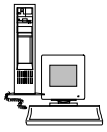


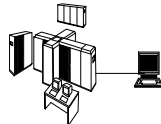
LAN Network Manager LAN Station Manager

Sallie Matlack
Debra Walton

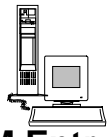
Notes . . .



LNM



NetView



LNM Entry



8230

L AN
N ETWORK
M ANAGER

T-R N
B ridge
2.2



3174



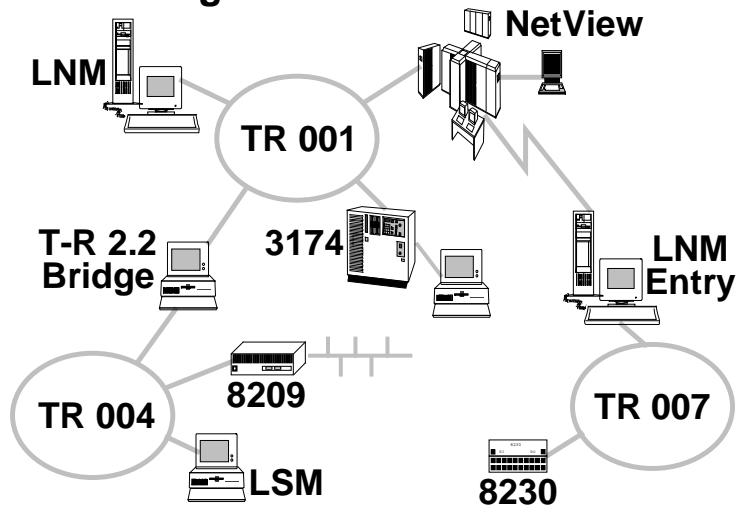
LSM

8209



Notes . . .

LNM Managed Domain



Notes . . .

LNM Product Family

- LAN Network Manager V1.0
 - OS/2 EE or ES
 - Presentation Manager
 - 10 SPCS NetView RUNCMDS
 - Manages up to 255 bridges
 - 8230, 8209, TR 2.2, 3174

Notes . . .

LNМ Product Family

- **LAN Network Manager V1.1**
 - **LNМ V1.0 +**
 - ▶ **Graphics View/2 Option**
 - ▶ **>100 RUNCMD Variations**
 - ▶ **Local Automation Through Command Line Interface**
 - ▶ **Interface to LAN Station Manager**

Notes . . .

LNМ Product Family

- **LAN Network Manager Entry**
 - **LNМ V1.1 Except:**
 - ▶ **No End-User Interface**
 - ▶ **One Segment Only**
- **LAN Station Manager**
 - **DOS and OS/2 Agents for LNМ**
 - **Vital Product Data MIB**

Notes . . .

LNM Communications

- **LNM and NetView**
 - **SNA SSCP-PU Session**
 - **Communications Manager or NetView/PC**
- **LNM and Remote Segments**
 - **Thru Link to Bridge**
 - **LLC Type 2 (Connection-Oriented)**
 - **Proprietary**

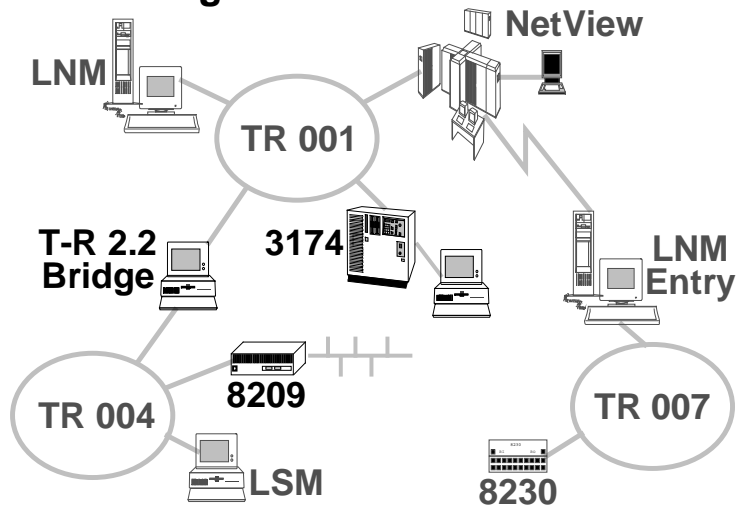
Notes . . .

LNM Communications

- **LNM and 8230s**
 - **CMIP Proprietary**
 - **LLC Type 1 (Connectionless)**
- **LNM and LSM**
 - **HLM = CMIP Over LLC = CMOL**
 - **Type 1 (Connectionless)**
 - **IEEE 802.1k and 802.1B**

Notes . . .

