Remote Office Client for NetRider
MS-DOS Installation and Use

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Reader's Comments	Your comments and suggestions help us to improve the quality and usefulness of our documentation. You can respond to the documentation manager at: **Email:** doc_quality@lkg.mts.dec.com **FAX:** 508 486 5655

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Preface

Overview

Purpose

This book explains how to install and use the Remote Office Client for NetRider for MS-DOS and Windows software in an MS-DOS environment.

Intended Audience

This book is written for individuals who install and use the Remote Office Client for NetRider for MS-DOS and Windows software to access remote LANs. This book assumes that readers are familiar with the hardware and software installed on their personal computer.

Conventions

This book uses the following conventions:

Convention	Description
boldface text	Boldface text represents the name of a button, menu, or menu option.
italic text	Italic text in a command indicates a variable for which you supply a value.
[key]	Text enclosed in brackets represents keys that you press. For example, [Enter] means press the Enter key.
[key] + [key]	Text enclosed in brackets and separate by a plus sign (+) indicate that you press the first key and hold it down while pressing the second key.

Associated Documents

Contact your Digital reseller or Digital representative to order additional documentation. The following documents can be of use:

Book	Description
NetRider Client for Macintosh Installation and Use	Describes how to install and use the NetRider Client in a Macintosh environment.
Remote Office Client for NetRider Windows Installation and Connection	Describes how to install and make a remote connection with the Remote Office Client for NetRider Windows software.
Remote Office Client for NetRider RCHost Installation and Use	Describes how to install and use the Remote Office Client RCHost remote control program with an IPX network.

Book	Description
Remote Office Client for NetRider PC/TCP OnNet Applications Use	Describes how to use the PC/TCP OnNet applications supplied with the Remote Office Client for NetRider.
NetRider Remote Access Server Quick Start	Describes how to install the NetRider Remote Access Server, the Digital Network Access Server software, and automate the PC client installation.
DECserver Network Access Software Installation	Describes how to install the Digital Network Access Server (DNAS) software on your operating system.
DECserver Owner's Manual (90 or 900 series)	Describes how to install and operate the DECserver hardware.

Chapter **1**

Remote Office Installation

Overview

In This Chapter

This chapter describes the following:

- Product description

- Preparing for installation

- Installation tasks

- Installation results

- Post-installation tasks

- Operation considerations

Product Description

Introduction

Remote Office Client for NetRider for MS-DOS and Windows, referred to as Remote Office, is a remote-client software solution that allows you to use a modem to dial into an access server, such as a DECserver, and connect to your main office LAN. People who travel, work in a satellite office, or work at home, can use Remote Office to communicate on the main office LAN.

When to Use NetRider

Use the Remote Office client software if you use a modem to make an asynchronous connection to a remote network. Remote Office includes special network applications that enhance your ability to work when connected in this manner (for example, telnet and ftp).

If you connect to a local network with an Ethernet adapter (and without using a modem), Digital recommends that you do not use Remote Office or the Remote Office network applications. Instead, rely on the network software you use for your wired network connections.

Key Features

Created for enterprise-wide networks, Remote Office provides the same functionality to remote users as locally connected LAN users. When you dial in to an access server, such as a DECserver, your remote PC becomes a node on the network.

The Remote Office product includes the following key features:

Item	Description
File and print services	Allows those who select NetRider with OnNet TCP/IP as their LAN operating system to connect to remote drives and printers through the use of the USE utility.
IP and IPX connections	Allows you to connect to a remote access server that supports IP and/or IPX protocols.
ISDN terminal adapter support	Allows you to use the Remote Office client over ISDN lines with the AT&T 5ESS switch type.

Item	Description
PC/TCP OnNet applications	The PC/TCP OnNet applications include:
	• Ping – Tests the availability of network hosts and network gateways or traces the path that a message takes from one host to another.
	• Telnet VT– Connects your PC to a remote system using DEC VT terminal emulation
	• FTP – Provides an alternate method to transfer files between remote hosts and your PC.
	• Statistics – Allows you to display information about your PC/TCP configuration, view network configuration information for your PC, and monitor network traffic.
	• DHCP – Sends DHCP or BOOTP requests to configure the TCP stack. This application does not work with DECservers.
	More Information: See *Remote Office Client for NetRider PC/TCP OnNet Applications Use* for information about using these applications.

Typical Uses

Typical Remote Office uses include:

• Access to your office LAN from a remote PC

• Ability to run non-client-server applications

• Monitoring of unattended PCs, such as job servers or data-collecting workstations

How to Use Remote Office

To use Remote Office after you install the product you:

Step	Action
1	Load ROSTART.BAT by typing ROSTART at the MS-DOS prompt or run the RO utility by typing RO at the MS-DOS prompt.
2	Dial into an access server by selecting **Connection** from the menu bar and then clicking **OK**.
3	After you receive a successful connection message from Remote Office, close the Remote Office screen. At this point, you are connected to your remote network.
4	Use your applications as you normally do. For example, if you select NetRider with OnNet TCP/IP as your LAN operating system, you can connect to remote file and print services by typing USE *drive:path*.

Configuration Example

The following illustration shows an example of a Remote Office configuration.
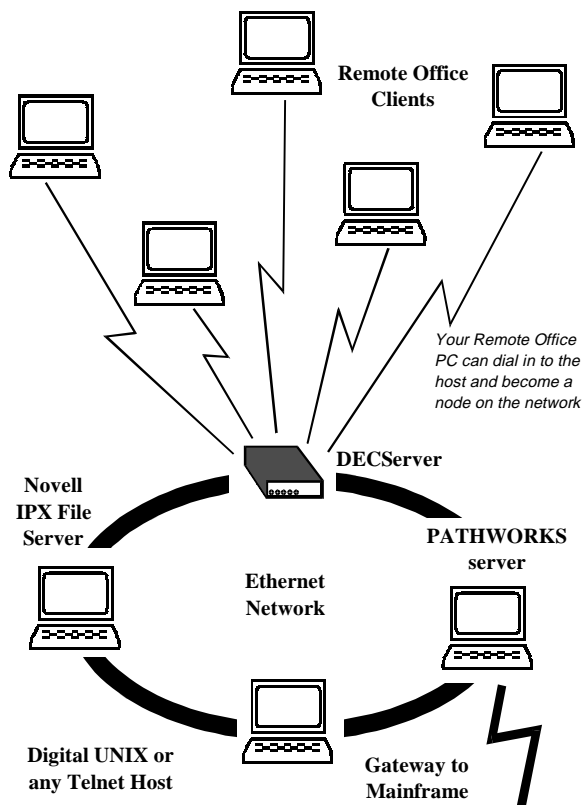
Preparing for Installation

Check Your Product Package

You need the following items to install Remote Office on your PC.

- Remote Office installation disk.

- VLM installation disk (only used for NetWare installations).

- OnNet TCP/IP installation disk. This installs the OnNet PC/TCP software from FTP Software Inc. .

- NetRider Redirector installation disk. This installs the Digital Basic Redirector.

- *Remote Office Client for NetRider PC Quick Start.*

- *Remote Office Client for NetRider MS-DOS Installation and Use* (this manual).

Other Items in the Package

The other items in your package are used for different clients and the DECserver. The DECserver items vary according to the type of DECserver your system or network administrator is installing.

Check System Requirements

Your PC should be equipped as follows

- MS-DOS Version 5.0 minimum

- 1 available COM port (COM1 is often used for the mouse, you may want to choose a different port.)

- Modem (Digital recommends a 9600 baud or faster modem).

- 5 MB of disk space

Automated Installations

Your system or network administrator can automate the installation procedure to minimize the amount of information you provide when you run the procedure. Ask your system or network administrator whether you have an automated installation, and if so, what information you need during the installation.

Instructions

Appendix E in the *NetRider Access Server Quick Start* book contains instructions for creating an automated installation procedure.

Pre-Installation Checklist

The Remote Office installation program requires software only. Refer to your modem manual to install your modem. Obtain the following before you install the Remote Office software on your PC (you do not need all of this information if you have an automated installation; see your system or network administrator):

- The telephone number of the access server into which you will dial (your dial-in number).

- The username and password for logging into the access server. These can be case sensitive, see your system or network administrator to confirm this.

- Your username and password for logging into the network, if necessary. These can be case sensitive, see your system or network administrator to confirm this.

- Your username for connecting to remote file services. See your system or network administrator to determine if this is required.

- The type of modem installed in your PC (brand, model, and speed).

- The COM port and the IRQ and I/O Port settings that your modem uses.

- Your PC's node name.

- Your PC's Internet address and the domain name server's Internet address. If you are installing NetRider with OnNet TCP/IP and NetWare as your LAN operating system, you also need an IPX network number.

- The host names and Internet addresses of the systems you plan to access.

- Whether the access server to which you plan to connect uses CHAP authorization protocol. If you use this protocol, you need to load it after starting Remote Office. See the Load Options sections in Chapter 4 for information.

Installing the Software

What You Do

The following table lists the steps you take to install the Remote Office software. If you have an automated installation, you may be able to omit some of these steps; see your system or network manager for details. The following sections describe each step in detail.

Step	Action
1	Start the installation procedure.
2	Specify the communication port that your modem uses.
3	Select the type of modem installed in your PC.
4	Select a NetRider LAN operating system.
5	Specify host access information (username and password).
6	Confirm the installation settings you specified.

During Installation

The installation procedure does the following:

- Copies files from the installation disk to your PC after you respond to the displayed installation prompts.

- Modifies your AUTOEXEC.BAT file. The installation procedure first makes a copy of these files and gives them a numeric file extension. For example, the installation procedure might rename your original AUTOEXEC.BAT file to AUTOEXEC.001.

- Uses some of the information you provide during installation to create an initial phonebook record called HOST. You use phonebook records to dial into DECservers or other access servers. See Chapter 3 for information about maintaining phonebook records.

Start the Procedure

Do the following to start the installation procedure:

Step	Action
1	Exit from Windows, if it is loaded.
2	Insert your installation disk in drive A or B.
3	At the DOS prompt, type **A:INSTALL** (or **B:INSTALL**) and press [Enter]. You see the following screen:

```
 Remote Office Client Install                    Stampede Technologies, Inc.



          ══════════Welcome to Remote Office Client Installation═══════
          │                                                           │
          │  Name:                  ████████████████████████████      │
          │  Company Name:          ████████████████████████████      │
          │  Destination Directory  C:\ROF       ████████████         │
          │                                                           │
          │              [ Ok ]          [ Cancel ]                   │
          │                                                           │
          └───────────────────────────────────────────────────────────┘



 Enter = Continue    Tab = Next Field    F1 = Help    FZ = Readme    F3 = About
```

Keys to Use: Use the [Tab] key or press [ALT] + the highlighted letter to progress through this screen. You can also use the left mouse button to select any field or button.
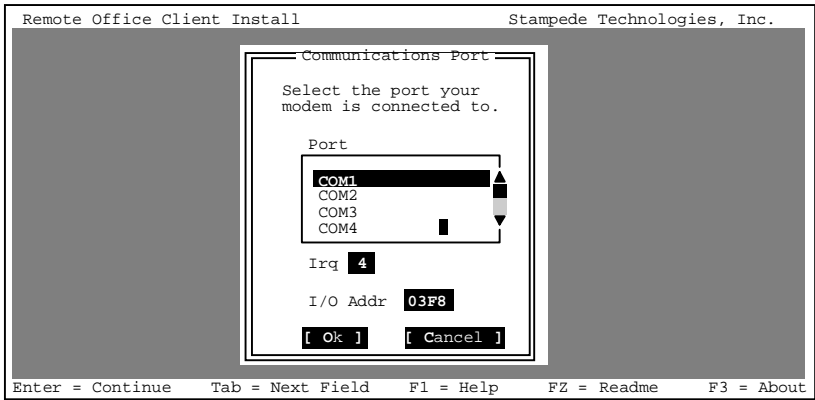
Automated Installations: If you are using an automated installation procedure, the screen displays the pre-configured information. If the information is correct, go to Step 4d. Otherwise, go to Step 4a.

