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LinkPlexer 1.2 Installation and Configuration Guide

NORTEL
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Preface

This document describes how to install and configure the Nortel Networks LinkPlexer 1.1 application.

Before you begin

This guide is designed to be read by the following:

- Nortel Networks customers
- Nortel Networks personnel
- Nortel Networks distributors

This guide assumes familiarity with the following:

- Microsoft Windows NT
- TCP/IP networking concepts such as IP address, subnet mask and port
- CompuCall or ICM on DMS or MSL-100 switches

Text conventions

This guide uses the following text conventions:

- | | |
|--------------------------|---|
| angle brackets (< >) | Indicates that the reader chooses the text to enter based on the description inside the brackets. Do not type the brackets when entering the command.
Example: If the command syntax is <code>ping <ip_address></code> , you enter <code>ping 192.32.10.12</code> |
| bold Courier text | Indicates command names and options and text that you need to enter.
Example: Use the dinfo command.
Example: Enter show ip {alerts routes} . |
| braces ({}) | Indicates required elements in syntax descriptions where there is more than one option. The reader may choose only one of the options. Do not type the braces when entering the command.
Example: If the command syntax is <code>show ip {alerts routes}</code> , you must enter either <code>show ip alerts</code> or <code>show ip routes</code> , but not both. |
| brackets ([]) | Indicates optional elements in syntax descriptions. Do not type the brackets when entering the command.
Example: If the command syntax is <code>show ip interfaces [-alerts]</code> , you can enter either <code>show ip interfaces</code> or <code>show ip interfaces -alerts</code> . |
| ellipsis points (...) | Indicates that the reader repeat the last element of the command as needed.
Example: If the command syntax is <code>ethernet/2/1 [<parameter> <value>]...</code> , you enter <code>ethernet/2/1</code> and as many parameter-value pairs as needed. |
-

<i>italic text</i>	Indicates new terms, book titles, and variables in command syntax descriptions. Where a variable is two or more words, the words are connected by an underscore. Example: If the command syntax is <code>show at <valid_route></code> , <code>valid_route</code> is one variable and you substitute one value for it.
plain Courier text	Indicates command syntax and system output, for example, prompts and system messages. Example: <code>Set Trap Monitor Filters</code>
separator (>)	Shows menu paths. Example: <code>Protocols > IP</code> identifies the IP command on the Protocols menu.
vertical line ()	Separates choices for command keywords and arguments. Enter only one of the choices. Do not type the vertical line when entering the command. Example: If the command syntax is <code>show ip {alerts routes}</code> , you enter either <code>show ip alerts</code> or <code>show ip routes</code> , but not both.

Related publications

For more information about the LinkPlexer 1.1, refer to the following publications (you can find most documents listed in the Customer Support section at www.nortelnetworks.com):

- *Nortel Networks Symposium Call Center Server and DMS Switch Guide*, (part number 911815).
- Nortel Networks Symposium Call Center Server Installation and Configuration guide (part number PO910112).
- ICM TAPI Network Managers Guide (part number PO881940)
- Peri Link Server Installation Guide
- MIS-Q218-1 SCAI Interface Specification
- CompuCall Interface Specifications, refer to <http://triweb/ACD/icm/ICM.html>

Hard-copy technical manuals

You can print selected technical manuals and release notes free, directly from the Internet. Go to the www.nortelnetworks.com/documentation URL. Find the product for which you need documentation. Then locate the specific category and model or version for your hardware or software product. Use Adobe Acrobat Reader to open the manuals and release notes, search for the sections required, and print them on most standard printers. Go to Adobe Systems at the www.adobe.com URL to download a free copy of the Adobe Acrobat Reader.

The selected documentation sets, CDs, and technical publications can be purchased through the Internet at the www1.fatbrain.com/documentation/nortel/ URL.

How to get help

If a service contract for your Nortel Networks product has been purchased from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

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Chapter 1

Overview

This chapter is an overview of the architecture and features of LinkPlexer 1.2. It contains the following sections:

- “LinkPlexer 1.2 Architecture” , next
- “Features” on page 17
- “Benefits” on page 22
- “Considerations & Limitations” on page 23
- “Engineering Guidelines” on page 25

LinkPlexer 1.2 Architecture

LinkPlexer 1.2 is a Windows 2000 application that enables multiple IP clients to share the same session and DMS/MSL-100 resources, by acting as a proxy server between the two. LinkPlexer 1.2 can connect to the switch via IP (ICM) or X.25 (CompuCALL). When LinkPlexer 1.2 acts as an IP capable server it allows applications that can only connect via IP to communicate with a switch that uses an X.25 connection.

LinkPlexer 1.2 allows applications to share DN (Directory Number) association between different eBusiness applications.

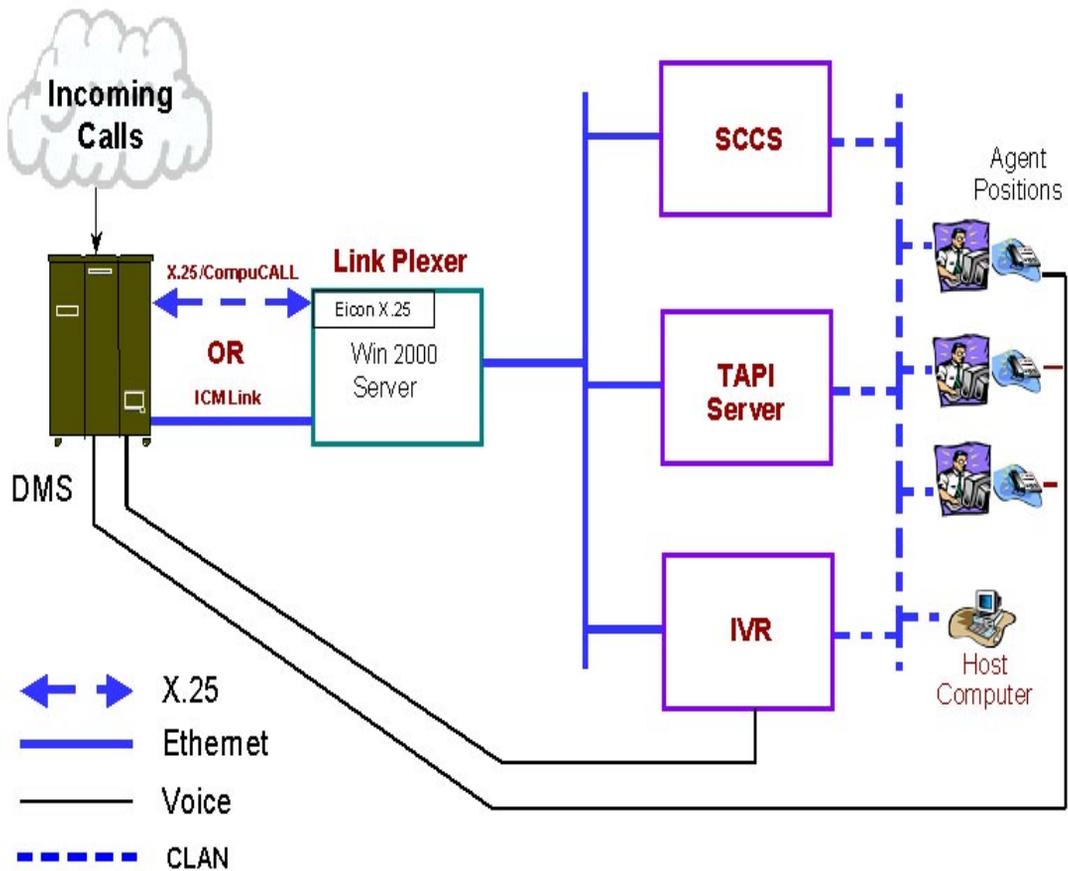
For example:

- Interactive Voice Response (IVR) voice ports controlled by IVR and monitored by Symposium Call Center Server (SCCS)
- A system where, SCCS performs the call routing, the IVR controls the voice response system, and TAPI Symposium Server/Symposium Agent controls softphones and screen pops

- When agent positions are controlled by TAPI Server/Symposium Agent (TAPI) (or desktop CTI) and monitored by SCCS
- In systems where call queues and agent positions monitored by third party applications, such as voice recorders

Figure 1 describes the general architecture of LinkPlexer 1.2.

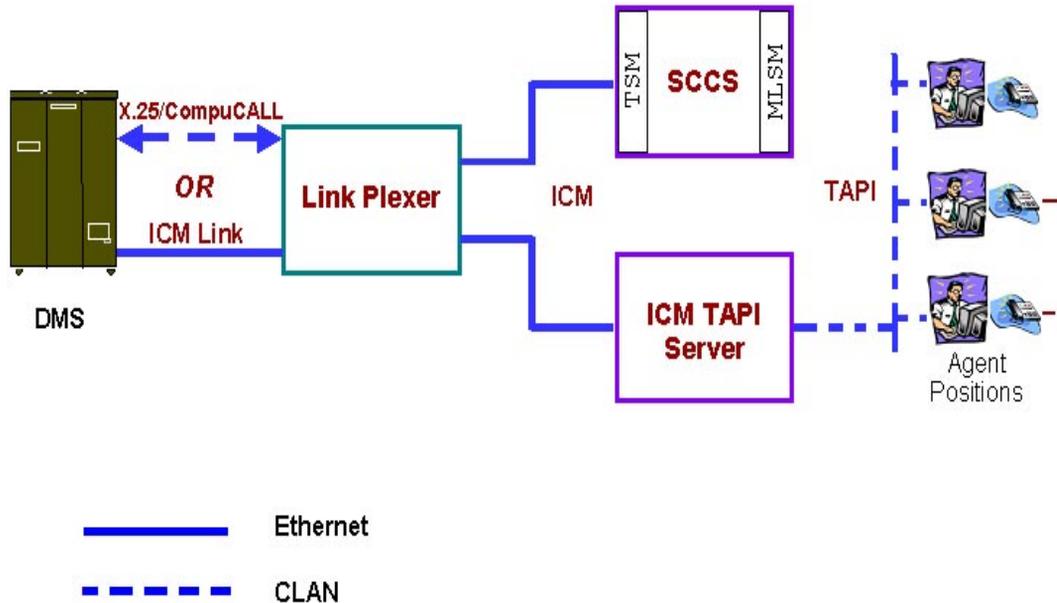
Figure 1 General architecture diagram



In Figure 1 CLAN refers to the Customer LAN; Ethernet refers to the ELAN.

Figure 2 describes the architecture for LinkPlexer 1.2, SCCS and TAPI

Figure 2 LinkPlexer 1.2, SCCS & TAPI



Features

The main features of LinkPlexer 1.2 are described in the following sections:

- “DN association sharing” , next
- “ICM application multiplexing” on page 18
- “Connectivity of ICM client to Compucall” on page 18
- “Messaging” on page 18
- “DN Association Management” on page 19
- “Client connection management” on page 20
- “Generation of dv-Set-Offhook-U on behalf of Softphone” on page 22

DN association sharing

Both CompuCALL and Intelligent Call Management (ICM) limit the association of resources to a single session. Two host applications with simultaneous CompuCALL/ICM application sessions established with a given switch cannot have the same resource associated with the two sessions at the same time.

LinkPlexer 1.2 overcomes this limitation by propagating all resource messages from the DMS/MSL-100 to all clients.

For example:

A dv-call-offered message from the DMS/MSL-100 is propagated to all clients and not just the client that originally issued the dv-dn-association request.

ICM application multiplexing

The DMS/MSL-100 only allows one resource to be associated per link session with the switch. However, LinkPlexer 1.2 acts as a proxy server between multiple ICM applications and a DMS, MSL-100 CompuCALL, or ICM switch link. It enables ICM clients to share, via TCP/IP, the same session and DMS/MSL-100 resources and manages messages to and from the switch.

Connectivity of ICM client to Compucall

LinkPlexer 1.2 supports a single connection to the DMS/MSL-100 switch, either Ethernet TCP/IP or X.25. This connection allows ICM-only applications to access CompuCall-equipped systems. LinkPlexer relays messages to the X.25/ICM link on the switch

Messaging

LinkPlexer 1.2 has three general types of messaging and tracks each message from an application to the DMS/MSL-100. The initial response message is sent only to the sending application. Event messages are broadcast to all connected applications.

To the application communicating with LinkPlexer 1.2 the socket exactly emulates the DMS/MSL-100 ICM interface.

DN Association Management

LinkPlexer 1.2 keeps a track of which DNs and Agent Position IDs are associated with each agent/client (e.g. SCCS, TAPI etc.) connection. This is required to ensure that DNs and Agent Position IDs associated with a particular agent/client connection are not disassociated by a dv-Dn-Associate (delete) being received from another agent/client connection.

LinkPlexer 1.2 will only forward dv-DN-Associate (add) messages to the DMS/MSL-100 when the DN/Agent Position ID is not currently associated by LinkPlexer. If it is already associated LinkPlexer will simply send a RETURN-RESULT message back to the requesting agent/client.

LinkPlexer 1.2 will only forward dv-DN-Associate (delete) messages to the DMS/MSL-100 when the requesting agent/client is the last agent/client referencing the DN/Agent Position ID. If another agent/client is currently referencing the DN Agent Position ID a RETURN-RESULT is sent back to the requesting agent/client without forwarding the message to the DMS/MSL-100.

When the last client application disconnects, LinkPlexer 1.2 will drop and re-establish the connection to the DMS/MSL-100. This will guarantee synchronisation between the device list maintained by LinkPlexer 1.2 and the devices acquired on the DMS/MSL-100 link.

Known Limitations

The DMS/MSL-100 resources must be configured to ensure uniqueness between DNs and agent positions ids. The operation of DN Association Management will not be guaranteed for those DN and Agent positions that are not guaranteed unique. The define operation of the dv-DN-Association will not be supported. Where the operation is used LinkPlexer 1.2 will not guarantee DN Association Management. Neither SCCS nor ICM TAPI utilise the define operation.

The management of CDN state (DEFAULT, CONTROLLED, REVERT TO DEFAULT) is outside the scope of DN Association Management, i.e. all dv-set-CDN-state messages are passed to the DMS/MSL-100 without being processed. This implies that LinkPlexer 1.2 may permit an application to take control of a CDN that is controlled by another client.

Session Management

Session Management is carried out by LinkPlexer 1.2 and operates as follows:

- On LinkPlexer 1.2 service startup a connection is established with the switch and a login session is started (by sending a dv-Appl-Logon message).
- When the last agent/client disconnects from LinkPlexer 1.2, the link between LinkPlexer 1.2 and the switch is also disconnected. After a short period (less than 10 seconds) LinkPlexer 1.2 will re-establish the connection to the connection to the switch and restart the login session (by sending a dv-Appl-Logon message).

Client connection management

LinkPlexer 1.2 manages all client connections. A client connection is any successful socket connection to LinkPlexer 1.2. Each connection uses one client license. The number of client connections is limited, by the keycode, to 150.

LinkPlexer 1.2 maintains the integrity of the connection between the LinkPlexer 1.2 server and each connected client. This allows LinkPlexer 1.2 to:

- Free the client license when a client disconnects

The client connection integrity is maintained at the ICMP level and the application level. These are described in the following sections:

- “ICMP connectivity checking” , next
- “Application-level connectivity checking” on page 21

ICMP connectivity checking

To enable ICMP connectivity checking, set the parameters in the DMSGlobal.ini files to the following values:

- `<AgentPingTest=ON>`
This setting turns on ICM connectivity checking. The default value is OFF.
- `<AgentPingInterval=120>`
This specifies a 120 second time period between checks. The default value is 120 seconds.

If specific values are not set for these parameters, LinkPlexer 1.2 uses the default values.

Application-level connectivity checking

To enable application-level connectivity checking, set the `AgentContinuityTest` parameter in `DMSGlobal.ini` file to the following value:

- `AgentContinuityTest=ON`

With this parameter turned on, LinkPlexer:

- Forwards the message to the Session Manager (Internal or External)
- Forwards the message to all connected LinkPlexer agents
- On receipt of a timely reply from the Session Manager, a positive acknowledgement (RETURN-RESULT) is sent to the DMS.
- Any agents that don't respond to the message in a timely fashion are disconnected and the agent licence becomes available.
- If the session Manager doesn't respond the Session Manager Connection, the DMS Connection and connections to all active agents are disconnected.

If specific values are not set for these parameters, LinkPlexer 1.2 uses the default value i.e.:

- `AgentContinuityTest = OFF`

With this parameter set to OFF, LinkPlexer:

- Forwards the message to the Session Manager (Internal or External)
- On receipt of a timely reply form the Session Manager, a positive acknowledgement (RETURN-RESULT) is sent to the DMS

- If the session Manager doesn't respond the Session Manager Connection, the DMS Connection and connections to all active agents are disconnected.

Generation of dv-Set-Offhook-U on behalf of Softphone

LinkPlexer 1.2 enables multiple applications to monitor and control devices on a single link. In the direct-connect to the DMS/MSL-100 scenario (no LinkPlexer 1.2) the application always has knowledge of the operations being performed on a device since the application is responsible for instructing the DMS/MSL-100 to perform the operation. With LinkPlexer 1.2, an application can initiate an operation on a device that negatively impacts another application on the link.

While this is a rare scenario, an instance has been identified when using TAPI enabled softphone. When a physical phone-set is used to make the outbound call a dv-set-offhook-U message is sent by the DMS/MSL-100 at the time the physical phone goes off-hook. However, when TAPI is used to make the outbound call no dv-set-offhook-U message is generated.

The off-hook message is used by SCCS to update the real-time display. The lack of data on the real-time display means that call centre supervisors have insufficient information on an agent to differentiate agents who are Not Ready from agents who are an outbound calls.

LinkPlexer 1.2 has implemented a feature whereby it generate a dv-set-offhook-U message when it receives a the RETURN-RESULT reply from the dv-make-call request. The message is sent all connected applications. Refer to "Appendix F: Softphone Message Sequence Chart" on page 125 for the relevant Message Sequence Chart.

Benefits

The main benefits of LinkPlexer 1.1 are described in the following sections:

- "Migration" , next
 - "Connectivity" on page 23
 - "Compatibility" on page 23
-

Migration

LinkPlexer 1.1 facilitates the introduction of Nortel applications (such as SCCS) into existing customer CompuCall or ICM-based networks without the need to displace the existing applications. LinkPlexer 1.1 architecture is componentized architecture, rather than a monolithic model with SCCS as the focal point.

Connectivity

LinkPlexer 1.1 provides conversion of ICM to X.25 and vice-versa allowing ICM-only applications to be used with existing CompuCall links.

Compatibility

LinkPlexer performs no protocol conversion. Applications conforming to the NIS Q218 CompuCALL/Meridian SCAI Interface Specification should work in a Linkplexer integrated environment.

Considerations & Limitations

- “Co-residency” , next
- “Application Considerations” on page 24
- “Limitations” on page 25

Co-residency

The following table illustrates the co-residency support for LinkPlexer 1.2 on the supported Windows operating systems.

Table 1 Co-Residency support for LinkPlexer 1.2

	Symposium Agent 2.3	ICM TAPI Driver 1.0	SCCS 3.0/SCCS 4.0	PERI ICM 2.04
Windows NT Server 4.0	NO	YES	NO	NO
Window 2000 Server	NO	NO	NO	NO

Nortel Networks recommends that LinkPlexer 1.2 be installed on a separate server due to the following reasons:

- Reliability: with LinkPlexer 1.2 running on a separate server you can make changes to co-resident applications without affecting the status of their link to the switch - this allows call centre activity to continue for other applications in the solution.
- Trouble Shooting: with LinkPlexer 1.2 running on a separate server, diagnosis of issues would be limited to LinkPlexer and other applications conflicting with the operations of LinkPlexer software would not have to be eliminated.

Refer to “Startup Procedures for Nortel Networks Call Centre Equipment” on page 102, for pertinent startup information.



Note: LinkPlexer 1.2 and LinkPlexer 1.1 co-residency is supported. However, some changes are necessary on LinkPlexer 1.2, so refer to “Upgrade Procedure for LinkPlexer 1.1 to LinkPlexer 1.2” on page 99

Application Considerations

Associated LinkPlexer 1.2 applications must cooperate in controlling common resources

- A ‘race’ condition will result if two applications attempt to change the state of the same device at the same time
- One application should control the device, others monitor events only

The applications must also be tolerant of receiving events related to resources that the application had not previously been associated with

- The impact of receiving these unexpected events can only be determined through testing the application in a LinkPlexer 1.2 environment
 - Applications may still get events on devices they have disassociated
 - Applications that disassociate resources may also affect other applications using those resources
 - Applications will receive messages about resources that they are not monitoring, but other applications are monitoring.
-

Limitations

LinkPlexer 1.2 has the following known limitations:

- X.25 Bandwidth
 - EMPC interface limited to 19,200bps
- 512 Invoke IDs
 - Invoke Ids are shared between applications
 - Maximum of 512 invoke Ids in either direction
 - Can run out of invoke IDs if switch latency is long
- Remote Alarm Monitoring is not supported

Engineering Guidelines

Nortel Networks does not recommend connecting more than 10 applications to LinkPlexer 1.2

For information on ICM Guidelines refer to <http://triweb/ACD/icm/ICM.html>

Chapter 2

Pre- Installation Requirements & Procedures

This chapter contains the following sections:

- “System Requirements” , next
- “Pre-installation procedures” on page 29

System Requirements

A LinkPlexer 1.1 system consists of a PC running MS Windows 2000 Server operating system. The system is connected to a DMS/MSL-100 switch. System requirements are described in the following sections:

- “Minimum server requirements” , next
- “TCP/IP requirements” on page 28
- “X.25 requirements” on page 28
- “Other considerations” on page 29



Note: Refer to the Microsoft Hardware Compatibility list (<http://www.microsoft.com/hcl/default.asp>) to ensure hardware and Operating System compatibility. Refer to the hardware manufacturers web site to ensure that the operating system is supported by them.

