize daily event statistics data".

Event Time	Outsta.	Ackno.	Not Clea.	Cleared	In Pr
2009-04-13	40	0	40	0	0
2009-04-12	6	0	6	0	0
2009-04-11	314	0	314	0	0
2009-04-10	182	0	182	0	0
2009-04-09	290	0	290	0	0
2009-04-08	412	0	412	0	0
2009-04-07	448	0	448	0	0
2009-04-06	1453	0	1453	0	0
2009-04-05	1704	0	1704	0	0
2009-04-04	1712	0	1712	0	0
2009-04-03	1276	0	1276	0	0
2009-04-02	799	0	799	0	0
2009-04-01	271	0	271	0	0
2009-03-31	277	0	277	0	0
2009-03-30	212	0	212	0	0
2009-03-29	17	0	17	0	0
2009-03-28	2	0	2	0	0
2009-03-27	108	0	108	0	0
2009-03-26	292	0	292	0	0
2009-03-25	46	0	46	0	0
2009-03-24	121	0	121	0	0
2009-03-23	1904	0	1904	0	0
2009-03-22	2643	0	2643	0	0
2009-03-21	354	0	354	0	0
2009-03-20	172	0	172	0	0
2009-03-19	1	0	1	0	0
2009-03-18	1294	0	1294	0	0
2009-03-17	788	0	788	0	0
2009-03-16	14	0	14	0	0
2009-03-15	3	0	3	0	0

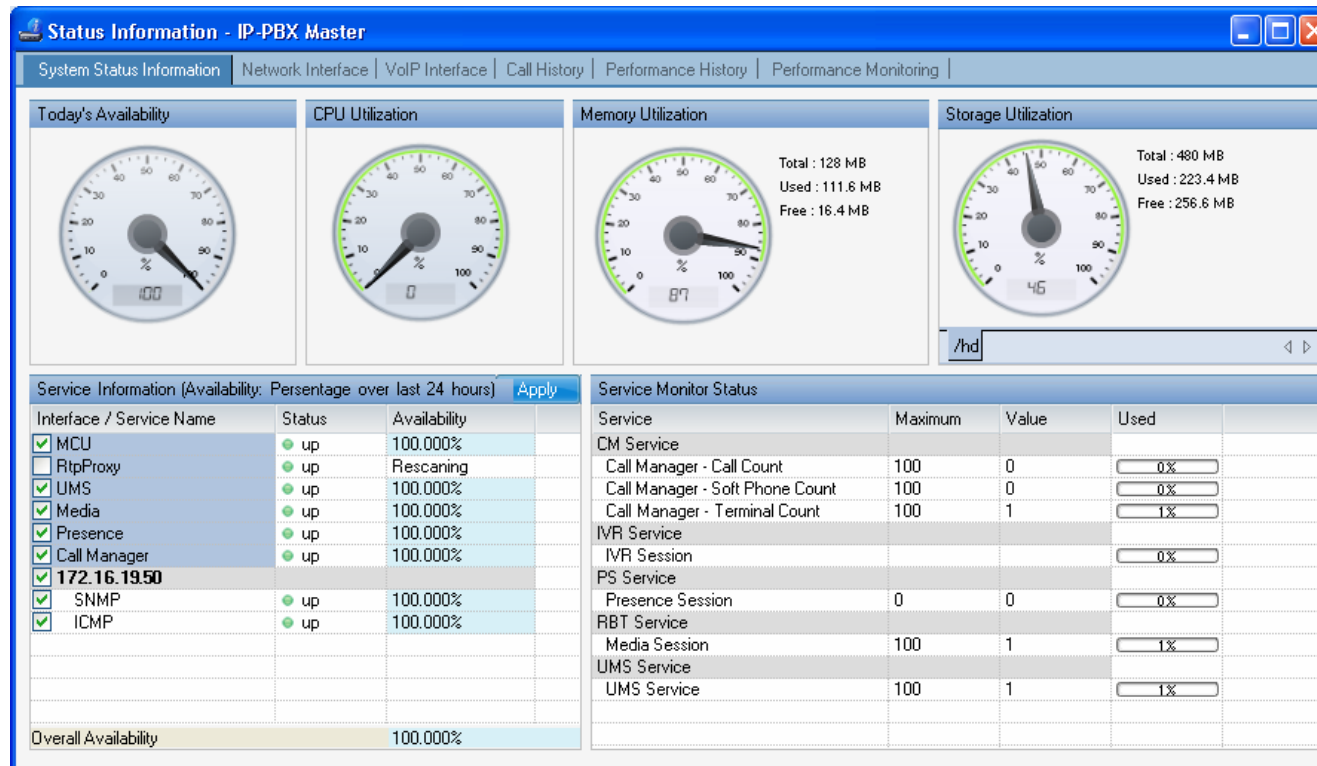
Ack	ID	Severity	Event Time	Site	Device Name	IP Address	Service	Message
	45786	Critical	4/13/2009 11:24:42 AM	/AddPac/Branch GX	SE_MG3000N_A	172.17.111.25		Agent Up with enterprise.1.3.6.1.4.1.4855.3.2.255 [1.3.6.1.4.1.4855.3.2.255] args [1].1.3.6.1.6.3.1.1.4.3.0=""1.3.6.1.4.1.4855.3.2.255"
	45785	Cleared	4/13/2009 11:15:59 AM	/AddPac/Branch GX	00_NR_server	172.17.111.21	SNMP	SNMP data collection on interface 172.17.111.21 previously failed and has been restored.
	45784	Cleared	4/13/2009 11:15:52 AM	/AddPac/Branch GX	00_NR_server			Node 00_NR_server is up.
	45783	Critical	4/13/2009 11:15:51 AM	/AddPac/Branch GX	00_NR_server	172.17.111.21		Agent Up with Possible Changes (coldStart Trap) enterprise.1.3.6.1.4.1.4855.3.2.10 [1].1.3.6.1.4.1.4855.3.2.10" args [1].1.3.6.1.6.3.1.1.4.3.0=""1.3.6.1.4.1.4855.3.2.10"
	45782	Critical	4/13/2009 11:15:13 AM	/AddPac/Branch GX	00_NR_server			Node 00_NR_server is down.
	45781	Warning	4/13/2009 11:14:57 AM	/AddPac/Branch GX	00_NR_server	172.17.111.21	SNMP	SNMP data collection on interface 172.17.111.21 failed.
	45780	Warning	4/13/2009 10:00:15 AM	/AddPac/Branch AQ	NMS_IP_PBX_31...	172.16.31.13	SNMP	SNMP thresholding on interface 172.16.31.13 failed.
	45779	Warning	4/13/2009 10:00:15 AM	/Subnetwork #2/Cent	NMS_IP_PBX_31...	172.16.31.16	SNMP	SNMP thresholding on interface 172.16.31.16 failed.
	45778	Warning	4/13/2009 9:59:51 AM	/AddPac/Branch GX	UMS slave	172.17.113.201	SNMP	SNMP data collection on interface 172.17.113.201 failed.
	45777	Warning	4/13/2009 9:59:46 AM	/AddPac/Branch GX	UMS slave	172.17.113.201	SNMP	SNMP data collection on interface 172.17.113.201 failed.
	45776	Warning	4/13/2009 9:59:42 AM	/AddPac/HeadQuarter	UMS server(our co.	61.33.161.43	SNMP	SNMP data collection on interface 61.33.161.43 failed.
	45775	Warning	4/13/2009 9:59:41 AM	/AddPac/HeadQuarter	UMS server(our co.	61.33.161.43	SNMP	SNMP data collection on interface 61.33.161.43 failed.
	45774	Warning	4/13/2009 9:59:36 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45773	Warning	4/13/2009 9:59:33 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45772	Warning	4/13/2009 9:59:32 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45771	Warning	4/13/2009 9:59:27 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45770	Warning	4/13/2009 9:59:24 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45769	Warning	4/13/2009 9:59:23 AM	/Subnetwork #2/Cent	NMS_SOHO_PBX	172.16.19.50	SNMP	SNMP data collection on interface 172.16.19.50 failed.
	45768	Warning	4/13/2009 9:59:18 AM	/AddPac/Branch AQ	NMS_IP_PBX_31...	172.16.31.13	SNMP	SNMP data collection on interface 172.16.31.13 failed.
	45767	Warning	4/13/2009 9:59:15 AM	/AddPac/Branch AQ	NMS_IP_PBX_31...	172.16.31.13	SNMP	SNMP data collection on interface 172.16.31.13 failed.