Step	Action
4	Enter information as follows (use the [Tab] key or press [ALT] + the highlighted letter to progress through this screen):
	a) Type your name in the **Name** box.
	b) Type your company name in the **Company Name** box.
	c) Type a directory name to contain Remote Office files, if you wish to use a directory other than C:\ROF.
	d) Click **OK** or press [Enter] to continue.

Specify Communication Port

After you respond to the initial installation prompts, you see the following screen:

```
 Remote Office Client Install              Stampede Technologies, Inc.
┌─────────────────────────────────────────────────────────────────┐
│              ╔═══════════ Communications Port ═══════════╗        │
│              ║     Select the port your                   ║        │
│              ║     modem is connected to.                 ║        │
│              ║                                            ║        │
│              ║     Port                                   ║        │
│              ║   ┌─────────────────────────────┐▲         ║        │
│              ║   │ COM1                        │          ║        │
│              ║   │ COM2                        │          ║        │
│              ║   │ COM3                        │ ■        ║        │
│              ║   │ COM4                        │▼         ║        │
│              ║                                            ║        │
│              ║     Irq  4                                 ║        │
│              ║                                            ║        │
│              ║     I/O Addr  03F8                         ║        │
│              ║     [ Ok ]        [ Cancel ]               ║        │
│              ╚════════════════════════════════════════════╝        │
└─────────────────────────────────────────────────────────────────┘
 Enter = Continue    Tab = Next Field    F1 = Help    FZ = Readme    F3 = About
```

Automated Installations

If you are using an automated installation that pre-configures this option, you do not see this screen.
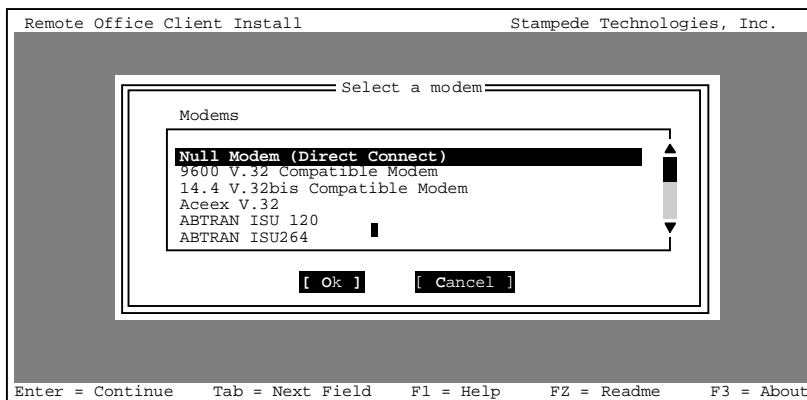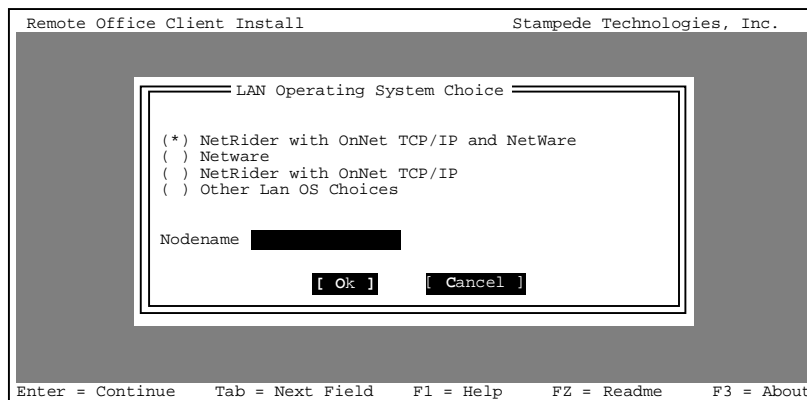
Procedure

Do the following to select a communication port:

Step	Action
1	Scroll up or down to select the port to which the modem is connected on the PC.
2	Make sure the IRQ and I/O Port settings match the settings for your port. If you need to change either of these, tab to the box and type the appropriate value.
3	Click **OK** or press [Enter] to continue.

Select a Modem

After you select a communication port, you see the following screen:

```
 Remote Office Client Install                  Stampede Technologies, Inc.



            ╔══════════════════ Select a modem═══════════════════╗
            ║   Modems                                            ║
            ║ ┌─────────────────────────────────────────────────┐║
            ║ │ Null Modem (Direct Connect)                    ▲ │║
            ║ │ 9600 V.32 Compatible Modem                       │║
            ║ │ 14.4 V.32bis Compatible Modem                    │║
            ║ │ Aceex V.32                                       │║
            ║ │ ABTRAN ISU 120                      ▓            │║
            ║ │ ABTRAN ISU264                                  ▼ │║
            ║ └─────────────────────────────────────────────────┘║
            ║               [ Ok ]        [ Cancel ]              ║
            ║                                                     ║
            ╚═════════════════════════════════════════════════════╝


 Enter = Continue    Tab = Next Field    F1 = Help    FZ = Readme    F3 = About
```

Automated Installations

If you are using an automated installation procedure that pre-configures
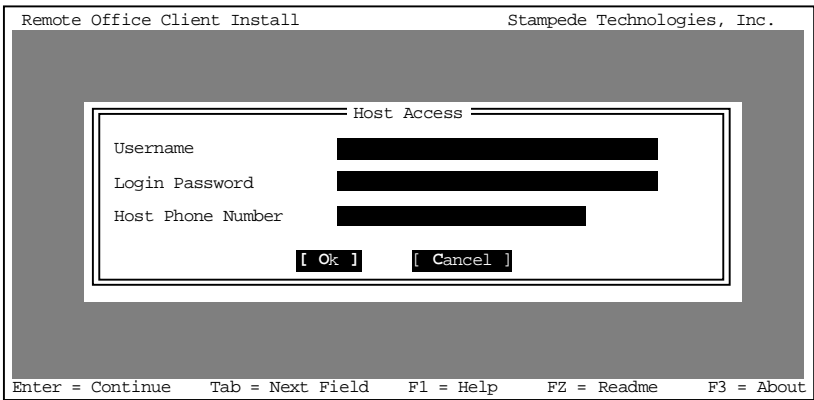this option, you do not see this screen.

Procedure

Scroll up or down to highlight the modem you are using, then press
[Enter]. If you do not see your modem listed, choose a modem that is
closest to the one you have.

Select LAN Operating System

After you select the modem, you see the following screen:

```
Remote Office Client Install                  Stampede Technologies, Inc.


           ════ LAN Operating System Choice ════

        (*) NetRider with OnNet TCP/IP and NetWare
        ( ) Netware
        ( ) NetRider with OnNet TCP/IP
        ( ) Other Lan OS Choices

      Nodename  █████████████████

                   [ Ok ]        [ Cancel ]



Enter = Continue     Tab = Next Field    F1 = Help     FZ = Readme     F3 = About
```

Automated Installations

If you are using an automated installation that pre-configures this option, you do not see this screen.

Procedures

Do the following:

Step	Action
1	Use the arrow keys to select NetRider with OnNet TCP/IP and NetWare or NetRider with OnNet TCP/IP.
2	Press [Tab] and enter your PC's node name.
3	When prompted, enter your PC's Internet address and the domain name server's Internet address.
4	Click **OK** or press [Enter] to continue with the installation. The procedure prompts you to insert the NetRider Redirector installationdisk after it installs the OnNet TCP/IP software.

Specify Host Access

After you specify a LAN Operating system, you see the following screen:

```
 Remote Office Client Install                 Stampede Technologies, Inc.



          ╔════════════════════ Host Access ════════════════════╗
          ║                                                      ║
          ║   Username        ███████████████████████████        ║
          ║                                                      ║
          ║   Login Password  ███████████████████████████        ║
          ║                                                      ║
          ║   Host Phone Number  ████████████████████            ║
          ║                                                      ║
          ║           [ Ok ]          [ Cancel ]                 ║
          ║                                                      ║
          ╚══════════════════════════════════════════════════════╝



 Enter = Continue    Tab = Next Field   F1 = Help    FZ = Readme    F3 = About
```

Automated Installations

If you are using an automated installation procedure, the Host Access
screen displays the pre-configured information. If the information is
correct, go to Step 5 in the following procedure. If the information is
incorrect, go to Step 1.

Procedure

Do the following:

Step	Action
1	Enter the username as it is configured on the access server to which you plan to connect and press [Tab]. Ask your system or network administrator if the username is case sensitive.
2	Enter the password as it has been configured on the access server to which you plan to connect and press [Tab]. Ask your system or network administrator if the username is case sensitive. Each character you type appears as an asterisk (*). If you want to be prompted for the password when using Remote Office, type one asterisk in this field.

Step	Action
3	Enter the phone number of the access server which you will be dialing and press [Enter]. Include any of the following that applies:
	• 9 or other digit needed for access outside lines from your location
	• 1 plus area code, if number is long distance
	• Any other applicable digits
	Note: Place a comma (,) in the number to tell the system to pause while dialing. Refer to Appendix A for specific modem settings.
4	The procedure prompts you to re-enter your password. Re-enter it as you entered it previously.
5	Click **OK** or press [Enter] to continue.

Install PC/TCP OnNet Applications

After you enter the host access information, you see a screen asking if you want to install the Remote Office Client applications for Microsoft Windows.

Automated Installations

If you are using an automated installation that pre-configures this option, you are not prompted to install the PC/TCP OnNet Windows applications; the procedure automatically installs the PC/TCP OnNet MS-DOS version of the applications.
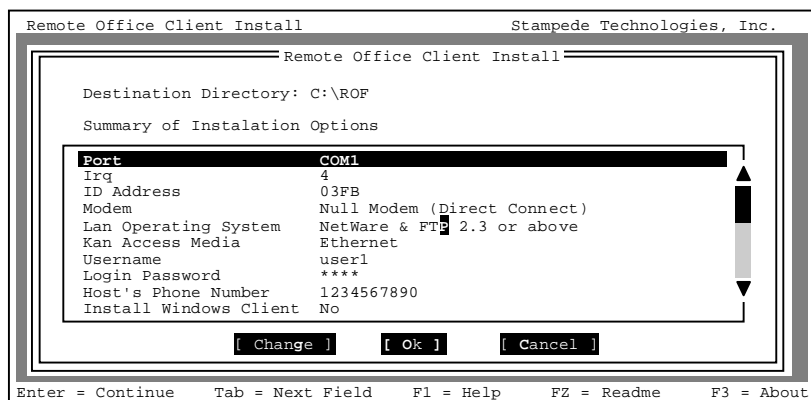
Procedure

Select **NO**. The installation procedure installs the MS-DOS version of the applications. The *Remote Office Client for NetRider PC/TCP OnNet Applications Use* book describes how to use these applications in the MS-DOS environment. You are prompted to enter the OnNet Applications disk when the installation procedure is copying files onto your PC.