Minimum server requirements

The following are the minimum server requirements:

- Pentium III - 933MHz
- MS Windows 2000

- 128 MB RAM
- 18 GB storage
- Security dongle and keycode
- Parallel port for dongle
- LinkPlexer supports two NIC cards. Two NIC cards are required if LinkPlexer is co-resident with the ICM TAPI Driver.
- If X.25 (CompuCall) is being used, the following requirements are necessary:
 - Two comm ports (only one is required for ICM)
 - Eicon card
 - Motorola V.3600 modem



Note: LinkPlexer 1.2 will be supported on Windows 2000 Server operating system with the service pack number indicated in the readme file.

Note: LinkPlexer 1.2 will be supported on Windows NT 4.0 Service Pack 6a so as to enable an upgrade without having to change operating systems.

Note: LinkPlexer 1.1 is a software only product and Nortel Networks is not responsible for replacing hardware components..

TCP/IP requirements

To connect to DMS/MSL-100 via TCP/IP the minimum requirements are:

- An EIU on the DMS/MSL-100 switch
- A 10Mb or 10/100 Mb ethernet card on the LinkPlexer 1.1 server

X.25 requirements

To connect via X.25 the minimum requirements are:

- An EMPC/MOC or IOM card on the DMS/MSL-100 switch
 - An EICON C20 or C90 card on the LinkPlexer 1.1 server
 - A pair of Motorola V.3600 stand alone modems
-

Other considerations

The minimum switch requirements are:

- MSL-100: MSL-09 or later
- DMS-100: CCM10 (MMP10) or later

Administrator rights on the Local Server are required for LinkPlexer Installation.

Nortel Networks recommends the following:

- PC Anywhere V10.5 on systems which require remote administration.
- UPS backup power supply

Pre-installation procedures

LinkPlexer 1.2 requires the following pre-installation procedures:

- TCP/IP must be configured and working prior to beginning the LinkPlexer installation. See the system administrator's manual for MS Windows 2000 for information.
- MS Windows 2000 Server must be installed on the PC and installation of LinkPlexer must be completed using the local administrator account.
- Nortel Networks requires that installation of pcAnywhere before installation of LinkPlexer 1.2.
- An ICM or CompuCall line to switch must be in place. See the Symposium Network Managers guide or the ICM guide for more information.
- LinkPlexer 1.2 supports the X.25 network protocol to communicate with the DMS/MSL-100 switch. If using this protocol the hardware and network configuration must be completed before installing LinkPlexer 1.2. For more information See Chapter 6, "Installing and configuring the Eicon X.25 card," on page 81 and Chapter 4, "Configuring LinkPlexer 1.2," on page 49.

Chapter 3

Installing LinkPlexer 1.2

This chapter describes how to install and start LinkPlexer 1.2. It contains the following sections:

- “LinkPlexer 1.2 Checklist” , next
- “Windows 2000 Service Pack Installation” on page 32
- “Dongle Installation” on page 33
- “LinkPlexer 1.2 Installation” on page 35
- “Starting the LinkPlexer 1.2 service” on page 42
- “Additional applications” on page 43
- “Un-installing LinkPlexer 1.2” on page 46

LinkPlexer 1.2 Checklist

The following items are supplied with LinkPlexer 1.2:

- LinkPlexer 1.2 CD, this includes the following folders and files:
 - Documentation
 - LinkPlexer 1.2 Installation & Configuration Guide.pdf
 - ThirdParty
 - DallasDongleDriver
 - pcAnywhere_v10.5
 - Windows2000ServicePack3
 - Setup.exe and ancillary files
- iButton TMEX RTE dongle (with parallel port adapter) and associated keycodes

Windows 2000 Service Pack Installation

LinkPlexer 1.2 is supported on a Windows 2000 server/Windows NT 4.0 Operating System. However, the primary target operating system is Windows 2000 Server. Windows NT 4.0 support requires service pack 6 to be installed on the system, refer to Chapter 3 Installing LinkPlexer 1.1, in the LinkPlexer 1.1 Installation and Configuration Guide, for information on Windows NT 4.0 Service Pack installation.

LinkPlexer 1.2 has no known specific Windows 2000 server service pack dependencies. The current service pack i.e. Service Pack 3 will be shipped on the cd for convenience. Any future dependency will be published in the Readme file also shipped with the product.

To check if Windows service pack 3 is present go to Start\Settings\Control Panel\Add/Remove Programs, on the LinkPlexer machine, and click to open it. Scroll through the list of programs and locate 'Windows 2000 Service Pack 3'. If this is found, service pack 3 is present and no further actions are required. The service pack version may also be found by typing 'winver' at the Start\Run...\Open: location.

If 'Windows 2000 Service Pack 3' is not present it must be installed.

- 1 Insert the LinkPlexer CD into the CD-ROM drive
- 2 In Windows Explorer, navigate to the E:\ThirdParty\Windows2000ServicePack3 folder (where E: is the CD-ROM drive).
- 3 Double click on executable W2Ksp3.exe
- 4 Follow the installation instructions - more installation information is available at <http://www.microsoft.com/windows2000/downloads/servicepacks/sp3/spdeploy.htm>

At the time of printing, there were not any Windows 2000 server hot fixes required. Refer to <http://www.microsoft.com> for more information on relevant hot fixes.

Dongle Installation

Nortel Networks provides an iButton TMEX RTE dongle (consists of an iButton and a Parallel Port Adapter), associated key codes, and Dallas Semiconductor 1-Wire Driver (Win32) v3.20 with LinkPlexer 1.2.

Figure 3 iButton TMEX RTE Dongle: Parallel Port Adapter (top) and iButton



To install the dongle and dongle drivers:

- 1** Attach the iButton TMEX RTE dongle to the parallel port of the LinkPlexer 1.2 server.
- 2** Insert the LinkPlexer 1.2 CD into the CD-ROM drive.
- 3** In Windows Explorer, navigate to the E:\ThirdParty\DallasDongleDriver folder (where E: is the CD-ROM drive).
- 4** Double click the Install_1_Wire_Drivers_v320 icon.

Figure 3 shows the InstallShield dialog box.

Figure 4 1-Wire Drivers InstallShield Self-extracting EXE



5 Click Yes to continue.

Figure 5 shows the USB dialog box.

Figure 5 USB dialog box



6 If there is a 1-Wire USB device attached to the LinkPlexer 1.2 server PC, unplug it. Note that a 1-wire USB device is not required for LinkPlexer 1.2

7 Click OK.

The Software Licence Agreement is displayed.

8 Click Yes to continue the installation.

The Readme Information dialog box is displayed.

9 Click Next.

The Choose Destination Location dialog box is displayed.

10 Click Next to accept the default location.

The Select Program Folder dialog box is displayed.

11 Click Next.

Figure 6 shows the BOOT Option dialog box.

Figure 6 1-Wire Drivers BOOT Option

12 Click OK.

The Setup Complete dialog box is displayed.

13 Click Finish.

14 Restart the LinkPlexer 1.2 server.

LinkPlexer 1.2 Installation

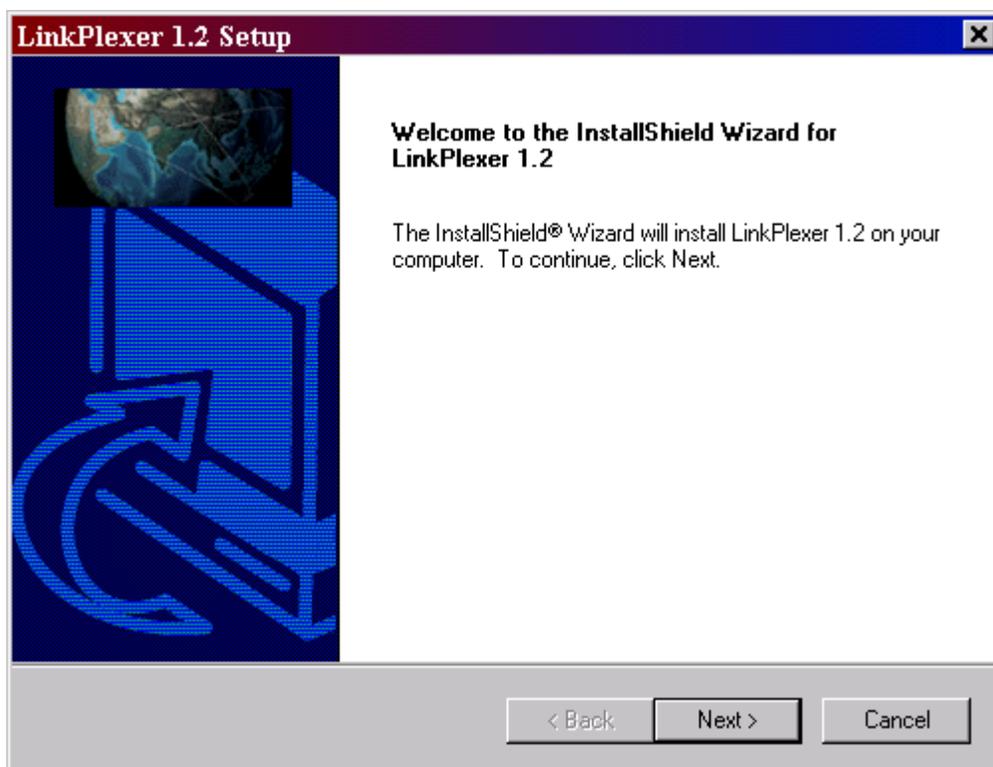
This section describes how to install the LinkPlexer 1.2 application from the CD. The supplied keycode is necessary to complete the installation.

To install LinkPlexer 1.2:

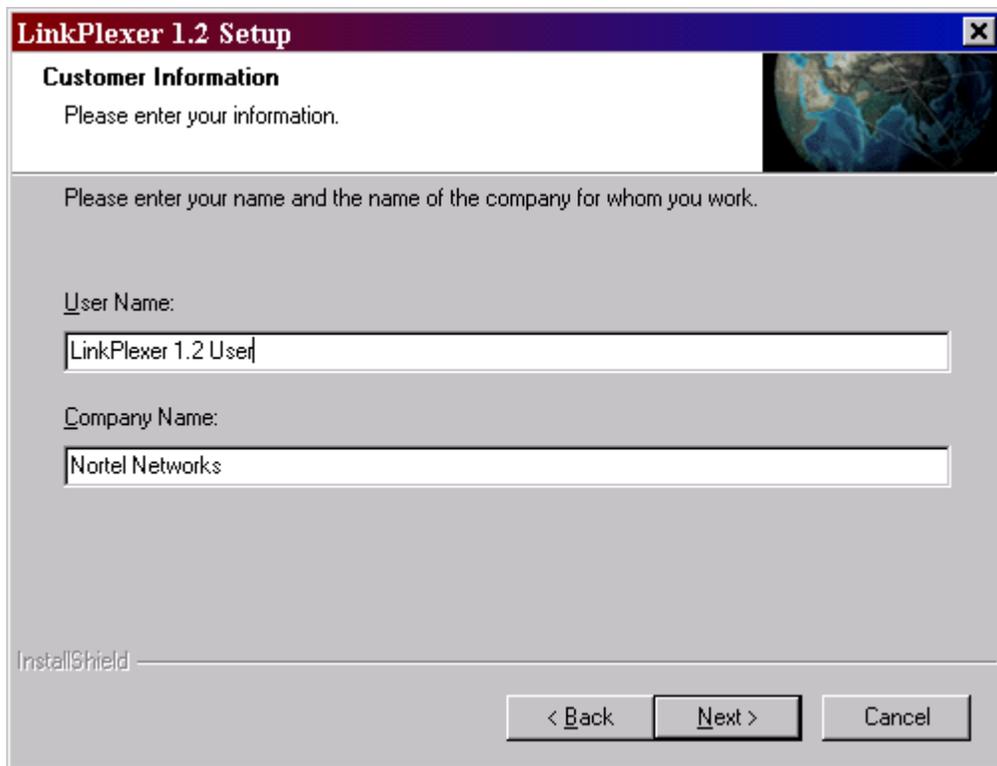
- 1** Insert the LinkPlexer 1.2 CD into the CD-ROM drive.
- 2** In Windows Explorer, navigate to the CD-ROM drive folder
- 3** Double click the Setup icon. If LinkPlexer 1.1 is installed on the same machine, a warning dialog box will appear, requesting the customer to refer to customer documentation. Refer to “Upgrade Procedure for LinkPlexer 1.1 to LinkPlexer 1.2” on page 99 for more information

Figure 7 shows the InstallShield Wizard for LinkPlexer 1.2

Figure 7 LinkPlexer 1.2 Setup



- 4 Click Next.
The License Agreement dialog box is displayed.
- 5 To accept the terms of the LinkPlexer 1.2 license agreement, click Yes.
Figure 8 shows the Customer Information dialog box.

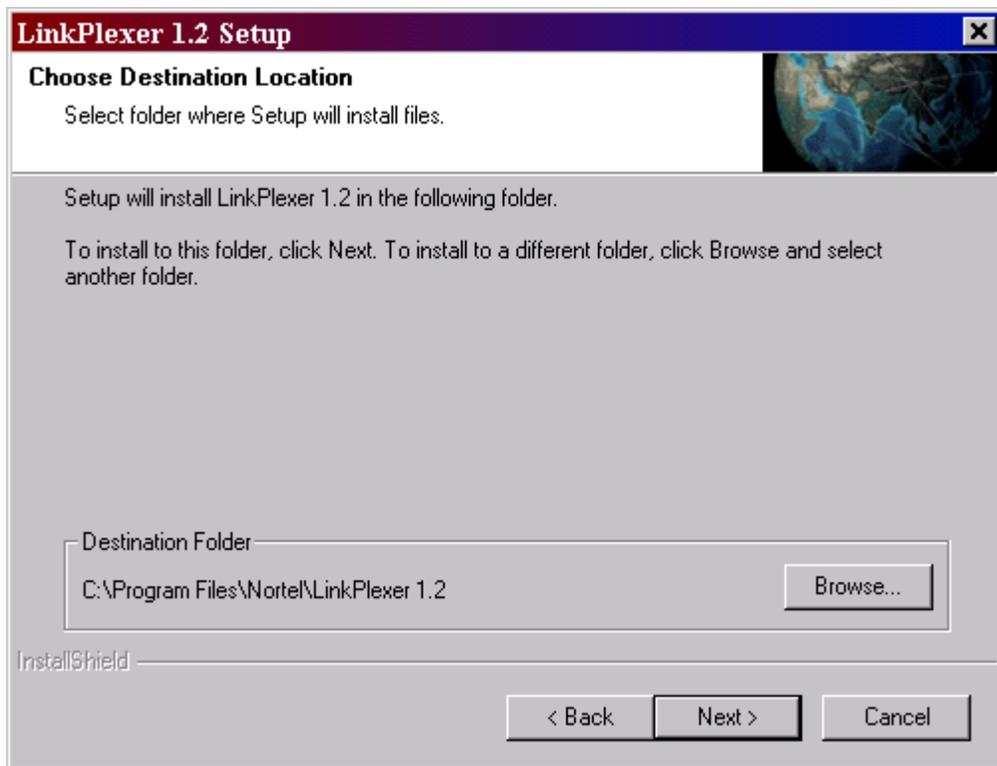
Figure 8 Customer Information

The screenshot shows a Windows-style dialog box titled "LinkPlexer 1.2 Setup" with a close button (X) in the top right corner. The main title bar is purple. Below the title bar, the text "Customer Information" is displayed in bold, followed by "Please enter your information." To the right of this text is a small graphic of a globe. Below this, the instruction "Please enter your name and the name of the company for whom you work." is shown. There are two text input fields: the first is labeled "User Name:" and contains the text "LinkPlexer 1.2 User"; the second is labeled "Company Name:" and contains the text "Nortel Networks". At the bottom left, the text "InstallShield" is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

- 6** Type a user name in the User Name text box.
- 7** Type the relevant company name in the Company Name text box.
- 8** Click Next.

Figure 9 shows the Choose Destination Location dialog box.

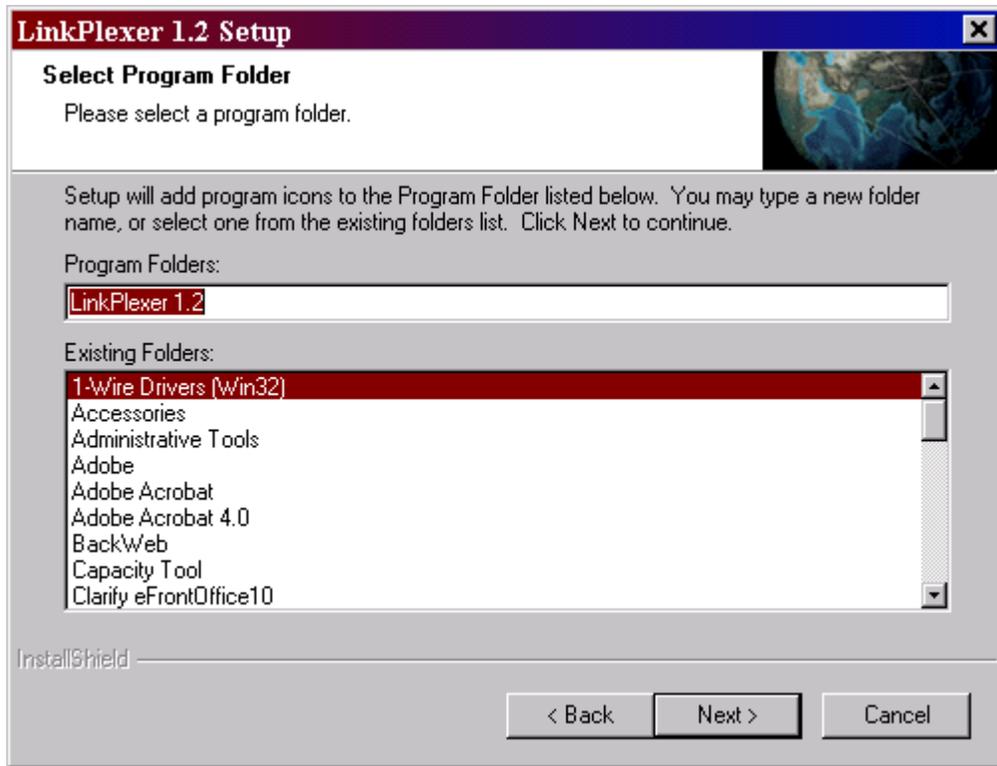
Figure 9 Choose Destination Location



9 To accept the default destination folder, click Next.

10 Click Next.

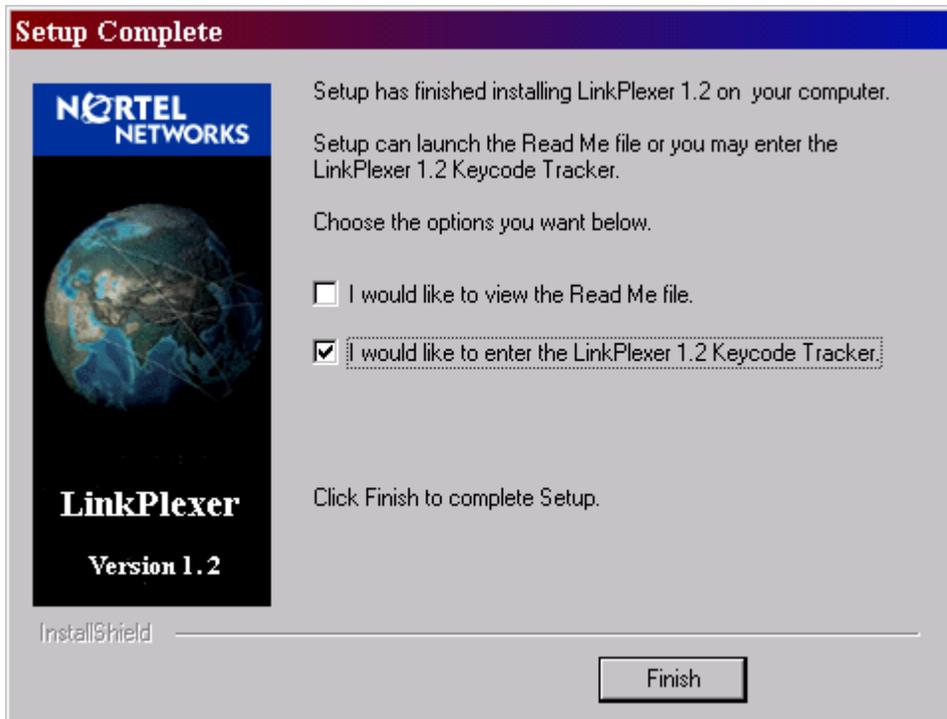
Figure 10 shows the Select Program Folder dialog box.

Figure 10 LinkPlexer 1.2 Setup Select Program Folder

- 11** To accept the default program folder, click Next. To select a new folder, type the folder name in the Program Folders text box. To select an existing folder highlight it in the Existing Folders list.
- 12** Click Next.

Figure 11 shows the Setup Complete dialog box.