Site	Device Name	IP Address	Service	Message
/AddPac/Branch GX	00_RBT_server			device 00_RBT_server's all services are down.
/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meeting room phone device, all services are down.
/Subnetwork #2/Cent	NMS_SOHO_PBX			device NMS_SOHO_PBX, all services are down
/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed.
/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed.
/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down.
/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_31.13 all services down.
/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator

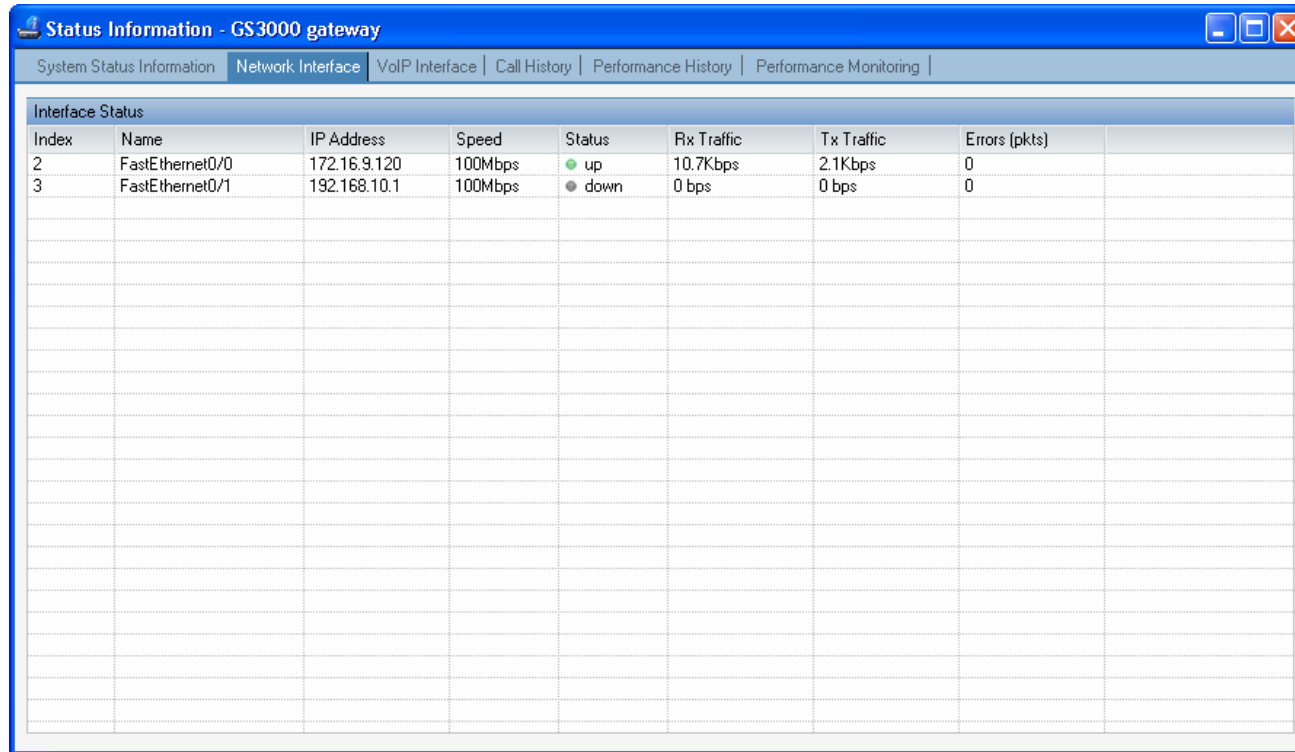
Device Status Information

- System Performance Information (CPU, HDD, Memory,...)
- Provide device current service status (up/down)
- Provide device main status (max value vs current value)
- Provide network interface status (up/down & network traffic)
- Provide VoIP interface status and call statistics.
- Search call history for the device and port
- Display Graph Series with System Performance Information
- Monitor Main Status Flow with System Monitoring View

System Status Information



Network Interface



The screenshot shows a web-based interface for a GS3000 gateway. The title bar reads "Status Information - GS3000 gateway". Below the title bar are several tabs: "System Status Information", "Network Interface", "VoIP Interface", "Call History", "Performance History", and "Performance Monitoring". The "Network Interface" tab is selected. The main content area is titled "Interface Status" and contains a table with the following data:

Index	Name	IP Address	Speed	Status	Rx Traffic	Tx Traffic	Errors (pkts)
2	FastEthernet0/0	172.16.9.120	100Mbps	● up	10.7Kbps	2.1Kbps	0
3	FastEthernet0/1	192.168.10.1	100Mbps	● down	0 bps	0 bps	0

VoIP Interface

You can view call summary informations such as total call, ASR, and ACD for the GSM gateway device each

The screenshot displays the 'Status Information - GS3000 gateway' web interface. The 'VoIP Interface' tab is active, showing call statistics and interface status.

GSM Call Statistics

Inbound Calls				Total			All Clear
VoIP	FXS	FXD	E1	Call	ASR (%)	ACD (sec)	
0	58	0	0	58	94 %	11	

VoIP Interfaces Status

Port	Line Type	Line Status	In Gain	Out Gain	Phone Number	GSM Phone Number	Inbound Calls (VoIP/FXS/FXD/E1)	ASR (%)	ACD (sec)
0/0	GSM	hookOn	0	0	5T		0 / 37 / 0 / 0	94%	5
0/1	GSM	hookOn	0	0	6T		0 / 21 / 0 / 0	95%	6
0/2	GSM	hookOn	0	0	7T		0 / 0 / 0 / 0	0%	0
0/3	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
1/0	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
1/1	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
1/2	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
1/3	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
2/0	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
2/1	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
2/2	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
2/3	GSM	hookOn	0	0			0 / 0 / 0 / 0	0%	0
7/0	FXS	hookOn	0	0	7000			0%	
7/1	FXS	hookOn	0	0				0%	
7/2	FXS	hookOn	0	0				0%	
7/3	FXS	hookOn	0	0				0%	
7/4	FXD	hookOn	0	0	1231			0%	
7/5	FXD	hookOn	0	0				0%	

ⓘ GSM call statistics (Inbound calls, ASR, ACD) was created in the device to collect data is displayed on the screen.