Confirm Installation Settings

After you indicate how you want to install the PC/TCP OnNet applications, you see a screen similar to the following:

```
Remote Office Client Install                    Stampede Technologies, Inc.

            ┌──────────── Remote Office Client Install ────────────┐

             Destination Directory: C:\ROF

             Summary of Instalation Options
            ┌───────────────────────────────────────────────────┐
             Port                COM1                            ▲
             Irq                 4
             ID Address          03FB
             Modem               Null Modem (Direct Connect)
             Lan Operating System NetWare & FTP 2.3 or above
             Kan Access Media    Ethernet
             Username            user1
             Login Password      ****
             Host's Phone Number 1234567890                      ▼
             Install Windows Client  No

                    [ Change ]      [ Ok ]      [ Cancel ]

Enter = Continue    Tab = Next Field    F1 = Help    FZ = Readme    F3 = About
```

This window confirms the selections you made during the installation.

Automated Installations

If you are using an automated installation procedure, you do not see this screen.

Procedures

If the displayed selections are correct, press [Alt] + [O] or click **OK** to continued. The installation procedure copies all the necessary files to your PC and completes the installation.

If you want to change the displayed settings, do the following:

Step	Action
1	Scroll up or down to highlight the setting you want to change.
2	Press [Alt] + [G] to change the setting.
3	Change the setting as shown in the installation instructions.
4	Press [Alt] + [O] or click **OK** to continue. The installation procedure copies all of the necessary files to your PC, prompting you to insert the OnNet TCP/IP and NetRider Redirector disks, and completes the installation.
	Rebooting Your System: At the end of the installation, the procedure instructs you to reboot your system. Read the Customizing Your Environment section in this chapter before rebooting your system.

VLM Installation

If you select NetWare or any combination of NetWare and TCP/IP as your LAN operating system, the Remote Office installation procedure prompts you to insert the NetWare VLM software disk when copying files to the PC.

Next Steps

After the installation completes, do the following:

For This Task:	Refer to:
Read the online text files	Customizing Your Environment section in this chapter
Edit system files, if necessary, and reboot your system.	Customizing Your Environment section in this chapter
Connect to an access server	Chapter 2
Add or change phonebook records	Chapter 3

Installation Results

If You Select NetWare

If you select NetWare or any combination of NetWare and TCP/IP as your LAN operating system, the Remote Office installation procedure installs the NetWare VLM software after it installs the Remote Office software. The procedure makes the following changes:

- Sets the LASTDRIVE statement in CONFIG.SYS to Z

- Installs a NetWare LOGIN.EXE that supports directory services.

If You Select NetRider With OnNet TCP/IP

If you select NetRider with OnNet TCP/IP as your LAN operating system, the Remote Office installation procedure installs the OnNet PC/TCP software and the Digital Basic Redirector. The Digital Basic Redirector allows you to connect to remote drives and printers through the use of the USE command.

Components Installed

The following table lists the key components reside on the client PC after running the installation procedure.

File/Component	Description
EXEGUARD	An application that warns you when you are about to run an application across the communications link. If you attempt to run a program across the link, a warning message appears, giving you the option of not running the program.
	ROSTART.BAT automatically loads this file if ROFFICE is configured to do so. See the RO command line section in Chapter 5 for further information.
HOST phonebook record	A record defined using the information you supplied during the installation. This is the default record displayed the first time you select the Connect option after installing the software.
LAN OS text files	Contains a set of with updated configuration information for use with Remote Office. These files are located on the installation disk in the LANOSDEP directory. The text file corresponding to the LAN OS installed is copied to the ROF directory during installation.
PKROF-E.EXE	A file that provides an ftp packet driver interface into ROFFICE.EXE. The packet driver is for Ethernet networks only. No special configuration is required.

File/Component	Description
RO.EXE	An interactive program that contains further setup and phonebook functions. You can use this program to modify your phonebook entries and to log into and log out of a Remote Office Host. See Chapter 5 for a description of the RO commands.
ROSTART.BAT	A batch file that contains commands necessary to start your network operating system, start Remote Office, and log into a DECserver.

Files Modified

The installation program modifies the following files:

File	Modification
AUTOEXEC.BAT	Adds the Remote Office directory to the PATH statement.
SYSTEM.INI	• Sets the TimerCriticalSection parameter to 10000 for improved I/O operations. • Sets the name of the network driver in the network.drv line. The network driver for the NetRider with OnNet PC/TCP and NetRider with OnNet PC/TCP and NetWare LAN operating systems is PATHWRKS.DRV.

Backup Files

Before the installation procedure modifies any system files, it makes a copy of the original file and saves it with the same file name and a numeric extension. For example, your original AUTOEXEC.BAT file can become AUTOEXEC.001.

Customizing Your Environment

Read the Online Text File

The Remote Office installation procedure copies a README.TXT text file to the directory where you installed the Remote Office files.

The text file provides additional information about how to configure and run the Remote Office client. Read these files before you edit system files and before you make your first connection to a remote LAN.

Modify ROSTART.BAT

The installation procedure creates a batch file called ROSTART.BAT. This file contains all the commands necessary to load your network operating system, start Remote Office, and login to DECserver. ROSTART.BAT does the following:

1. Executes ROFFICE.EXE to start the Remote Office program.

2. Executes either ODIROF-E, NDROF-E, or PKROF-E

3. Executes transport protocol (for example, IPX or TCP/IP).

4. Loads the LAN Operating System(s).

Depending on your network environment, you may need to edit this file before starting Remote Office. Read the Remote Office Client README.TXT file or see your system or network administrator for details.

Modify Files for NetRider With OnNet PC/TCP

If you install NetRider with OnNet TCP/IP as your LAN operating system, do the following:

Step	Action

1	Create a file called nbnames in the C:\ROF directory or the directory where you installed the Remote Office files. The nbnames file contains the names and IP addresses of the remote hosts whose file and print services you want to access. Build the file as follows:
	
	`HOSTNAME         <ipaddress>`
	
	The *HOSTNAME* is the name of the remote host you plan to access as it is known on the network. Enter the HOSTNAME in **uppercase characters.** The *<ipaddress>* is the host's IP address.
	
	Example: The following is an example of entries in the nbnames file:
	
	`MYNODE          123.123.12.12`
	`YRNODE          123.123.12.10`

2	Edit the PCTCP.INI file in the C:\ROF directory (or the directory where you installed the Remote Office files). Find the following entry to the [pctcp netbios] section: `namefile=` Enter the path of the nbnames file. For example, `namefile=c:\rof\nbnames`

3	If performance seems slow, check that the following entries are in the PCTCP Kernel] section of the PCTCP.INI file:
	
	`mtu-discovery=no`
	`slow-link-multiplier=3`
	`rtt-multiplier=2`

Modify NET.CFG for NetWare Networks

NetWare networks use the ODI driver. The following example illustrates the specification for your NET.CFG file. You must specify IPX as the protocol to interface to Remote Office through the ODIROF-E MLID.

NET.CFG Example

```
#  Define ODIROF-E as board #1
#
Link Driver ODIROF-E
   FRAME ETHERNET_802.2
   VLMIPX ETHERNET_802.2
;  FRAME ETHERNET_802.3
   FRAME ETHERNET_II
Protocol IPX
   bind #1
```

Modifying PROTOCOL.INI for LAN Manager

A file called NDROF-E provides an NDIS interface into ROFFICE.EXE. LAN Manager uses this interface over TCP/IP, among others. Your protocol may require a BINDINGS statement in the PROTOCOL.INI. If so, it should read: BINDINGS=NDROF-E.

Reboot Your System

After you edit systems files, reboot your system so the changes take effect. If you do not edit any system files, you still need to reboot your system.

Operation Considerations

Working with Third-Party Communications Packages

When a Remote Office client is idle (not logged in), the serial port for which it is configured is available for use by other communications packages. Therefore, you can have the Remote Office components loaded and still get control of the serial port.

EXEGUARD

Remote Office includes an application called EXEGUARD that warns you when you are about to run an application across the communications link. If you attempt to run a program across the link, a warning message appears, giving you the option of not running the program. ROSTART.BAT will automatically load this file if ROFFICE is configured to do so. Refer to the RO command line section of this book for further information.

Chapter **2**

Remote LAN Connection

Overview

In This Chapter

This chapter contains the following information

- Login overview

- Login considerations

- Connection setting descriptions

- Connecting to the access server

- After making a connection

- Disconnecting from the access server

Login Overview

Login Sequence

The following occurs when you try to connect to an access server:

Phase	Description
Modem Lights	The first phase of the login process shows the status of modem lights while initiating the call. A "1" means the corresponding modem light is on; a "0" means the modem light is off.
Modem Status	After the login is initiated, the modem sends back status information concerning the negotiation of compression protocols, the line speed between the two modems (DCE speed), and the speed between the computer and the modem (DTE speed). This information is displayed as it is returned from the modem. Check your modem manual for the control string needed to enable modem echo. It is usually part of the initialization string.
LCP Status	LCP indicates Link Establishment Status. Once the modem is communicating with the host modem, the host and client exchange "link control protocol" packets to determine basic communication parameters.
Authentication Status	After the LCP step, the host sends a message to check the user's identity. The client returns the user name and password. After this, the login process continues into the callback phase, if necessary.
NCP Establishment Status	After the authentication phase, the client and host exchange network protocol packets to determine additional communication parameters. These are based on Network Control Protocol, or NCP.

Login Error Information

If you encounter errors during the login, see Chapter 6 for explanations and suggested solutions.

Login Considerations

Before You Begin

When dialing into an access server, remember the following important points:

- Remote Office acts as an actual node on the network, and all traffic that the client PC generates is actually sent across the telephone link, which is slower than in-house network traffic.

- When planning for login scripts, it is vital that scripts be designed to run applications off of the local drive on the client, not the server. For instance, when running in a NetWare environment, if the login script were to perform a capture command, the entire CAPTURE.EXE program would be transferred across the telephone link to the local CPU. This adds unnecessary overhead to an already slower process. Instead, it is preferable to store the CAPTURE.EXE program on the client drive, and configure the script to execute it from the client drive. The INSTALL program copies CAPTURE.EXE, MAP.EXE, and LOGOUT.EXE for NetWare clients.

- Application planning is also an important consideration. In keeping with the preceding discussion, you do not want the remote client to load applications from a network drive. Again, this adds unnecessary traffic on the wire. The server should be used to store data, accessed by an application loaded off the client's local drive.

Script File Information

For more information about using script files, see the Using Login Options section in this chapter.

Connection Settings

Introduction

Connection settings tell the Remote Office client how to connect to an access server. You usually store these settings in phonebook records. You can also change them when Remote Office displays the settings during a connection operation.

HOST Record

Remote Office uses information you supply during installation to create a phonebook record called HOST.

Types of Connection Settings

The Remote Office connection settings consist of:

- Login options

- Advanced options

- Network control protocol options

Creating and Changing Phonebook Records

For information about creating and changing phonebook records, see Chapter 3.

Login Options

Introduction

When the Login to Host window appears, you can use the scroll bar to select the name of the phonebook record you want to use for your remote connection session. The phonebook record contains all the necessary information to log into a specified access server. The HOST phonebook record contains the information you supplied during the installation.

Options You Set

You can set the following login options on the Login to Host screen for the current session (to set options permanently, create a new phonebook record or edit an existing one):

Item	Description
Phone number	All of the necessary digits, including 9 to obtain outside lines, or credit card digits. Use commas to create a pause in the dialing process. See Appendix A for information on using credit cards.
Username and password	The username and password as configured in the access server.
COM port	The communication port that your modem uses.
Callback number	A number for the access server to call back to the client. DECservers do not currently support this feature.
Baud rate	The baud rate of the interactions between your PC and your modem. Because of Remote Office's use of data compression, you can set this value higher than your modem's actual baud rate. For example, a 14.4 modem can use a baud rate of 57.600 and a 28.8 modem can use a baud rate of 115,200.