Figure 11 Setup Complete

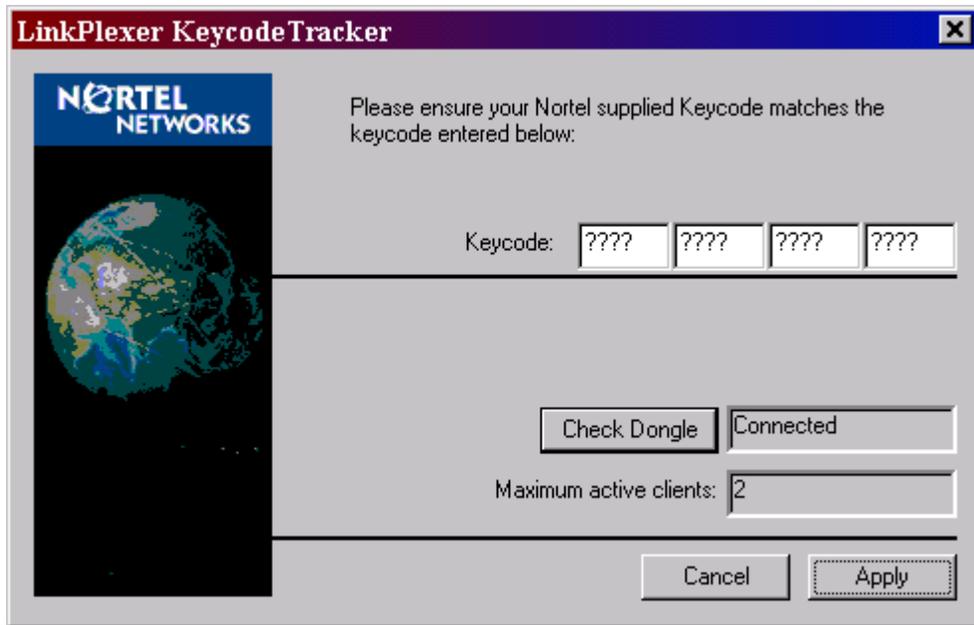


13 To launch LinkPlexer 1.2 Keycode Tracker:

- a** Select the I would like to enter the LinkPlexer 1.2 Keycode Tracker check box. Note, this can be launched separately by clicking on the link in Start\Program Menu\Nortel LinkPlexer 1.2\Keycode Tracker
- b** Click Finish.

Figure 12 shows the keycode dialog box.

Figure 12 LinkPlexer KeycodeTracker



c Type the supplied keycode in the Keycode text boxes.

d Click Apply.

The LinkPlexer 1.2 KeycodeTracker dialog closes.

The Setup Complete dialog box is displayed.

e Deselect the I would like to enter the LinkPlexer 1.2 Keycode Tracker check box in the Setup Complete dialog box.

14 To display the readme file:

a Select the I would like to view the readme file check box and click Finish.

b Read and close the Readme file.

The Setup Complete dialog box is displayed.

c Deselect the I would like to view the readme file check box in the Setup Complete dialog box.

15 Click Finish.

Starting the LinkPlexer 1.2 service



Note: LinkPlexer 1.2 must be configured prior to starting the service (refer to Chapter 4: Configuring LinkPlexer 1.2 for details)

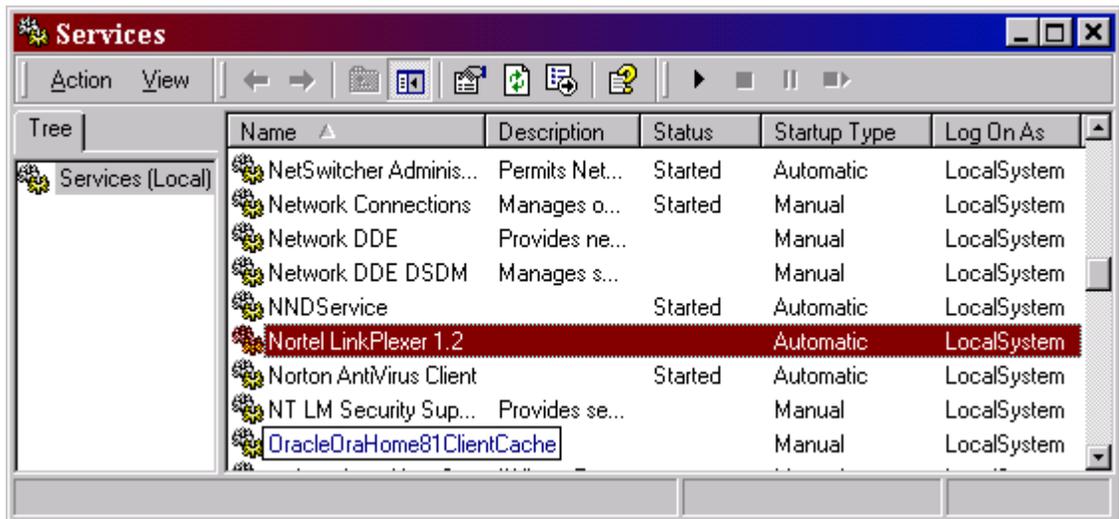
Note: If LinkPlexer 1.1 is co-resident with LinkPlexer 1.2, then the LinkPlexer 1.1 service must be specified as Manual. Refer to Chapter 7, upgrading from LinkPlexer 1.1 to LinkPlexer 1.2 for details???????

To start LinkPlexer 1.2:

- 1 From the Windows 2000 Start menu, select Settings, and click Control Panel.
- 2 Select Administrative Tools and then double-click on Services.

The Services window is displayed as in Figure 13.

Figure 13 Services Control Panel



- 3 Select Nortel LinkPlexer 1.2 in the scroll box.
- 4 Click the Start button.

LinkPlexer starts.

If LinkPlexer 1.2 does not start correctly see Chapter 7, “Maintenance & Troubleshooting LinkPlexer,” on page 87.

Additional applications

The LinkPlexer 1.2 installation includes 2 additional applications, these are discussed in the following sections:

- “LinkPlexer Tracker” on page 43
- “LinkPlexer Keycode Tracker” on page 44

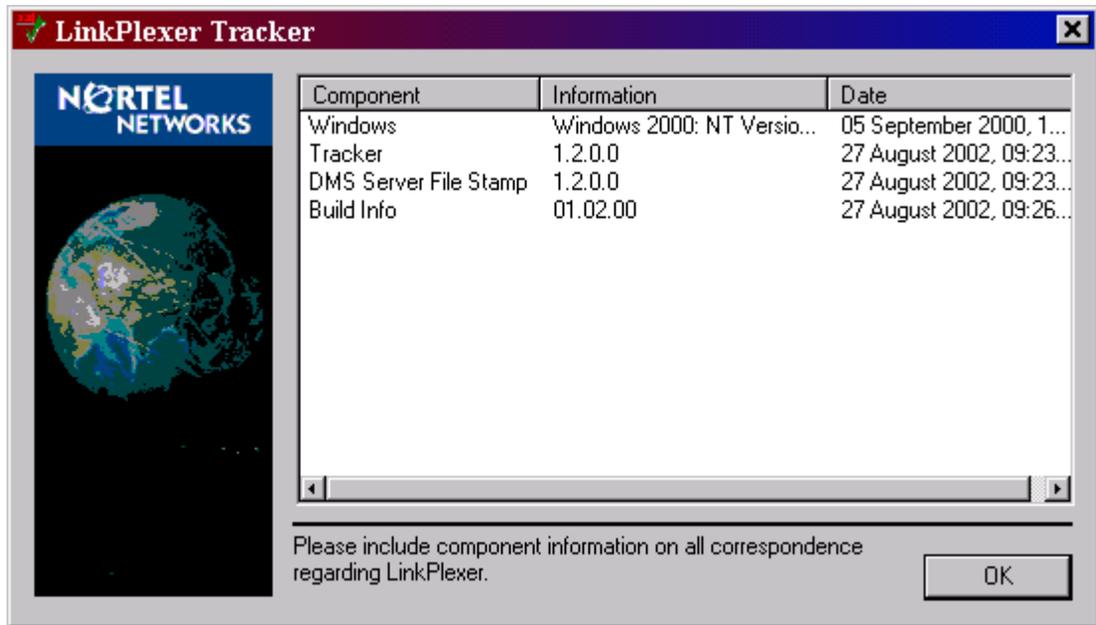
LinkPlexer Tracker

The LinkPlexer Tracker application provides information about the LinkPlexer 1.2 build version and the MS Windows NT system. It detects and displays information on the MS Windows operating version, the build number and date of the installation, and the version number and date of install of any PEP installation.

To launch the Tracker application:

➔ From the Start menu, select Programs>Nortel LinkPlexer 1.2>Tracker

Figure 14 shows the Tracker application window.

Figure 14 LinkPlexer Tracker application window

The LinkPlexer Tracker application window displays the following Components and Information:

- Windows: This refers to the operating system and service pack versions
- Tracker: indicates the current version of the LinkPlexer Tracker application
- DMS Server File Stamp: refers to the version of the File Stamp
- Build Info: indicates the LinkPlexer 1.2 build.

The date for the Tracker, DMS Server File Stamp and Build Info components refers to the date LinkPlexer 1.2 was installed.

LinkPlexer Keycode Tracker

The LinkPlexer Keycode Tracker application enables the entering of the dongle keycodes. It also displays the number of agents that can connect to the LinkPlexer 1.2 server.

The Keycode Tracker is also used to confirm dongle detection. If a dongle is detected the 'Check Dongle' box, on the Keycode Tracker window, displays 'Connected' as in Figure 15. If the dongle is not detected the user will see 'Not Connected'. If this occurs refer to Chapter 7, "Maintenance & Troubleshooting LinkPlexer," on page 87.

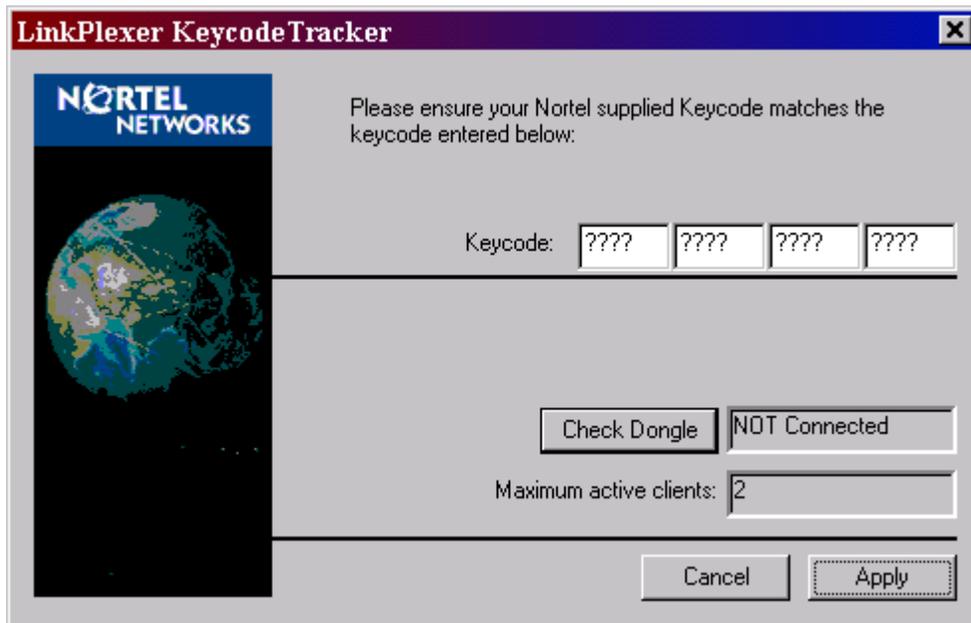
Alternatively, the dongle may be also be detected using iButton applications as referred to at <http://www.ibutton.com/software/tmex/index.html>

To enter keycodes with LinkPlexer Keycode Tracker:

- 1 From the Start menu, select Programs>Nortel LinkPlexer 1.2>Keycode Tracker.

Figure 15 shows the default Keycode Tracker window.

Figure 15 LinkPlexer Keycode Tracker



- 2 Type the supplied 20-character keycode in the Keycode text boxes.
- 3 Click Apply.

Un-installing LinkPlexer 1.2

To un-install LinkPlexer 1.2 using the Add/Remote Programs control panel:

- 1** Close all running applications and close all open windows on the desktop including Windows Explorer.
- 2** From the Start menu, select Settings>Control Panel.
- 3** Open the Add/Remove Programs control panel.
- 4** Select LinkPlexer 1.2 in the Install/Uninstall tab screen, and click OK.
LinkPlexer 1.2 is removed from the system

To uninstall LinkPlexer 1.2 using the LinkPlexer Setup program:

- 1** Close all running applications and close all open windows on the desktop.
- 2** Insert the LinkPlexer 1.2 CD into the CD-ROM drive.
- 3** Navigate to the CD-ROM drive, via the My Computer icon on the desktop.
- 4** Double click the Setup icon.

Figure 16 shows the Modify, repair, or remove the program dialog box.

Figure 16 Modify, repair, or remove the program

- 5 Select the Remove radio button, and click Next.

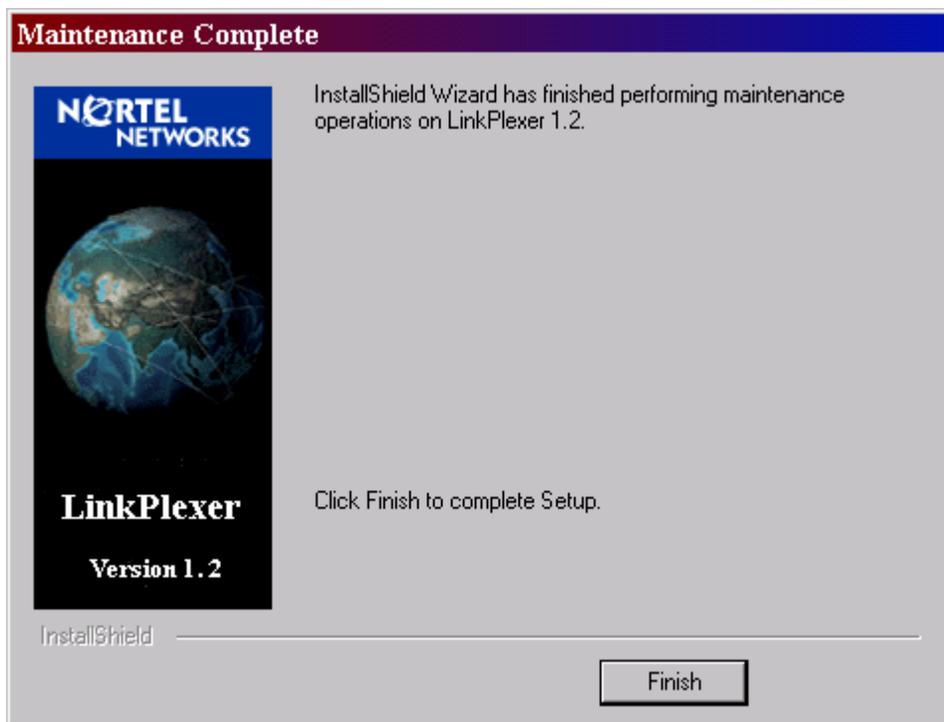
Figure 17 shows the Confirm File Deletion dialog box.

Figure 17 Confirm File Deletion

- 6 Click OK.

Figure 18 shows the Maintenance Complete dialog box.

Figure 18 Maintenance Complete



7 Click Finish.

The LinkPlexer 1.2 application is removed from the system.

Chapter 4

Configuring LinkPlexer 1.2

This chapter contains information on the following topics:

- “LinkPlexer 1.2 Configuration” , next
- “X.25 configuration” on page 52
- “TCP/IP Connections” on page 56
- “Configuring the DMS/MSL-100 switch” on page 57
- “Configuring SCCS to use LinkPlexer 1.2” on page 57
- “Configuring the ICM TAPI Driver to use LinkPlexer 1.2” on page 60
- “Configuring Periphonics VPS/IS (Peri-ICM) to use LinkPlexer” on page 63

LinkPlexer 1.2 Configuration

LinkPlexer 1.2 is configured using a single configuration file called `LPConfig.ini` which exists in the LinkPlexer 1.2 install directory, by default `C:\Program Files\Nortel\LinkPlexer 1.2`. This single configuration file replaces `DMSGlobal.ini` and `DMSLocal.ini` required in LinkPlexer 1.1

The Configuration file is read when LinkPlexer 1.2 is started. All entries are read at startup however LinkPlexer 1.2 will check for updates to certain fields in the configuration file every 10 seconds. Configuration items are grouped by function ‘dynamic OR static’ and ‘mandatory OR optional’.

Dynamic Configuration Items: These items will be read shortly (less than 10 seconds) after the configuration file is modified. They can be changed without stopping the Linkplexer 1.2 service.

Static Configuration Items: These items were only read at LinkPlexer service startup. To change one of these items the LinkPlexer service must be stopped and restarted after modifying the configuration file.

Mandatory Configuration Items: These configuration items must be present in the configuration file and must be valid (within specified ranges). If they are not present or are set incorrectly, the LinkPlexer service will NOT start, A fatal error indicating the reason will be logged.

Optional Configuration Items: These configuration items are NOT mandatory. If they are not present in the configuration file or their setting are not within the specified ranges the specified default settings will be used.

New configuration items have been added to manage logging (refer to “Log files” on page 89) and appear under the section [Logging-Dynamic]. Information about the agent is contained in [Agent] and the section [Agent-Dynamic] contains the dynamic entries pertaining to client connection management. The dv-AppI-Logon is the message that LinkPlexer 1.2 will send to the switch on service startup. The dc-AppI Logon message includes the parameters in [Switch-Logon] that must be configured on LinkPlexer 1.2.

Table 2 describes the sections and configuration items in the LPConfig.ini file and Figure 19 on page 55 shows the default content for the LPConfig.ini file.

Table 2 LPConfig.ini Section and Parameter Descriptions

Config. Item	Description	Range/ Settings	Default	Mandatory	Type
[Logging-Dynamic]					
MaxLogFileSize-Megs	Specifies the maximum size in megabytes that the current logfile LP_Curr.log will reach before being moved to LP_Prev.log. After being moved LP_Curr.log will be recreated empty and logging to this file continues	1-50	1	NO	Dynamic
IcmMessageLogging	Determines whether or not hex dumps of the ICM messages to and from the switch will be logged to the file ‘LP_SndRcvCurr.log’.	ON or OFF	OFF	NO	Dynamic

Table 2 LPConfig.ini Section and Parameter Descriptions

Config. Item	Description	Range/ Settings	Default	Mandatory	Type
IcmMessageMaxLog- FileSizeMegs	Specifies the maximum size in megabytes that the current Linkplexer ICM message logfile 'LP_SndRcvCurr.log' will reach before being moved to 'LP_SndRcvPrev.log'. After being moved 'LP_SndRcvCurr.log' will be recreated empty and logging to this file continues.	1 - 50	1	NO	Dynamic
[Agent]					
AgentListenerPort	Specifies the IP Port that LinkPlexer 1.2 will listen on for connections from LinkPlexer 1.2 agents.clients (e.g. SCCS, TAPI etc.)	1 - 65535		YES	Static
[Agent-Dynamic]					
AgentContinuityTest	On receipt of a continuity message from the switch, this configuration item is read and the appropriate action is taken depending on whether it is set or not (refer to "Application-level connectivity checking" on page 21 for more information)	ON or OFF	ON	NO	Dynamic (item is read everytime a message is received from the switch)
AgentPingTest	If Agent pinging is enabled all servers/machines on which active LinkPlexer 1.2 agents/clients (SCCS, TAPI etc.) are pinged at the configured time interval. Any agent machines that don't respond to the ping in a timely fashion have their connections to LinkPlexer disconnected and the agent license becomes available. Refer to "ICMP connectivity checking" on page 20 for more details.	ON or OFF	OFF	NO	Dynamic

Table 2 LPConfig.ini Section and Parameter Descriptions

Config. Item	Description	Range/ Settings	Default	Mandatory	Type
AgentPingInterval- Secs	This configuration item is only valid/read if 'AgentPingTest' is enabled (ON). It specifies the interval in seconds at which ping requests are sent to servers/ machines on which active Agents/ clients reside.	10 - 86400 (10 secs to 1 day)	60	NO	Dynamic
[Switch]					
SwitchLinkType	Specifies the type of Link that LinkPlexer will attempt to use when communicating with the switch	IP or X25	IP	NO	Static
SwitchAddress	Specifies the address (IP or X25) of the switch that LinkPlexer is to communicate with.	Valid IP or X25 address		YES	Static
SwitchPort	Specifies the Port (IP or X25) on the switch that LinkPlexer will attempt to connect to.	1 - 65535		YES	Static
SwitchReplyTimeout- MilliSecs	Specifies the time in milli-seconds that LinkPlexer will wait for a response to a request sent to the switch. Responses received from the switch after this timeout period will be discarded.	250 - 300000 (250ms to 5 Mins)	10000 (10 Secs)	NO	Static
SwitchContinuityTest	If switch Continuity testing is enabled (ON), LinkPlexer will send a dv-Appl-Continuity-Test to the switch at the configured time interval (SwitchContinuityIntervalSecs). If the switch does not reply to the message within 'SwitchReplyTimeoutMilliSecs' the link to the switch is dropped.	ON or OFF	OFF	NO	Static
SwitchContinuity- IntervalSecs	This configuration item is only valid/read if 'SwitchContinuity Test' is enabled (ON). It specifies the interval in seconds at which	60 - 86400 (1 Min to 1 Day)	600	NO	Static

Table 2 LPConfig.ini Section and Parameter Descriptions

Config. Item	Description	Range/ Settings	Default	Mandatory	Type
[Switch-Login]					
NetworkNodeID	Specifies the switch with which the LinkPlexer wishes to communicate. This is the switch which LinkPlexer connects to via the ICM/CompuCALL link and is defined by the operating company. (Switch: defined in NETNODEID of the table SCAIGRP)	0 - 32767		YES	Static
ServiceID	Identifies a service profile for a session. An operating company can define functions and parameters in service profiles on the switch. Also an operating company can assign a customer up to eight service IDs (Switch: Defined in PROKEY.LINKSET.SRVCID of table SCAIPROF)	0 - 255		YES	Static
ServiceVersion	Specifies the application level signaling version used by LinkPlexer	0 - 65535		YES	Static
BusinessGroupID	Identifies the customer to whom the LinkPlexer application belongs. This is defined by the operating company. (Switch: Defined in BGID in table BGDATA and ECM option in table CUSTNTWK)	1 - 4194304		YES	Static
ApplicationID	Identifies the specific LinkPlexer application indicating the logon request	1 - 32767		YES	Static

Table 2 LPConfig.ini Section and Parameter Descriptions

Config. Item	Description	Range/ Settings	Default	Mandatory	Type
Password	This is used for security purposes and corresponds to a specific 'BusinessGroupID'. One password datafilled for the customer is applicable to all eight service IDs. (Switch: Defined in PASSWORD in table SCAIGRP)	Variable length IA5-String (1 to a Max. of 8 Char's)		YES	Static
TcpLinkSetName	TCP connections between the LinkPlexer and the switch use TcpLinksetName to identify which linkset is sent to dv-Appl-Logon. For X.25 connections, TcpLinkSetName is not applicable and is not checked by the switch. If TcpLinkSetName is set for X.25 connections, the parameter is simply ignored by the switch. (Switch: Defined in LINKSET in table SCAICOMS)	Variable length IA5-String (1 to a Max. of 8 Char's)		NO	Static

Figure 19 Default Content of LPConfig.ini

```
[Logging-Dynamic]
MaxLogFileSizeMega=1
IcmMessageLogging=OFF
IcmMessageMaxLogFileSizeMega=1

[Agent]
AgentListenerPort=2500

[Agent-Dynamic]
AgentContinuityTest=ON
AgentPingTest=OFF
AgentPingIntervalSecs=60

[Switch]
SwitchLinkType=IP
SwitchAddress=192.192.192.192
SwitchPort=2500
SwitchReplyTimeoutMilliSecs=10000
SwitchContinuityTest=OFF
SwitchContinuityIntervalSecs=600

[Switch-Login]
NetworkNodeID=1
ServiceID=1
ServiceVersion=12
BusinessGroupID=1
ApplicationID=2
Password=CHANGEME
TcpLinksetName=CHANGEME
```



Note: There has been changes made to the configuration files and parameters between the LinkPlexer 1.1 release and LinkPlexer 1.2 release. For a list of the changes refer to “Appendix D: LinkPlexer Configuration Changes” on page 122

X.25 configuration

Chapter 6, “Installing and configuring the Eicon X.25 card,” on page 81 describes how to install and configure the Eicon X.25 card.