Call History

You can search call history with various conditions such as start date, end date, port and ip etc.

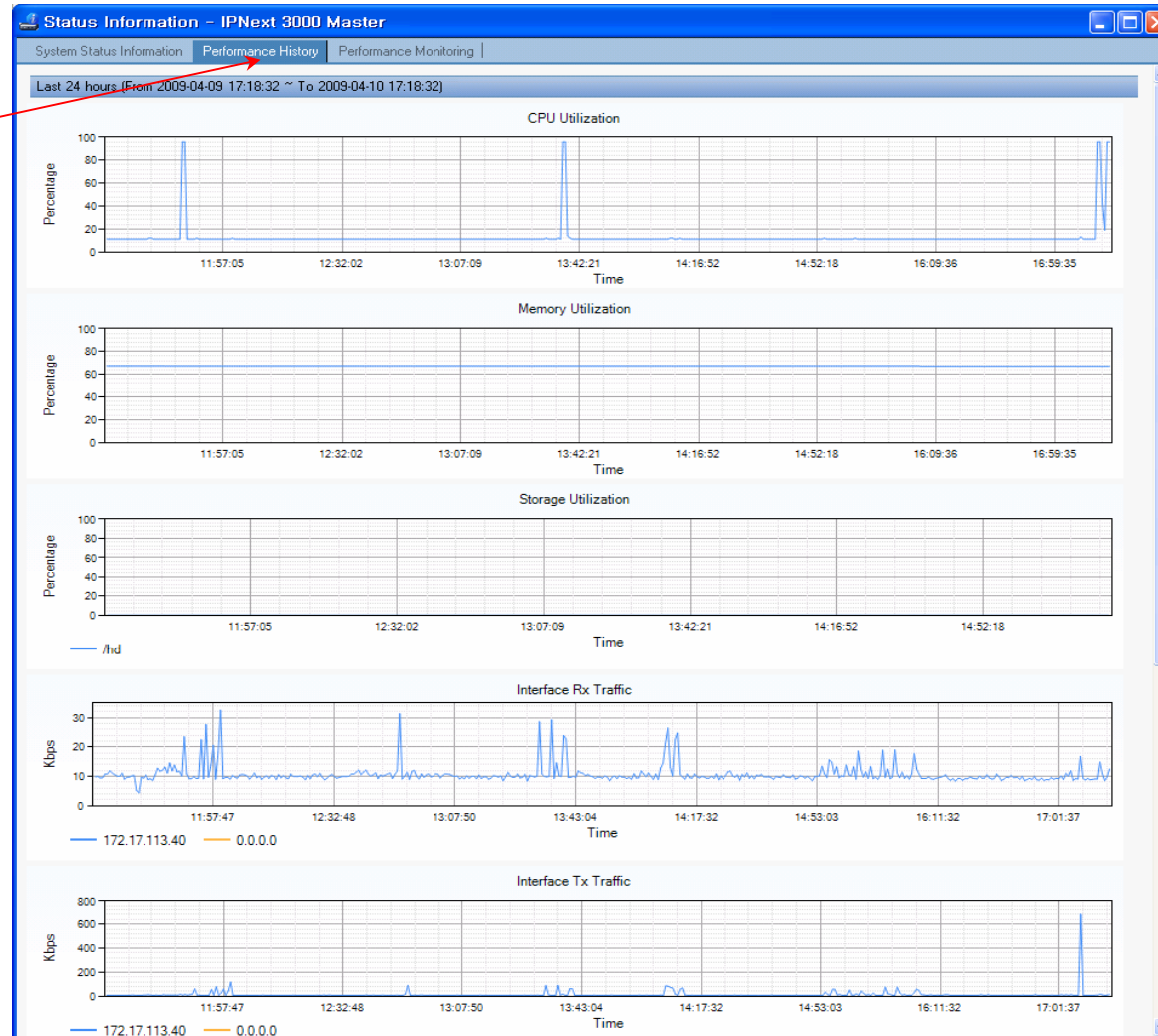
Device Call History

*Destination Port: <All> *Search Count: 153
*Period: 2010-11-18 10:15:01 ~ 2010-11-19 10:15:01
*Filter: Empty