Item	Description
Inactivity timeout	Indicate whether you want the link to automatically disconnect after being idle for a period of time.
Enter TTY mode	Indicates whether the Remote Office software should enter TTY mode immediately after establishing a phone connection. In TTY mode, your PC acts as a teletype terminal emulator so you can manually respond to any security prompting devices that may be attached to your dial-in network. **For More Information:** See the Using Login Options section in this chapter.
Script file specification	If you select TTY mode, you can specify the name of a file containing scripted TTY data. This file runs after the Remote Office software establishes a phone connection.

Advanced Options

Options You Set

You can set the following advanced options on the Advanced Options screen for the current remote connection session:

Item	Description
Connect timeout	The number of seconds to allow for a successful connection to the host. If the access server will be calling you back, be sure to allow enough time for the callback.
Number of auto reconnects	If you lose your connection to the host, Remote Office attempts to reconnect you. The **Number of Auto Reconnects** value specifies the number of times a reconnection should be attempted.
Network control protocol	The **Network Control Protocol** between your PC and the access server. The default value is concurrent IPCP & IPXCP.
Compression	You can choose whether to compress data traveling between the and the client. For IPXCP, Remote Office uses CIPX compression. For IPCP, Remote Office uses VJ compression.
	Load VJ Compression: If you plan to use VJ compression, load it by selecting Remote Office Load Options from the Setup menu. Select VJ Compression on the displayed screen.

Item	Description
Login to network after connection	This option appears for NetWare users only. If selected, a NetWare login occurs after you connect successfully to an access server. The login process prompts you to enter a server name, your login name, your password, and the option of processing NetWare login scripts.

Network Control Protocol Options

Options You Set

You can set the following network control protocol options on the Network Control Protocols Options screen:

Item	Description
IPX network address	If necessary, you can enter an IPX network address. This field has two parts: the network number and the node address.
	a) The network number portion consists of a four-digit hexadecimal number for the network number portion.
	b) The node address portion consists of a six-digit hexadecimal number for the node address portion.
	Each digit is represented by two characters entered in the prompt. Therefore, you must enter an even number of characters. For example, to set the network number to 12F4, you would enter eight characters, 01020F04.
Internet address	If necessary, you can set an Internet (IP) address. The Internet address consists of 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.), for example, 222.60.56.54.
Domain Name Server Address	Enter the IP address of your domain name server. The IP address consists of 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.), for example, 222.60.56.54.

Using Login Options

Introduction

This section provides information about using the login options, TTY mode and script files.

Using TTY Mode

When you select the TTY Mode option, the Remote Office software enters this mode after it successfully connects to an access server. The characters you type are immediately transmitted over the communications link, and any received characters are immediately displayed.

TTY Actions

The following actions are available in TTY mode:

Action	Description
[Alt] + [E]	Exit TTY mode and resume the Remote Office login process.
[Alt] + [C]	Exit TTY mode and cancel the Remote Office login process.

Using Script Files

You can run script files if you choose to enter TTY mode after connecting to an access server. You can use any text editor to create a script file. A script file contains ASCII commands and data (up to 80 characters for each command line). The characters in a script file are not case sensitive. You need to include at least one space between the command text and the command data.

Save your script file in the same directory where the Remote Office software resides. If the Remote Office software cannot find a specified script file, the login process does not start. After processing the entire script, TTY mode automatically ends and the Remote Office login process resumes.

Script Commands

The following table lists the script commands.

Item	Description
SEND *xxxxxxx*	*xxxxxxx* is the data sent to the access server. A carriage return (hex character 0D) is automatically sent after the data unless the CR_TOGGLE is OFF.
PAUSE *nn*	*nn* is the number of seconds to pause before reading the next script command
PROMPT *xxxxxxxxx*	*xxxxxxxxx* is displayed. Script file processing is suspended until the keyboard sends a carriage return. All characters received from the keyboard are sent to the modem.
MATCH *xxxxxx*	Script file processing is suspended until *xxxxxx* is received from the access server.
PPP	Ends TTY mode immediately. Starts PPP mode and resumes the login process.
HEXSEND *xx*	Converts the hexadecimal string *xx* to binary and sends the number to the access server.
CR_TOGGLE	Prevents a carriage return (hex character 0D) from being appended to the data sent to the DECserver.

Script Example

The following table contains an example of commands you can put in a script file and what they do:

Script Command	Description
MATCH #	Wait for access server to send "#".
SEND ABCDEF	Send the characters to the access server.
MATCH username:	Wait for access server to send "username:"
SEND fred	Append carriage return and send "fred".
MATCH LOCAL>	Wait for access server to send "LOCAL>" prompt.
SEND C PPP	Send the characters to the access server.
PPP	End TTY mode, resume login.

Starting the Application

Procedure

Do the following:

Step	Action
1	If you have Windows running, exit Windows.
2	At the MS-DOS prompt, run ROSTART.BAT by typing ROSTART. This loads the Remote Office and the network operating system software. You see the following screen:

Displayed Settings: If this is the first time you are making a connection, the screen shows the information stored in the HOST phonebook record (the information you supplied during installation). If you previously made a connection, Remote Office stores these settings in a record called LAST_LOGIN. This record appears when you make your next connection.
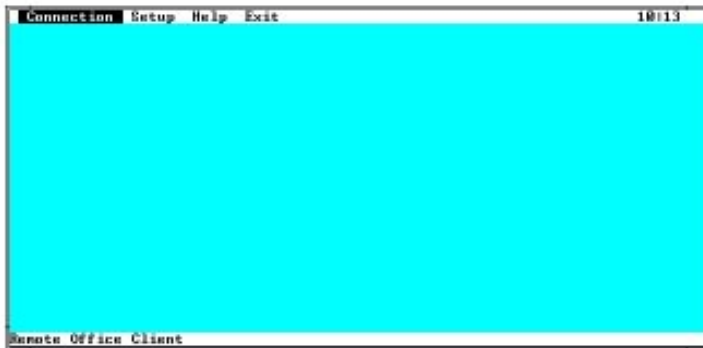
Accessing Online Help: Press [F1] to display online help for the RO screens.

Step	Action
3	Is the displayed Phonebook Name the name of the phonebook record that you want to use? • If yes, type press [Alt] + [O] or click **OK** to dial the access server. • If no, do one of the following: – Press [Alt] + [N] and use the down arrow key to highlight the name of the phonebook record you want to use. Then press [Alt] + [O]. – Change the displayed information. Then press [Alt] + [O].

Alternative Starting Method

If you previously loaded ROSTART.BAT, you can start Remote Office at a later time without running ROSTART.BAT again. Do the following to start a connection at any time without running ROSTART. BAT again:

Step	Action
1	Run RO. You see the following screen:

Step	Action
2	Press [Alt] + [C] to select the **Connection** menu, then press [L] to select **Login to Host**. You see the Login to Host screen.

Adding or Changing Login Information

To store changes in a different phonebook records, use the Setup option on the menu bar.

Do the following to add or change the displayed login settings for the current session (you do not need to change all of the settings):

Step	Action
1	To select a different phonebook record:
	a) Tab to the **Phonebook Name** box.
	b) Scroll up or down to highlight the name of the phonebook record you want to use.
2	To change the phone number:
	a) Tab to the **Phone Number** box.
	b) Type the new number.
3	To change the user name or password:
	a) Tab to the appropriate box.
	b) Type the correct value.
4	To change the COM port:
	a) Tab to the **Port** box.
	b) Scroll up or down to select the correct COM port.
5	To add or change a callback number that an access server uses to call you:
	a) Tab to the **Callback Number** box.
	b) Enter the number where you are currently located in the **Callback Number** box. Be sure to include any extra digits and commas to pause dialing, if needed.
	DECserver Support: Currently, this option does not work with DECservers.

Step	Action
6	To set a baud rate different than the currently configured baud rate: a) Tab to the **Baud Rate Override** box. b) Scroll up or down to select a new baud rate.
7	To specify a timeout value when Remote Office will automatically disconnect you if there is no activity: a) Tab to the **Inactivity Timeout** box. b) Enter a time-out value. A value of zero means the connection will not time out.
8	To specify TTY mode, press [Alt] + [Y]. To exit TTY mode, press [Alt] + [E].
9	To indicate you want to run a script file after entering TTY mode: a) Tab to the **Script Filename** box. b) Enter the file name.

Next Steps

If you want to set additional options, press [Alt] + [R]. See the Setting Advanced Options and Setting Network Protocol Options sections for details about setting additional options.

If you are finished setting options, press [Alt] + [O] to dial the access server. Remote Office displays the status of the call while dialing and trying to establish a connection.

Setting Advanced Options

Do the following to set the advanced options for the current connection:

Step	Action
1	From the Login to Host screen, press [Alt] + [R] to select **More**. You see the following screen:

Step	Action
2	To specify a connect timeout value:
	a) Tab to the **Connect Timeout** box.
	b) Enter a decimal number. The default is sixty seconds.
3	To specify the number of times Remote Office attempts to reconnect lost connections:
	a) Tab to the **Number of Auto Reconnects** box.
	b) Enter a decimal number. Valid values are 0 through 99, where 0 means Remote Office will not attempt to reconnect lost connections.
4	To select a network control protocol between your PC and the host:
	a) Tab to the network control protocol box.
	b) Scroll up or down to highlight the protocol you want to use. The default value is concurrent IPCP & IPXCP.

Step	Action
5	To select data compression press [Alt] + [S] to toggle compression on or off.

Next Steps

If you want to set network control protocol options, see the Setting Network Control Options section in this chapter.

If you are finished setting options, press [Alt] + [O] to return to the Advanced Options screen. Press [Alt] + [O] to return to the Login to Host screen. Press [Alt] + [O] again to dial the DECserver.

Setting Network Control Protocol Options

Do the following to set the network control protocol options:

Step	Action
1	Press [Alt] + [P] to select Protocol on the Advanced Options screen.
2	If you select IPCP or IPXCP & IPCP as your network protocol in the Advanced Options screen, you can enter an IPX network address (see your system or network administrator to determine if you need to do this).

In the **IPX Network** box, enter the IPX network address. This field has two parts: the network number and the node address. Do the following:

a) Enter a four-digit hexadecimal number for the network number portion.

b) Enter a six-digit hexadecimal number for the node address portion.

Two characters entered in the prompt represent each digit in the address. Therefore, you must enter an even number of characters. For example, to set the network number to 12F4, you enter eight characters, 01020F04.

Step	Action
3	If you select IPXCP o r IPXCP & IPCP as your network protocol on the Advanced Options screen, you can enter an Internet address (see your system or network administrator to determine if you need to do this). In the **Internet Address** box, enter 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.), for example, 222.60.56.54.
4	Select the **Domain Name Server Address** box and enter 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.), for example, 222.60.56.54.

Next Steps

After you finish setting all of the connection settings, you can connect to the access server. Press [Alt] + [O] to return to the Login to Host screen. Press [Alt] + [O] again to dial the access server's telephone number.

After Making a Connection

Login Status Display

When Remote Office starts to dial your access server, it displays
messages while attempting to make the connection. Refer to the
troubleshooting section in Chapter 6 for descriptions of these messages.

After Successful Connection

Once you successfully complete a connection, click OK or press [Enter] to
close the Remote Office screen. You can then proceed as you normally
would on the network.

- If you are still in the RO utility, exit by choosing the Exit menu
  ([Alt] + [X]), then press [Enter].

- Use your standard login procedure to login to servers on the
  network. You can start your applications and proceed as you
  normally would on the network.