To specify X.25 as the protocol that LinkPlexer 1.2 uses to communicate with the DMS/MSL-100 switch:

- 1 Ensure that the DMS/MSL-100 datafill specifies the correct setup information for the X.25 link.

For more information, see “Configuring the DMS/MSL-100 switch” on page 57.

- 2 Configure the parameters in the [Switch] section of the LPConfig.ini file:
 - a Set the SwitchLinkType parameter to DMSX25.
 - b Ensure that the SwitchAddress parameter contains the necessary X.25 information to connect to the DMS/MSL-100 i.e. the Calling DNA (in table SCAICOMS), the Called DNA (in SVCDNA in table MPCLINK), and the port number.

This information is specified in LPConfig.ini as follows:

```
SwitchAddress=[Calling DNA],[Called DNA]:[port number]
```

For example:

```
SwitchAddress=111111111,111222333:2500
```

- 3 Use the error log files (refer to “Log files” on page 89) to verify that the X.25 connection is established correctly when LinkPlexer 1.2 is started.

TCP/IP Connections

To specify TCP/IP as the protocol that LinkPlexer 1.2 uses to communicate with the DMS/MSL-100 switch:

- 1 Ensure that the DMS/MSL-100 switch datafill specifies the correct setup information for the TCP/IP link.
 - 2 Configure parameters in the [Switch-n] section of the LPConfig.ini file:
-

- a Set the SwitchLinkType parameter to DMS.
- b Ensure that the SwitchAddress parameter contains the necessary TCP/IP information to connect to the DMS/MSL-100 i.e. the IP address and port of the DMS/MSL-100 which this server connects to (defined in the CMIPADDR parameter in the IPNETWRK table).

This information is specified in LPConfig.ini as follows:

```
SwitchAddress= IP Address:Port
```

For example:

```
SwitchAddress=123.4.5.6:2500
```

- 3 Use the error log files to verify that the TCP/IP connection is established correctly when LinkPlexer 1.2 is started.

Configuring the DMS/MSL-100 switch

To configure the DMS/MSL-100 switch the ACD groups information must be specified. The required information is specified in the DMS/MSL-100 Switch tables by the administrator of the DMS/MSL-100 switch. Definitions, and examples, of these are found in Appendix B “Appendix B: DMS/MSL100 Table Definitions & Examples” on page 116.

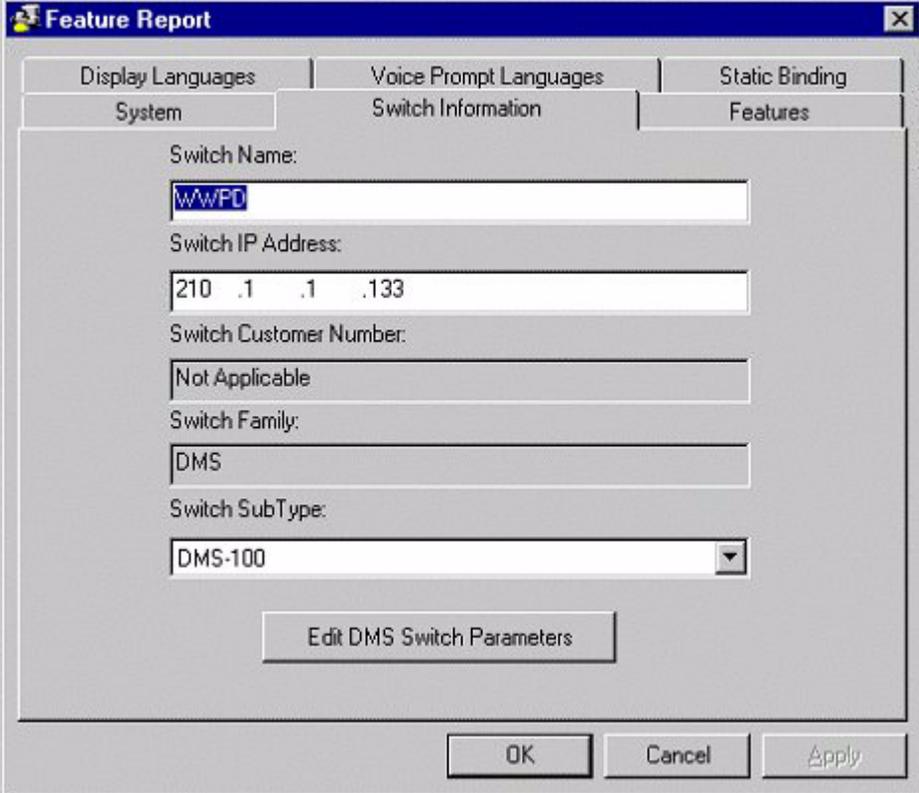
Configuring SCCS to use LinkPlexer 1.2

To configure the SCCS to use the LinkPlexer 1.2 application:

- 1 From the SMI window, choose System Administration>System Configuration>Server Settings.

The Feature Report dialog box is displayed.

- 2 Select the Switch Information tab. Figure 20 shows the Switch Information tab dialog box.

Figure 20 Feature Report Switch Information dialog box

The screenshot shows a dialog box titled "Feature Report" with a close button (X) in the top right corner. The dialog has three tabs: "Display Languages", "Voice Prompt Languages", and "Static Binding". The "Switch Information" tab is selected. Below the tabs are three sub-sections: "System", "Switch Information", and "Features". The "Switch Information" section contains the following fields:

- Switch Name: A text box containing "WVFD".
- Switch IP Address: A text box containing "210 .1 .1 .133".
- Switch Customer Number: A text box containing "Not Applicable".
- Switch Family: A text box containing "DMS".
- Switch SubType: A pull-down menu showing "DMS-100".

Below these fields is a button labeled "Edit DMS Switch Parameters". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Apply".

- 3 In the Switch Name text box, type the name of the switch.
- 4 In the Switch IP Address text box, type the IP address of the LinkPlexer 1.2 server.
SCCS assumes the port number is 2500.
- 5 In the Switch Sub Type text box, select DMS-100 from the pull-down menu.
- 6 Click on the Edit DMS Switch Parameters button.
The DMS Parameter dialog box is displayed. Figure 21 shows the DMS Parameter dialog box.

Figure 21 DMS/MSL-100 Parameter dialog box

The screenshot shows a dialog box titled "DMS Parameter" with the following fields and values:

Network Node ID	1
Service ID	11
Application ID	55
Service Version	12
Business Group	2
Link Set Name	VTAPI
DMS Password	RT1000

Buttons: OK, Cancel

- 7 Set the parameters in the DMS/MSL-100 Parameter dialog box to match the settings in the LPConfig.ini file and the DSM/MSL-100 Switch tables.

Table 3 shows the location of the parameter values.

Table 3 DMS/MSL-100 Parameter value locations

Parameter	LPConfig.ini file Parameter	DMS/MSL Switch table and parameter
Network Node ID	NetworkNodeID	SCAIGRP table, NETNODID parameter
Service ID	ServiceID	SCAIPROF table, PROFKEY.LINKSET.SRVCID parameter
Application ID	ApplicationID	
Service Version	ServiceVersion	Provided by the DMS/MSL-100 Switch administrator
Business Group ID	BusinessGroupID	BGDATA table, BGID parameter CUSTNTWK table, ECM parameter
LinkSet Name	TcpLinkSetName	SCAICOMS table, LINKSET parameter
DMS Password	Password	SCAIGRP table, PASSWORD parameter

- 8 Click OK to close the DMS Parameter dialog box.
- 9 Click OK to close the Feature Report dialog box.

For more information, including information about the relationships between fields and tuples (parameters and values) in the DMS/MSL-100 switch tables, see the *Nortel Networks Symposium Call Center Server and DMS Switch Guide*, part number 911815.

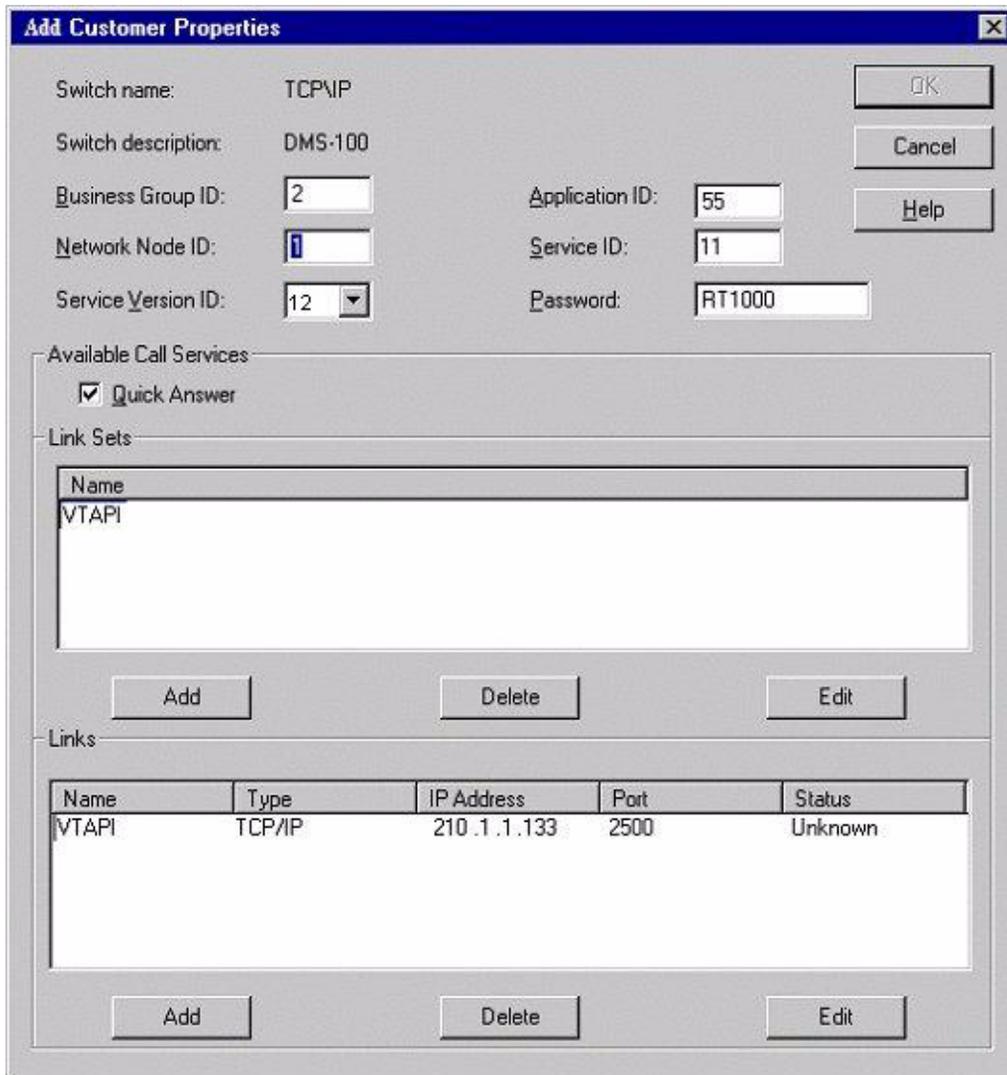
Configuring the ICM TAPI Driver to use LinkPlexer 1.2

To configure the ICM TAPI driver (on the ICM TAPI server) to use the LinkPlexer 1.2 application:



Caution: Where SCCS and TAPI associate the same CDN, that is under the control of SCCS, it is possible for TAPI to cause SCCS to stop routing calls. Therefore, ensure that there is TAPI and SCCS CDN partitioning i.e. ensure that TAPI does not share the same CDNs as SCCS.

- 1 Open the Add Customer Properties dialog box.
Figure 22 shows the Add Customer Dialog box.

Figure 22 Add Customer Properties dialog box


Switch name: TCP/IP

Switch description: DMS-100

Business Group ID: 2

Application ID: 55

Network Node ID: 1

Service ID: 11

Service Version ID: 12

Password: RT1000

Available Call Services

Quick Answer

Link Sets

Name
VTAPI

Add Delete Edit

Links

Name	Type	IP Address	Port	Status
VTAPI	TCP/IP	210.1.1.133	2500	Unknown

Add Delete Edit

- 2 Set the parameters in the Add Customer Properties dialog box to match the settings in the LPConfig.ini file, and the DMS/MSL-100 Switch tables.

Table 4 shows the location of the parameter values.

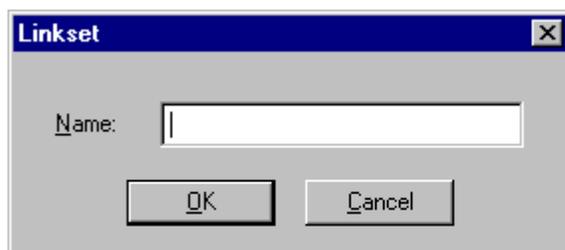
Table 4 DMS/MSL-100 Parameter locations

Parameter	LPConfig.ini file and parameter	DMS/MSL Switch table and parameter
Network NodeID	NetworkNodeID	SCAIGRP table, NETNODID parameter
Service ID	ServiceID	SCAIPROF table, PROFKEY.LINKSET.SRVCID parameter
Application ID	ApplicationID	
Service Version ID	ServiceVersion	Provided by the DMS/MSL-100 Switch administrator
Business Group ID	BusinessGroupID	BGDATA table, BGID parameter CUSTNTWK table, ECM parameter
LinkSet Name	TcpLinkSetName	SCAICOMS table, LINKSET parameter
Password	Password	SCAIGRP table, PASSWORD parameter

- 3 In the Link Sets section of the Add Customer Properties dialog box, click Add.

The Add Link Sets dialog box is displayed as in.

Figure 23 Link Set Dialog box



- 4 Type the Link Set name for this link set.

The link set name is defined by the LinksetName parameter in the LPConfig.ini file, and by the LINKSET parameter in the DMS/MSL-100 switch SCAICOMS table.

- 5 In the Name text box, type the name of this link.

- 6 In the Type pull-down menu, select TCP/IP.
Select TCP/IP, even if LinkPlexer 1.2 uses an X.25 connection to the switch.
- 7 In the IP Address text box, type the IP address of the LinkPlexer 1.2 server.
- 8 In the Port text box, type the port number, 2500.
- 9 To close the Add Customer Properties dialog box, click OK.

For more information on configuring the ICM TAPI drivers, refer to ICM TAPI Network Managers Guide (part number PO881940).

Configuring Periphonics VPS/IS (Peri-ICM) to use LinkPlexer

To configure a Peri-ICM package on a Link Server for use with LinkPlexer 1.2 the PBX Link Connection must be configured.

- 1 Locate the `hosts` file in `C:\WINNT\system32\drivers\etc\hosts` on the Peri-ICM server.
- 2 The `hosts` file must be edited by adding the PBX Link IP address using the PBX Configuration Edits, for example: `192.84.161.227 pbxlink`
- 3 For DMS100 connection with PERI-ICM, SCCS and/or TAPI server, add the LinkPlexer's (CLAN) IP address as `pbxlink` in the `hosts` file.

For more information on configuring the Peri-ICM package, refer to the MPS and VPS/is interface to M1/DMS100 (peri-IPML v2.0, Peri-ICM v2.0) document (part number P0988599).

Chapter 5

Installing and configuring pcAnywhere

One copy of pcAnywhere version 10.5 is provided for the LinkPlexer 1.2 server. The installer application is located in the ThirdParty folder on the LinkPlexer 1.2 CD.

In the case of co-residency with TAPI, a modem is not supported and the TAPI guidelines, found in the ICM TAPI Network Managers Guide (part number PO881940), must be followed. Chapter 5 Additional Tools, of the ICM TAPI Network Managers Guide contains a section on pcAnywhere configuration.

This chapter contains the following sections:

- “Installing pcAnywhere version 10.5” , next
- “Configuring pcAnywhere” on page 66
- “Uninstalling pcAnywhere 10.5” on page 78

Installing pcAnywhere version 10.5

To install pcAnywhere version 10.5

- 1 Log on to the server as Administrator.
- 2 Shut down all running applications
- 3 Insert the LinkPlexer 1.2 CD into the CD-ROM drive.
- 4 In Windows Explorer, navigate to the E:\ThirdParty\pcAnywhere_v10.5\Disk 1 folder (where E: is the CD-ROM drive).
- 5 Double click the Setup.exe file.

The Symantec installation wizard window is displayed.

- 6 Click Next.

The License agreement is displayed.

- 7 Accept the terms of the license agreement, then click Next.

The Customer Information window is displayed.

- 8 Type the User Name and Organization name, then click Next.

The Setup Type window is displayed.

- 9 Select Typical, then click Next

The Ready to Install window is displayed

- 10 Click Install. Follow the instructions in the wizard for the type of installation selected.

- 11 When the installation is complete, restart your computer

Configuring pcAnywhere

Administrator privileges on the server PC are necessary to configure pcAnywhere.

This section contains the following topics:

- “Password recommendations” , next
- “Starting pcAnywhere for the first time” on page 67
- “Changing User access rights” on page 67
- “Setting the video mode” on page 68
- “Configuring pcAnywhere host PC network properties” on page 68
- “Changing pcAnywhere caller passwords” on page 77

Password recommendations

Plan the passwords required for the user accounts. Use the same passwords for the pcAnywhere caller passwords that are planned for use with the Windows NT accounts. This simplifies the remote logon process.

To maintain remote access security, change the passwords for the caller accounts regularly. Continue to match the pcAnywhere caller passwords to the Windows NT user account passwords.

For more information on resetting caller account passwords, See “Changing pcAnywhere caller passwords” on page 77.

Starting pcAnywhere for the first time

To start pcAnywhere for the first time:

- 1 Log on to MS Windows 2000 as Administrator.
- 2 From the Windows Start menu choose Programs>Symantec pcAnywhere.
- 3 If asked to register pcAnywhere, select Skip, and then choose Yes when asked to confirm.

The Smart Setup Wizard window is displayed.

The system prompts for the modem device.

- 4 Choose the entry that matches the modem in use, then click Next. Note, if the driver supplied by the modem vendor is not listed, then it must be installed.

The system prompts for network device selection.

- 5 Ensure that only TCP/IP is selected, then click Next.

The system prompts for port selection.

- 6 Select COM1, then click Next.

- 7 Click Finish.

The pcAnywhere main window is displayed.

Changing User access rights

If during pcAnywhere configuration, a message is received indicating that the user does not have the rights to modify a setting or create a new caller, the user must change the Windows NT User access rights for pcAnywhere files.

To change the Windows NT User access rights for pcAnywhere files:

- 1 Ensure that pcAnywhere is not running.
- 2 Navigate to %Systemroot%\Profiles\All Users\Application Data\Symantec.
- 3 Select the pcAnywhere directory.
- 4 Right-click the directory icon, choose Properties, and then click the Security tab.
- 5 Click on Permissions and, for Administrators, select Type of Access: Full Control.
- 6 Click OK to save changes.
- 7 Click OK to close the Properties window.

Setting the video mode

To set the pcAnywhere video mode:

- 1 Open pcAnywhere.
- 2 Choose Tools>Application Options.
- 3 Click the Host Operation tab.
- 4 For Video mode, ensure that the option selected in the drop-down list is Default.
- 5 Click Apply to save the changes.
- 6 Click OK to exit.