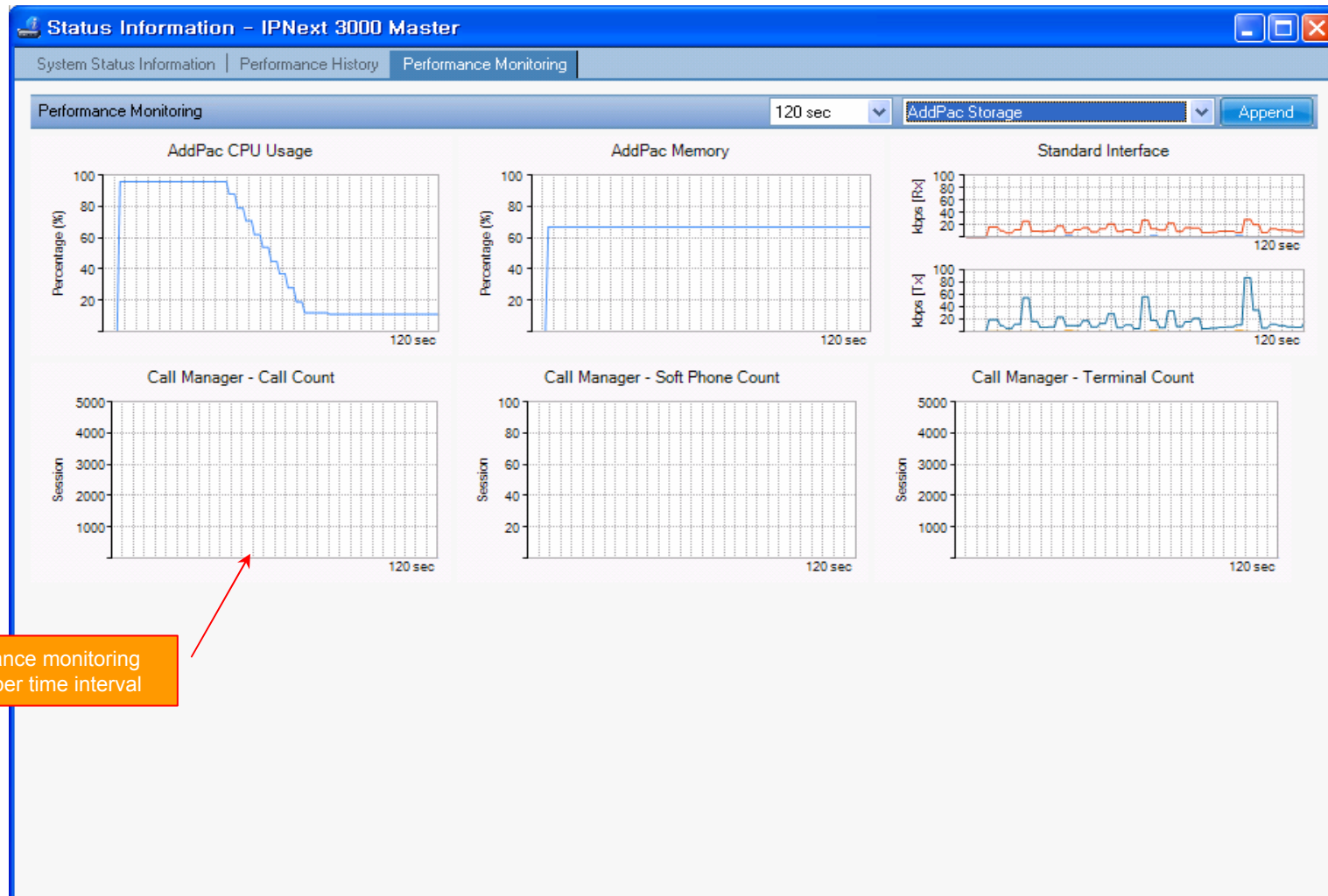
ID	Create Time	Duration	Caller Type	Caller Number	Called Type	Called Number	Remote IP	GSM Phone N...	Codec	Status
346	11/18/2010 3:54:50 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed
345	11/18/2010 3:50:43 PM	00:00:03	FXS	7000	VoIP	9999	172.16.9.18		g7231r63	Success
344	11/18/2010 3:46:54 PM	00:00:16	FXS	7000	GSM	6000			g711alaw	Success
343	11/18/2010 3:45:59 PM	00:00:02	FXS	7000	GSM	5000			g711alaw	Success
342	11/18/2010 3:43:33 PM	00:00:03	FXS	7000	VoIP	9999	172.16.9.18		g7231r63	Success
341	11/18/2010 3:43:23 PM	00:00:00	FXS	7000	GSM	600			g711alaw	Failed
340	11/18/2010 3:43:16 PM	00:00:00	FXS	7000	GSM	600			g711alaw	Failed
339	11/18/2010 3:43:12 PM	00:00:00	FXS	7000	GSM	500			g711alaw	Failed
338	11/18/2010 3:43:07 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g7231r63	Failed
337	11/18/2010 3:42:32 PM	00:00:04	FXS	7000	VoIP	9999	172.16.9.18		g7231r63	Success
336	11/18/2010 3:25:48 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed
335	11/18/2010 3:21:05 PM	00:00:03	VoIP	9999	FXS	7000	172.16.9.18		g7231r63	Success
334	11/18/2010 3:20:57 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g7231r63	Failed
332	11/18/2010 3:20:54 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed
330	11/18/2010 3:20:43 PM	00:00:02	FXS	7000	GSM	6000			g711alaw	Success
328	11/18/2010 3:20:30 PM	00:00:02	FXS	7000	GSM	5000			g711alaw	Success
325	11/18/2010 3:05:30 PM	00:00:03	FXS	7000	VoIP	9999	172.16.9.18		g7231r63	Success
324	11/15/2010 3:05:22 PM	00:00:00	VoIP	9999	FXS	7000	172.16.9.18		g7231r63	Failed
323	11/15/2010 3:05:11 PM	00:00:03	VoIP	9999	FXS	7000	172.16.9.18		g7231r63	Success
322	11/15/2010 3:05:08 PM	00:00:00	FXS	7000	Unknown				g711alaw	Failed

Performance History

performance analysis graph for last 24 hours



Performance Monitoring



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

Event Notification Management

apply notification policy with event-based filter
(example : notify me when network link of device is downed through SMS, e-mail)

specify category when each event occurs

describe notification message content for e-mail or SMS

Name	Service...	Availability
Branch AQ		
NMS Camera	6 of 12	50.000 %
NMS_IP_PBX...	3 of 3	0.000 %
Branch GX		
00_IVR_server	3 of 3	0.000 %
00_IVR_slave...	3 of 3	0.000 %
00_PS_server	3 of 3	0.000 %
00_PS_slave...	2 of 3	33.333 %
00_RBT_server	3 of 3	0.000 %
IPNext 3000 ...	1 of 3	66.667 %
IPNext 3000 S...	1 of 3	66.667 %
UMS slave	3 of 3	0.000 %
HeadQuarter		
5th floor meeti...	1 of 1	0.000 %
UMS server(o...	3 of 3	0.000 %
Subnetwork #2		
NMS_SOHO_...	2 of 2	0.000 %

Notification Name	Event	Destination Path	Description
serviceUnresponsive	Node event: serviceUnresponsive	NMS Admin	test
serviceResponsive	Node event: serviceResponsive	NMS Admin	
interfaceDown	Node event: interfaceDown	NMS Admin	
nodeDown	Node event: nodeDown	NMS Admin	
interfaceUp	Node event: interfaceUp	NMS Admin	
nodeUp	Node event: nodeUp	NMS Admin	
nodeLostService	Node event: nodeLostService	NMS Admin	
nodeRegainedService	Node event: nodeRegainedService	NMS Admin	
coldStart	SNMP Cold Start	NMS Admin	
warmStart	SNMP Trap: SNMP Warm Start	NMS Admin	
authenticationFailure	SNMP Trap: SNMP Authn Failure	NMS Admin	
serviceDeleted	Node event: serviceDeleted	NMS Admin	
nodeAdded	Node event: nodeAdded	NMS Admin	
nodeInfoChanged	Node event: nodeInfoChanged	NMS Admin	
interfaceDeleted	Node event: interfaceDeleted	NMS Admin	
High Threshold	highThresholdExceeded	NMS Admin	
Low Threshold	lowThresholdExceeded	NMS Admin	
Low Threshold Rearmed	lowThresholdRearmed	NMS Admin	
High Threshold Rearmed	highThresholdRearmed	NMS Admin	

Event Notification Properties

Notification Name: serviceUnresponsive

Description: test

Event: Node event: serviceUnresponsive

Destination Path: default

Notification Type: sms, alarmLamp, email

Current Rule: IPADDR IPLIKE ****

Apply Category: Desktop, Network Camera, Phone, Server, Switch

Email Subject: Notice #noticeid% %service% service on %interfaceresolve% (%interface%)

Text Message: The %service% poll to interface %interfaceresolve% (%interface%) on node %nodeLabel% successfully completed a connection to the service listener on the remote machine. However, the synthetic transaction failed to complete within %param[timeout]% milliseconds, over %param[attempts]% attempts. This event will NOT impact service level agreements, but may be an indicator of other problems on that node.

