COMSPHERE 6700 SERIES NETWORK MANAGEMENT SYSTEM MULTIUSER FEATURE

USER'S GUIDE

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PARADYNE™

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About This Guide

Document Purpose and Intended Audience

This guide describes how to install and use the COMSPHERE 6700 Series Network Management System (NMS) Multiuser feature.

It is assumed that you have a basic understanding of modems and their operation, are knowledgeable about data communications, and are familiar with Windows terminology and conventions. You or your LAN administrator should also have knowledge of TCP/IP.

Document Summary

Section	Description
Chapter 1	*Introduction.* Provides an introduction to the multiuser features and network topologies.
Chapter 2	*Installation.* Presents hardware and software requirements and installation steps.
Glossary	Refer to *COMSPHERE 6700 Series Network Management System User's Guide,* Document Number 6700-A2-GY31.
Index	Lists key terms, acronyms, concepts, and sections in alphabetical order.

Product-Related Documents

Document Number	Document Title
3000-A2-GA31	*COMSPHERE 3000 Series Carrier, Installation Manual*
3610-A2-GB46	*COMSPHERE 3600 Series Data Service Units, Models 3610 and 3611, User's Guide*
3610-A2-GB48	*COMSPHERE 3600 Series Data Service Units, Models 3610 and 3611, Time Division Multiplexer, Multichannel Multipoint, and Digital Bridge Options Supplement*
3610-A2-GB49	*COMSPHERE 3600 Series Data Service Units, Models 3610 and 3611, Dial Backup Module Options Supplement*
3810-A2-GB30	*COMSPHERE 3800 Series Modems, Models 3810, 3811, and 3820, User's Guide*
3910-A2-GN32	*COMSPHERE 3900 Series Modems, Models 3910 and 3911, Point-to-Point/Multipoint, Installation and Operation Manual*
6700-A2-GB20	*COMSPHERE 6700 Series Network Management System SNMP Proxy Agent Feature User's Guide*
6700-A2-GB22	*COMSPHERE 6700 Series Network Management System Network Configuration Guide*
6700-A2-GB23	*COMSPHERE 6700 Series Network Management System Remote Monitor Feature User's Guide*
6700-A2-GB41	*COMSPHERE 6700 Series Network Management System Security Manager Feature Supplement*
6700-A2-GY31	*COMSPHERE 6700 Series Network Management System User's Guide*

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Introduction

1

What is the Multiuser Feature?

The COMSPHERE 6700 Multiuser feature gives you the ability to connect multiple Windows workstations together to form a network of NMS users. With this feature, each user's workstation has a complete graphical interface that interacts with the NMS as if it were a single user workstation.

The Multiuser feature consists of two separately orderable packages: Server and Client.

You can install the Multiuser Server and Client packages on the COMSPHERE 6700 Series NMS at any time.

The Multiuser feature supports up to six simultaneous users. In addition, the software provides statistical data and Platform/Network Performance Monitoring.

Feature List

In addition to all the features of the 6700 Series NMS, the Multiuser feature provides the following capabilities:

- Integrated TCP/IP, UDP/IP, and SNMP

- Concurrent Ethernet, Token Ring, FDDI, SLIP, and PPP interfaces

- Support for various network adapter vendors

- User-definable configuration via the COMSPHERE 6700 Series NMS Network Configuration feature

- Seamless multiuser (up to 6 users) via LAN and/or RS-232 connections via SLIP and/or PPP

- RS-232 Gateway to LAN via SLIP and/or PPP allowing dial-up multiuser

- Full graphical user interface features at all multiuser workstations

- Platform/Network Performance Monitoring

- Knowledge of more than one NMS server

- User-selectable active NMS server

Sample Multiuser Network Topologies

When using the Multiuser feature, one workstation must be configured as the NMS *server* where the NMS database resides and the control channels are connected. The server is also the point of interface with all NMS devices.

All other networked workstations must be configured as an NMS *client*, which executes only the user interface portion of the NMS.