Configuring pcAnywhere host PC network properties

To configure pcAnywhere network properties on a host PC:

- 1 Log on to Windows 2000 as Administrator.
 - 2 From the Windows Start menu, choose Programs>Symantec pcAnywhere. pcAnywhere starts.
 - 3 Select New Host.
 - 4 The New Host Properties window is displayed.
-

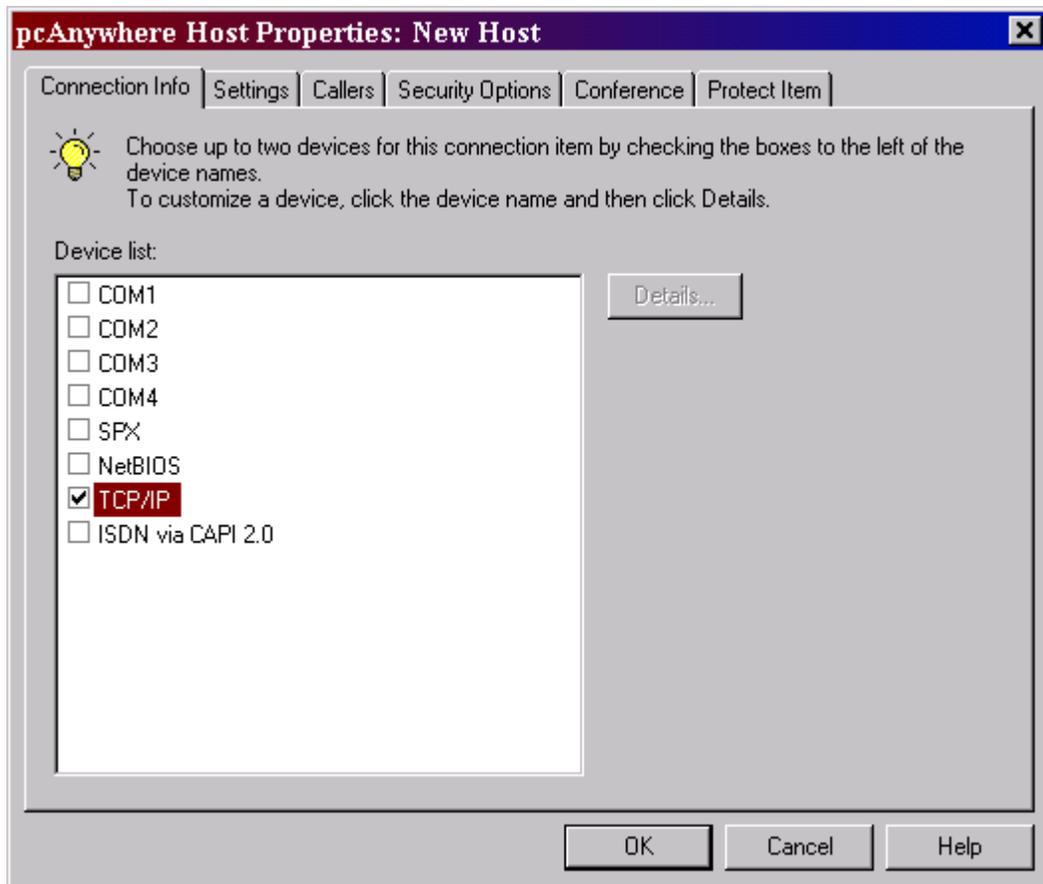
- 5 Select a tab window to view the network property options. For information on configuring tab window properties refer to the following sections:
 - “Configuring connection information” , next
 - “Configuring settings” on page 70
 - “Configuring callers” on page 71
 - “Setting security options” on page 74
 - “Setting Conference options” on page 75
 - “Password controlling network configuration” on page 76.

Configuring connection information

To configure network connection settings:

- 1 Click the Connection Info tab.

Figure 24 shows the New Host Properties Connection Info tab window.

Figure 24 NEw Host Properties Connection Info tab window

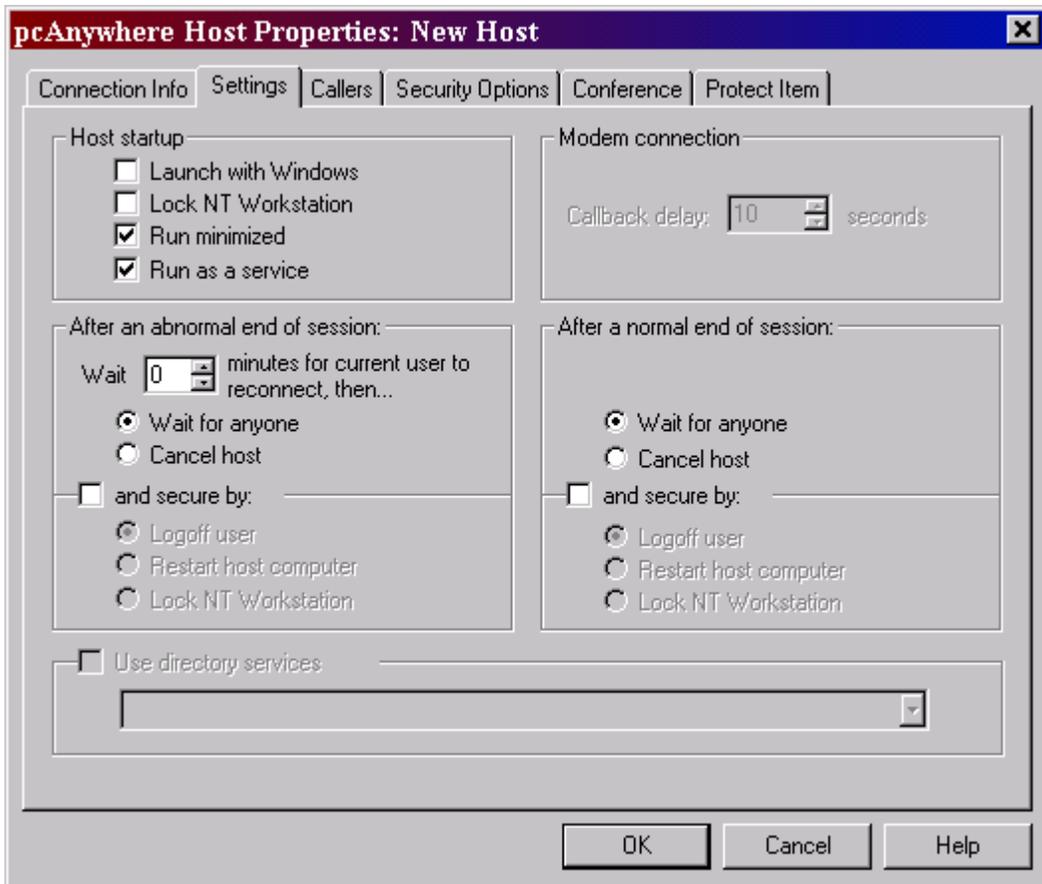
- 2 Ensure that only TCP/IP is checked.
- 3 Click Apply to save changes.

Configuring settings

To configure the network settings:

- 1 Click the Settings tab.

Figure 25 displays the New Host Properties Settings tab window.

Figure 25 New Host Properties Settings tab window

- 2 Ensure that the settings match those shown in Figure 25.
- 3 Click Apply to save changes.

Configuring callers

To allow remote users to connect to the LinkPlexer 1.2 server PC caller accounts must be configured. If creating an account to allow remote administration of LinkPlexer 1.2, then at least one account with full administrator access must be created.

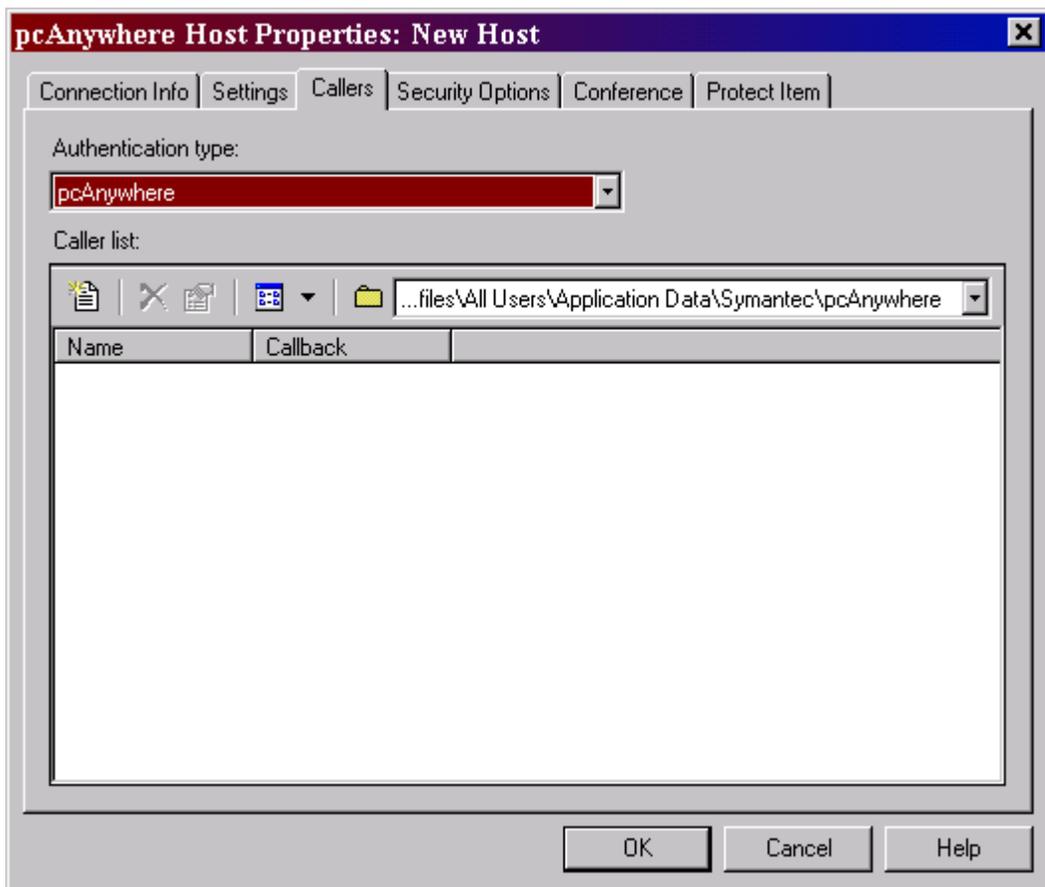
This section describes how to create and configure two remote users, NGenDist and NGenDesign. The suggested passwords and login names are for example purposes only. Passwords and login names should be configured to match the Windows NT user accounts on the LinkPlex server PC.

To configure caller accounts:

- 1 Click the Callers tab.

Figure 26 shows the New Host Properties Callers tab window.

Figure 26 New Host Properties Callers tab window

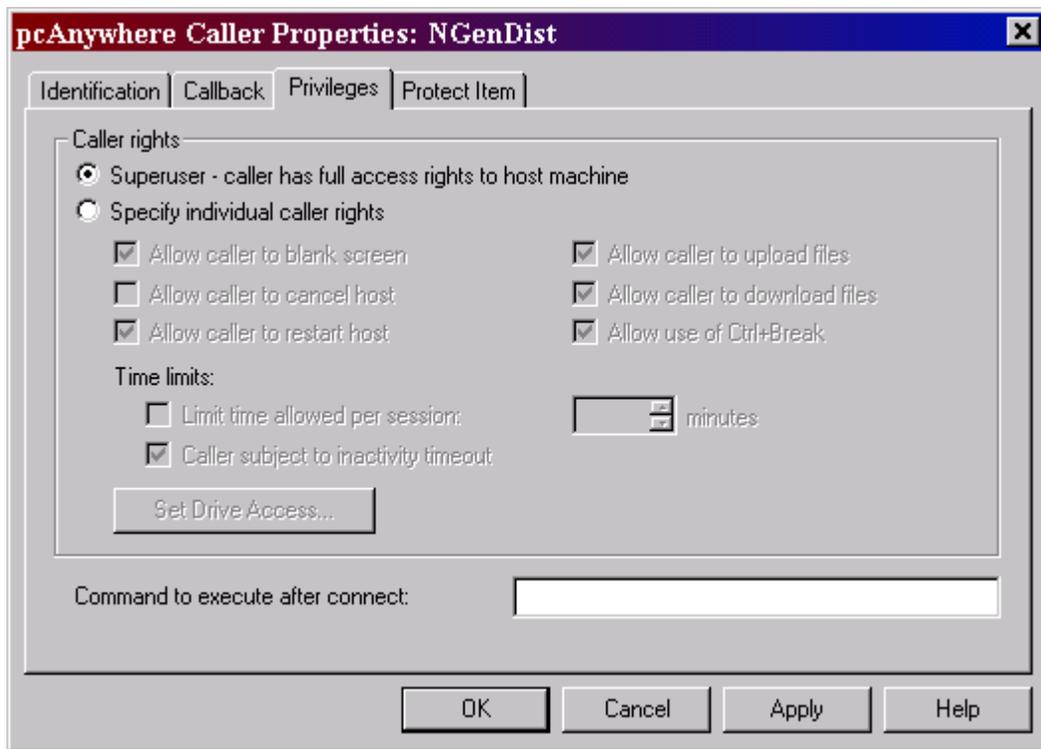


- 2 Select the Use pcAnywhere authentication with pcAnywhere privileges radio button.

- 3** Place the mouse in the blank area and right-click to display the properties dialog box.
- 4** Select New to add a new caller.
The New Caller Properties window is displayed.
- 5** Type the Login name **NGenDist** and the password **ntdist**.
- 6** In the Confirm Password box, retype the password.
- 7** Click OK to save the changes.
The Callers tab window is displayed.
- 8** Right-click the NewCaller icon, select rename, and type **NGenDist**.
- 9** Repeat steps 3 to 8 to create the **NGenDesign** caller, using the password **Nortel**.
- 10** Right-click the NGenDesign caller icon, and then select Properties.
- 11** Click the Privileges tab.

Figure 27 shows the NGenDesign Properties Privileges tab window.

Figure 27 NGenDist Properties Privileges tab window



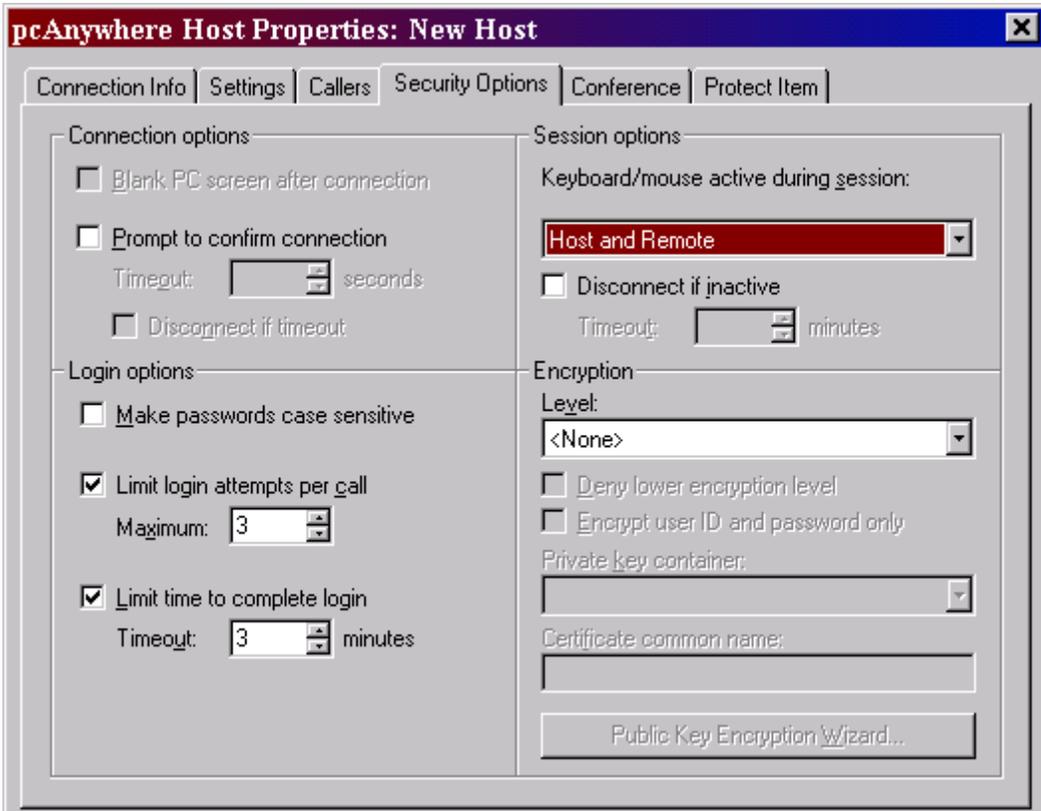
- 12** Select the Superuser radio button.
- 13** Click Apply to save the changes.
- 14** Repeat steps 10 to 13 for the NGenDist caller.

Setting security options

To configure security options:

- 1** Click the Security Options tab.

Figure 28 shows the New Host Properties Security Options tab window.

Figure 28 New Host Properties Security Options tab window

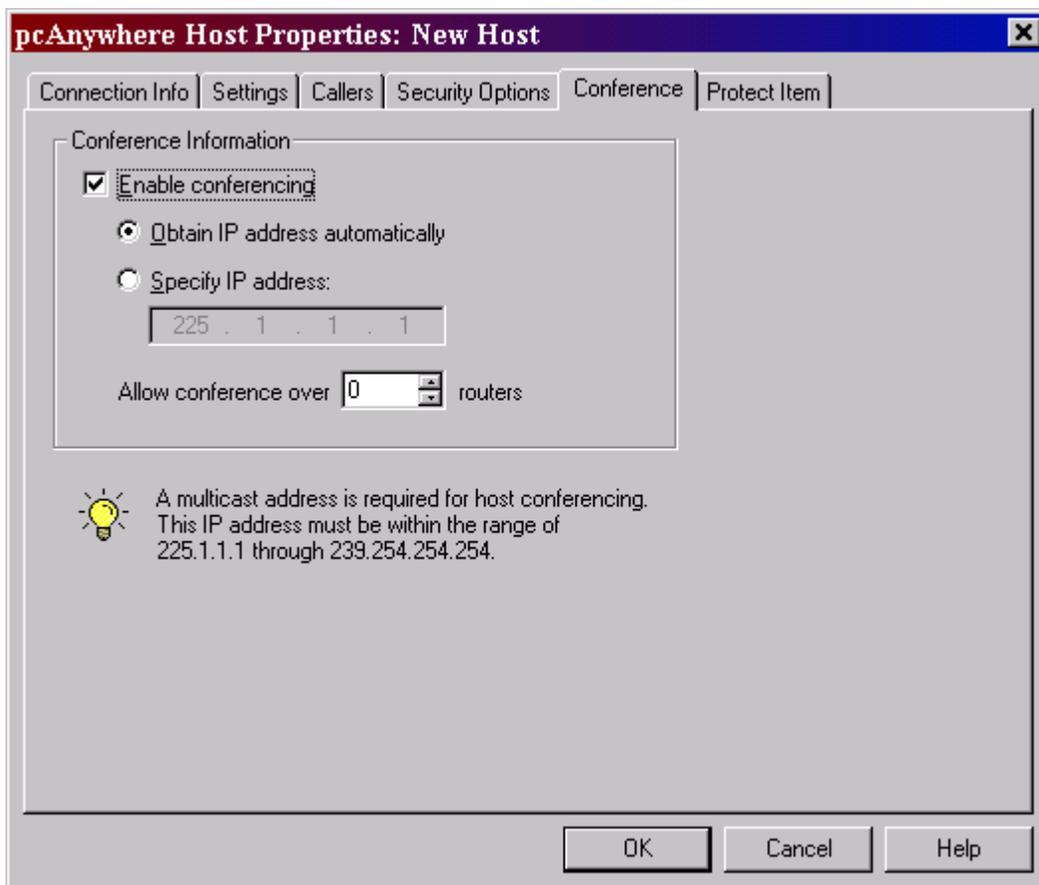
- 2 Ensure that the settings match those shown in Figure 28.
- 3 Click Apply to save changes.

Setting Conference options

To configure conference options:

- 1 Click the Conference tab.

Figure 29 shows the NETWORK Properties Conference tab window.

Figure 29 New Host Properties Conference tab window

- 2 Ensure that Enable conferencing and Obtain IP address automatically are selected.
- 3 Click Apply to save changes.

Password controlling network configuration

To control access to network configuration options:

- 1 Click the Protect Item tab.
- 2 To assign a password to control who can modify the Network icon settings, enter a password on this screen.

- 3 Click Apply to save changes.



Caution: If the option Required is selected in order to modify properties, the password must be entered each time a setting is changed. The password should be recorded and a copy of it kept in a safe place. If the password is forgotten, non of the settings can be changed.

Changing pcAnywhere caller passwords

During the installation and configuration of pcAnywhere, login passwords for the NGenDist and NGenDesign callers are specified. To maintain system security, change these passwords periodically.

To simplify the remote login process, the same passwords for the pcAnywhere NGenDist and NGenDesign caller passwords should be used as those planned for use with the MS Windows NT NGenDist and NGenDesign accounts. Change the pcAnywhere caller passwords and the Windows NT user account passwords for NGenDist and NGenDesign at the same time.

For more information, See “Password recommendations” on page 66.

To change passwords:

- 1 Log on to Windows 2000 as Administrator.
- 2 From the Windows Start menu, choose Programs>Symantec pcAnywhere.
pcAnywhere starts
- 3 From the File menu, choose Properties.
The Host Properties property sheet appears.
- 4 Click the Callers tab.
- 5 Click Specify individual caller privileges.
- 6 Right-click the NGenDist icon and then select Properties.
- 7 Click the Identification tab.
- 8 In the Password text box, type a new NGenDist password.
- 9 In the Confirm Password text box, type the NGenDist password again.

- 10 Click Apply.
- 11 Click OK.
- 12 Right-click the NGenDesign icon. Then select Properties.
- 13 Repeat steps 8 to 13 to assign a new password to NGenDesign.
- 14 Click OK to return to the main pcAnywhere window.
- 15 Exit pcAnywhere.

Once the server connection profile has been created, the profile must be configured. The connection properties window is displayed.

Uninstalling pcAnywhere 10.5

Before uninstalling pcAnywhere, ensure there is no pcAnywhere Waiting icon on the desktop. If the icon is on the desktop, right-click it and select Cancel Host.

