

# Powerful Multi-Site Monitoring and Management, iPECS NMS

iPECS® NMS is a powerful web based Network Management tool designed for SMB to improve its staff efficiency, permit rapid response to system alarms, and optimize system resources with remote access, usage statistics and automated alarm notification.

## Fault management and real-time system monitoring

The iPECS® NMS monitors registered systems in real-time to deliver fault and alarm event statistics. The NMS Server generates automatic email alerts of fault and alarm defined as critical by the system manager. In addition, while on-line, NMS Server can be configured to notify the NMS Web client while the manager works on other PC tasks. Managers can thus identify critical issues with monitored systems implementing corrective measures before the faults become service disrupting or noticed by users.

## Inventory management

The iPECS® NMS monitors and maintains a list of the resources and components for all registered systems. The list includes the call server, each gateway, terminals and even soft-phones as well as software associated with each system and component. Reports in the form of an Excel file can be generated by the system manager for analysis and inventory accounting within the company.

## Web based client access

The iPECS® NMS employs a Web based design for access to management tools and reports. Clients require no special software. By using their browser, managers have full access to NMS services to monitor and maintain registered systems, components and applications from anywhere with IP access.

## REMOTE MAINTENANCE

Periodically, Ericsson-LG releases enhancements to iPECS-LIK software that are specifically designed to permit direct upgrade over the network. The upgrade process can be tedious and time consuming. With the iPECS® NMS the repetitive process is reduced to just a few clicks of your mouse assuring accurate efficient and complete upgrades to multiple iPECS systems and components.

## Traffic statistics

Understanding system resource usage is an effective starting point in managing a communication system. The iPECS® NMS monitors registered systems to deliver detailed traffic statistics covering use of the various components and resources of the system. Managers can easily analyze the traffic data to determine under and over usage of resources as well as usage trend and adjust system configurations to address any issues. In addition, the iPECS® NMS provides detailed and summary data for call accounting and cost allocation.

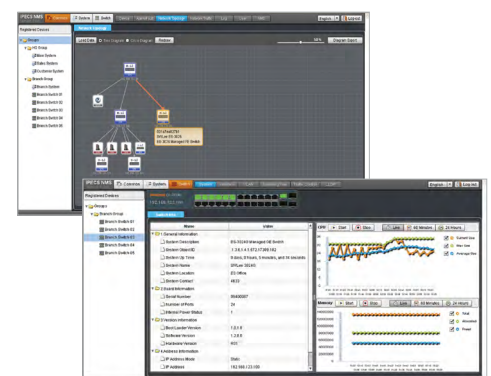
## Easy installation & operation

The iPECS® NMS application is designed to easily install in a Windows environment. Following the straight forward install shield instructions, the system manager can quickly complete installation. An intuitive GUI permits the manager to register iPECS systems to a single the iPECS® NMS Server. Registering the monitored systems is also managed by easy to use GUI and up to recommended maximum capacity of

500 systems. System managers can access the monitoring system whenever they want to access and wherever they are. Just by opening Internet Explorer on any networked PC, system managers can take full control of monitored systems.

## SWITCH INFORMATION MANAGEMENT

The iPECS® NMS enables you to monitor and manage the registered network switches. With Ericsson-LG iPECS Ethernet Switch Series, The iPECS® NMS displays general switch information, board and version information, real-time CPU and memory utilization. All the configuration information including port configuration, port mirroring, VLAN, spanning tree information, LLDP and others are displayed. Those switch information at a glance is very critical for the system manager of IP communication environment.



## Real time monitoring

- Device type based status display
- Resource based status display : CO resource, Station resource
- Device connection status : Disconnected, Registering, Active, T-Net, Downloading, Out of Service
- Channel status for selected device : In use, DND, Idle, Forward, Pre-selected message, DECT base connection
- Device information : Device name, number, type, F/W version, CPU, number of channel etc.
- Device network information : IP, MAC, NAPT IP, ARP on / off, Signal type, Zone number, T-Net etc.