Special Values: Can be used in both the text message and email subject

%noticeid% = notification ID number

%time% = time sent

%severity% = event severity

%nodeLabel% = may be IP address or empty

%interface% = IP address, may be empty

%service% = service name, may be empty

%eventid% = event ID, may be empty

Note: If the alert exceeds 80 bytes then the notification will be dispatched in two or more sms.

Enable Notification

Event Notification Management

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a tree view of network devices and their service availability. A dialog box titled "Destination Path Properties" is open, allowing configuration of notification channels. The "Destination Path Name" is set to "default". The "Initial Target" is "onlyAlarmLamp". The "Initial Delay" is set to "0m".

The "Notification Type" table in the dialog is as follows:

Notification Type	Target	Auto Notify
alarmLamp	alarmLamp	on
email	admin	on
sms	admin	on

An orange callout box with a red arrow points to the "alarmLamp" entry, containing the text: "define notification channel such as e-mail, sms, or alarmlamp".

At the bottom of the interface, there is a "Your Outstanding Notices (18)" table:

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RB_T_server			device 00_RB_T_server's all services are down.
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meeting room phone device, all services are down.
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent...	NMS_SOHD_PBX			device NMS_SOHD_PBX, all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down.
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_31.13 all services down.
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS_Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator

Event Notification Management

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a tree view of devices under 'AddPac', including Branch AQ, Branch GX, HeadQuarter, and Subnetwork #2. The 'Destination Paths' table is visible, showing a path named 'default' with the target 'onlyAlarmLamp'. Two dialog boxes are open: 'Destination Path Properties' and 'Target Properties'. The 'Target Properties' dialog has 'Send to select user' selected, with 'Account Administrator' chosen in the dropdown menu. An orange callout box with a red arrow points to this dropdown menu, containing the text: 'user account (administrator) setting for SMS, E-mail Notification or specify e-mail address or SMS phone number'. The bottom of the interface shows a table of 'Your Outstanding Notices (18)' with columns for Ack, ID, Send Time, Site, Device Name, and IP Address.

Notification Type	Target	Auto Notify
alarmLamp	alarmLamp	on
email	admin	on
sms	admin	on

Site	Device Name	IP Address	Message
/AddPac/Branch GX	00_RBT_server		device 00_RBT_server's all services are down.
/AddPac/HeadQuarter	5th floor meeti...		device 5th floor meeting room phone device, all services are down.
/Subnetwork #2/Cent...	NMS_SOHO_PBX		device NMS_SOHO_PBX: all services are down
/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed.
/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed.
/AddPac/Branch GX	00_IVR_server		device 00_IVR_server all services are down.
/AddPac/Branch AQ	NMS_IP_PBX_3...		device NMS_IP_PBX_31.13 all services down.
/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator

Configuration

Smart Network Management System - Windows Internet Explorer

http://172.16.31.20/smartnms.htm

Smart Network Management System

NMS Account Configuration Monitoring Notification Fault Statistics View Help

Current Outage Devices (13) Site

Name	Service...	Availability
Branch AQ		
NMS_Camera	6 of 12	50.000 %
NMS_IP_PBX...	3 of 3	0.000 %
Branch GK		
00_IVR_server	3 of 3	0.000 %
00_IVR_slave...	3 of 3	0.000 %
00_PS_server	3 of 3	0.000 %
00_PS_Slave...	2 of 3	33.333 %
00_FBT_server	3 of 3	0.000 %
IPNext 3000 ...	1 of 3	66.667 %
IPNext 3000 S...	1 of 3	66.667 %
UMS_slave	3 of 3	0.000 %
HeadQuarter		
5th floor meeti	1 of 1	0.000 %
UMS_server(o...	3 of 3	0.000 %
Subnetwork #2		
Center		
NMS_SOHD_...	2 of 2	0.000 %

Destination Path Name: default, onlyAlarmLamp

Configure Notification

External Notification | Alarm Lamp

E-Mail | SMS

Sender Email Address: nms@addpac.com

SMTP Server Host: 61.33.161.2

Authentication

Username: []

Password: []

Help | Ok | Cancel

global notification channel configuration

Total destination paths : 2

Your Outstanding Notices (18)

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GK	00_FBT_server			device 00_FBT_server's all services are down.
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meeting room phone device, all services are down.
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent...	NMS_SOHD_PBX			device NMS_SOHD_PBX- all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GK	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed.
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GK	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GK	00_IVR_server			device 00_IVR_server all services are down.
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_31.13 all services down.
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS_Camera 2	172.16.253.118		device (NMS_Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator

Your Outstanding Notices (18) | All Outstanding Notices (18)

4/13/2009 11:26:16 AM | 172.16.31.20:5101 | admin | Version 1.2.3384

Audible & Visible Alarm

notify operator (or administrator)
1. Alarm lamp blink (on&off) (visible)
2. play alarm sound (audible)

can synchronize with alarm lamp equipment

Site	Type	Outages	Availability	Description
AddPac	Sub Netw...	32 / 12 / 32	92%	AddPac Technology C...
Seoul	Sub Netw...	2 / 1 / 2	33%	Seoul subnetwork

Category	Outages	Availability
Desktop	0 / 0 / 1	100%
Network Camera	6 / 1 / 2	57%
Phone	1 / 1 / 3	66%
Server	27 / 11 / 22	42%
Switch	0 / 0 / 0	100%
VoIP Gateway	0 / 0 / 6	100%

Overall Availability	Count	Percentage
Overall Availability	34 / 13 / 34	27.690 %
Overall Categories Availability	34 / 13 / 34	49.470 %

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RBT_server			device 00_RBT_server's all services are down.
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuater	5th_floor_meeting...			device 5th floor meeting room phone device, all services are down.
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent...	NMS_SDHO_PBX			device NMS_SDHO_PBX, all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (IPNext 3000 Slave) service Call Manager 2009-4-10 11:37:12 failed.
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.40 (172.17.113.40) device (IPNext 3000 Master) service Call Manager 2009-4-10 11:37:12 failed
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_server all services are down.
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_31.13 all services down.
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) not response or delete by administrator
<input type="checkbox"/>	9238	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator
<input type="checkbox"/>	9237	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	device (NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service SNMP not response or deleted by administrator
<input type="checkbox"/>	9236	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	device(NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service ICMP not response or deleted by administrator
<input type="checkbox"/>	9235	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	device(NMS Camera 2) interface 172.16.253.118 (172.16.253.118) service SNMP not response or deleted by administrator

Fault Statistics

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

Fault Statistics

The screenshot displays the Smart Network Management System (NMS) interface. The main content area is divided into several sections:

- Event Summary Table:** A table on the left showing event statistics for various dates from 2009-04-04 to 2009-04-13. Columns include Event Time, Outsta..., Ackno..., Not Clea..., and Cleared. The total number of outstanding events is 1712.
- Search Condition Panel:** A panel above the graph allowing users to filter data by 'Hour' (4/ 9/2009) and 'Site' (Branch A, Branch AQ, B).
- Fault Statistics (Site) Graph:** A bar chart showing the number of faults per hour for different sites. The x-axis represents time from 01:00 to 23:00, and the y-axis represents the fault count (0 to 60). The highest fault count is observed at 15:00.
- Detailed Data Table (4/9/2009):** A table providing a breakdown of faults by site and time. The total number of faults for this date is 118.
- Your Outstanding Notices (18):** A list of specific fault events with columns for Ack, ID, Send Time, Site, Device Name, IP Address, Service, and Message.

