

DAMERY special offer of Operations Support System

ProMo IS A REAL PROMOTION FROM DAMERY OF THE BEST, THE OPTIMAL, THE LESS EXPENSIVE PROVISIONNING & MONITORING SOFTWARE

The **ProMo** Operations Support System (OSS) is a powerful and reliable system management solution that integrates all functions needed to operators to easily manage industry-standard DOCSIS systems. Perfectly suited for all SNMP products, **ProMo** is a low-cost, web-based application that excels in performance and flexibility

ProMo server can simultaneously manage multiple CMTS, thousands of cable modems, and an unlimited number of subscriber records stored in the database.

This leads to a highly adaptable, cost-effective solution that can accommodate current and future cable operator needs.

ProMo implements client-server architecture.

The **ProMo** server is based on Linux, and an easy-to-use web application providing cable operators access to cable modems and CMTS units.

ProMo Capabilities

The **ProMo** management tools and software components feature a full range of capabilities including:

- **Complete web application environment :**
 - Database connection (MySQL, Oracle)
 - User authentication and session management
 - OSS users privileges
 - Dynamic page flow control and variables management
- **Complete configuration management software which provides full control for :**
 - Damery entire family of Data Over Cable systems ([OPAL](#))
 - any DOCSIS-compliant system (CMs and CMTSs)
 - Any other SNMP system

- **Complete DOCSIS servers range :**
 - DHCP , TOD, TFTP serves
 - SYSLOG server
 - SNMPTRAP server , SNMP Manager
 - MRT Manager
 - MIB Monitor
- **Complete cable operators business support:**
 - Subscriber Provisioning
 - QoS = Contract Management: **ProMo** provides cable operators a comprehensive control over various bandwidth assignments. It permits choosing from several QoS profiles for each business or residential subscriber.
 - Configuration File Builder
 - On site installation support
 - Modem software upgrade tools
- **Network Monitoring & alarm system**
 - Spectrum view
 - Rf parameters , MAC parameters surveillance
 - Network usage monitoring
 - Customer view
 - Monthly and daily Traffic
 - Alarm view



- **Complete service and support**

Real-Time Network Monitoring Software for DOCSIS Systems

- *Incorporates MIBMON and web server*
- *Viewable from any web browser*
- *Easy to use, easy to read displays*
- *Subscriber-level monitoring pinpoints problems*
- *Receive alarm notification via pager or email*

BENEFITS

- *Helps track down problems quickly*
- *Allows operators to be proactive, not reactive*
- *Diagnostics minimize truck rolls, support costs*
- *Network utilization trend graphs*

THE NEED FOR NETWORK MONITORING

Troubleshooting and managing a cable-modem network can be a complex task, with many variables at the subscriber level.

The bus topology network means that problems with a subscriber's equipment can affect every subscriber on that cable segment. Being able to isolate problems quickly is the key to providing reliable service.

ProMo is designed to help cable operators be *proactive* as well as reactive. By examining network trends such as error rates, packet utilization and broadcast rates, and pinpointing faulty modems, operators can isolate and resolve problems before the subscriber notices.

ProMo can also be useful in measuring usage per subscriber.

High bandwidth users may be offered higher speed uplinks, offering increased revenue opportunities for cable operators.

WHAT IS ProMo?

The network monitoring functions of **ProMo** are based MIB data polling robot and web server which runs on the Linux platform. It offers a graphical, interactive interface to provide network alarms and statistics accessible from anywhere in the network.

It collects vital network statistics on key protocol attributes from the network using the SNMP standard, and presents them through standard web browsers such as Netscape Navigator, running on any operator workstation.

The browser interface eliminates the need for dedicated workstations and allows multiple operators to be logged in at different network locations.

AT-A-GLANCE DISPLAYS

ProMo uses bar graphs, dials and other easy to read displays to simplify operation.

For example, the color code are used to highlight subscribers or cable segments with problems, and green icons show normal operation. While the underlying statistics are available for analysis, the emphasis is on allowing operators with basic training to spot problems quickly. In addition, reports can be printed or exported to other applications.

USER INTERFACE

A single screen presents easily understood browsers and graphs that provide an instant snapshot of the network's status. From any browser, you have instant access to real-time statistics that present your network's utilization, packet rate, error rate, and broadcast rate as they happen. Built-in HELP provides on-line explanations of all functions.