Figures 1-1, 1-2, and 1-3 show some sample Multiuser feature network topologies.
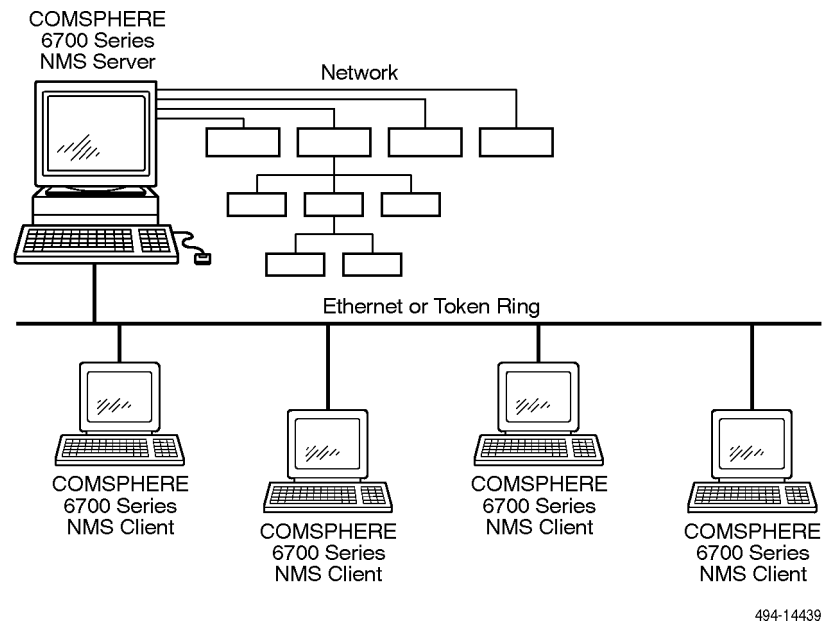
Figure 1-1.   Multiuser LAN Network
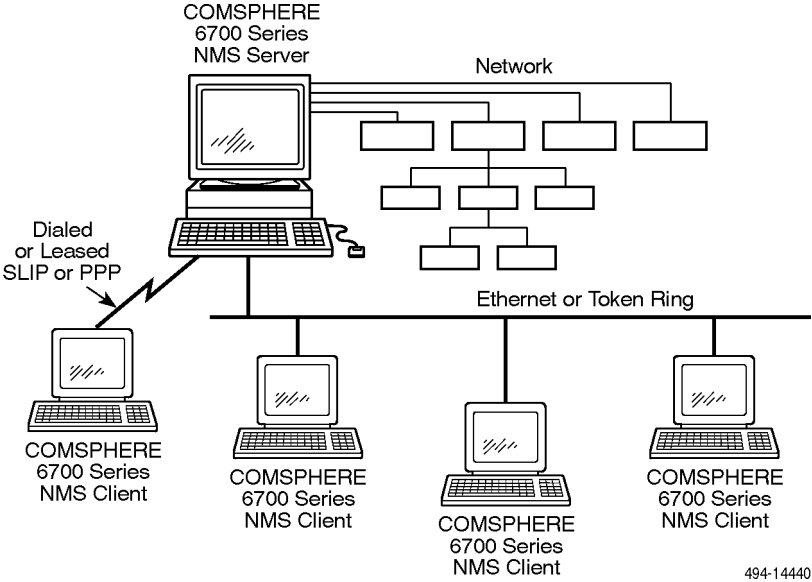
Figure 1-2.   Multiuser Serial Network (Using SLIP and/or PPP)
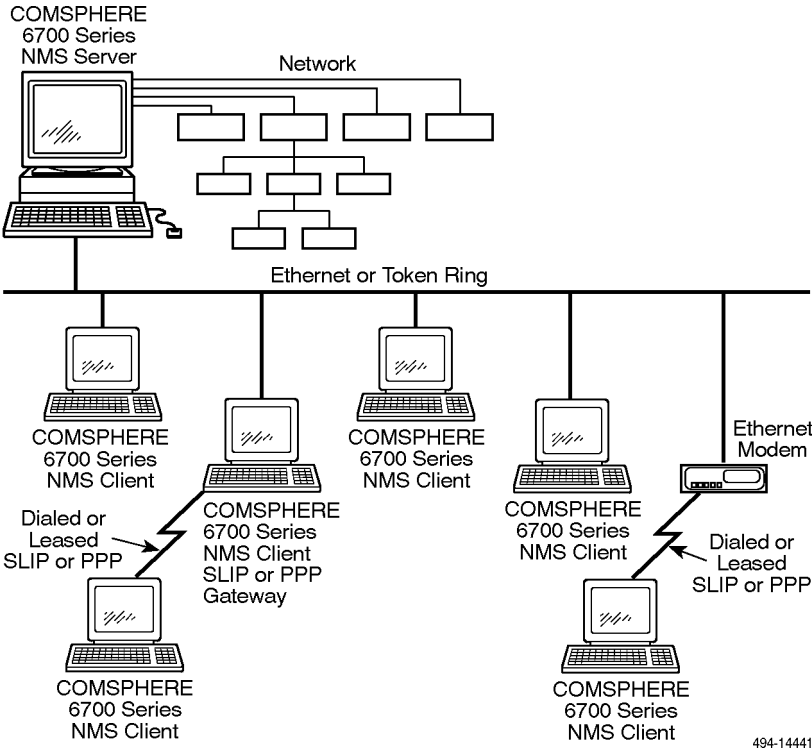
Figure 1-3.   Multiuser Serial Gateway or Ethernet Modem (Using SLIP and/or PPP)