LNM Managed Domain



Notes . . .

Bridges

- Definition
 - Adapters
 - Auto Bridge Link
- Types
 - IBM Token Ring Bridge Program
 - IBM PCNet Bridge Program
 - 3174
 - 8209

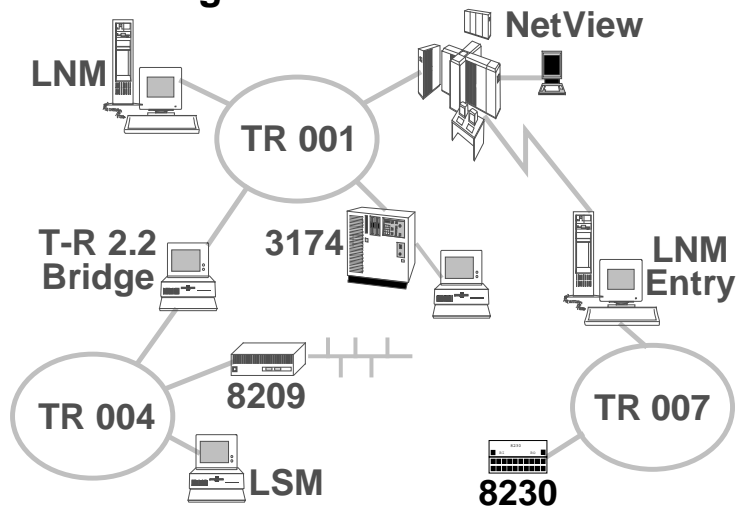
Notes . . .

Bridges

- Configuration Parameters
 - Controlling LNM Only
 - 8209 Specific
 - Functional Addresses Enabled
- Performance Counter
 - Located in DataBase
 - Bridge Utilization Aid
 - Threshold Alerts Generated

Notes . . .

LNM Managed Domain



Notes . . .

Controlled Access Unit - 8230

- **Registration**
 - Controlling LNM Only
 - Registers When Powered On
- **Registered LNM Can:**
 - Set Password
 - Enable and Disable Lobe Receptacles and Attachment Modules
 - Reset CAU
 - Change Wrap State of CAU

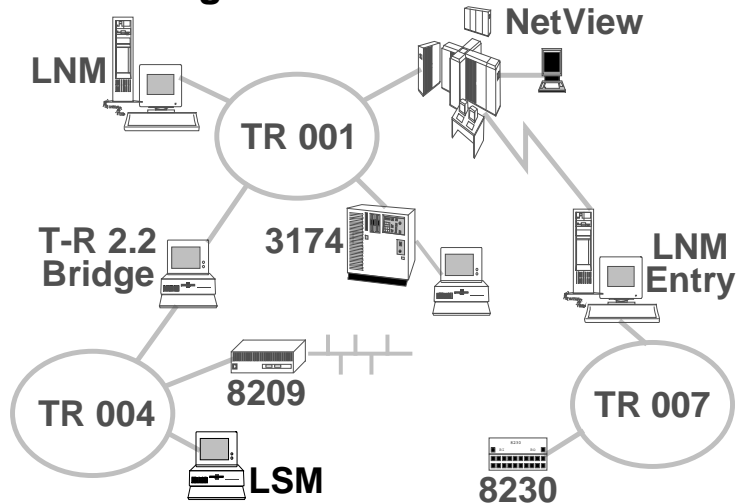
Notes . . .

Controlled Access Unit - 8230

- **Access Control**
 - Unauthorized Adapters
 - Day of Week
 - Time of Day
 - Unauthorized Bridges
 - Lobe Authorization
- **Remote Program Update**
 - Wrap 8230 Until RPU Complete
 - Loaded By Only LNM or Maintenance Facility

Notes . . .

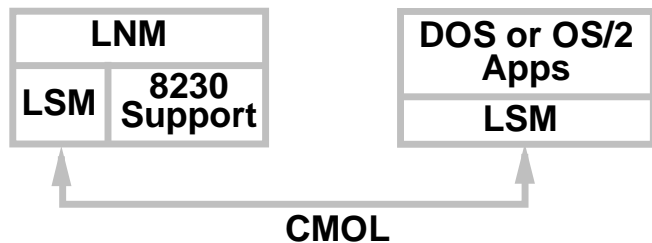
LNM Managed Domain



Notes . . .

LAN Station Manager

- Query
- SET
- Store in DataBase
- Agent Present
- Respond to Queries
- Act on SET



Notes . . .