HARDWARE REQUIREMENTS

The PROMO server is installed on the latest version of Linux environment. A Pentium 1 GHz processor or equivalent, 4 GB RAM and 500 Gbytes hard disk space and an Ethernet or Fast Ethernet adapter capable of operating in promiscuous mode are required. Requirements for viewing station(s) are a Java capable web browser (e.g. Netscape or Internet Explorer).

MONITORING FUNCTIONS

In a general way, PROMO has a polling robot called the MIB Monitor. This tool is programmed in order to get information from CMTS MIB.

MIB monitor polling rate can be programmed

The data are put in the DB. The cleaning period, the polling rate and history duration can be programmed following the user choice.



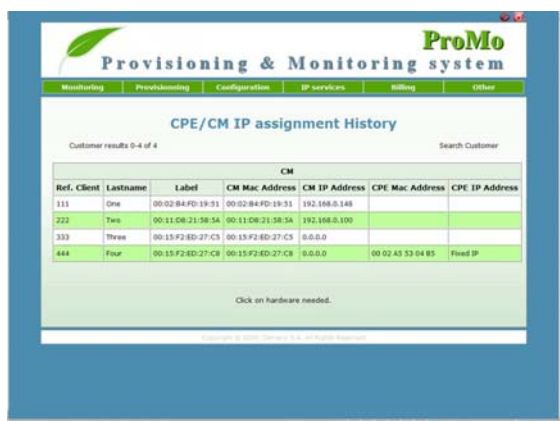
The data presentation module can be reconfigured following the user requirements:

CMTS parameters "History module":

This mode presents the polled data on the classical browser giving all the polled information in the CMTS & in th CM.

The parameters will be present on each record of the browser can be defined by the user.

CPE /IP History: Several search options



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CMTS "Alarm Module

From the Alarm view link, it is possible to access of the first screen the CMTSs in alarm by color code (Critical and not critical). The detailed alarm information will be presented by selection of the CMTS in alarm.



The status of the CMTS will be presented in a browser you can see the following parameters:

- CMTS STATUS
- ETHERNET TRAFFIC
- CARD STATUS
 - UPSTREAM STATUS /CARD
 - CPU LOAD UTILIZATION
 - DOWNSTREAM TRAFFIC
 - DOWNSTREAM SNR
- DOWNSTREAM RX LEVEL
- DOWNSTREAM TO UPSTREAM STATUS parameter
- UPSTREAM BANDWIDTH USAGE
- RECEIVER SNR
- MODEM TRANSMIT LEVEL
- UPSTREAM TO

Selecting the parameter in alarm will give the detailed information on alarm.

Save boundaries		US Transmit Power		DS Receive Power		DS S/N Ratio	
Upper bound ->	58	20	40				
Lower bound ->	10	-10	32				
US	Total	Ok	Not Ok	Ok	Not Ok	Ok	Not Ok
2	2	2		1	1	2	
1	10	10		8	2	9	1
3	28	29		25	3	24	4
4	2	2		1	1	2	

MAC Adresse	IP Adresse	Up time (Td) h:m:s	Last Syncs	Reset Count	Upstream Tx Power (dBmV)	Downstream Rx Power (dBmV)	Downstream S/N Ratio (dB)	Last updated
00-02-b4-f6-02-f4	203.190.173.14	0:24:56	0	0	45.8	15.8	31.3	2005-09-22 22:06:34
00-02-b4-f6-03-08	203.190.173.36	2 days, 10:17:44	0	0	36	-16.7	31.9	2005-09-22 22:06:25

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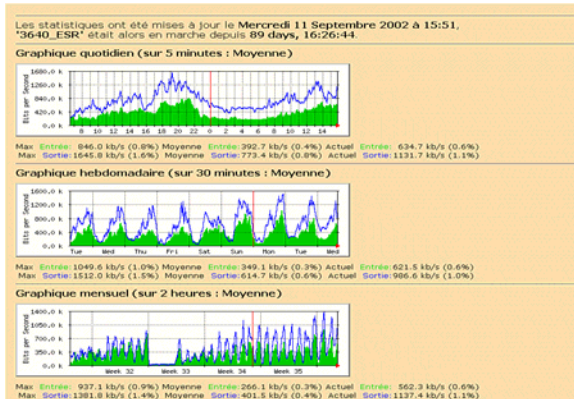
Alarm threshold value can be programmed. For the critical alarms, the action can be selected as to send a E-MAil to build a report etc.