Multiuser Feature Package Contents

The Multiuser feature package includes the following:

Server:

- Multiuser server software on one or more 3 1/2″ disks

- One *COMSPHERE 6700 Series Network Management System Multiuser Feature User's Guide*

- One *COMSPHERE 6700 Series Network Management System Network Configuration Guide*

Client:

- Multiuser client software on one or more 3 1/2″ disks

- One *COMSPHERE 6700 Series Network Management System Multiuser Feature User's Guide*

- One *COMSPHERE 6700 Series Network Management System Network Configuration Guide*

Installation

2

Hardware Requirements

The following are the hardware requirements for installation of the Multiuser feature server and client software:

Server

- 486 processor, 66 MHz or higher PC (or compatible computer)
- 16 MB of RAM (32 MB of RAM recommended)
- Hard disk with 15 MB of free space and a minimum of 14 ms access time
- Super VGA (800 x 600 resolution) or higher with 256 colors
- Video accelerator card
- One of the following network interfaces:
    - NDIS-compliant network adapter
    - ODI network adapter
    - Additional serial port
- 1 serial port for device communication
- LAN adapter or additional serial port
- 1 parallel port for a printer
- 101 keyboard
- Mouse
- 3.5″ 1.44 megabyte diskette drive
- DB-25 socket to 6-pin (RJ11) socket adapter (Part #002-0025-0031)

This configuration is sufficient for a network of 1–512 local and remote devices. If the number of devices increases, use the following table as a guideline for upgrading your hardware configuration:

Number of Devices	Processor Required	Memory Required
513–1024	486 (66 MHz)	16 megabytes
1025–1536	486 (90 MHz)	16 megabytes
1537–4000	Pentium (133 MHz)	32 megabytes

Client

- 486 processor, 66 MHz or higher PC (or compatible computer)

- 16 MB of RAM (32 MB of RAM recommended)

- Hard disk with 15 MB of free space and a minimum of 14 ms access time

- Super VGA (800 x 600 resolution) or higher with 256 colors

- Video accelerator card

- One of the following network interfaces:

    — NDIS-compliant network adapter

    — ODI network adapter

    — Additional serial port

- 1 serial port for device communication

- LAN adapter or additional serial port

- 1 parallel port for a printer

- 101 keyboard

- Mouse

- 3.5″ 1.44 megabyte diskette drive

This configuration is sufficient for a network of 1–512 local and remote devices. If the number of devices increases, use the following table as a guideline for upgrading your hardware configuration:

Number of Devices	Processor Required	Memory Required
513–1024	486 (66 MHz)	16 megabytes
1025–4000	Pentium (133 MHz)	32 megabytes

Supported Network Adapters

To use the Multiuser feature on Ethernet, Token Ring, or FDDI, you must install a supported network adapter board. Supported boards are listed in Table 2-1.