## Fault management

- Automatic notification : email, audio alarm, visual alarm
- Notice event type management : None problematic system events & Device failure alarm
- Editable fault event level and notice level : Critical, Major, Minor
- 10,000 event log storage
- Log information field : Fault type, Level, Event code, Event description, NMS system time, System name, Location
- Event search options : by Status, Event type, Event level, Event code, location, log time

## System information management

- 4 directory levels & 100 system groups
- General system registration information : System name, type, IP, S/W version, Channel capacity consumption, IP range, Codec type, DiffServ code, Attendant number, type, station number, CO group number, CO line number, Station group number, type, pick up & station number
- Per system group device inventory information : Group name, number of system, Maximum channel capacity, Registered number of channels, Total number & type of registered devices
- Per system inventory information : System name, IP, S/W version etc.
- Network topology diagram as tree or circle format including zooming & exporting as a picture format file

## Switch information management

- Real-time CPU & memory utilization
- Port configuration, media types, admin and operation status
- Port mirroring information
- Voice VLAN general and configuration information
- Spanning Tree information of STP / RSTP configuration
- Traffic control information
- Storm control configuration information to set thresholds of unknown unicast, multicast and broadcast
- LLDP Information

## System call & traffic statistics

- Filtered by attendant call, completed call, CO group call, VM usage: period of today, yesterday, last 1 week, last 4 weeks, display by daily, hourly
- Attendant call filtering options: held call, duration, answer delay, total call, abandoned call
- Total number of completed calls
- CO group call options, All CO busy count, Incoming/outgoing seizure, group overflow
- Voice mail access requested & denied
- DECT Statistics : DECT base and handset log information, General information, WTIM related information

## SMDR statistics

- One click SMDR file download : SMDR table and graphical display
- Max. SMDR log size : MFIM50 / 100-5,000, MFIM300-10,000, MFIM600-15,000, MFIM1200-30,000
- Log analysis fields : Station, CO number, time, duration, Dialed number, ring time, Normal calls, abandoned calls etc.

## Network traffic statistics

- General Ping & Trace-route from NMS server, iPECS Ping from MFIM
- SNMP device data traffic monitoring: Incoming/outgoing packets, SNMP v.1/2 devices
- iPECS device data traffic Gateways, All packets or RTP only
- Real-time traffic statistics graph and table for selected port
- Rx & Tx octets, errors, unicast, multicast, broadcast packets, etc.

## Multi-Site firmware upgrade

- Sequential device F/W upgrade
- Upgradable devices: All MFIM, Gateways, IP phones
- Scheduled software upgrade and DB download

## System DB back up

- Multi system DB download and upload
- System DB type: LCR table, System speed dial, Station speed dial, Networking data, Station group data, System data, Flexible numbering plan Station flexible buttons, RSGM table, Toll table, MSN table, Flexible DID table, Password table, Mobile extension table, ICLID table & registered device table
- Scheduled DB back up, Upload status and result display

## Voice prompt & system greeting upload

- Multi system prompt & greeting management
- System voice prompt, Total system prompt, Individual.wav file
- Multi language system greeting: Total system greeting, Individual.wav file, Upload status and result display

### Server requirements

Less than 20 systems registration	Intel Core 2 Duo 2.33 GHz or higher & 2 GB RAM or higher Minimum 4GB of free disk space
Less than 200 systems registration	Intel Dual-Core Xeon 2.4GHz or higher & 2GB RAM or higher Minimum 20GB of free disk space
Less than 500 systems registration	Intel Quad-Core Xeon 2.66GHz or higher & 2GB RAM or higher Minimum 50GB of free disk space
Server operating system	Microsoft Windows XP Professional or Windows Server 2003 32bit version with NTFS
iPECS platform requirements	iPECS-LIK : Phase 5.0 or higher, LIP-8000 and LIP-7000 IP phones with P5 firmware for full feature iPECS-MG: Phase 1.0 or higher