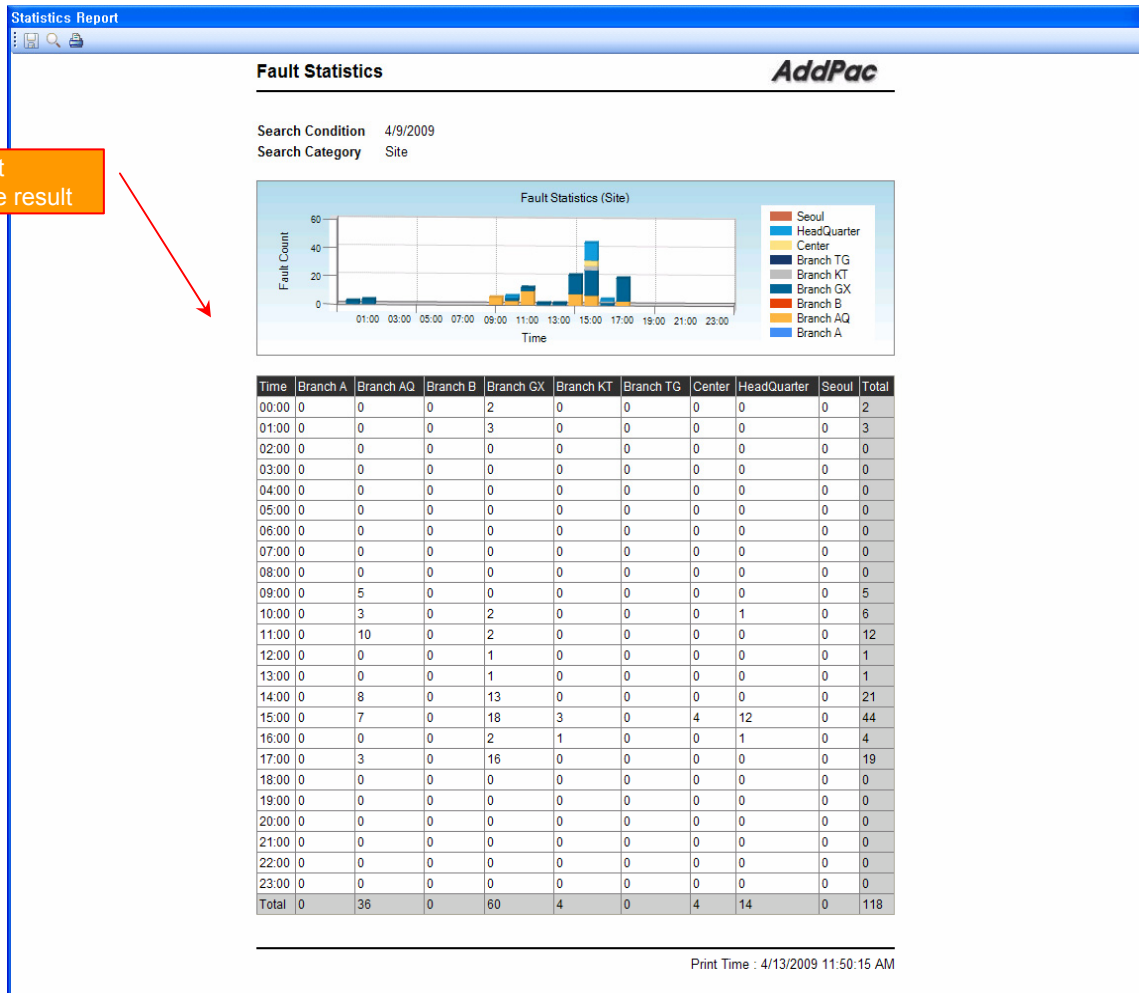
Two orange callout boxes provide additional context:

- display graph for fault statistics with various search condition:** Points to the 'Fault Statistics (Site)' bar chart.
- display detailed data for fault statistics:** Points to the detailed data table for 4/9/2009.

Time	Branch A	Branch AQ	Branch B	Branch GX	Branch KT	Branch TG	Center	HeadQuarter	Seoul	Total
07:00	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0
09:00	0	5	0	0	0	0	0	0	0	5
10:00	0	3	0	2	0	0	0	1	0	6
11:00	0	10	0	2	0	0	0	0	0	12
12:00	0	0	0	1	0	0	0	0	0	1
13:00	0	0	0	1	0	0	0	0	0	1
14:00	0	8	0	13	0	0	0	0	0	21
15:00	0	7	0	18	3	0	4	12	0	44
16:00	0	0	0	2	1	0	0	1	0	4
17:00	0	3	0	16	0	0	0	1	0	19
18:00	0	0	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0
Total	0	36	0	60	4	0	4	14	0	118

Fault Statistics – Report Generation

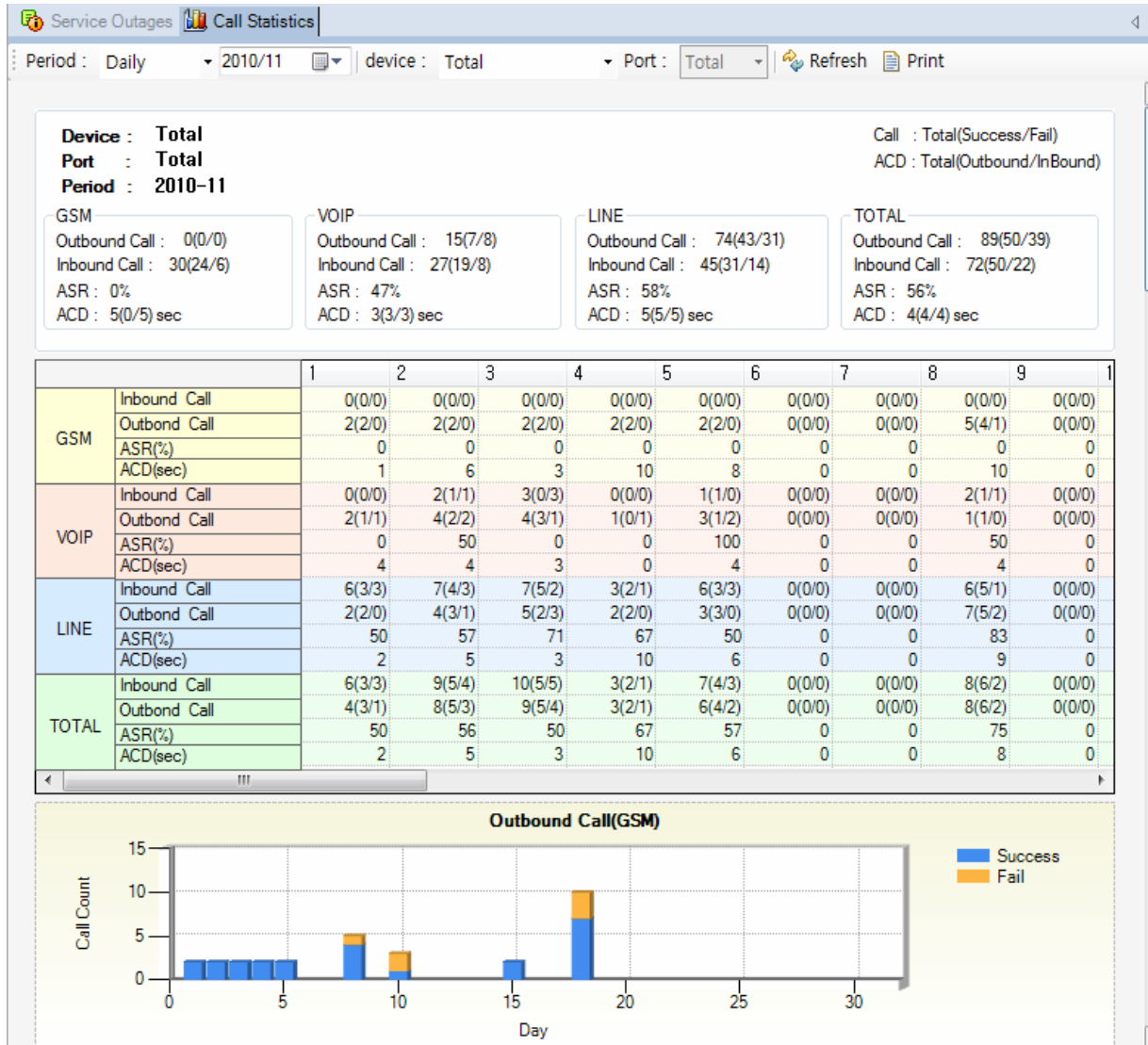
report generation for fault statistics and print out the result