Connecting to Remote File and Print Services

If you installed NetRider with OnNet TCP/IP as your LAN operating
system, use the USE utility to connect to and disconnect from your
remote file and print services. The USE command has the following
syntax:

To Connect to Remote Services:	To Disconnect From Remote Services
USE *drive*:*path*	USE/D *drive:*

Path Formats

The format of the path is different depending on the type of Network Operating System the server to which you want to connect uses. The following table lists the different path formats:

For This Network Operating System:	Use This Path Format:
IP file and print servers	\\server\service
InfoServer	[\\server\] service
LAD	[\\server\] service
LAN Manager	\\server\service
NetWare	server\volume:directory

Examples

- If you want to use drive L: to connect to a file service named MYAPPS on a PATHWORKS server called MYSERV, you use the following USE command:

  ```
  C:> USE L:\\MYSERV\MYAPPS
  ```

- To disconnect from this drive, you type:

  ```
  C:> USE/D L:
  ```

Disconnecting From a Remote LAN

Logging Off (Command Line)

Run the following command at the MS-DOS prompt:

```
RO LOGOUT
```

UNLOAD.BAT File

You can invoke a file called UNLOAD.BAT from the MS-DOS prompt to unload your LAN operating system and Remote Office from memory. The unload function also performs a Remote Office logout.

Logging Off (RO Utility)

Do the following:

Step	Action
1	Run RO.
2	When you see the RO screen, press [Alt] + [C] to select the **Connection** menu.
3	Press [O] to select **Logout from Host**.

Exiting Remote Office

Do the following to exit the RO utility.

Step	Action
1	Choose the **Exit** menu.
2	Press [Enter] or continue pressing the [Esc] key until you exit the program.

Chapter **3**

Maintaining Your Phonebook

Overview

In This Chapter

This chapter contains the following information:

- Creating phonebook records

- Changing phonebook records

- Deleting phonebook records

Creating Phonebook Records

Introduction

The Remote Office phonebook record is an easy way to keep a list of numbers you want to call and connection settings. The information you provide during installation becomes the first phonebook record, and is named HOST in the phonebook.

To create a new phonebook record, you:

Step	Action
1	Open the phonebook window.
2	Add login information.
3	Set advanced options, if necessary.
4	Set network control protocol options, if necessary.
5	Save the new phonebook record.

The following sections describe each step in detail.

Connection Setting Descriptions

Chapter 2 contains detailed descriptions of all of the connection settings that you store in phonebook records.

Opening a New Phonebook Record

Do the following to open a new phonebook record.

Step	Action
1	Run RO. You see the following screen:
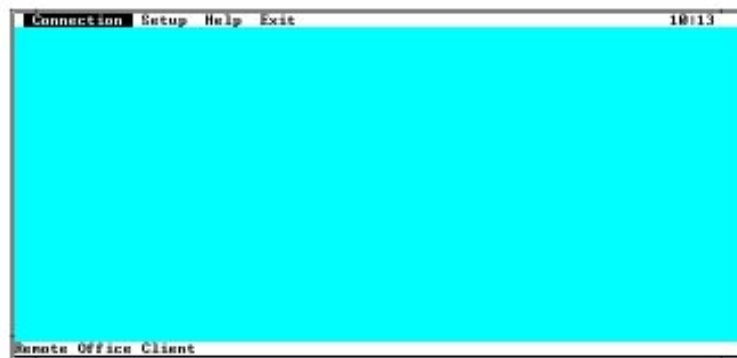
2	Press [Alt] + [S] to show the **Setup** menu.
3	Press [A] to **Add Phonebook Records.** You see the Add Phonebook Record screen.

This screen looks very similar to the Login to Host screen. The difference is that this screen saves a permanent record of connection settings.

Adding Login Information

Do the following to add new login information.

Step	Action
1	In the **Phonebook Name** box, enter a name for the phonebook record. You can enter any name; it does not have to match any names at the access server.
2	In the **Phone Number** box, enter the phone number for the access server to which you plan to connect. Remember to include: – 9 or other digit to access outside lines from your location – 1 plus area code, if long distance – Any other applicable digits, such as calling card digits **Note:** Place a comma (,) in the number to tell the system to pause while dialing. Refer to Appendix A for specific modem settings.
3	In the **User Name** box, enter your user name as it is configured in the access server to which you plan to connect. This can be case sensitive; check with your system or network administrator
4	In the **Password** box, enter the password as it is configured in the access server to which you plan to connect. This can be case sensitive; check with your system or network administrator. Each character you enter as an asterisk (*). Enter * in this box if you want Remote Office to prompt you for a password at login time. **Note:** Some access servers do not require or support the Username and Password options.
5	If you want to specify a callback number (a number for the access server to call back to the client), enter the number where you expect to be located in the **Callback Number** box. Include any extra digits and commas to pause dialing, if needed. This feature does not currently work with DECservers.

Step	Action
6	If you want to use a baud rate other than the baud rate configured for your COM port when dialing this host, enter the desired baud rate in the **Baud Rate Override** box.
7	If you want to disconnect automatically after the connection is inactive for a period of time, enter the timeout value in the **Inactivity Timeout** box. A value of zero means the connection will not time out.
8	If you want your PC to enter TTY mode upon logging in, press [Alt] + [Y]. To exit TTY mode, press [Alt] + [E]. In TTY mode, your PC acts as a teletype terminal emulator so you can manually respond to any security prompting devices that may be attached to your dial-in network. In TTY mode, the characters you type are immediately transmitted over the communications link, and any received characters are immediately displayed.
9	If desired, specify a script file to be read during login. The script file is read once the login phase enters TTY mode. If you want to execute a communication script file, enter the filename in the **Script Filename** box. **For More Information:** See the Using Login Options section in Chapter 2.

Next Steps

Set advanced options, if needed, or save the record. See the Setting Advanced Options or the Saving Phonebook Records section in this chapter.

Setting Advanced Options

Do the following to set the advanced options.

Step	Action
1	Press [Alt] + [R] to select **More** on the Phonebook Record screen. You see the following screen:

Step	Action
2	Tab to the **Connect Timeout** box and enter a number. **Default:** 60 seconds.
3	Tab to the **Number of Auto Reconnects** box and enter a number. Valid values are 0 through 99, where 0 means Remote Office will not attempt to reconnect lost connections.
4	Press [Alt] + [S] to toggle compression on or off.
5	Tab to the **Network Control Protocol** box and scroll up or down to highlight the protocol you want to use. The default value is concurrent IPCP and IPXCP.

Next Steps

Set the Network Control Protocol options, if needed. If you are finished adding information to the phonebook record, save it. See the Setting Network Control Protocol Options or Saving Phonebook Records section in this chapter.

Setting Network Control Protocol Options

Do the following to set the Network Control Protocol options.

Step	Action
1	Press [Alt] + [P] in the Advanced Options screen.
2	If you select IPXCP or IPXCP & IPCP as the Network Control Protocol, you can specify an **IPX Network Address**. This field has two parts: the network number and the node address. Do the following:

    a) Tab to the **IPX Network** box and enter a four-digit hexadecimal number for the network number portion.

    b) Enter a six-digit hexadecimal number for the node address portion.

Each digit is represented by two characters entered in the prompt. Therefore, you must enter an even number of characters. For example, to set the network number to 12F4, you enter eight characters, 01020F04.

Step	Action
3	If you select IPCP or IPXCP & IPCP as the Network Control Protocol, you can specify an **Internet Address**. Do the following:

    a) Tab to the **Internet Address** box

    b) Enter 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.), for example, 222.60.56.54.

Step	Action
4	If you select IPCP or IPXCP & IPCP as the Network Control Protocol, you can specify a Domain Name Server IP address. Do the following: a) Tab to the **Domain Name Server Address** box b) Enter 4 groups of numbers, each between 0 and 255. Separate the groups with decimal points (.).
5	When finished setting options, press [Alt] + [O].

Next Steps

After setting all the options, you need to save the new phonebook record. See the Saving Phonebook Records section in this chapter.

Saving the Phonebook Record

Do the following when you are finished adding information to your phonebook record.

Step	Action
1	Press [Alt] + [A] to add the new phonebook record.
2	Press [Alt] + [X] to exit the Add Phonebook Records screen.

Changing and Deleting Phonebook Records

Displaying Phonebook Records

To display listings of existing phonebook records using a command line, enter the following at the MS-DOS prompt:

`RO PHONEBOOKSHOW`

You can also display listings using the Modify Phonebook Records screen. See Step 3 in the Change Procedure section.

Change Procedure

Do the following to change an existing phonebook record:

Step	Action
1	Change to the ROF directory (or the directory where you installed Remote Office).
2	Run RO.
3	When you see the RO screen, do the following: a) Press [Alt] + [S] to show the **Setup** menu b) Press [M] to modify the phonebook records. You see a screen very similar to the **Add Phonebook Records** screen. Use the up or down arrow to scroll through the Phonebook Name listings.
4	Modify parameters in this screen the same way you used the **Add Phonebook Records** screen (see the Creating Phonebook Records section in this chapter).
5	Press [Alt] + [M] to modify the record.
6	Press [Alt] + [E] to exit this screen.

Deleting Phonebook Records

Do the following to delete an existing phonebook record:

Step	Action
1	Change to the ROF directory (or the directory where you installed Remote Office).
2	Run RO.
3	When you see the RO screen, do the following: a) Press [Alt] + [S] to show the **Setup** menu. b) Press [D] to delete phonebook records. You see a screen very similar to the Add Phonebook Records screen.
4	Press [Alt] + [D] to delete the record.
5	Press [Alt] + [E] to exit this screen.

Chapter 4

Using Remote Office Options

Overview

In This Chapter

This chapter describes the following information:

- Load options

- Setup options

- Port status option

Load Options

Introduction

The Remote Office Load Options screen allows you to specify parameters that load when you start Remote Office.

Opening the Load Options Screen

To select Load Options, press [Alt] + [S] to select the **Setup** menu and then select **Remote Office Load Options**. You see the following screen:

```
 Connection    Setup    Help    Exit                              00:36

              ┌──────────────── Remote Office Load Options ─────────────┐
              │ Default User Name     CKerns                            │
              │ Node Address          026F6F5CEB53                      │
              │ [ x ]  Load Remote Office in the Upper Memory Blocks    │
              │ [   ]  Load MD5 Encryption Algorithm                    │
              │ [   ]  Load VJ Compression Algorithm                    │
              │ Default Network Control Protocol                        │
              │  ┌──────────────────────┐                              │
              │  │ IPXCP                 │                              │
              │  │ IPCP                  │                              │
              │  │ IPXCP & IPCP          │                              │
              │  └──────────────────────┘                              │
              │                                                         │
              │      [ Ok ]      [ Cancel ]       [ Protocol ]          │
              └─────────────────────────────────────────────────────────┘

 Remote Office Client                                          F1  [Help]
```
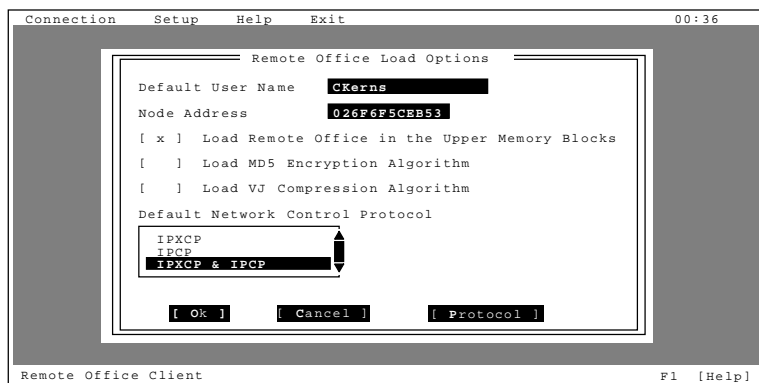
Specifying Load Options

The following table list the options you can specify and how to specify them:

Option	How To Specify	Description
Default user name	Do the following: 1. Enter the name you want to use for your default user name in the **Default User Name** box. 2. Click **OK** or press [Enter] to continue	Remote Office uses the default user name to automatically fill in your user name each time you define a new phonebook listing. If no phonebook records exist, Remote Office supplies this user name each time you log into an access server.
Default node address	Do the following: 1. Press [Alt] + [S] to select **Setup**. 2. Select **Remote Office Load Options**. 3. Tab to the **Ethernet Address** box and enter the desired address.	Remote Office randomly assigns a network address to your PC when you install the software. This gives your remote PC a unique node address on the network.