LAN Station Manager

- **Management Information Base (MIB)**
 - **Physical Topology** (adapter wall plug, machine location, user data)
 - **Configuration Description** (adapters, operating system / version, device types)
 - **Ring Utilization**

Notes . . .

LNМ Files

- **DataBase Manager/2 Tables**
 - **Accessible Thru:**
 - **Query Manager/2**
 - **Command Line Interface**
- **May Not Be Current**
- **Does Not Contain Ring Utilization**

Notes . . .

LNМ Files

- **Examples of CL Queries:**

- **To find segments with specific adapter address**

```
SELECT ADAPT_ADDR,  
SEGMENT_NO FROM LANM  
CONFIG WHERE ADAPT_ADDR =  
"10005A000000"
```

Notes . . .

LNМ Files

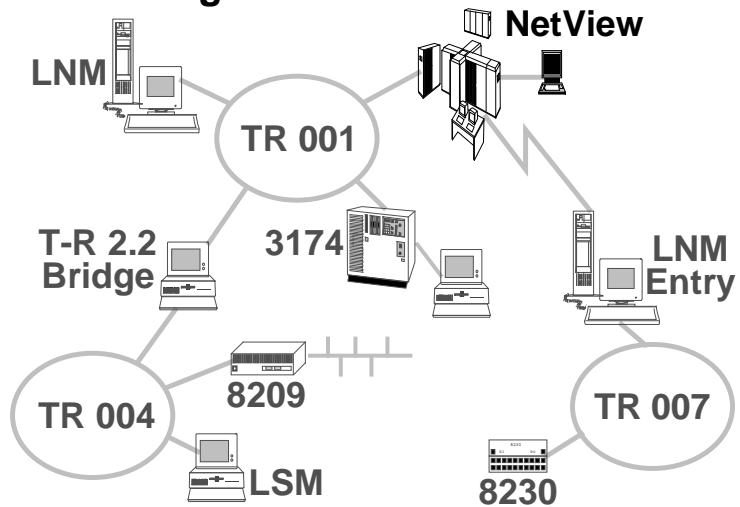
- **Examples of CL Queries:**

- **To generate a report of all mod 95s (running LSM)**

```
SELECT ADAPT_ADDR,  
SEGMENT_NO USER_DEF_DATA  
FROM LANM PC_INFO WHERE  
WORKSTN_TYPE LIKE "%95%"
```

Notes . . .

LNM Managed Domain



Notes . . .

NetView

- **NetView V1.3**
 - 10 Commands
- **NetView V2.2**
 - 100 Plus Commands
- **Alert Filtering**
 - Filter Alerts to Host
 - User Written or Previously Defined

Notes . . .

NetView

- **Alert Transport Facility**
 - Application on LAN Send Alert to LNM
 - LNM Logs Alerts Forward to NetView
- **NetView Performance Monitor V1R6**
 - Ring Utilization
- **Bridge Statistics**

Notes . . .

Enhanced NetView Commands

- **LAN SP = XXXX LNM Command String**
- **LNM Command String**
 - Adapter List
 - Bridge
 - CAU
 - Event
 - Event Filter
 - Help

Notes . . .

Enhanced NetView Commands

- **LNМ Command String (Continued)**
 - **Soft Log**
 - **Alert Filter**
 - **System Parameter**
 - **Segment Resync, Test, Utilization**
 - **Network Status**
 - **LANMGR Restart**

Notes . . .

Installing LNM 1.1

- **Hardware Requirements**
- **Software Requirements**
- **CONFIG.SYS**
- **Communications Manager Updates**
- **Migrating 1.0 to 1.1**

Notes . . .

Hardware Requirements

- **PS/2 or Personal Systems/55 with MicroChannel Minimum of 25 MHz**
 - 12 MB Memory
 - 44 MB Hard Disk
- **Network Adapter**
 - Token Ring 4 or 16/4 Mbps Cards
 - PCNet
- **8230 EC C40347A**

Notes . . .

Software Requirements

- **IBM OS/2 V2.0**
 - OS/2 1.0 Extended Services
- **IBM OS/2 V1.3**
 - OS/2 1.0 Extended Services
 - OR
 - OS/2 1.3 Comm. Manager
 - OS/2 1.3 DB Manager
 - OS/2 1.3 Query Manager
- **IBM LAN Station Manager**

Notes . . .

CONFIG.SYS

- **Memory Swapping Enabled**
- **Minfree > = 512 Kb**
- **Threads = 255**
- **Buffers > = 60**

Notes . . .

