



Network Management

Effective X.25 network management requires information to be communicated quickly and in an understandable format to support decisions regarding network operations. Dynetcom offers the DN 25 network management system for controlling its CPX series of PAD switch products and a management tool for day to day operations.

- ***Single point management and control for Dynetcom's CPX series products***
- ***Real-time alarms of network problems***
- ***Quickly and easily uploads and downloads PAD and Switch parameters***
- ***Direct X.25 interface to network provides quick device updates and detection of network problems***

Information from all elements of the network such as alarms, node statistics, and call detail records are reported to the DN 25 workstation using the proprietary Dynetcom Network Control Protocol (DNCP).

The DN 25 provides the capability of presenting an uncompromised view of network activity with a concentration of critical system information which is vital for intelligent data resource management. This network management tool supports many different configurations from a single node to a large corporate network.

The DN 25 is structured with the following major hardware and software features:

Dynetcom Network Control Protocol (DNCP)

DNCP is an internal protocol which acts as a transport layer within the network. This protocol links the distributed intelligence that is programmed into every CPX product to the DN 25 Network Management System. This distributed intelligence is superior in detecting error conditions and transferring the remote information to the NMS in the most efficient manner. This layer is in charge of carrying an type of network messages (alarms, regular events). Statistics, accounting records, and configuration data are collected from each node or PAD with minimal overhead and maximum speed.

DN 25 Workstation

The DN 25 PC-based workstation collects all network messages, which DNCP acknowledges before each is stored and logged in a database. This raw message data is stored in dedicated databases that can be selectively filtered and graphically displayed. Network messages can be either automatically reported to DN 25 (alarms) or issued by operator request (configurations changes, billing).

Common Operator Interface

Presentation Manager's windowing package provides common and easy access to heterogeneous equipment. Menus are product type independent, and dedicated applications are assigned in simultaneously displayable windows.

Databases

Databases available on PC hard disk represent a key element of the whole network management system architecture. They hold all necessary information for network definition and operation including: alarms, statistics, billing, configuration, routing, and network device profile.

Communication solutions from

NSGDatacom

extend. evolve. innovate.



Statistics

- Statistics reported are mainly related to the frame and packet levels of each port on a node. They include:
 - Frames TX/RX
 - Rejected Frames TX/RX
 - Data Packet TX/RX
 - FCS Error TX/RX
 - Successful Calls
 - Clear Packet with cause
 - Peak Calls

Basics

- Alarming (real-time, historical) with filtering capability
- Statistics (reporting, database collection, display)
- Configuration
 - Node/network configuration (parameter changes)
 - Remote download
 - User profile definition
- Accounting data (cost estimation)
- Diagnostics

Accounting

- At circuit clearing time, an accounting record (Call Detail Record: CDR) will be created and forwarded to the X.25 database. Information contained in this record is:
 - Calling/Called address
 - Originating/Destination node
 - Start/End of session
 - Duration of call
 - Number of bytes/packets TX/RX
 - Cause and diagnostics (CUG, hunt group, reverse charge..)
 - NUI

Alarming

- Unsolicited alarms
- Real-time and historical alarms
- Various severity levels (0-4)
- Threshold and filtering
- Audible alarms
- Alarming ON:
 - X.25 Level 1 change on a trunk (up or down)
 - X.25 Level 2 change on a trunk (up or down)
 - X.25 Level 3 change on a trunk (up or down)
 - Bad frame check sequence (FCS) above threshold on a trunk
 - Statistics record lost for a device
 - Alarm record lost for a device
 - Call detail record lost for a device

Configuration

- Network Topology Control
 - Adding a device to the network
 - Deleting a device from the network
 - Changing device parameters
 - Device configuration (Node Profile)
 - Trunk/Port configuration
 - Routing tables
- Network Devices Configuration
 - Download configuration
 - Upload configuration
 - Modify configuration

NSGDatacom

www.nsgdata.com

3863 Centerview Drive
Chantilly, VA, 20151-3232 USA
Phone: +(1) 703 793 2000
Fax: +(1) 703 793 2001

7435 New Technology Way
Frederick, MD, 21703 USA
Phone: +(1) 301 662 5926
Fax: +(1) 301 694 6279

The Brackens, London Road
Ascot, Berkshire SL5 8BE, UK
Phone: +(44) 1344 893 000
Fax: +(44) 1344 891 990