Table 2-1.   Support Network Adapter Boards (1 of 2)

Interface	Vendor	Modem
Ethernet	3COM	3C501 Ether Link
		3C503 Ether Link II
		3C505 Ether Link Plus
		3C507 Ether Link 16
		3C509 Ether Link III
		3C523 Ether Link/MC TP
		3C527 Ether Link/MC 32
	Allied Telesis	AT-1500 Network Adapter
	Hewlett-Packard	HP27247/HP27252 Plus
	Intel	EtherExpress 16 and 16T
	Novell/Excelan	EXOS105T
		NE1000
		NE2000
	Racal InterLan	NI5210
		NI6510
	SMC	SMC 8000
		SMC Elite 16
	Ungermann-Bass	Networth EtherNext 16-Bit UTP
		NIUpc/EOTP
		NIUps
	Western Digital	EtherCard Plus
		EtherCard Plus Elite 16
	Xircom	All PE Models
		All PE2 Models
		All PE3 Models
	Other	(NDIS Driver Required)

Table 2-1.   Support Network Adapter Boards (2 of 2)

Interface	Vendor	Modem
Token Ring	IBM	16/4 Token Ring Adapter
	Xircom	All PT Models
	Madge	Smart 16/4 RingNode adapter
	Proteon	p139X p189X p1990
	Raycone	16/4 Token Ring Adapter
	Other	(NDIS Driver Required)
FDDI	Any	(NDIS Driver Required)

Software and Installation Requirements

You must have one of the following sets of software installed before you install the Multiuser feature server or client software:

■ COMSPHERE 6700 Series NMS Release 5.0.0 or higher with Microsoft Windows 95 or Windows NT, or

■ COMSPHERE 6700 Series NMS Release 4.0.0 or higher with Microsoft Windows 3.1.

Additional network installation requirements are based on the software installed:

■ With COMSPHERE 6700 Series NMS Release 5.0.0 or higher, it is expected that the user has installed the TCP/IP stack and has a functioning network.

■ With COMSPHERE 6700 Series NMS Release 4.0.0 or higher, NetManage software is supplied to meet licensing requirements. Do not separately install the NetManage software. During the *Installing the Multiuser Feature* procedure, the NetManage software is installed automatically.

Installation Worksheet

Before installing and configuring the Multiuser feature, you need some system and network information. Use the following form to collect the necessary information before you start the installation process. Retain this form as a record of this information. Examples are shown in brackets [ ].

Multiuser Feature Installation and Configuration Information
General
Where to install the software [c:\pcnms]:
Location of network drivers [c:\pcnms]:
Software Serial Number [149301]:
Software Key Number [dkjslmo]:
Network Interface Name [Ethernet0]:
Network Interface Type [Ethernet]:
Multiuser Workstation
Internet Address of Workstation [192.0.2.2]:
Unique Node Name [Largo Bldg. H]:
NMS Server(s) Name [6700 Bldg. H]:
NMS Server(s) IP Address [192.0.2.1]:
LAN/Hardware Interface
Adapter Vendor Name [Western Digital]:
Board Type [Ether Card Plus]:
Interrupt Level [5]:
I/O Base Address [0x300]:
SLIP Interface
Baud Rate [9600]:
Flow Control (Hardware):
Modem Type [Hayes compatible]:
Port [COM 1]:
Telephone Number [9,1,813-530-2671]:
Optional
Subnet Mask [255.255.255.0]:
Default Gateway [192.0.2.254]:

Installing the Multiuser Feature

To install the Multiuser feature server or client software, start from the Program Manager window.

NOTE:

NMS is designed to be the primary application program running on a personal computer. If you use NMS with other applications, it is your responsibility to ensure compatibility.