CMTS MRTG Graphs

For each CMTS the following information are presented on the on the MRTG graphs, with the possibility to programme the polling rates and the parameters to be polled:

- Ethernet traffic
- DS traffic
- Upstream traffic
- Signal to noise ratio
- Micro reflections

The information for each parameter can be presented yearly, monthly and daily.



IP events

ProMo allows the possibility to brows all IP events or selected IP events;

Customer View

ProMo has a customer status browser presenting all the necessary information concerning your customers and the modem status



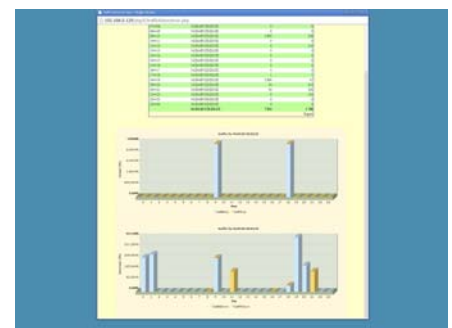
ProMo allows setting ON/OFF MRTG graph for each customer individually

Very extended research possibilities are included for the customer view services.

Customer bandwidth usage profile

In many time it is important to know daily and monthly profile of the customer traffic for billing or network upgrade purposes.

ProMo provides the possibility to monitor the daily, monthly and yearly bandwidth usage by service flows for your customers if the CMTS is IPDR capable.



Provisioning for DOCSIS Systems

Integrated provisioning software reduces the costs and time-to market for triple-play or quad-play deployment.

The software removes the complexity of subscriber activation including the need to send a technician to the subscriber's home.

Standard Provisioning mode:

To fulfil provisioning, the broadband provider must assign an IP address and a device a configuration file to the modem, an IP address and a DNS server to the CPE device.

ProMo software provides by its original concept a very effective and fast provisioning method in 3 steps.

First the broadband provider defines different types of commercial contract using different service of classes.

In second step the IP architecture defining the subnet for cable modems, CPE and EMTA has to be configured once a time using DHCP configuration tools.

The third step is creating the subscriber.

ProMo provisioning function allows on one screen to create the subscriber data record with the necessary associations of the subscriber modem and service contract.

Un-provisioned mode:

This mode allows the modems from not registered customer to come on line.

For the CPE connected behind of these modems Promo DHCP server provide special info in order to switch the customer to special services.

Turn off / suspend modems for non-payment

Promo software allows blocking internet access to some customer having administrative problems.

Finalise the operation by a demand of dhcp file generation
the subscriber to a web site that facilitates service activation.

EMTA & SIP device provisioning

SIP-based MTAs and eMTAs playing a CPE role needs some special vendor specific information and learn the configuration file name through DHCP server.

ProMo software allows to creation the MTA pools with related information.



User Administration

The **ProMo** software provides the facilities to give the limited access to the different level of services



Services

Service Panel:

ProMo software provides an elegant way to start and stop for the different services.

Database Maintenance services

ProMo software allows daily monthly pre-programmed automatic back up facilities.

Traffic data maintenance

This service allows exporting the traffic data to well defined machine using FTP services. It is also possible to define the polling rate of the traffic data storage

ALARMS LOGBOOK

PROMO will automatically sample traffic to determine alarm thresholds, or they can be set by the user. When thresholds are exceeded **ProMo** sounds the alarm and maintains a log.

ON site Installation services:

You can plan on site installation before sending your team on site?

ProMo software on site installation services will provides the possibility to execute planned services.

Modem Software up grade services

This service allows planning the software up grades of a group of modems or an individual modem

SECURITY

Multiple levels of access can be defined with password control.

REPORTS AND TOOLS

ProMo includes many useful tools, such as:

- Standard reports or graphs that are easily printed or exported to other programs
- Remote "Ping" capabilities for IP
- Detailed MIB stat



SYSTEM EVALUATION MORE INFO

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