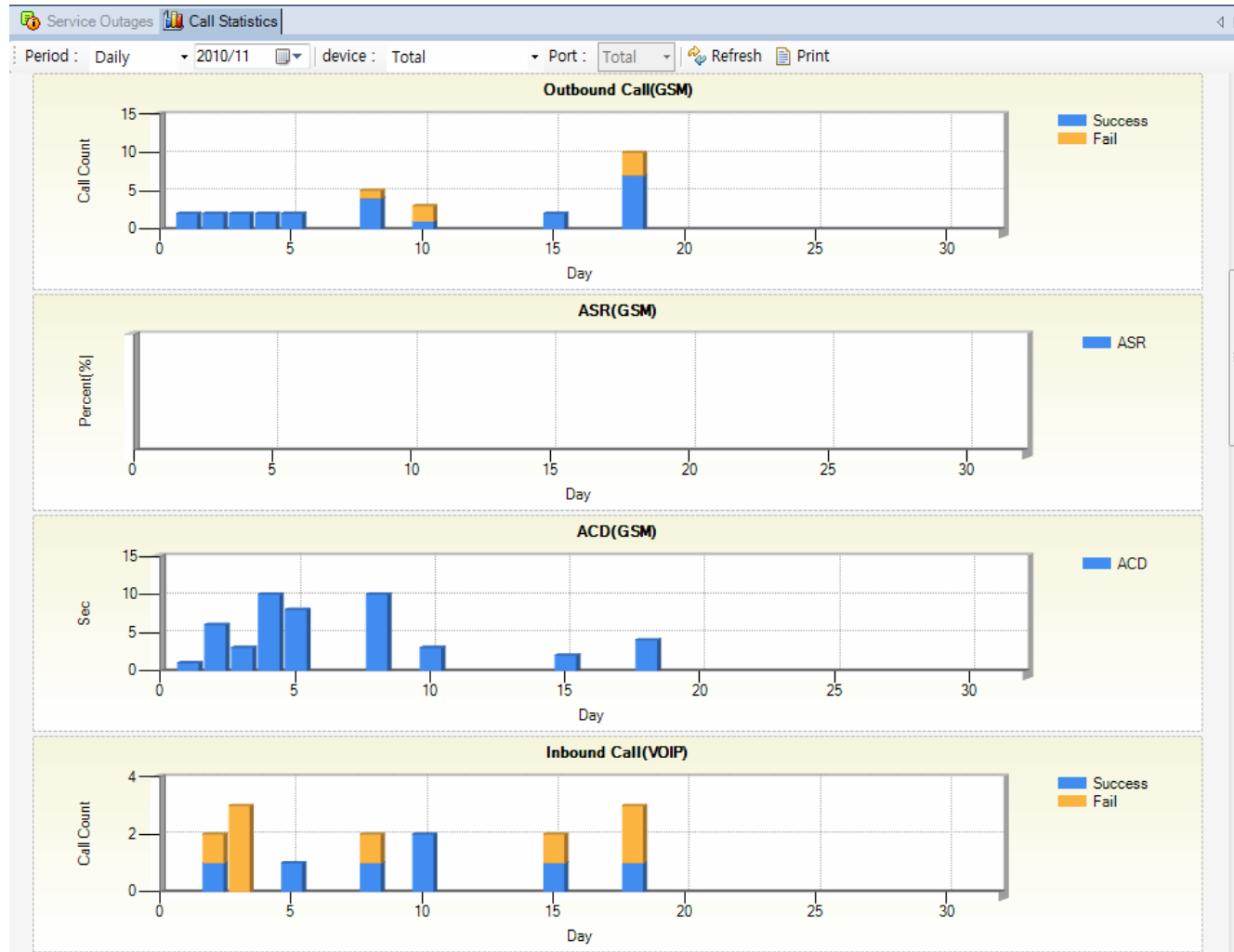
Call Statistics

- SmartNMS receives CDR data for calls which is used for call statistics from the VOIP or GSM gateway.
- You can get statistics data with various time interval conditions such as daily and monthly basis for the device and VOIP port.
- Report statistics can be exported to the various document formats such as PDF and MS-Excel.