Option	How To Specify	Description
Loading Remote Office in upper memory	Do the following: 1. Press [Alt] + [S] to select **Setup**. 2. Select **Remote Office Load Options.** 3. Press [Alt] + [A] to toggle the X on or off next to Allow Remote Office to load into Upper Memory Blocks. 4. Click **OK** or press [Enter] to continue.	ROFFICE.EXE normally tries to load into upper memory block if possible. You can turn this option off, if desired.
Loading the MD5 Encryption algorithm (CHAP)	Do the following: 1. Press [Alt] + [S] to select **Setup**. 2. Select **Remote Office Load Options.** 3. Press [Alt] + [M] to toggle the X on or off next to Load MD5 Encryption Algorithm. 4. Click **OK** or press [Enter] to continue.	Some remote hosts require MD5 encryption during the authentication (CHAP) phase of a connection; see your system or network administrator. **Note:** This algorithm requires 8K of conventional memory.

Option	How To Specify	Description
Loading the VJ Compression algorithm	Do the following: 1. Press [Alt] + [S] to select **Setup**. 2. Select **Remote Office Load Options.** 3. Press [Alt] + [V] to toggle the X on or off next to Load VJ Compression Algorithm. 4. Click **OK** or press [Enter] to continue.	Some remote hosts use VJ compression; see your system or network administrator.

Option	How To Specify	Description
Default network control protocol	Do the following: 1. Press [Alt] + [F] to select Default Network Control Protocol. 2. Select the desired default protocol. 3. Press [Alt] + [P] to add the following protocol-specific information: • If you select IPCP or IPXCP & IPCP as the Network Control Protocol, you can enter the network number and the node address of an IPX Network Address. • If you select IPCP or IPXCP & IPCP as the Network Control Protocol, you can specify an IP address • If you select IPCP or IPXCP & IPCP as the Network Control Protocol, you can specify a domain name server IP address 4. Click **OK** or press [Enter] to continue.	The default network control protocol is IPXCP & IPCP.

Setup Options

Introduction

Use the Setup options to:

- Change the modem you use for dialing in to an access server.

- Change the port you use for dialing in to an access server.

- Modify the baud rate, initialization strings, answer, dial, or hang up strings for your modem.

Configuring a Port or Modem

Do the following to configure a port or select a modem:

Step	Action
1	Press [Alt] + [S] to select the **Setup** menu.
2	Select **Ports and Modems**. You see the following screen:
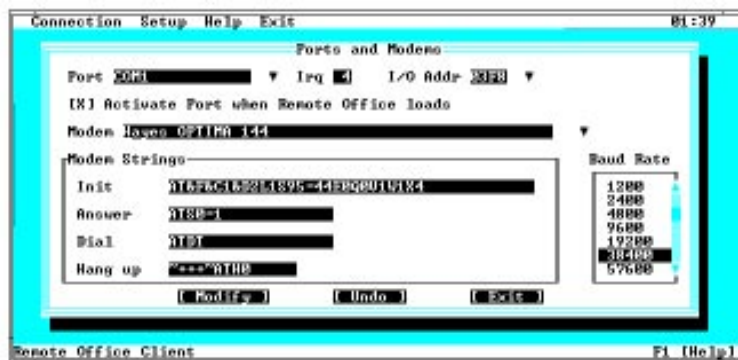
3	Use the up or down arrow to select the port you want to configure.

Step	Action
4	Make sure the IRQ and I/O Port settings match the settings for the port on your PC. You should rarely have a need to change these settings. However, if there is a conflict, change these settings as necessary. Do the following:
	a) Tab to the **IRQ** box and enter the correct IRQ setting.
	b) Tab to the **I/O Addr** box. Scroll up or down to select the I/O address you want to use.
5	Press [Alt] + [T] to toggle the X on or off to activate this port when you load Remote Office. If this setting is toggled off, you cannot use this port when you use Remote Office to dial into an access server.
6	Select your modem in the **Modem** box. If necessary, use the up or down arrow to scroll through the list of available modems.
7	To change the **Initialization**, **Answer**, **Dial**, or **Hang up** strings, tab to the appropriate box and enter a new setting. Check your modem manual for the appropriate settings.
8	Select the baud rate in the **Baud Rate** box.
9	Press [Alt] + [M] to modify the settings.
10	Press [Alt] + [X] to exit this box.

Setting a Default Control Directory

Remote Office maintains your Phonebook, Port Settings, Defaults, and Modem information in a subdirectory of your Remote Office directory called CONTROL. The purpose of this selection is to allow remote administration of control information on peer to peer networks.

Do the following to change this directory:

Step	Action
1	Press [Alt] + [S] to choose the **Setup** menu.
2	Select **Remote Office Control Directory**. You see the following screen:

| 3 | Type the name of the directory where you want Remote Office to store system information. |
| 4 | Click **OK** or press [Enter] to continue. |

Port Status Option

Introduction

The Port Status option allows you to view communication status information, such as the number of packets sent and received, and the number of errors.

Checking Port Status

Do the following to view port status information:

Step	Action
1	Press [Alt] + [C] to select the **Connection** menu.
2	Select **Port Status**. You see the following screen:

3	To update this information while you are viewing, press [Alt] + [U] to select **Update**.
4	To reset these statistics to zero, press [Alt] + [L] to select **Clear Tallies**.
5	Click **OK** or press [Enter] to continue.

Port State Indicators

The top portion of the Port Status window displays the following information:

Field	Meaning
Port State	The current link level communication state of the port.
Baud Rate	The current speed between this computer and the modem in bits per second.

Receive Tallies

The **Receive** box in the Port Status screen reflects the status of input the client has received from the serial port. It displays the following information.

Field	Meaning
Frames	The number of packets which were sent from the access server to the client.
Characters	The number of characters which were sent from the access server to the client.
Frame Errors	If not zero this indicates some sort of hardware problem with your serial port.
Drops	This indicates the number of times characters were received from the serial port but were dropped because they were not part of a recognizable Remote Office frame.

Field	Meaning
FCS Failures	This indicates the number of frames that were received with a frame check sequence that did not match the expected value. An FCS error indicates that a character was lost in the interface between the modem and the client computer. A packet with an FCS error is dropped. An excessive number of FCS errors (greater than one percent) may indicate a need to lower the baud rate between your computer and modem.
Overruns	This occurs when a character is received before the last character received has been processed. If you experience high numbers of overruns, make sure VROF is loaded. You may also need to lower the baud rate.

Transmit Tallies

The **Transmit** box in the Port Status screen displays the status of output the client has transmitted to the serial port. It shows the following information:

Attribute	Meaning
Frames	The number of packets which were sent from the client to the access server.
Characters	The number of characters sent to the access server.
TimeOuts	The number of times that Remote Office did not detect an expected transmit interrupt from the serial port. An excessive number of timeout errors (greater than one percent) may indicate that you should lower the baud rate between your computer and the modem.

Buffers

Remote Office uses two types of buffers: large and small. A large buffer is capable of holding a single packet. Small buffers are used to optimize memory usage.

The **Buffers** box displays status for both large and small buffers. It shows the following (if Remote Office encounters a no buffers condition, the number of occurrences is displayed under the "nobuffs" header):

Field	Meaning
In Use	The number of buffers in use.
Free	The number of buffers available.
Peak	The number of buffers used during peak usage.

Changing Number of Large Buffers

If the buffer peak meets or exceeds the total available, and/or a "no buffers" condition has occurred, and you experience problems, then you may need to increase the number of large buffers. To change the number of buffers, use the command:

```
RO CFGCHANG BUFFERS=nn
```

Each buffer uses 1568 bytes of memory.

Changing Number of Small Buffers

In some LAN environments, the remote host may have to process high volumes of small packets, for example, broadcast packets. If your workstation is short on memory, you may decide that you can safely reduce the number of large buffers and increase the number of small buffers. To change the number of small buffers, use the DOS command:

```
RO CFGCHANGE NUMSBUFFS=nn
```

Buffer RO Command Descriptions

See Chapter 5 for a description of the RO commands.

DSA

DSA (Dynamic Storage Area) is the storage area allocated when the Remote Office client software loads. The **DSA** box in the **Port Status** window displays the following information:

Field	Meaning
Size	The size (in bytes of memory) of the dynamic storage area. Normally the default size is adequate.
Available	The amount of DSA that is still available to be allocated.
	If Value is Close to Zero: If this value falls near zero then the software will be unable to operate. If this happens, you need to set the DSA size using the command:
	RO CFGCHANG DSA=*xxxx*
	xxxx is the number of bytes to allocate for the DSA.

Connection Information

The connection information at the bottom of the Port Status window displays the following information:

Field	Meaning
Caller	The user name that was used in the last login.
# Dialed	The last phone number dialed.

Chapter 5

Command Line Functions

Overview

In This Chapter

This chapter contains the following information:

- ROFFICE commands

- RO command line functions.

ROFFICE Command

Introduction

Remote Office provides the following client PC functions with ROFFICE.EXE for command line use. These commands are only available in MS-DOS; exit Windows before using them.

ROFFICE BUFFERS=*nn*

Allocates memory for Remote Office Buffers. The *nn* variable is the number of buffers to allocate. One buffer holds a single Ethernet packet.

ROFFICE DSA=*nnnn*

Reserves space for dynamic allocation of internal Remote Office data structures. The *nnnn* variable is the number of bytes of memory to reserve.

ROFFICE LOADHIGH=*Y|N*

ROFFICE loads partially into upper memory by default. Specify N to inhibit upper memory loading.

ROFFICE U

Unloads ROFFICE.EXE.

Note

ROFFICE cannot unload if other TSR programs are loaded after ROFFICE.

RO Command Line Functions

Introduction

Remote Office provides the following client PC functions with RO.EXE for command line use. These commands are only available in MS-DOS; exit Windows before using them.

Command Syntax

To run an RO command line, use the following syntax:

```
RO [command] [parameter1=xxx] [parameter2=yyy] ...
```

Command Example:

This command changes the number of buffers used for Remote Office to 15.

```
RO CFGCHANGE BUFFERS=15
```

RO CFGCHANGE

Changes the CONFIG file parameters. Other parameters are available for this function on host systems.

Parameters

The following table describes the parameters for this command.