▶ **Procedure**

1. Insert Disk #1 into Drive A.

2. From the Program Manager window, choose File.

3. From the File menu, choose Run.

4. In the Command Line field, type `A:\INSTALL`.

5. Choose OK. The Welcome window appears.

```
┌─────────────────────────────────────────────────────┐
│ ▭          COMSPHERE 6700 Series NMS Installation    │
├─────────────────────────────────────────────────────┤
│                                                       │
│  ╔═══╗    Welcome to COMSPHERE 6700 Server Installation. │
│  ║6700║                                               │
│  ╚═══╝    INSTALL will ask you several questions about your │
│           particular installation such as the install drive, directory │
│           and type of installation.                   │
│                                                       │
│           Each question has a default answer. If the default answer │
│           is correct, press the CONTINUE button in response to the │
│           question. Otherwise, type or select the item and then │
│           press the CONTINUE button.                  │
│                                                       │
│              ┌─────────┐      ┌─────────┐            │
│              │Continue │      │ Cancel  │            │
│              └─────────┘      └─────────┘            │
└─────────────────────────────────────────────────────┘
```

6. Choose Continue. The Product Information window appears.

```
┌─────────────────────────────────────────────────────┐
│ ▭                 Product Information                 │
├─────────────────────────────────────────────────────┤
│  ╔═══╗    INSTALL has detected the following information of │
│  ║6700║    your COMSPHERE 6700 NMS installation.      │
│  ╚═══╝                                                │
│                                                       │
│   Product Name: COMSPHERE 6700 Server                 │
│                                                       │
│        Version: 1.0.0                                 │
│                                                       │
│   Do you wish to install above product on your computer system? │
│              ┌─────────┐      ┌─────────┐            │
│              │  Yes    │      │   No    │            │
│              └─────────┘      └─────────┘            │
└─────────────────────────────────────────────────────┘
```
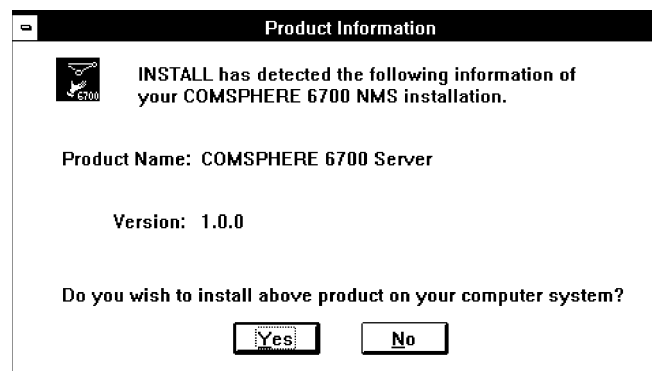
7. Choose Yes. The Destination Directory window appears.

```
┌─────────────────────────────────────────────────────┐
│ ▭           Destination Directory                    │
├─────────────────────────────────────────────────────┤
│  ┌────┐   INSTALL will place COMSPHERE 6700 Server    │
│  │6700│   into the following directory, which it will create on │
│  └────┘   your hard disk.                             │
│                                                        │
│  If you want to install COMSPHERE 6700 Server          │
│  in a different directory and/or drive, type the name of the │
│  directory.                                            │
│  Install to: │ C:\PCNMS                              │ │
│                                                        │
│  To quit installation, press the CANCEL button at any time │
│  during the installation process.                      │
│                                                        │
│         ┌──────────┐      ┌──────────┐                │
│         │ Continue │      │  Cancel  │                │
│         └──────────┘      └──────────┘                │
└─────────────────────────────────────────────────────┘
```
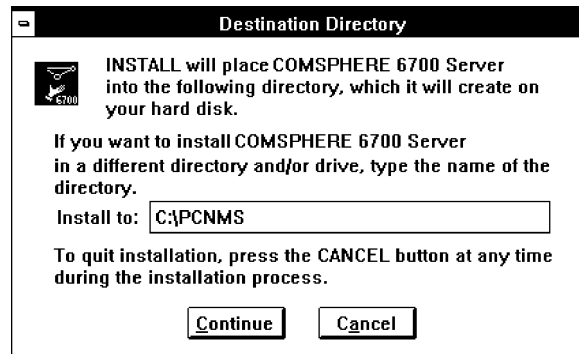
The Destination Directory window allows you to place the NMS software into a specific directory. A single directory within a single partition is required.