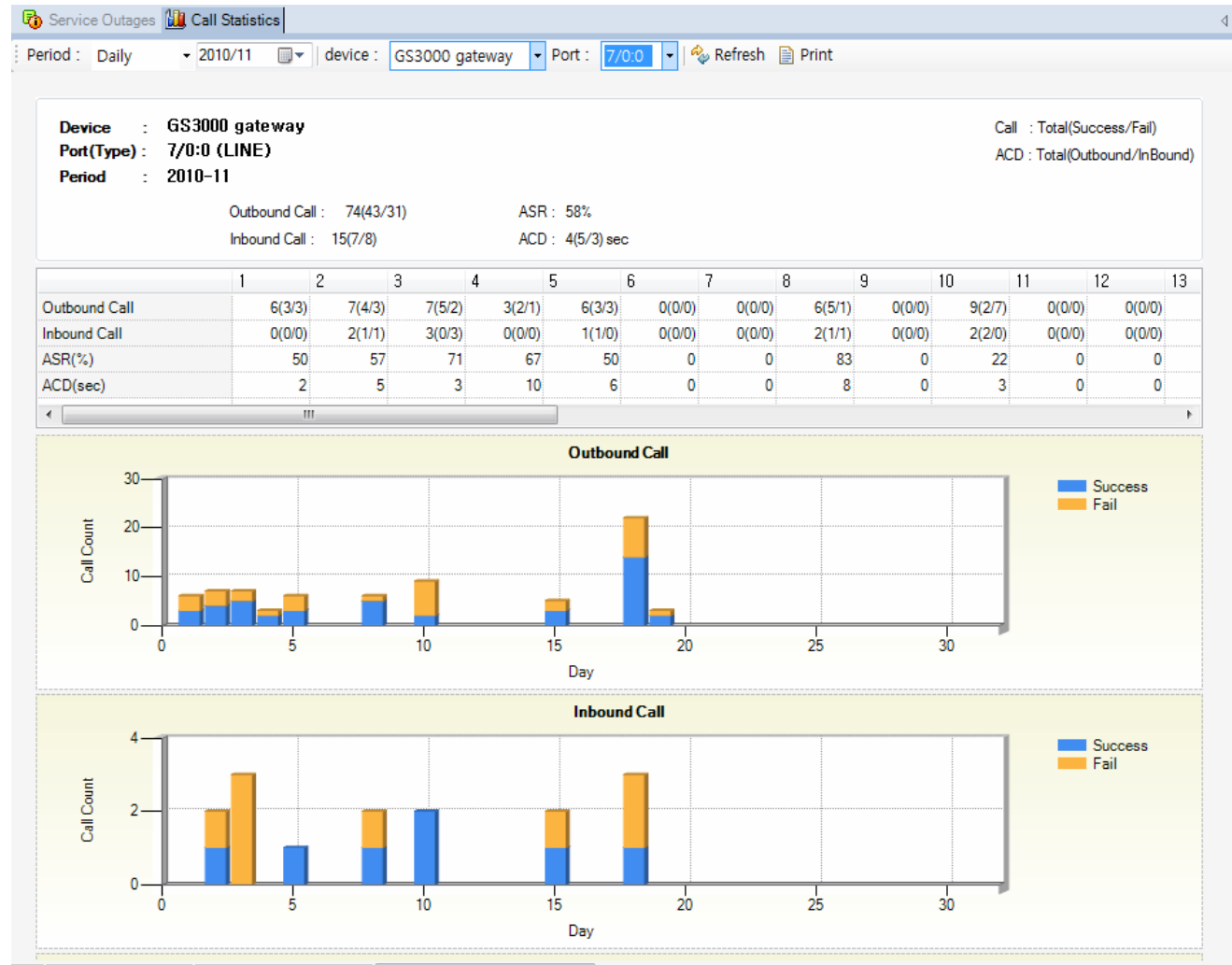
Call Statistics



Call Statistics



Call Statistics



Model & Service Management

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

Device Model Management

The screenshot displays the Smart Network Management System (NMS) interface. The main window shows a tree view of sites on the left, a list of device models in the center, and a 'Device Model Properties' dialog box. The dialog box is open for the 'AP-IPC250M' model, showing its category as 'Network Camera' and a 'Model Image' field with a camera icon. An orange callout box points to the 'Model Image' field with the text: "manage device model with various properties such as model image".

Below the main window, a 'Model Image Management' window is open, showing a grid of device images for selection. An orange callout box points to this window with the text: "model image repository for selection".

The 'Your Outstanding Notices (18)' table at the bottom of the interface contains the following data:

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RBT_server			device 00_RBT_server's all services are down.
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meeting room phone device, all se
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork_#2/Cent...	NMS_SDHO_PBX			device NMS_SDHO_PBX, all services are down
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.41 (172.17.113.41) device (If
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.4		Call Manager 2009-4-10 11:37:12 failed.
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device (00_IVR_server) interface 172.16.253.118
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device (NMS_IP_PBX_3) interface 172.16.253.118
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.1		device (NMS Camera 2) interface 172.16.253.118
<input type="checkbox"/>	9238	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	ICMP not response or deleted by administrator
<input type="checkbox"/>	9237	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	SNMP not response or deleted by administrator
<input type="checkbox"/>	9236	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	ICMP not response or deleted by administrator

Service Definition

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

The screenshot displays the Smart Network Management System (NMS) interface within a Windows Internet Explorer browser. The main window shows a tree view of network sites and a list of services. A 'Service Properties' dialog box is open, showing the configuration for a service named 'Camera Operation Status'. The dialog has two tabs: 'General' and 'SNMP'. The 'General' tab is active, showing the service name, protocol (SNMP), and port (161). The 'SNMP' tab is also visible, showing the Service OID (1.3.6.1.4.1.4855.7.51.1.3.0) and a service condition (Operator: =, Operand: 1).

Service Name	Protocol	Port
Call Manager	SNMP	161
Presence	SNMP	161
Media	SNMP	161
NMS	SNMP	161
RtpProxy	SNMP	161
MCU	SNMP	161
IVR	SNMP	161
Recording	SNMP	161
Tomcat	TCP	8080
FTP	TCP	21
Camera Pan	SNMP	161
Camera Tilt	SNMP	161
Camera Zoom	SNMP	161
Camera Operation Status	SNMP	161

Ack	ID	Send Time	Site	Device Name	IP Address	Service	Message
<input type="checkbox"/>	9535	4/10/2009 9:26:04 PM	/AddPac/Branch GX	00_RBT_server			device 00_RBT_serv
<input type="checkbox"/>	9527	4/10/2009 5:34:10 PM	/AddPac/HeadQuarter	5th floor meeting...			device 5th floor meet
<input type="checkbox"/>	9502	4/10/2009 3:34:29 PM	/Subnetwork #2/Cent...	NMS_SDHD_PBX			device NMS_SDHD_PBX
<input type="checkbox"/>	9495	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Slave	172.17.113.41	Call Manager	interface 172.17.113.
<input type="checkbox"/>	9494	4/10/2009 11:37:12 AM	/AddPac/Branch GX	IPNext 3000 Master	172.17.113.40	Call Manager	interface 172.17.113.
<input type="checkbox"/>	9418	4/9/2009 2:20:01 PM	/AddPac/Branch GX	00_IVR_server			device 00_IVR_serv
<input type="checkbox"/>	9396	4/9/2009 10:57:37 AM	/AddPac/Branch AQ	NMS_IP_PBX_3...			device NMS_IP_PBX_3
<input type="checkbox"/>	9239	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118		device (NMS_Camera
<input type="checkbox"/>	9238	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	response or delete by
<input type="checkbox"/>	9237	4/6/2009 7:49:20 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	SNMP	ICMP not response o
<input type="checkbox"/>	9236	4/6/2009 7:41:25 PM	/AddPac/Branch AQ	NMS Camera 2	172.16.253.118	ICMP	SNMP not response
<input type="checkbox"/>							device(NMS_Camera
<input type="checkbox"/>							ICMP not response o
<input type="checkbox"/>							deviceNMS_Camera



Thank you!

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