Parameter	Meaning
BUFFERS=*nn*	Sets the number of buffers to use for communication. Specify 0 to let Remote Office calculate a value. **Default:** 0
DSA=*nnnn*	Sets the size of the dynamic storage area. Specify 0 to let Remote Office calculate a value. **Default:** 0

Parameter	Meaning
EXEGUARD=*Y/N*	Specify whether to load Remote Execution Warning TSR program.
EXESIZE=*nnn*	Warn if executable is greater than *nnn* Kilobytes.
EXEWARN=*Y/N*	Specify whether to display a warning if executable files are run across the link.
IPADDRESS=*nn.nn.nn.nn*	Specify the IP address if NCP=2.
LCPACCM=*nn.nn.nn.nn*	Set desired async character control map field.
NCP=*nn*	Default Network Control Protocol. 1=IPXCP, 2=IPCP, 3=IPXCP and IPCP.
NETWORKNUMBER=*hhhhhhhh*	Specify the network number if NCP=1 or 3.
NUMSBUFFS=*nnn*	Number of small buffers. 0 means let Remote Office calculate.
SIZESBUFFS=*nnnn*	Size of small buffers. 0 means let Remote Office calculate.
NODEADDRESS=*hhhhhhhhhhhh*	Specify a hex node address.
UMB_LOAD=*Y/N*	Specify whether to load Remote Office into upper memory. **Default:** Y
VROF386=*Y/N*	Specify whether to load VROF.386 VxD when running Windows enhanced mode. **Default:** Y

RO CFGSHOW

Display the contents of the CONFIG file. No optional parameters.

RO DIAGNOSTICS

This functions performs PPP diagnostics over a port with an established connection.

Parameters

The following table lists the parameters for this command.

Parameter	Meaning
ECHO=*Y/N*	Specify whether to echo diagnostic packets. **Default:** N
COUNT=*nnnn*	Specify number of times to send frame. 0 means use duration value.
DURATION=*nnn*	Number of seconds to run test. 0 means run until key hit.
INCREMENTAL=*Y*/*N*	Specify whether to do an incremental test from 1 to PACKETSIZE value.
PACKETSIZE=*nnnn*	Specify size of packet. 0 means random. **Default:** 1500
PORTNAME=*aaaa*	Specify the communications port. **Default:** COM1
REPORT=*nnnn*	Specify report interval in seconds. **Default:** 5

RO EXPAND

This function provides a means to expand files from the Remote Office installation disks.

Parameter
Use the following parameter with this command:

RO EXPAND *source-file* [*destination*]

RO FIND

Find and display information about a communication port.

Parameter
Use the following parameter with this command.

CLEAR=*Y*/*N*   Specifies whether to clear port tallies.

　　　　　　　　　　Default: N

RO HELP

Displays detailed Help information.

Tips
The following tips help you use this command:

- Brackets [ ] denote default values.

- PORTNAME=aaaa can shortened to just COMx if it is the first argument to a command.

- Typing RO help *function* provides help on a function.

- RO *function* /? also provides help on a function.

RO LOGIN

Starts a connection and logs in to a Remote Office DECserver.

Parameters

The following table describes the parameters for this command.

Parameter	Meaning
AUTORECONNECT=**nn**	Specifies the number of times to attempt reconnection after connection drops. Values are from 0 to 99. **Default:** 99
BAUD=*nnnnn*	Specifies the baud rate for communication. **Default:** 9600
CALLBACK=*aaaaaaaaaaa*	Specifies a number for the DECserver to call back to the client computer. Number can be up to 47 characters. **Default:** No callback number
CONNECTSECS=*nnn*	Number of seconds to allow for connection to complete. Values 0 to 127. **Default:** 60
DIAL=*aaaaaaaaaaaaaaa*	Specifies the phone number to dial in to the DECserver. Number can be up to 47 characters. See Appendix A for details on long distance or credit card dialing. **Default number:** None (direct connect)

Parameter	Meaning
PASSWORD=*aaaaaaaa*	Specifies the user's login password. To prompt the user for a password at login time, specify "*".
	Default: No password
PHONEBOOK=*aaaa*	Specifies a phonebook record containing the desired phone number and password.
PORTNAME=*aaaa*	Specifies communications port.
	Default: COM1
SCRIPT=*aaaaaaaa.aaa*	Specifies the name of a script file containing SEND and PAUSE commands.
USERNAME=*aaaaaaaaa*	Specifies a username for login.
TTY=*Y/N*	Specifies whether to enter TTY mode at login time.

RO LOGOUT

Ends a connection and logs out from a DECserver.

Parameter

Use the following parameter with this command:

PORTNAME=*aaaa*   Specify the communications port.

Default: COM1

RO PHC

Shorter function name for PHONEBOOKCHANGE.

RO PHONEBOOKCHANG

Changes a record in the FONEBOOK file

Parameters

The following table describes the parameters for this command.

Parameter	Meaning
AUTORECONNECT=*nn*	Specifies the number of times to attempt reconnection after connection drops. Values 0 to 99. **Default:** 0
BAUD=*nnnn*	Changes the baud rate in the phonebook record. 0=keep same.
CALLBACK=*nnnnnnnnn*	Specifies a number for the DECserver to call back to the client PC. Phone number can be up to 47 characters. See Appendix A for long distance and credit card phone number strings.
CONNECTSECS=*nnn*	The number of seconds to allow for connection to complete. Values 0 to 127. **Default:** 60
DIAL=*nnnnnnnnnn*	Specifies the phone number of the DECserver.
IPADDRESS=*nn.nn.nn.nn*	Used only if NCP=2 or 3. Specifies an Internet address.
NAME=*aaaa*	Specifies the name of the DECserver.
NCP=*n*	Specifies the type of Network Control Protocol. Values: 1=IPXCP, 2=IPCP 3=IPXCP & IPCP. **Default:** 3

Parameter	Meaning
PASSWORD=*aaaaaa*	Specifies the password to be used for login. To prompt the user for the password, specify *.
SCDIR=*aaaaaa*	Specifies the Remote Office Control Directory.
	Default: ROF\CONTROL
TTY=*Y/N*	Specifies whether to enter TTY mode after carrier detect.
USERNAME=*aaaaaaaaa*	Specifies the user name for logging in to the DECserver.
	Default: GUEST

RO PHONEBOOKDEL

Deletes a record in the FONEBOOK file.

Parameter

Use the following parameter with this command:

NAME=*aaaa*   Specifies the name in the phonebook record to delete.

RO PHONEBOOKSHOW

Displays records in the FONEBOOK file.

Parameter

Use the following parameter with this command:

NAME=*aaaa*   Optional name of the phonebook record.

RO PORTCHANGE

Changes a record in the PORTS file.

Parameters

The following table describes the parameters for this command.

Parameter	Meaning
ANSWERSTR=*aaaa*	Modem answer string.
BAUD=*nnnnn*	Specifies the baud rate for the port.
BCDTICKS=*nn*	The between command delay in CPU ticks. The range is 1-240.
	Default: 10
	Note: A CPU tick is about 1/18th of a second.
COMMENT=*nnnnnn*	A user-defined comment of up to 23 characters.
CTSTICKS=*nn*	Clear to send timeout in CPU ticks, range: 1-240.
	Default: 10
	Note: A CPU tick is about 1/18th of a second.
DEACTIVATE=*Y*/*N*	Inhibits any port activity.
	Default: Y
DIALSTR=*aaaa*	Modem dial string.
HANGBCDS=*nn*	Delay after hangup in BCDs. The range is 1-240.
	Default: 8
HANGSTR=*aaaaa*	Modem hangup string.
INITSTR=*aaaa*	Modem initialization string.

Parameter	Meaning
IOADDR=*xxxx*	Specifies the I/O address for the port.
IRQ=*xx*	Specifies the IRQ for the port.
MODEMKEY=*nn*	Key value of modem.
POLLEDXMIT=*Y/N*	Specify whether to perform transmits in polled mode.
PORTNAME=*aaaa*	Specifies the port name.
	Default: COM1
SCDIR=*aaaaaa*	Remote Office Control Directory.

RO PORTSHOW

Display records in the PORTS file.

Parameter

Use the following parameter with this command:

PORTNAME=*aaaa*   **Default:** COM1

Chapter **6**

Troubleshooting

Overview

In This Chapter

This chapter contains information about the following:

- Troubleshooting tools

- Operation tips

- Speed-related issues

- Ensuring high throughput

- Messages and common problems

- Technical support

Troubleshooting Tools

Introduction

You can use the RO commands RO FIND and RO SHOW to help in your troubleshooting efforts. To use these commands, you must exit Windows and run the commands from DOS. Appendix A describes the RO commands in detail.

Displaying Port Information

Type `RO FIND COM1` or select **Connections**-**PortStatus** from the RO utility to display port configuration information and port statistics such as tallies on sends and receives, and packet errors. The key tallies include FCS Errors, Drops, and Receive Overruns.

FCS Errors

When a packet is received a two byte integrity check sum is included. This is known as the frame check sequence (FCS). The algorithm used to calculate this FCS is described in the Internet document that defines the point-to-point protocol. If the FCS field in the packet does not match what is expected based on the algorithm then the packet is dropped. An FCS error indicates that an interrupt from the COM port was missed. If you have an excessive number of FCS errors (greater than one per cent), chances are that your CPU cannot keep up with the asynchronous traffic.

To resolve this condition, you may want to decrease the baud rate of your connection, or try a different modem, first on the access server side, then on the client side.

Receive Drops

This indicates that the Remote Office driver which fields the asynchronous interrupts could not recognize a frame out of the data. Each frame starts and ends with the character 7EH. If Remote Office misses the 7EH character, then it drops the data and increments the receive drop tally.

If you have an excessive number of receive drops (greater than 1 percent), it is likely that the CPU cannot keep up with the asynchronous traffic. Try reducing the baud rate.

Receive Overruns

This indicates that the Remote Office module is unable to handle the number of packets being sent from the modem.

This could be caused by a shortage of Remote Office buffers. Check the buffer usage, and increase the number of buffers if peak usage matches the total number available.

Displaying Version, Usage, and Compression Statistics

The RO SHOW command displays the Remote Office software version, buffer usage (including peak usage), and compression statistics.

Buffer Usage

Use the RO SHOW command to monitor buffer usage on both the DECserver and client PCs. If the peak buffer usage approaches the total number of available buffers, it may be necessary to increase the number of available buffers.

Compression Statistics

The compression statistics displayed with the RO SHOW command are an indication of how compressible the data being transmitted is for a given compression algorithm. It is also a good measure of how much traffic is being channeled through the system. This tally shows compression information for all ports, and is a running tally until the PC is reset or the tally is cleared using RO SHOW CL.

Version Information

The RO SHOW command also displays the version of the ROFFICE.EXE module.

Loading ROSTART.BAT Line By Line

You can load ROSTART.BAT line by line to diagnose problems relating to inability to find a network server. By loading the components line by line, you can verify that each component loaded without error, and check to see that proper frame types are in use.

Operation Tips

Running NETX

If you are running NETX, the Remote Office client must be logged into the access server or NETX will not load. Also, be sure to type the `NETX U` command prior to breaking the Remote Office connection. Otherwise, the program may appear to hang the machine.

Displaying Command Line Help

You will find a wealth of command line functionality by entering `RO /?` or `RO /HELP`. The most useful commands are RO FIND and RO SHOW.

About RO Commands

To use the RO commands, you must exit Windows. See Appendix A for details about the RO commands.

Displaying Modem Statistics

You can use the RO TTY function to display interesting modem statistics. For many modems, entering the `RO TTY ATI6` command causes the modem to return statistics about the most recent session. See the user's guide for your modem for other diagnostic functions that can be performed with this function.

Battery Operation

While running some makes of laptop computers and modems on batteries that are not fully charged, the reliability of sustaining a Remote Office session degrades when running at 38,400 baud. If you are having connection trouble, check the battery level or try running with AC power.

Call Waiting

Telephone call waiting features can interfere with your Remote Office connection. You can modify your modem dial strings (or phonebook records) to turn call waiting off by adding *70 to your modem initialization string. You can also modify your modem hang-up string to turn call waiting back on.

