

Network Management System



NMS is a typical requirement for any kind of Service Provider or Enterprise which has several number of Network Elements deployed in the Network. The solution developed is meant for both Homogeneous and Heterogeneous Network Elements (hereafter referred as NEs). The developed solution is meant for Telecom Network. There are deployments in which all NEs be of homogeneous where NEs are DLCs (Digital Loop Carrier Systems) as part of Access Network Equipment. And other deployments include monitoring the heterogeneous Network Elements (Switches manufactured by different vendors).

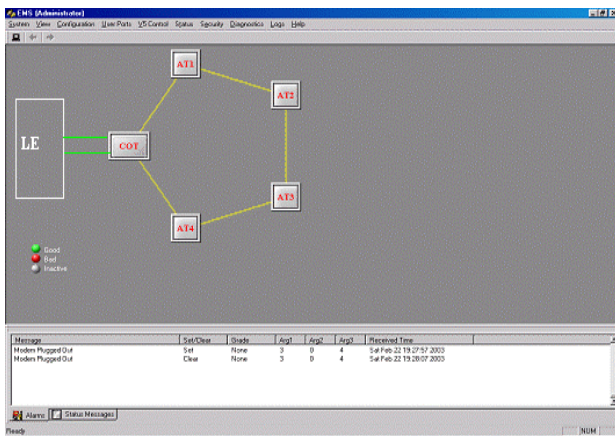
The **NMS** solution is **MODULAR** and **SCALABLE** making the customer to add some more existing type of NEs or add new technology NEs. The solution covers all the Management Functionality envisaged in **Fault** management, **Configuration** management, **Accounting** management, **Performance** management and **Security** management (**FCAPS**).

Both Network Management and Element Management applications are developed. And the synchronism among the DATA obtained or available at NMS DB and EMS DB is maintained. The applications are developed in such a way that any CONFIGURATION change to the NE is getting updated to both EMS and NMS.

Architecture

NMS provides the Network Manager a easy-to-use monitoring tool to monitor large & wide remote Network on 24x7 basis and enables him to make proactive Maintenance for any faults occur in NEs. If there are certain COMPLAINTs which can be rectified from NMS commands for Configuration changes or Alarm Acknowledgements that can be done from Central Place.

TYPICAL RING VIEW (NMS/EMS)



The system contains mainly the following:

Data Collection & Database Server (DCDB) is located at Central Place which collects the DATA from the NE (DLC node) over leased connection (64Kbps/nx64Kbps link). The DCDB server collects all the DATA from NEs both in Spontaneous collection mode and Interactive collection mode.

NMS WorkStation (NMS-WS) is also located at central NMS site to view NEs connectivity and their status. The NMS workstation may be in CENTRAL place or it can be extended over WAN link to any other operational site. All the Element Management Operations for configurations and Network level operations of Testing and Reporting can be done from NMS workstation.

Typical view of Textual Status windows looks like:

The screenshot shows a window titled 'V5 Interface Status'. It includes a 'Select Interface' dropdown set to '1' and a 'Stop' button. Below is a 'DLL Status' section with six indicators: PSTN, CTRL, BCC, PROT1, LCTRL, and PROT2, all shown as green circles. A table below lists various status items and their values.

General Status	Up
DLL Startup Status	OK
V&I ID Check Status	OK
PSTN Restart Status	OK
APA Status	OK
User Shutdown	No
System De-Act Status	No
System Mgmt Status	Active
DLL Management State	Null
Originated PSTN Calls	0
Terminated PSTN Calls	0
Active Link	Primary

SALIENT FEATURES

- ❖ Integrated NMS for both Switching & Transmitting equipment
- ❖ SNMPv2/SNMPv4 compatible for integrating with other OSS & BSS

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