Comm. Mgr. Updates

- **SAPS - 6**
- **LINK Stations - # Bridges**
- **Users - 4**
- **Transmit Buffer Size**
 - 344 (multiple of 8)
 - > = 1944 (CAU with RPU)
- **Queue Elements - 200 x # Users**
- **Additional Requirements for IEEE 802.2 Resources From Other Applications**

Notes . . .

Migration

- **Migrate Files After You Install LNM and Before Changing System Parameters**
- **Copy Files to LNM 1.1 Directory**
 - **Stations Definitions**
 - **Bridge Definitions**
 - **System Parameters**
 - **CAU Definitions**

Notes . . .

Performance Tips

- **DataBase Related**
 - **Log File**
 - **Buffpage**
 - **Maintenance**
- **OS/2 Related**
 - **Swapper File**
 - **Memory**
 - **DOS Box**
 - **HPFS**
- **LNM Usage Tips**

Notes . . .

DataBase Tuning

- **Place DataBase Log File on Different Physical Disk From the Actual DataBase**
- **A Large Buffpage Avoids I/O and Improves Performance**
- **Reorg, Runstats, Rebind on Routine Basis**

Notes . . .

OS/2

- **Swapper File - Make Sure You Have Enough Space**
- **Memory - Configure Machines Adequately to Avoid Swapping**
- **Do Not Use DOS Box While LNM is Running**
- **Set HPFS Cache to Minimum**

Notes . . .

LNМ Usage Tips

- **Do Not Set Resync Timer Below 1 hr.**
- **Monitor Only Critical Resources**
- **Limit Bridge Performance Data Collection to Bridges of Real Interest**
- **Consider Filtering Selected Events and Alerts**

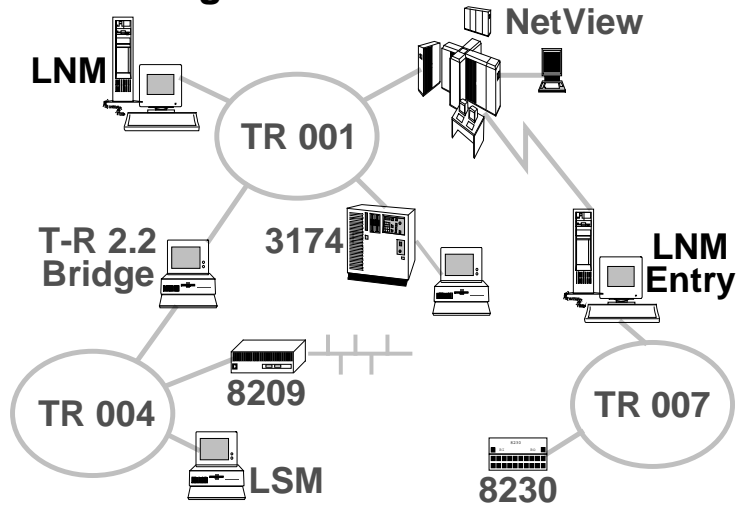
Notes . . .

LNМ Usage Tips

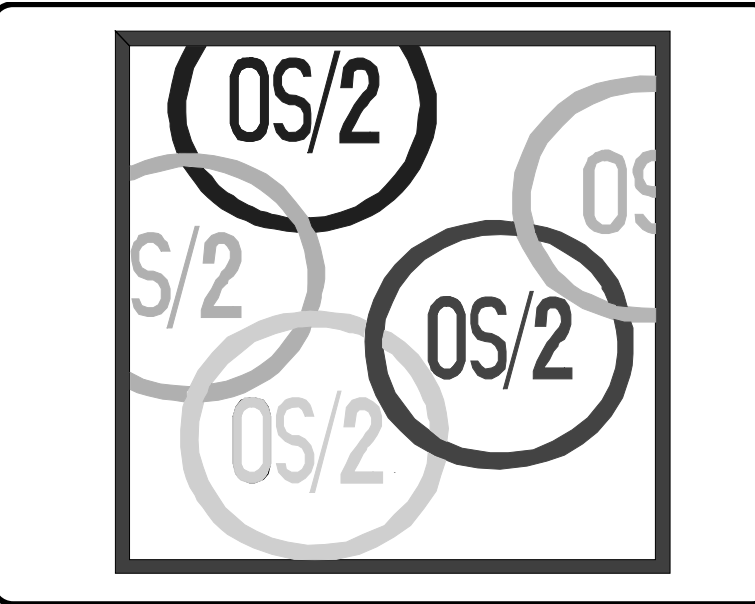
- **Limit Soft Error Logging During Normal Operation**
- **Re-Initialization May Take Longer if Event Log or Number of Bridge Performance Records Are Changed**

Notes . . .

LNM Managed Domain



Notes . . .



Notes . . .