Speed-Related Issues

Introduction

Speed is always a key issue. One of the most important things to do when evaluating the speed of the system is to understand the architecture. In many cases, speed comparisons are made relative to the time it takes a certain function to complete in a remote control environment versus the time it takes to complete in a remote node environment.

It is important to realize that the architecture of Remote Office, by design, simply routes packets to a remote PC by means of an asynchronous telephone line. This means that if a client runs a 100K executable file located on the server, 100K of data must be passed across the phone line in order for the program to load. (Compression can significantly reduce the amount of data transferred.) In a remote control environment, only screen and keyboard I/O traverse the asynchronous line, meaning that the same 100K program running in a remote control environment passes substantially less data across the line.

Avoid Running Server-Based Applications

Do NOT plan on running applications from a server across the telephone link. This mode of operation is not recommended because of the slow telephone link speed. Instead, install applications on the client and run them from the client's local disk drive. Use the server to store and retrieve data.

If you experience slowness at login time, do the following:

- Check the scripts that might be executing to see that they do not load applications from the server. If this is the case, you may wish to alter the scripts for remote users to load programs from their local drivers.

- Remove network drives from the search path on the client. This helps to prevent incidental loading of utility programs across the telephone link.

Ensuring High Throughput

Introduction

This section describes steps you can take to ensure the highest degree of throughput.

Investigate Tallies for Possible Errors

Slowness in a link can often be perpetuated by data frame errors. These errors take the form of FCS Errors, Drops, Overruns, and Out of Buffer conditions. If you suspect that the link is running slower than expected, you may want to monitor these error tallies to determine if data packets are encountering problems, resulting in upper layer protocol retransmissions. See the "Troubleshooting Tools" section in this chapter for more information on monitoring these conditions.

Tune the Protocol

Most protocols are not, by default, tuned for slower link speeds. If this is the case with a given LAN operating system, the DECserver can be forced to unnecessarily handle extra packets due to protocol packet retransmits. Check the appropriate LAN OS TXT file supplied with your Installation Disk for details.

Customize Login Scripts

This section lists some scripts designed to avoid the pitfalls of loading executables across the phone link, improving login time. The key is to avoid loading programs from the server's hard disk using unnecessary telephone bandwidth.

Using NetWare script commands, you can effectively alter the script path and exit out before any executables are run from the server. You may also note that server drives are not inserted into the PATH statement on client PCs during the Remote Office installation.

By simply setting an environment variable on the remote PC and checking the value of that variable in the script, you can alter the course of the script. This allows one script (USER or SYSTEM) to be used for local and remote access purposes.

Example

In the following example, we check the environment variable "LOCATION" to see if it is set to "REMOTE." If it is, then we exit out of the script before adding drives to the search path and running executables from the DECserver.

Similar logic can be implemented with other LAN operating system login script routines. We chose NetWare here for example purposes.

```
MAP DISPLAY OFF
MAP ROOT P:=SYS:PUBLIC
MAP M:=SYS:
MAP Q:=SYS:
MAP DISPLAY ON
MAP
IF <LOCATION>="REMOTE" THEN BEGIN
   WRITE "You are logged on Remotely!"
   DRIVE C:
   EXIT
END
write "You are logged on locally!"
MAP INS S1:=SYS:PUBLIC
MAP INS S2:=SYS:PUBLIC\%MACHINE\%OS\%OS_VERSION
#CAPTURE /L=1 /Q=HPLASER
#CAPTURE /L=2 /Q=HPLASER
#WHOAMI
DRIVE C:

** Remote Office Load Sequence

Set LOCATION=REMOTE    (Sets variable location
                             for LOGIN script)
ROFFICE
LSL
ODIROF-E
IPXODI
RO          (Establishes phone link
            with DECserver)
VLM
LOGIN
```

Messages and Common Problems

Introduction

Refer to this section for descriptions of messages or error situations you may encounter while using Remote Office.

8801, 8901: Drive Mapping Could Not Be Completed

Cause

This error may occur in NetWare environments.

User Action

If you are using the VLM client, set your LASTDRIVE statement in CONFIG.SYS to Z for mapping to take place.

Computer Hangs When NetRider is Running

Cause

You may not have sufficient conventional memory available.

User Action

You need 330K or more of free conventional memory. From Windows, open a DOS window and type the following to check the available memory.

```
mem/c/p
```

General Error Reading Network Device ...Abort, Retry, Fail...

Cause

This problem may occur on modem link speeds of 2400 baud. This speed is not fast enough to support most protocols.

User Action

If you are running in a LAN Manager environment, it may be necessary to set a parameter in your LANMAN.INI file to perform large file transfers. To disable raw data transfer SMB, enter the following line in the [WORKSTATIONS] section of the workstation LANMAN.INI file, then restart the workstation:

WRKHEURISTICS=xxxxxxxxxxxxxx1xxxxxxxxxxxxxxxxxx

There are 14 x's, followed by a 1, then 18 x's. The "x" means "use defaults."

Access Server Never Called Back

Cause

Either the access server instructed the client to expect a callback or the user requested a callback and the callback did not occur within the connection timeout interval.

User Action

Check that you specified the correct phone number and retry the connection. DECservers do not currently support the callback feature.

Login Succeeded

Cause

This message indicates the login was successful and the client may now communicate on the LAN served by the access server.

User Action

Proceed as you normally would on the LAN. For example, if you use the File Manager application to connect to a network drive, you can perform this task as usual after making a connection.

No CTS Outputting to Modem

Cause

Remote Office did not detect a Clear to Send message from the modem. This could indicate the modem cable is not connected or the modem is not turned on.

User Action

Check that the correct modem cable is connected and that the modem is on.

Other Side Not Recognizing ROFFICE Packets

Cause

The modems were able to communicate, but the access server either rejected the packets sent by the client or the access server sent back packets the client did not recognize. This message may also occur if the access server port is not active.

User Action

Do one or more of the following:

- Make sure that your modem is configured for hardware flow control.

- Check for FCS errors on the client side in the Port Status screen. If these errors exist, this could mean the line speed between the computer and the modem is too high, especially, when running the modem or a laptop on battery power. You may need to adjust the modem speed to a slower speed.

- Make sure the access server port is ready to receive calls. Check the Modem Ready status for the port you are dialing into on the access server PC. There should be a 1 in the MR status field.

- Check phone line functionality for bad connections, noise on the line, or faulty wiring.

- Check modem cables and applicable hardware to verify all connections.

- If you are working in a PBX environment, try to isolate the phone line from the PBX.

Port is not a UART

Cause

The serial port is not recognized by Remote Office. This could indicate that the IRQ or I/O Address conflicts with another device or was improperly configured in the Ports and Modems Setup screen.

User Action

Make sure you specified the correct COM port in your login settings. If this is the correct COM port, turn off and restart your PC.

Problem Establishing Carrier Between Access Server and Client

Cause

Any of the following:

- The modem initialization string may be improperly set up.

- This error may occur with poor telephone connections or line noise.

- There may be a problem with a modem on either the access server or client side.

User Action

Try the following:

- Reset your modem initialization string. Refer to Appendix B for key modem settings.

- If possible, try a different modem on either side to rule out a hardware problem.

Timeout Waiting for Connect

Cause

A call was made, but either one side did not answer, or the modems were unable to communicate.

User Action

Set a higher timeout value, giving the access server and client more time to complete the connection. See "Setting Advanced Options" in Chapter 2 to set the Connect Timeout value.

Unexpected Error 9 (89FF)

Cause

This occurs in NetWare environments when using the NETX shell and having the LASTDRIVE statement set to Z in CONFIG.SYS.

User Action

NETX requires that the LASTDRIVE statement be set one drive greater than the actual last drive located on the PC. For example, if you have a local C and D drive, set LASTDRIVE to E.

Technical Support

Introduction

When calling technical support, be prepared with answers to the questions listed in this section. This makes it easier for the product support personnel to understand and diagnose your problem promptly.

See your warranty card or contact the person who sold you the NetRider product for technical support telephone numbers.

Before Contacting Product Support

Refer to the Messages and Common Problems section of this chapter to see if you can resolve the problem. Then check the following:

- Make sure all cables are properly connected.

- Make sure all modem(s) are installed properly. Refer to the modem's installation instructions.

- Make sure you are using the right COM port. Make sure your modem cable is connected to the COM port you are checking, or if you are using an internal modem, verify that the IRQ/Port settings are correct.

- Is the port configuration information correct (speed/modem string/port)? Verify that the Ports and Modems settings contain accurate information pertaining to the modem string, download string, and selected serial port. Check your modem guide for specifics on the download string and supported speeds.

- Have you checked online help for field descriptions? If you have questions pertaining to parameter settings, detailed information can be found in the online help throughout the interactive RO utility.

- If you have questions on particular parameters, check your documentation

If you still cannot solve your problem, contact your technical support representative.

Information You Provide

Your technical support representative may ask the following questions, so please be prepared to answer them.

- Computer brand name, CPU type, clock speed and bus type

- Is this a network-related problem or a PC-related problem?

- Modem manufacturer

- Modem Initialization string (Have your modem manual handy)

- DOS version

- Remote Office components software version (accessed from command line by typing `RO SHOW`)

- If you are experiencing a duplicable problem, list the sequence of steps

- Make note of any error or status message that may have appeared on the screen

- Responses to the following RO commands:

    RO FIND

    RO PORT

    RO SHOW

Appendix **A**

Modem Support

Overview

In This Appendix

This appendix contains the following information:

- Dialing with credit cards

- Important modem settings

Dialing With Credit Cards

Introduction

The Phone Number field is 47 characters long. This should be sufficient to handle virtually any credit card dialing string/phone number combination. If you need to provide more characters for a particular dialing string, you can use the DIAL field defined for a particular port to add up to an additional 15 characters.

Characters to Facilitate Dialing

You can use the following characters to facilitate credit card dialing

Character	Meaning
,	Pause approximately 2 seconds
W	Wait for a second dial tone
@	Wait for silence
!	Issue hookflash
$	Wait for calling card prompt tone (check modem manual for availability)

Example

The following is an example of calling card string.

9,05132915936,,,51329150367575

In this example:

- 9, is the outside line followed by a pause of 2 seconds

- 05132915936 is the phone number

- ,,, is a 6 second pause

- 513329250367575 is the credit card number

Important Modem Settings

Most Important Settings

The following table lists the three most important modem settings. Refer to your modem manual to determine the AT command string to achieve these settings.

Setting	Description
Flow Control	Enable RTS/CTS local flow control.
Track Status of CD	Modem tracks the status of the carrier detect signal.
Monitor DTR signal	When an on to off transition of DTR signal occurs, the modem hangs up and enters the command state.

Speeds Greater Than 14.4 KB

If you experience problems establishing a connection at speeds greater than 14.4 KB, try reducing the speed at which the connection is to be made. If this helps, refer to the modem manual to determine if any special modem parameters are needed for higher speeds.

Example AT Command Strings

The following are examples of AT command strings for some of the more commonly used modems. See your modem documentation for the latest command strings.

Parameter	Hayes Ultra 14.1	US Robotics V.32	AT&T Paraydyne 3830
HW Flow Control	&K3*	&H1	\Q2*
Track Status of CD	&C1	&C1	&C1
Monitor DTR	&D2	&D2	&D2
Recall Factory	&F	&F	&F0
Disable Keyboard Echo in Command State	E0	E0	E0
Return Result Codes	Q0*	Q0*	Q0*
Display Result Codes as Words	V1	V1	V1*
Display Extended result codes	X4*	X4	X4*

*Default Settings

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