- 1 From the Windows Start menu, choose Settings>Control Panel.
 - 2 Double-click the Add/Remove Programs control panel.
 - 3 Select Symantec pcAnywhere and click Add/Remove.
The Symantec pcAnywhere Setup window is displayed.
 - 4 Click Next.
The Program Maintenance options window appears.
 - 5 Select Remove and click Next.
The Remove the Program window appears.
 - 6 Click Remove.
 - 7 When the process completes, click Finish.
 - 8 From the Windows Start menu, choose Shutdown.
The Shut Down Windows dialog box appears.
 - 9 Select Restart, and then click Yes.
The server shuts down and then begins starting up. If the system does not restart, it must be restarted manually.
-



Note: For more information on Installing and Configuring pcAnywhere 10.5 please consult http://www.symantec.com/techsupp/enterprise/products/pca/pca_105/manuals.html

Chapter 6

Installing and configuring the Eicon X.25 card

This chapter contains the following sections:

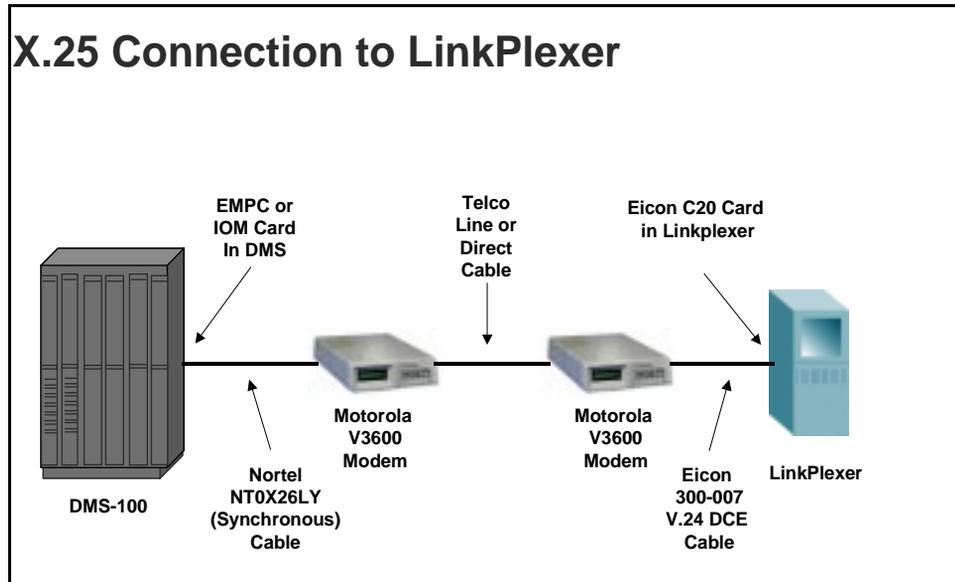
- “Supported configurations for X.25”, next
- “Installing the Eicon X.25 card” on page 82

Supported configurations for X.25

There are 2 supported configurations for X.25:

- A direct connection using a modem eliminator (or null modem) for distances of 50 feet or less.
- A normal modem connection for distances greater than 50 feet.

Figure 30 shows the X.25 connection configuration to LinkPlexer 1.2.

Figure 30 Switch Connections

Note: The supported modem is the Motorola V.3600 modem. For further information on specifications and configuration refer to the V.3600 Modem User guide, a copy of which is located at http://www.arcelect.com/V3600_Modem_manual.htm. <http://www.motorola.com> may also be used for reference.

Installing the Eicon X.25 card

To install and configure the Eicon X.25 card:

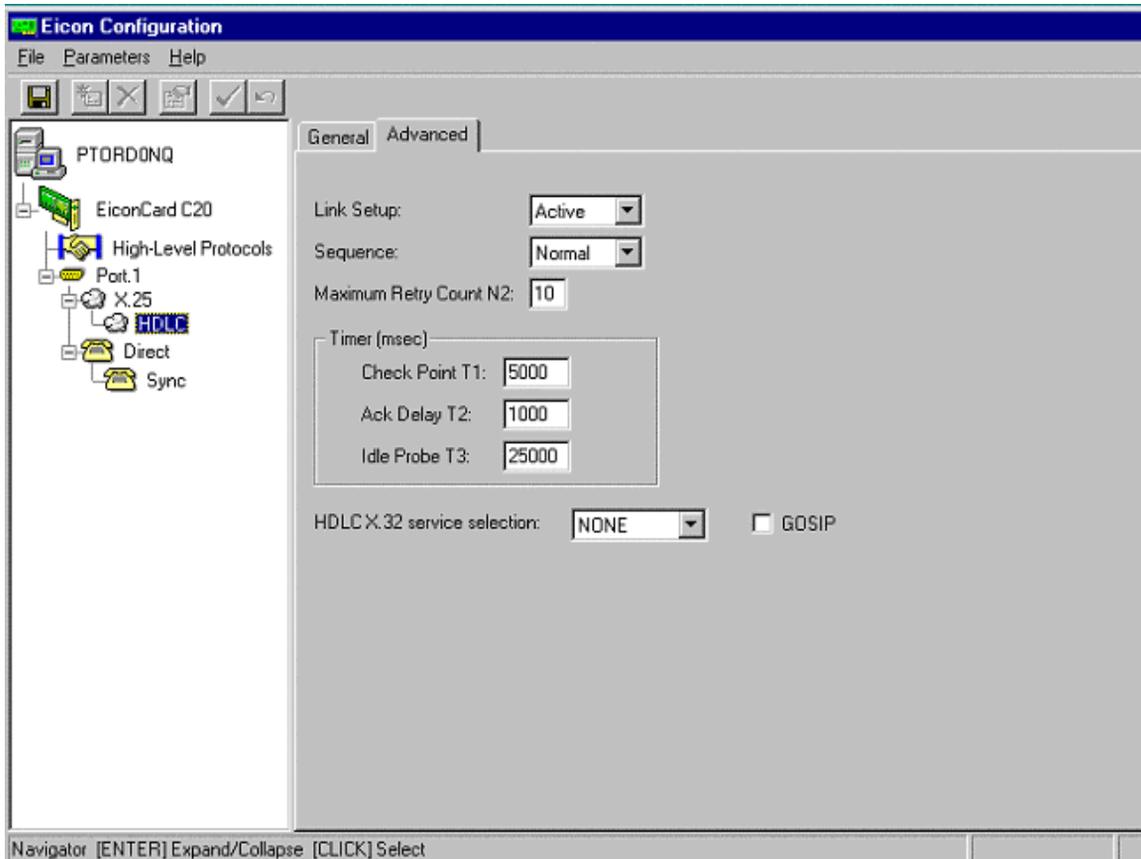
- 1 Insert the Eicon Card (C20 or C90) into the slot in the computer. It is not necessary to change any settings on the card. Refer to the following website for detailed installation instructions http://www.eicon.com/worldwide/support/docs.htm?en_prod=Eiconcard_C20
- 2 Connect the Eicon Card and the modem using the V24 cable (db25 to db25).
- 3 Install the Driver:

- a** The driver for Windows NT 4.0 (c4wntv4r2c.exe) is available from the following website: <http://www.eicon.com/cnnt/wanic/downld.htm>
 - b** Choose Add in the Network Adapter
 - c** Choose Eicon Wan Adapters and select the location of the downloaded executable.
- 4** The Eicon card may be configured with the default values, except in the HDLC\Advanced tab which must use the values as in Figure 31. Appendix A on page 107 includes screenshots of the Eicon Configuration windows with appropriate values for LinkPlexer 1.2



Note: The 'Check Point T1' Timer in this dialog box must be changed to 5000mSec. The default timer in the DMS/MSL-100 is 5000ms and the Eicon default is 2900. Hence there will be a conflict if the timer is not changed to 5000mSec.

Figure 31 Eicon Configuration HDLC:Advanced



- 5 Choose Yes to install OEM Option
- 6 Add the Eicon Performance Counter
- 7 Restart the computer

Figure 32 shows an example of the TAPI Server parameters and DMS-100 Datafill values for X.25 connections.

Figure 32 Example TAPI Server parameters & DMS-100 Datafill

TAPI Server parameters and DMS-100 Datafill for X.25 Connection

Business Computer Parameters		DMS-100 Datafill			Message Type
Parameters Name	Value	Table	Field	Value	
Version of X.25	1980	MPC	DLDFILE	MPC003AC	
Version of X.25	1980	MPCLINK	PROTOCOL	X2580	
Two way SVC	1	MPCLINK	SVCS2WAY	1	
Called DNA (DMS)	2222222	MPCLINK	EXINFO.SVCDNA.DIGITS	2222222	X.25 CALL REQUESTLAYER 1
Calling DNA (BC)	11111111	SCAICOMS	LINK_DEFINITION.REMDNA	11111111	X.25 CALL REQUESTLAYER 1
Protocol (User Data)	0 0 0 0	SCAICOMS	PROTOCOL	0 0 0 0	X.25 CALL REQUESTLAYER 1
Business Group ID	2	BGDATA	BGID	2	DV_APPL LOGONLAYER 7
Password	TESTER	SCAIGRP	PASSWORD	TESTER	DV_APPL LOGONLAYER 7
Network Node ID	25	SCAIGRP	NETNODID	25	DV_APPL LOGONLAYER 7
Business Group ID	2	SCAIGRP	BGID	2	DV_APPL LOGONLAYER 7
Service ID	1	SCAIPROF	PROFKEY.LINKSET.SRVCID	1	DV_APPL LOGONLAYER 7
Service Version	8				DV_APPL LOGONLAYER 7
Application ID	333				DV_APPL LOGONLAYER 7

Chapter 7

Maintenance & Troubleshooting LinkPlexer

This section contains information on maintenance and troubleshooting common problems with LinkPlexer 1.2. It contains the following topics:

- “Common problems” on page 87
- “Frequently Asked Questions” on page 88
- “Log files” on page 89
- “LinkPlexer 1.2 Procedures” on page 93

Common problems

Table 5 describes the solutions to some of the problems that can occur when running LinkPlexer 1.2.

Table 5 Common problems

Problem	Solution
LinkPlexer not running	Ensure that the LinkPlexer software has been installed, configured, and is running. Ensure that the dongle is connected and flagged as connected in the Keycode Tracker application. To check if LinkPlexer is running, access the drive where LinkPlexer is installed, and check the LP_Curr.log. If LinkPlexer did not start correctly, this log file should contain a startup error such as “invalid IP address” or “X.25 error”. A pop-up message may appear when attempting to start LinkPlexer, indicating a problem. If there has been a fatal error, this will be indicated by LP_Fatal_Error.log
DMS/MSL-100 is down... network problems	Ensure that all of the machines involved are up and communicating properly (usually pinging one machine from another is sufficient)
Invalid DNs to be monitored	Ensure that the ACD groups have been properly configured on the switch, and that the LPConfig.ini file matches that configuration

Table 5 Common problems (continued)

Problem	Solution
Call Info or Transfer fails (on client applications)	Ensure that the SwitchReplyTimeoutMilliSecs value is set to something reasonable (generally 5000 or more). Smaller values may cause client requests to time out without giving the switch time to complete a requested action.
No response to AgentContinuity Message	The switch expects a positive acknowledgement (RETURN-RESULT) from the Session Manager within 10 seconds. If the Session Manager doesn't respond the Session Manager connection, the DMS/MSL-100 connection and connections to all active agents are disconnected. Any agent that does not respond to the message in a timely fashion (5 seconds) will be disconnected, and that agent license becomes available, but the Session Manager connection, the DMS/MSL-100 connection and all the other agents remain connected.

Frequently Asked Questions

Table 6 shows the answers to some frequently asked questions about LinkPlexer 1.2 installation and configuration.

Table 6 Frequently asked questions

Question	Answer
How do I interpret LCD and LED fault indicators on the Motorola V.3600 modem?	Motorola modems have six LEDs on the front and a display panel. When LinkPlexer is running correctly, the first four LEDs are lit and the last two blink. The display shows the words ON-LINE. Any other combination indicates that the modem is not working.
How do I install and migrate from one server to another?	LinkPlexer can not migrate from one server to another. However, if the LPConfig.ini file is backed up, found in the C:\Program Files\Nortel\Linkplexer folder, then LinkPlexer can be installed on a new server. Replace the LPConfig.ini file with the old one without re-configuration.
How do I identify the latest version number or review fixes for LinkPlexer 1.2?	To identify the latest software version number, go to http://sulaco.europe.nortel.com:8080/mp/core_mm_view.cfm and under each build folder there is a list of pertinent PEPs. The applied software versions are available in the Tracker application. Ensure that this information is communicated with problem reports.
How do I use the front panel on a line driver to set the configuration?	See Chapter 4 of the <i>Motorola V.3600 Series Modem User's Guide</i> , Part # T0097,C for information.

Table 6 Frequently asked questions (continued)

Question	Answer
What if the hard disc fails? How is the system recovered?	Setting up the new machine. Install LinkPlexer 1.2 from the CD-ROM. Replace the LPConfig.ini file with a backup copy of the original file. Refer to "Back-up of LinkPlexer 1.2 and Restoration to a New Server" on page 98
Does upgrading LinkPlexer require an outage?	Yes.
What is the sequence of CTI servers?	<p>The recommended boot sequence is:</p> <ol style="list-style-type: none"> 1. LinkPlexer 1.2 server 2. SCCS 3. TAPI. <p>However, if Linkplexer is restarted, the switch link and all associations are dropped as well as the connections to SCCS and TAPI. Both SCCS and TAPI go into a link restart phase trying to reconnect to the 'switch'. When Linkplexer comes up, it establishes the connection to the switch and allows SCCS and TAPI to reconnect to it. SCCS and TAPI then reassociate (reacquire) the lines and continue normally.</p> <p>If the connection between the switch and Linkplexer is lost and Linkplexer continues to run, it will drop the connection to SCCS/TAPI, forcing them into the link restart phase. Any server should be able to be restarted without impacting the others.</p>
If there is a problem with the Eicon X.25 card, how are the X.25 commands diagnosed?	Refer to the Problem Determination Guide at http://www.eicon.com/support/helpweb/connt/PDmenu.htm for Eicon Card X.25 command diagnostics.

Log files

Log files record significant events and errors for the user. LinkPlexer 1.2 log files are created in a separate folder called `Log` under the LinkPlexer 1.2 installation folder (by default this is `C:\Program Files\Nortel\LinkPlexer 1.2`). The logging mechanism amalgamates all logging into a single file called `LP_Curr.log` in the `Log` directory.

Log files size will be dynamically configurable using the configuration file entry `MaxLogFileSizeMegs`. When the log file size reaches the limit then a backup copy of the log file called `LP_Prev.log` is created and stored in a folder called `OldLogs` off the `Log` folder. The current log file will be reinitialised and logging to this file continues.

The raw ICM messages sent and received by LinkPlexer 1.2 are written to a single file called `LP_SndRecvCurr.log` stored in the `Log` folder. When the log file reaches the dynamic limit defined in the configuration file then a backup copy of the log file called `LP_SndRecvPrev.log` is created and the current log file is emptied. This tracing can be turned on by setting the configuration file entry `IcmMessageLogging` to `ON`. The size of the ICM message trace log file will be limited by the parameter `IcmMessageLogFileSizeMegs` in the configuration file.

There are rare scenarios whereby fatal error encounter during the startup are not recorded to the log file. To prevent this, there is an error file which is generated to store fatal errors encountered by LinkPlexer 1.2. This file called `LP_Fatal_Error.log` will be stored in the `Log` folder.

Log File Examples

Figure 33 is an example of `LP_Curr.log`. `LP_Prev.log`. The time and date are displayed to the left of the log file. The first entry, after the time, is the thread name, the second entry is the log type i.e. information message or warning message followed by the log message.

Figure 33 LP_Curr.log file format

```

2002 Aug 27 14:40:55.017 [Main] [INFO] ***** Linkplexer Startup*****
2002 Aug 27 14:40:55.027 [Main] [INFO] X25 is not available
2002 Aug 27 14:40:55.027 [Main] [INFO] **** Reading static configuration items ****
2002 Aug 27 14:40:55.027 [AgentContinuityTest] [INFO] Thread started. (ID = 0x140, Control Block
= 0x85027C)
2002 Aug 27 14:40:55.027 [AgentPingTest] [INFO] Thread started. (ID = 0x5E8, Control Block =
0x85029C)
2002 Aug 27 14:40:55.027 [AgentPingTest] [INFO] Ping Socket = 232. Process Id = 1412.
2002 Aug 27 14:40:55.057 [AgentPingTest] [INFO] AgentPingTestDebug is turned OFF
2002 Aug 27 14:40:55.057 [AgentPingTest] [INFO] AgentPingTest is turned ON
2002 Aug 27 14:40:55.057 [AgentPingTest] [INFO] AgentPingIntervalSecs is 30
2002 Aug 27 14:40:55.057 [Main] [INFO] AgentListenerPort is 2500
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchLinkType is IP
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchLinkType is set to IP
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchAddress is 172.18.11.100
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchPort is 2500
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchReplyTimeoutMillisecs is 10000
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchContinuityTest is OFF
2002 Aug 27 14:40:55.057 [Main] [INFO] SwitchContinuityTest is turned OFF
2002 Aug 27 14:40:55.057 [Main] [INFO] NetworkNodeID is 3
2002 Aug 27 14:40:55.057 [Main] [INFO] ServiceID is 1
2002 Aug 27 14:40:55.057 [Main] [INFO] ServiceVersion is 11
2002 Aug 27 14:40:55.057 [Main] [INFO] BusinessGroupID is 3
2002 Aug 27 14:40:55.067 [Main] [INFO] ApplicationID is 2
2002 Aug 27 14:40:55.067 [Main] [INFO] Password is ABC345
2002 Aug 27 14:40:55.067 [Main] [INFO] TcpLinksetName is LAB3LNK1
2002 Aug 27 14:40:55.067 [Configuration] [INFO] Thread started. (ID = 0x5F0, Control Block =
0x514AF0)
2002 Aug 27 14:40:55.067 [Configuration] [INFO] **** Reading dynamic configuration items ****
2002 Aug 27 14:40:55.077 [Timer] [INFO] Thread started. (ID = 0x5EC, Control Block = 0x83F680)
2002 Aug 27 14:40:55.107 [Configuration] [INFO] MaxLogFileSizeMegs is 1
2002 Aug 27 14:40:55.107 [Configuration] [INFO] IcmMessageMaxLogFileSizeMegs is 1
2002 Aug 27 14:40:55.107 [Configuration] [INFO] IcmMessageLogging is turned ON
2002 Aug 27 14:40:55.107 [Configuration] [INFO] DnsAssociationDebug is turned OFF
2002 Aug 27 14:40:55.107 [Configuration] [INFO] DvSetOffHookGenerateDebug is turned OFF
2002 Aug 27 14:40:55.558 [Main] [INFO] Max number of LinkPlexer agents is 18.
2002 Aug 27 14:40:55.558 [SwitchSessionMgr] [INFO] Thread started. (ID = 0x5E0, Control Block =
0x8503C8)
2002 Aug 27 14:40:55.558 [SwitchQueue] [INFO] Thread started. (ID = 0x1B4, Control Block =
0x842F88)
2002 Aug 27 14:40:55.558 [SwitchQueue] [INFO] Connecting to: 172.18.11.100, port 2500
2002 Aug 27 14:40:55.568 [SwitchQueue] [INFO] Socket 372: connected
2002 Aug 27 14:40:55.568 [SwitchSocket] [INFO] Thread started. (ID = 0x47C, Control Block =
0x842FC0)
2002 Aug 27 14:40:55.568 [SwitchSessionMgr] [INFO] Sending login request (dv-AppL-Logon) to the
switch
2002 Aug 27 14:40:55.568 [Main] [INFO] Listening for connections on port 2500
2002 Aug 27 14:40:55.568 [Main] [INFO] Linkplexer Service initialised and running
2002 Aug 27 14:40:55.578 [AgentLicenceMgr] [INFO] Thread started. (ID = 0x588, Control Block =
0x850468)
2002 Aug 27 14:40:55.578 [AgentLicenceMgr] [INFO] Agent acquired and listening...
2002 Aug 27 14:40:55.608 [SwitchSessionMgr] [INFO] Received a positive response (RETURN-
RESULT) to the login request

```

Figure 34 is an example of LP_SndRcvCurr.log. In this file hex dumps of the ICM messages to and from the switch are logged to the file.

Figure 34 LP_SndRcvCurr.log file format

```

2002 Aug 27 15:29:37.639,RECV from DMS,1,0,A2 03 02 01 01
2002 Aug 27 15:29:38.120,SENT to DMS ,2,4,A1 17 02 01 02 02 01 02 30 0F 80 0A
39 37 32 36 38 33 31 32 30 30 81 01 00
2002 Aug 27 15:29:38.130,RECV from DMS,2,4,A2 03 02 01 02
2002 Aug 27 15:29:38.130,SENT to DMS ,3,6,A1 17 02 01 03 02 01 02 30 0F 80 0A
39 37 32 36 38 33 31 32 33 30 81 01 00
2002 Aug 27 15:29:38.130,SENT to DMS ,4,8,A1 17 02 01 04 02 01 02 30 0F 80 0A
39 37 32 36 38 33 31 32 33 31 81 01 00
2002 Aug 27 15:29:38.140,SENT to DMS ,5,9,A1 17 02 01 05 02 01 02 30 0F 80 0A
39 37 32 36 38 33 31 32 33 30 81 01 00
2002 Aug 27 15:29:38.150,RECV from DMS,3,6,A2 03 02 01 03
2002 Aug 27 15:29:38.150,SENT to DMS ,6,10,A1 17 02 01 06 02 01 02 30 0F 80
0A 39 37 32 36 38 33 31 32 33 32 81 01 00
2002 Aug 27 15:29:38.150,SENT to DMS ,7,11,A1 17 02 01 07 02 01 02 30 0F 80
0A 39 37 32 36 38 33 31 32 33 31 81 01 00
2002 Aug 27 15:29:38.150,SENT to DMS ,8,13,A1 17 02 01 08 02 01 02 30 0F 80
0A 39 37 32 36 38 33 31 32 33 33 81 01 00
2002 Aug 27 15:29:38.150,SENT to DMS ,9,14,A1 17 02 01 09 02 01 02 30 0F 80
0A 39 37 32 36 38 33 31 32 33 32 81 01 00

```

↑ **hex dumps**

↑ **Send and Receive messages**

Date and Time

The fatal error file displays information on rare scenarios that are encountered during startup. A fatal error is identified, at startup by the dialog box in Figure 36. Figure 36 gives an example of this file

- “Back-up of LinkPlexer 1.2 and Restoration to a New Server” on page 98
- “Upgrade Procedure for LinkPlexer 1.1 to LinkPlexer 1.2” on page 99
- “Startup Procedures for Nortel Networks Call Centre Equipment” on page 102
- “Guidelines for the use of Anti-Virus software on LinkPlexer 1.2” on page 104

Backup of LinkPlexer 1.2 to enable restoration - in the event of a faulty PEP

Builds affected

All Builds and PEPs

Background

The LinkPlexer 1.2 file content may be updated or added to by the use of the LinkPlexer 1.2 PEP installer. This will read the LinkPlexer 1.2 Path from the registry keys and install the modifications in the Nortel LinkPlexer 1.2 folder.