8. Enter a subdirectory location or choose the default setting of **C:\PCNMS**.

9. Choose Continue. The Confirmation window appears.

```
┌─────────────────────────────────────────────────────┐
│ ▭              Confirmation                           │
├─────────────────────────────────────────────────────┤
│  ┌────┐   COMSPHERE 6700 Server                       │
│  │6700│   will be copied to the following drive and directory. │
│  └────┘                                               │
│                                                        │
│  Installation Path:  C:\PCNMS                          │
│                                                        │
│   Product Name:  COMSPHERE 6700 Server                 │
│                                                        │
│   If all the above information is correct, press the INSTALL, │
│   or press the CANCEL to change the drive and/or directory. │
│                                                        │
│         ┌──────────┐      ┌──────────┐                │
│         │ Install  │      │  Cancel  │                │
│         └──────────┘      └──────────┘                │
└─────────────────────────────────────────────────────┘
```
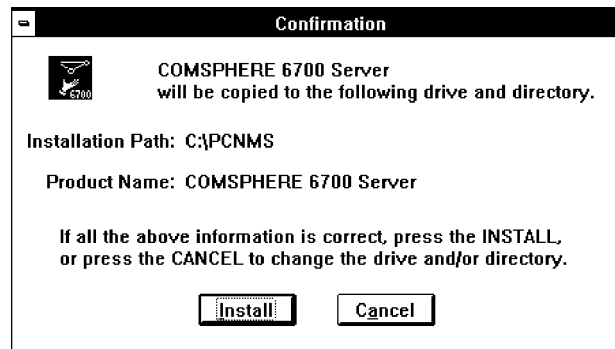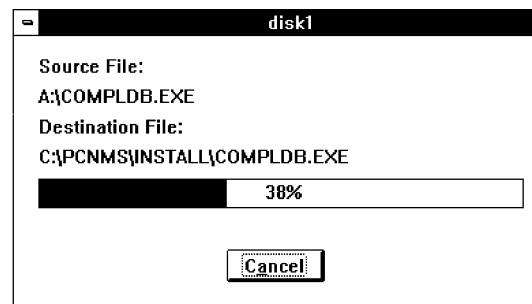
10. Choose Install to confirm the installation of the NMS software into the specified directory. The Completion status window appears.

```
┌─────────────────────────────────────────────────────┐
│ ▭                   disk1                             │
├─────────────────────────────────────────────────────┤
│  Source File:                                         │
│  A:\COMPLDB.EXE                                       │
│  Destination File:                                    │
│  C:\PCNMS\INSTALL\COMPLDB.EXE                         │
│  ┌─────────────────────────────────────────────┐    │
│  │████████████      38%                          │    │
│  └─────────────────────────────────────────────┘    │
│                                                        │
│                ┌──────────┐                           │
│                │  Cancel  │                           │
│                └──────────┘                           │
└─────────────────────────────────────────────────────┘
```

This window displays a bar indicating the percentage of completion for the current installation. In addition, the names of the files being installed appear above the bar until the installation is complete. The Installation Completed! window appears.
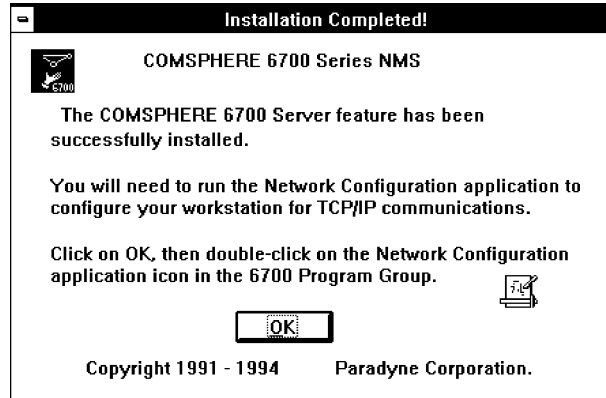
11. Choose OK to return to Windows.

12. To start NMS, choose the NMS icon from the COMSPHERE 6700 Program Group window.

Configuring the Multiuser Feature

After installation, use the Network Configuration application option to customize your configuration for TCP/IP networks if not already configured. For details on doing so, refer to the *COMSPHERE 6700 Series Network Management System Network Configuration Guide.*

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