However in the case that there is a fault in the PEP installation and/or PEP file content, it is advisable to have a backup copy of the original LinkPlexer 1.2 files.

Procedure

- 1 Locate the LinkPlexer 1.2 folder. By default this is located in C:\Program Files\Nortel\LinkPlexer 1.2
 - 2 Copy this folder (and consequently all the files) to another location
 - 3 Close all applications that are currently running
 - 4 Proceed with the PEP installation (refer to the PEP Installation procedure on page 91)
 - 1 If there has been a problem with the PEP installation, delete the LinkPlexer 1.2 folder located, by default, at C:\Program Files\Nortel\LinkPlexer 1.2
 - 2 Restore the LinkPlexer 1.2 folder to C:\Program Files\Nortel
 - 3 LinkPlexer 1.2 and its associated applications may be run as usual now.
-

PEP Installation

Builds affected

All builds and PEPs

Background

The LinkPlexer 1.2 file content may be updated or added to by use of the LinkPlexer 1.2 PEP (Product Enhancement Package) installer. This will read the LinkPlexer 1.2 Path from the relevant registry keys and install the modifications in the Nortel LinkPlexer 1.2 folder (default C:\Program Files\Nortel\LinkPlexer 1.2).

The latest PEP for a particular build is available from http://sulaco.europe.nortel.com:8080/mpl/core_mm_view.cfm where under each build folder there is a list of pertinent PEPs. The latest PEP for a given software build (e.g. 01.01.10) will always contain all the fixes/changes contained in earlier PEPs for the same build. Thus, only the latest PEP need be applied to the release.

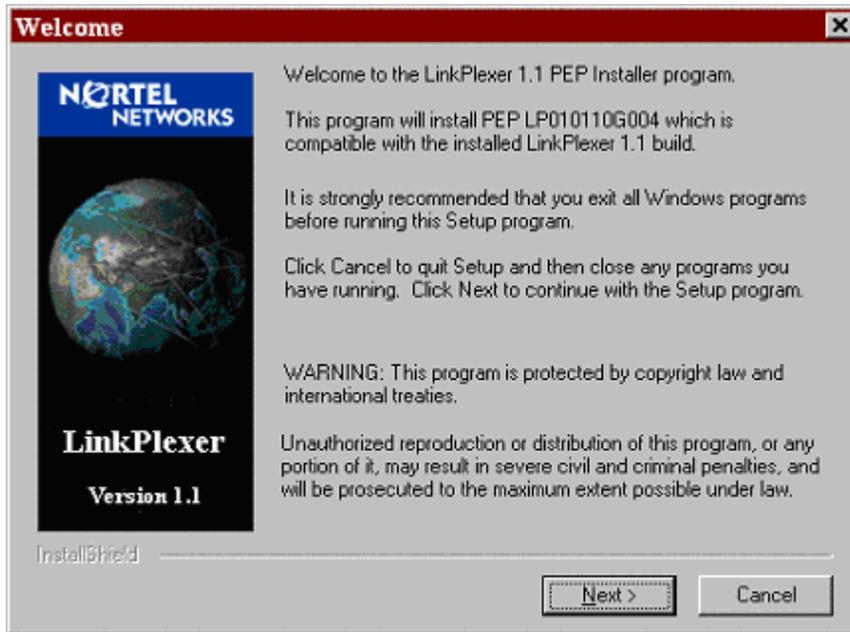
It is advisable to follow the procedure “Backup of LinkPlexer 1.2 to enable restoration - in the event of a faulty PEP” prior to beginning this procedure.

Procedure

Assumptions:

- LinkPlexer 1.2 is installed
 - All unassociated applications are closed
- 1** Locate the correct PEP for the installed build on the following website: http://sulaco.europe.nortel.com:8080/mpl/core_mm_view.cfm. Unzip the file and click on the setup icon (setup.exe)
 - 2** The dialog box in Figure 37 shows, as an example, the InstallShield Welcome dialog box for PEP LP010110G004. (Note, the same format will apply for LinkPlexer 1.2).

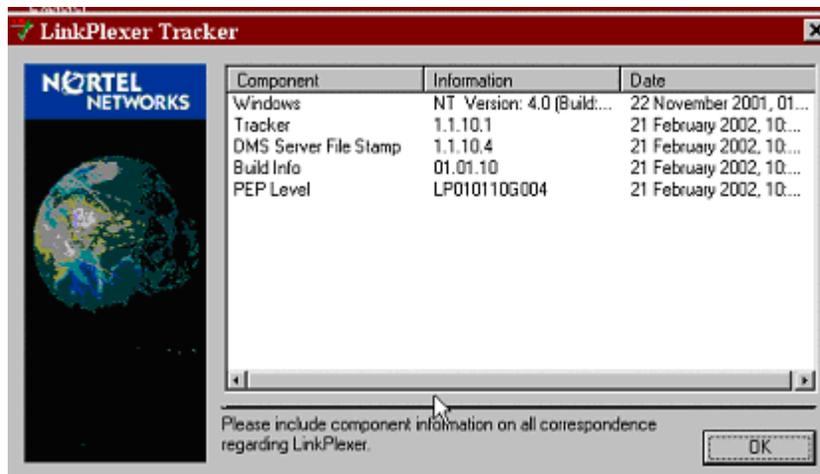
Figure 37 LinkPlexer 1.1 PEP Installation - welcome dialog box



- 3** Click Next. The PEP files will now be installed into the LinkPlexer 1.2 folder (by default this is C:\Program Files\Nortel\LinkPlexer 1.2)
- 4** After installation, the following dialog box, as in Figure 38, will be visible. Note, this is for a LinkPlexer 1.1 PEP, however a LinkPlexer 1.2 PEP will be of similar format.

Figure 38 LinkPlexer 1.1 PEP Installation - finish dialog box

- 5 Click Finish. The PEP has now been installed. The Tracker application can be used to verify the PEP.
- 6 Tracker may be launched from Start\Programs\Programs\Nortel LinkPlexer 1.2\Tracker. It will display the PEP level and the date as illustrated in Figure 39.

Figure 39 Tracker with PEP details (for LinkPlexer 1.1)

Back-up of LinkPlexer 1.2 and Restoration to a New Server

Builds affected

All builds and PEP's.

Background

This procedure documents the steps to take in order to ensure that the current configuration of LinkPlexer 1.2 (and hence the LinkPlexer files) is backed up. It also outlines the steps to restore LinkPlexer to a new server in the case of a fault/damage to the original server.

Procedure

- 1 Locate the LinkPlexer 1.2 folder. By default this is located in C:\Program Files\Nortel\LinkPlexer 1.2
- 2 Copy this folder (and consequently all the files) to another location. This step ensures that there are backup copies of all the installed files.
- 3 Make a separate copy of the LPConfig.ini configuration file, which has been adapted locally for LinkPlexer 1.2 configuration. A copy of this file should be held externally e.g. on a separate machine.

- 4 Install LinkPlexer 1.2 on the new server (follow Chapter 2, “Pre- Installation Requirements & Procedures,” on page 27 and Chapter 3, “Installing LinkPlexer 1.2,” on page 31).
- 5 Locate the LinkPlexer 1.2 folder. By default this is located in C:\Program Files\Nortel\LinkPlexer 1.2.
- 6 Retrieve the copied LPConfig.ini - copy this into the LinkPlexer 1.2 folder over the default LPConfig.ini file.
- 7 The TCP/IP or X.25 connections must be re-configured. Refer to “Configuring LinkPlexer 1.2” on page 49 and “TCP/IP Connections” on page 56.

Upgrade Procedure for LinkPlexer 1.1 to LinkPlexer 1.2

Builds

LinkPlexer Release 1.1 (all builds and PEPs) and all LinkPlexer 1.2 builds and PEPs

Background

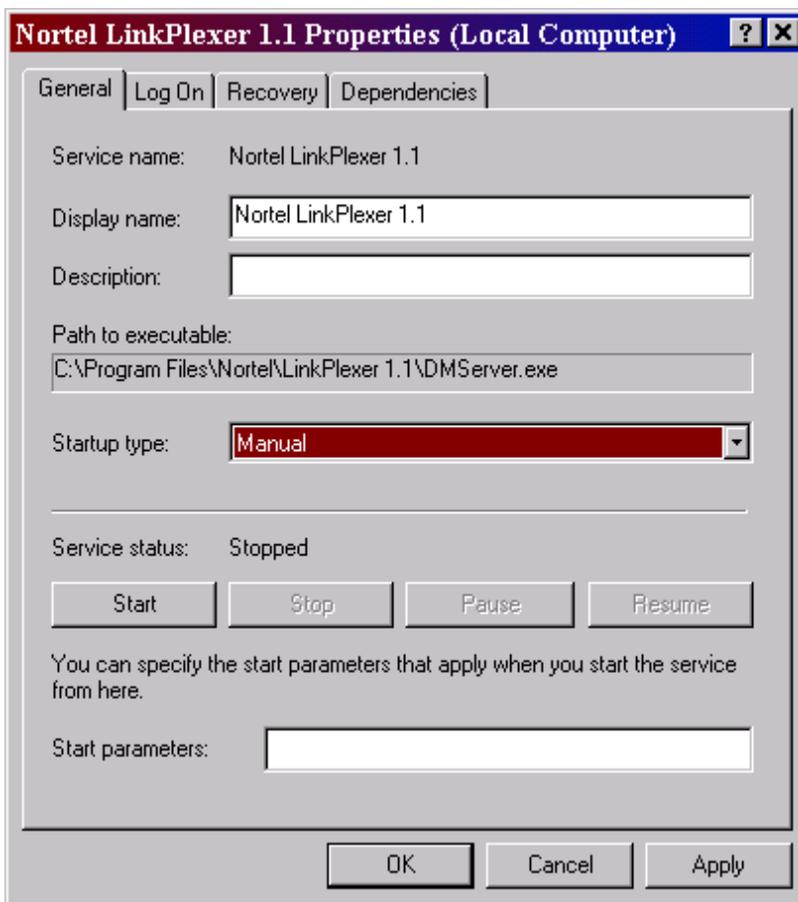
The following guidelines outline the necessary steps for upgrading the application from Release 1.1 to Release 1.2

Procedure

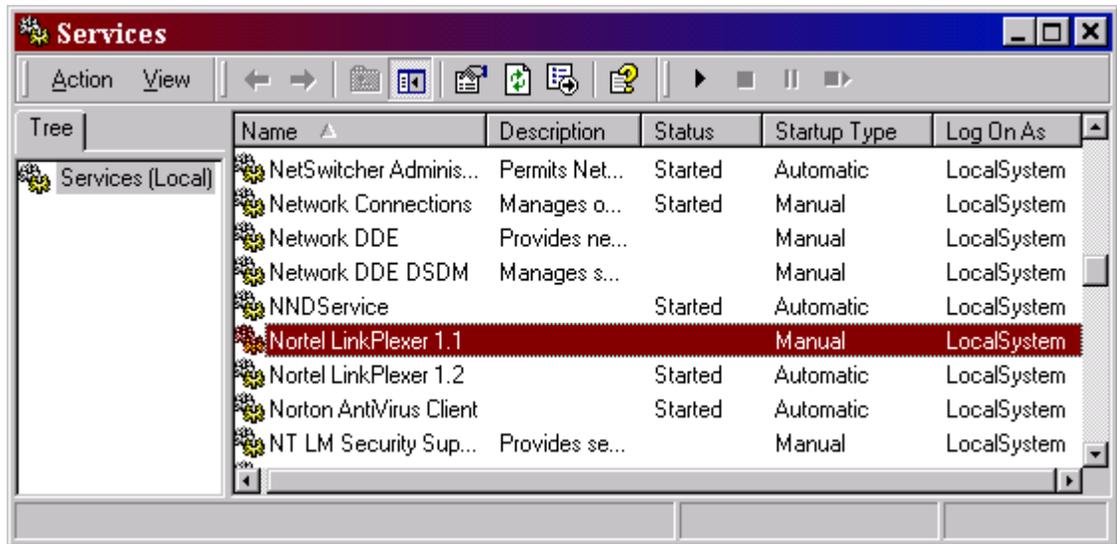
- 1 Locate the LinkPlexer 1.1 folder. By default this is located in C:\Program Files\Nortel\LinkPlexer 1.1
- 2 Copy this folder (and consequently all the files) to another location. This step ensures that there are backup copies of all the Release 1.1 files, in case of a fault during LinkPlexer 1.2 Installation.
- 3 Make a separate copy of the DMSGlobal.ini and DMSLocal.ini configuration files, which have been adapted locally for LinkPlexer 1.1 configuration. A copy of these file should be held externally i.e. on a separate machine for reference when completing the configuration for LinkPlexer 1.2. Note, although the format of the LinkPlexer 1.1 files are different to the format for the LinkPlexer 1.2 configuration file, there is mutual information. Refer to

“Appendix D: LinkPlexer Configuration Changes” on page 122 for the differences between LinkPlexer 1.1 and LinkPlexer 1.2 configuration files

- 4 Uninstall LinkPlexer 1.1, by clicking on Start\Settings\Control Panel\Add/Remove Programs and selecting Nortel LinkPlexer 1.1.
- 5 LinkPlexer 1.2 can be installed and configured as directed in Chapter 3, “Installing LinkPlexer 1.2,” on page 31 and Chapter 4, “Configuring LinkPlexer 1.2,” on page 49.
- 6 If LinkPlexer 1.2 is to co-reside with LinkPlexer 1.1 then proceed as instructed from step 1 to 3. However there is one change that needs to be made with regards to the system Services to enable LinkPlexer 1.2 operation when co-resident with LinkPlexer 1.1.
- 7 Open the Services dialog box Start\Settings\Control Panel\Administrative Tools and select Nortel LinkPlexer 1.1.
- 8 Right click and open the properties dialog box and change the startup type from Automatic to Manual as in Figure 40.

Figure 40 LinkPlexer 1.1 Services Properties Dialog Box

- 9 The Services dialog box will now have LinkPlexer 1.2 with automatic startup and LinkPlexer 1.1 with Manual as indicated in Figure 41.

Figure 41 Services with LinkPlexer 1.2 Coresident with LinkPlexer 1.1

Startup Procedures for Nortel Networks Call Centre Equipment

Builds affected

All Builds and PEPs

Background

This procedure defines the sequence for starting up call centre equipment

Procedure

When restarting Nortel Networks call centre equipment the following is the recommended sequence:

- 1 Start the Nortel Networks LinkPlexer 1.2 service
- 2 Start the services on the SCCS server (all services must be started before proceeding to the next step)

- 3 Start the ACD proxy service on the TAPI server (this will also start Telephony Services). Note, ensure Call Monitor is running - a restart may be necessary
- 4 Start the Nortel Networks Startup Services on the Peri Link Server (this establishes the socket connection to the TAPI server)
- 5 Make test calls into the VPS system to ensure the calls are being handled correctly

If there is to be a planned outage to the SCCS - for full backups or PEP installations, the order in which the systems are brought down should start at step 4 and go to step 1.

The following steps demonstrate how to stop the services:



Caution: Do not hard reboot the Peri Link

- 1 On the Peri Link server open the Services for the server and select the Peripherals Startup Services and click Stop
- 2 On the TAPI server, at the Run line type **killtapi**. This will shutdown the ACD proxy and Telephony Services.
- 3 If performing a Full Backup of the SCCS server, wait for the services to stop and go to the next step (step 4). If a PEP is being installed on the server, wait for the services to stop or for the server to start the reboot process before proceeding to the restarting sequence
- 4 After the SCCS services have stopped, or the server is rebooting, open the Services for the server and select Nortel LinkPlexer 1.2 and click Stop. This will disconnect the link with the switch. Note, the link needs to be reestablished by restarting the LinkPlexer 1.2 Service before the SCCS tries to restart.

Precautions

The end user should be aware of the following scenarios when restarting the call centre or during an outage situation:

- 1 If a caller is receiving music or RANS's and the SCCS is taken down or loses control of a CDN during call processing, the caller will not be placed

back into the default routing of the switch. At this point, the switch is still looking for a message to terminate the call handling. All new callers or callers not receiving the above treatments, will be defaulted to the switch where they will not receive any treatments when their call arrives at the switch.

- 2 If either of the Peri Link, ICM TAPI or SCCS applications go down, the other applications will stop receiving messages about the resources being shared. This also includes CDN's and associated ACD queues.

The affected applications can recover by reacquiring the resources in the switch, this would involve manual intervention by the site administrator.

- 3 In the case of a LinkPlexer failure, all applications will loose control of the acquired resources and the calls return to the switch default routing..

Guidelines for the use of Anti-Virus software on LinkPlexer 1.2

It should be noted that the risk of virus infection on the LinkPlexer 1.2 server is minimal due to the limited access required for support of the server. LinkPlexer 1.2 is compatible with and supports anti-virus software with known and documented guidelines.

Nortel Networks has carried out testing on a representative sample of Anti-virus software packages (Norton, McAfee and Innoculate) in order to determine generic guidelines for the use of Antivirus software:

- The LinkPlexer server software must be installed before installing the Anti-Virus software. When the Anti-Virus software is installed, it is the implementation personnel's responsibility to perform testing.
 - During PEP installations all Anti-Virus functionality should be disabled and should not startup automatically until the entire installation procedure is completed. Re-enable afterwards as required.
 - Infected file quarantine policy on the LinkPlexer 1.2 server: the anti-virus software should not be configured to deal automatically with suspected infected files. In the event of infected files being located, there should be no attempt to replace or remove them. Contact the local Nortel Support representative for assistance in determining if the file(s) are part of the LinkPlexer 1.2 application or a critical system file.
-

- It is strictly unsupported to connect the LinkPlexer 1.2 server directly to the Internet for the downloading of Virus definitions or updated files. Instead, Virus definitions and update files should be downloaded to another locations on the customer network, and manually loaded to the LinkPlexer 1.2 server. This is the same recommended procedure for downloading Symposium PEPs. This limits access to the Internet, and thus reduces the risk or downloading infected files.
- In addition, all PEP files, CD-ROMs and floppy disks should be scanned prior to installation or uploading to the server. This will minimise any exposure to infected files from outside sources.
- Capacity considerations: Customers should note that running virus scan software can place an additional load on the LinkPlexer 1.2 server. It is the implementation personnel's responsibility to run the WINNT 4.0 Performance Monitor tool on the server to gauge CPU utilisation. If the Anti-Virus software scan causes the LinkPlexer 1.2 server average CPU utilisation to become excessive then that Anti-Virus software should not be loaded onto the LinkPlexer 1.2 server.



Note: Nortel does not provide support on the configuration of anti-virus scan software. Questions or problems on Anti-Virus software should be directed to the appropriate vendor.

Note: The above recommendations are intended as guidelines only, and do not constitute a guarantee of compatability. Nortel does not plan to perform ongoing compatability testing, or testing on other Anti-Virus packages.

Note: If performance or functionality issues are raised to Nortel support, as part of the fault diagnosis process, the customer/distributor may be asked to remove third party utility software or Anti-Virus software.

Appendices

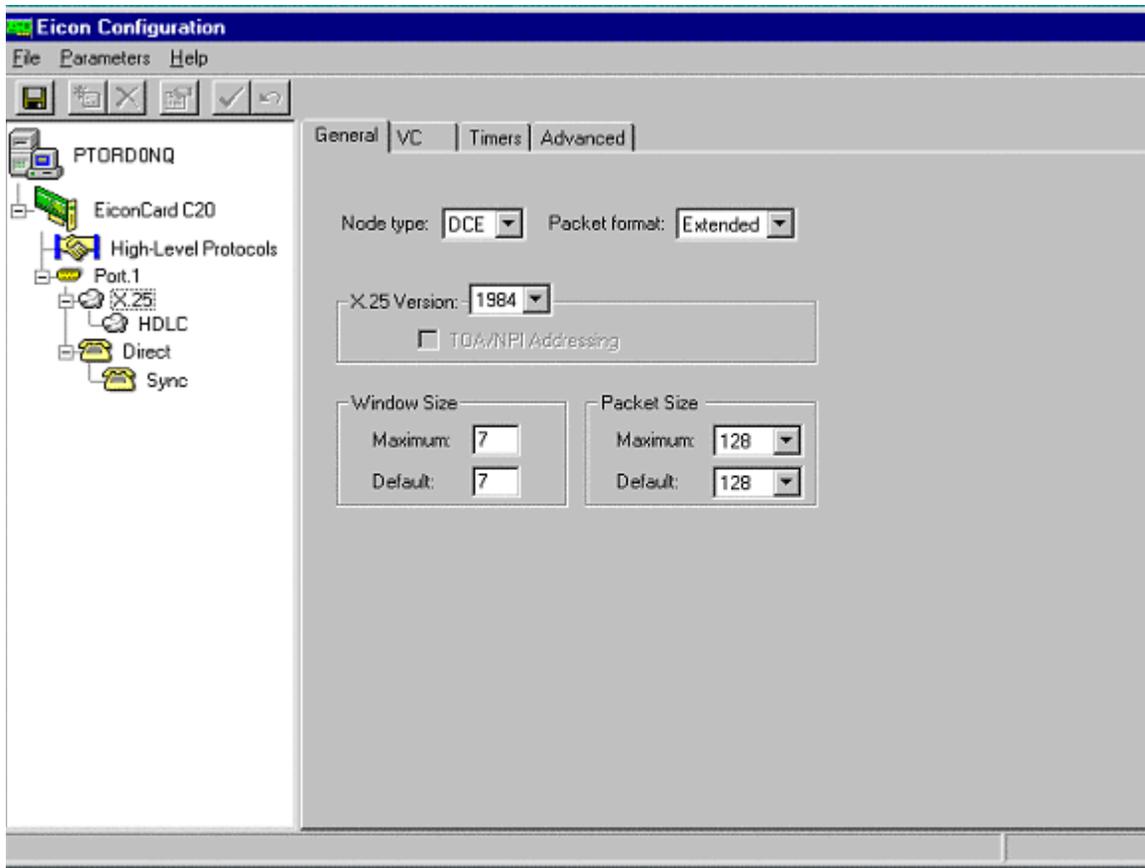
Appendix A: Installation of the Eicon X.25 Card

This Appendix refers to Chapter 6, “Installing and configuring the Eicon X.25 card, and the section “Installing the Eicon X.25 card” on page 82.

The following sequence of Screenshots can be used as a template for configuring the Eicon card for use with LinkPlexer 1.2.

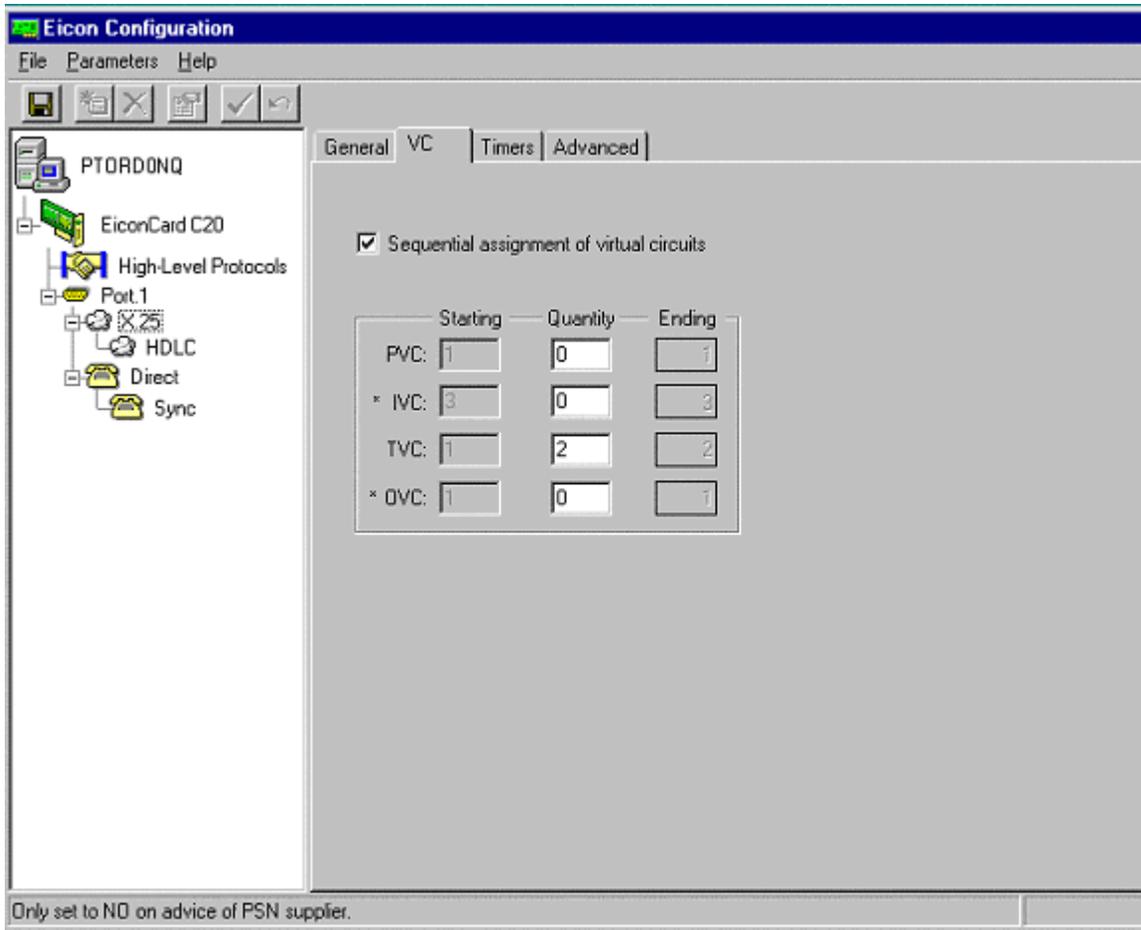
- a** X.25: General - values as in Figure 42

Figure 42 Eicon Configuration X.25:General



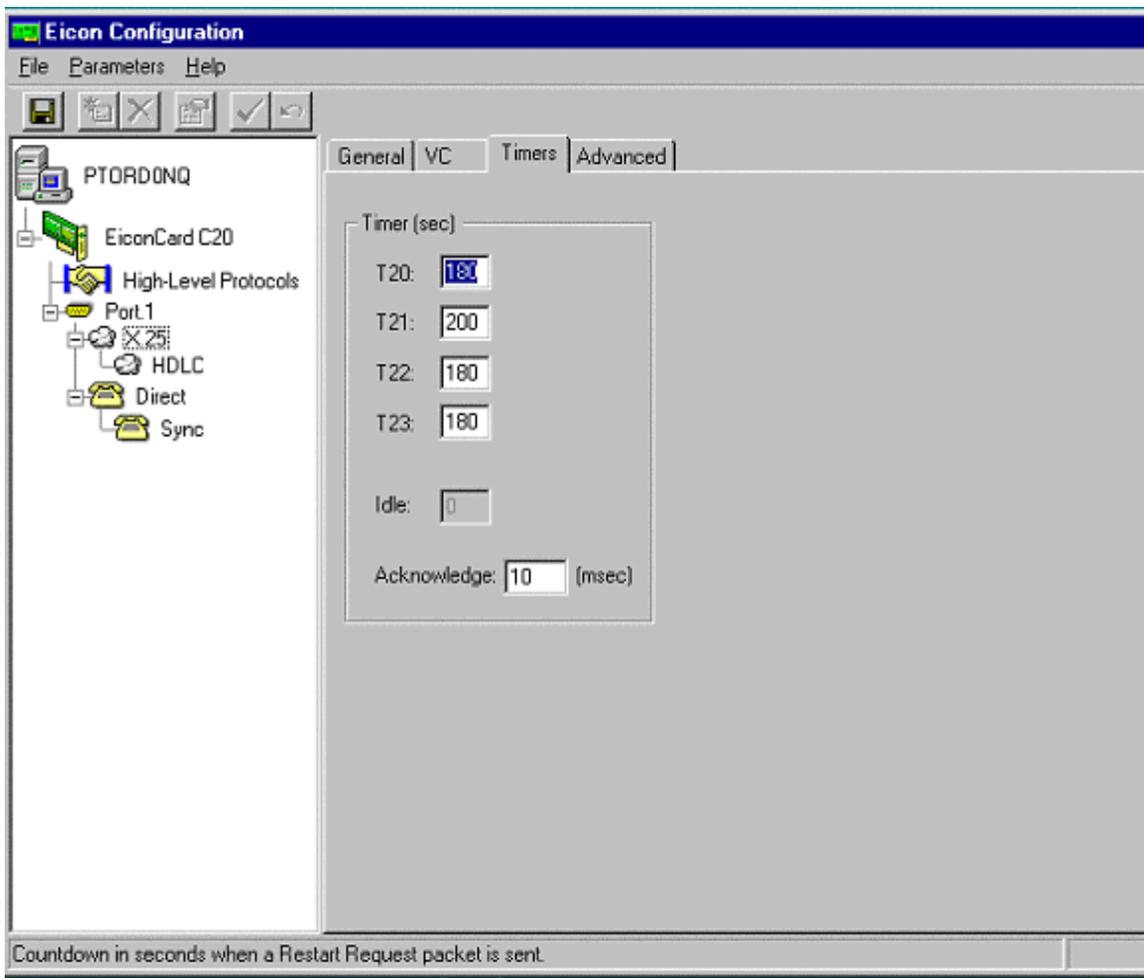
b X.25: VC - values as in Figure 43

Figure 43 Eicon Configuration X.25:VC

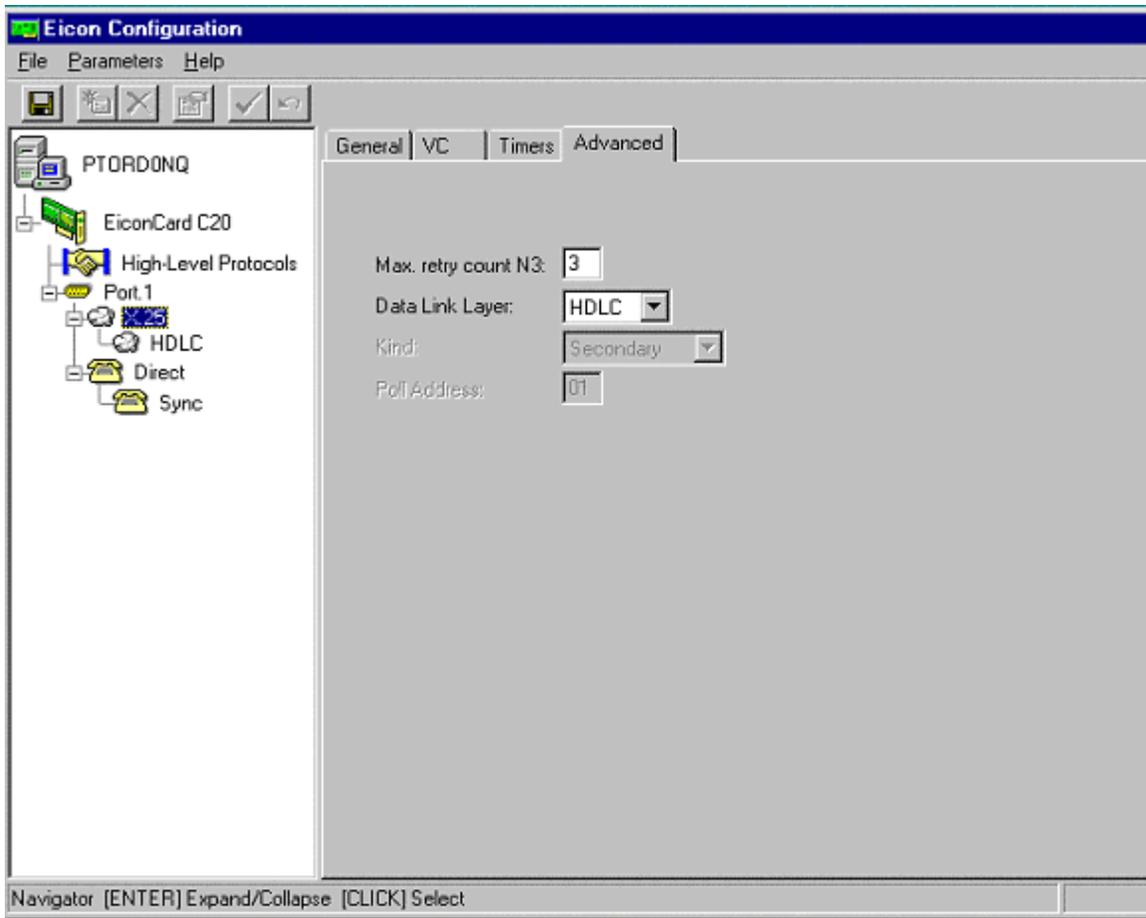


c X:25: Timers - values as in Figure 44

Figure 44 Eicon Configuration X.25: Timers

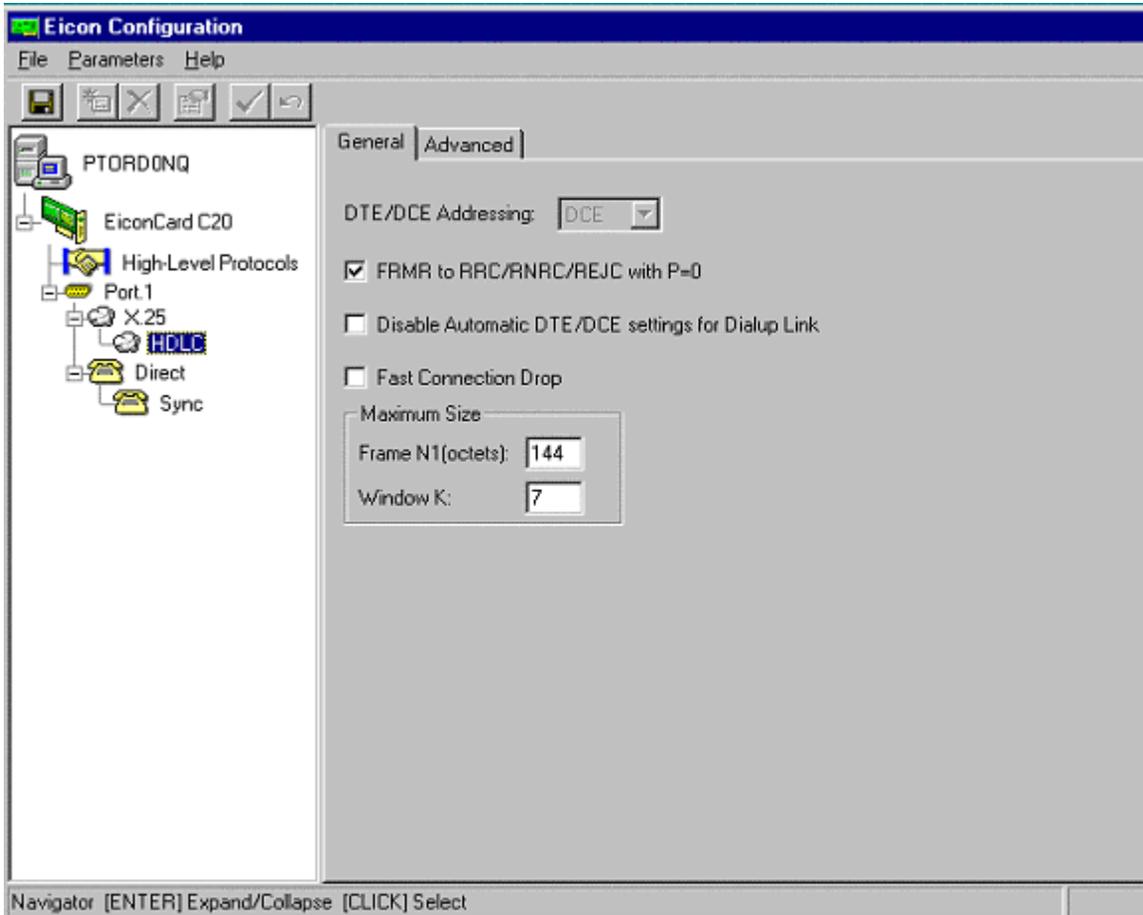


d X.25: Advanced - values as in Figure 45

Figure 45 Eicon Configuration X.25:Advanced

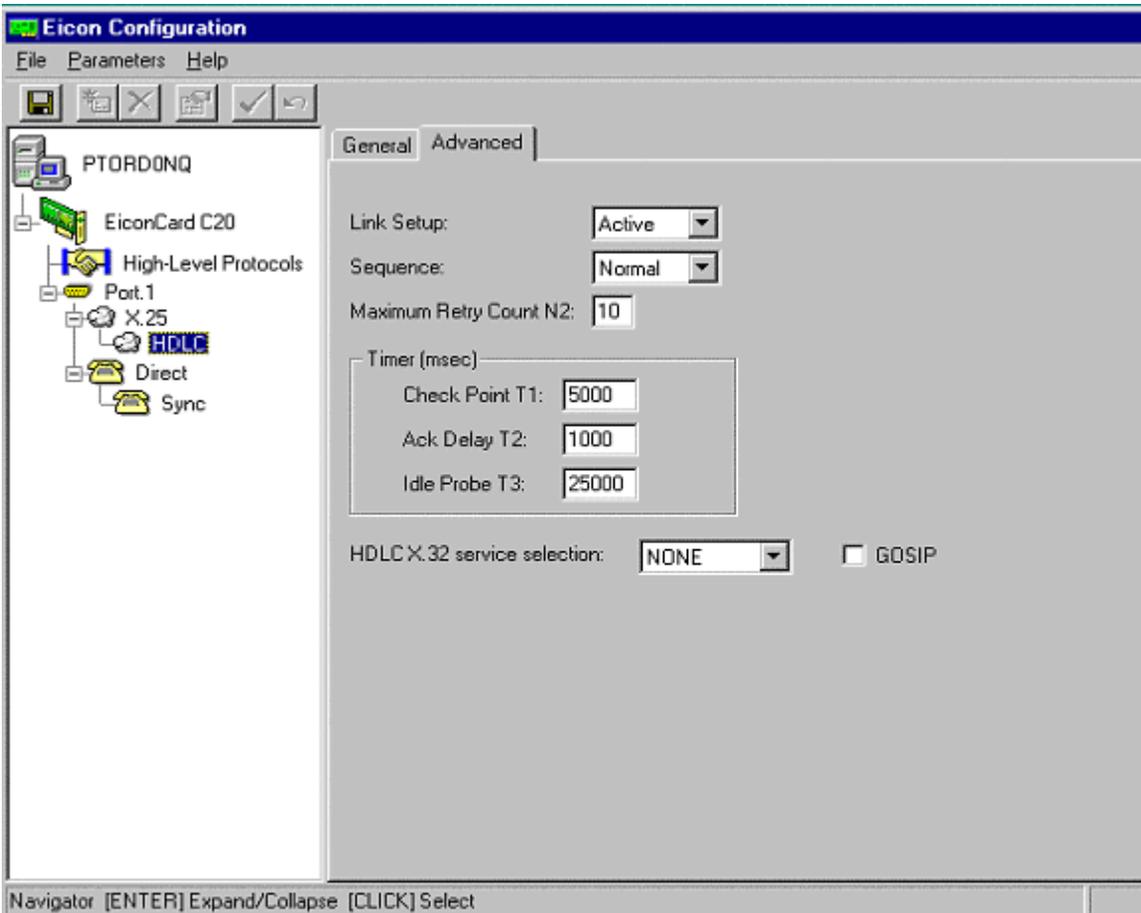
e HDLC: General - values as in Figure 46

Figure 46 Eicon Configuration HDLC: General



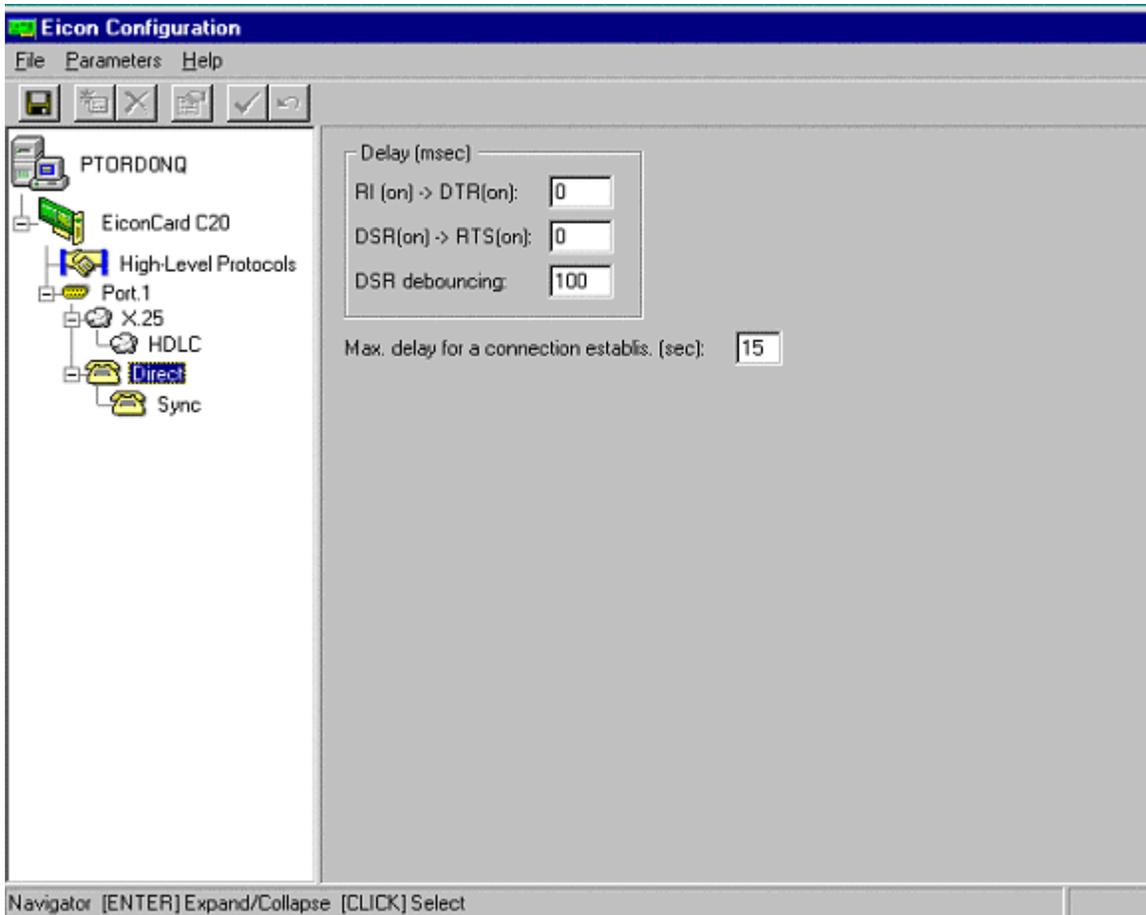
f HDLC: Advanced - values as in Figure 47

Figure 47 Eicon Configuration HDLC:Advanced

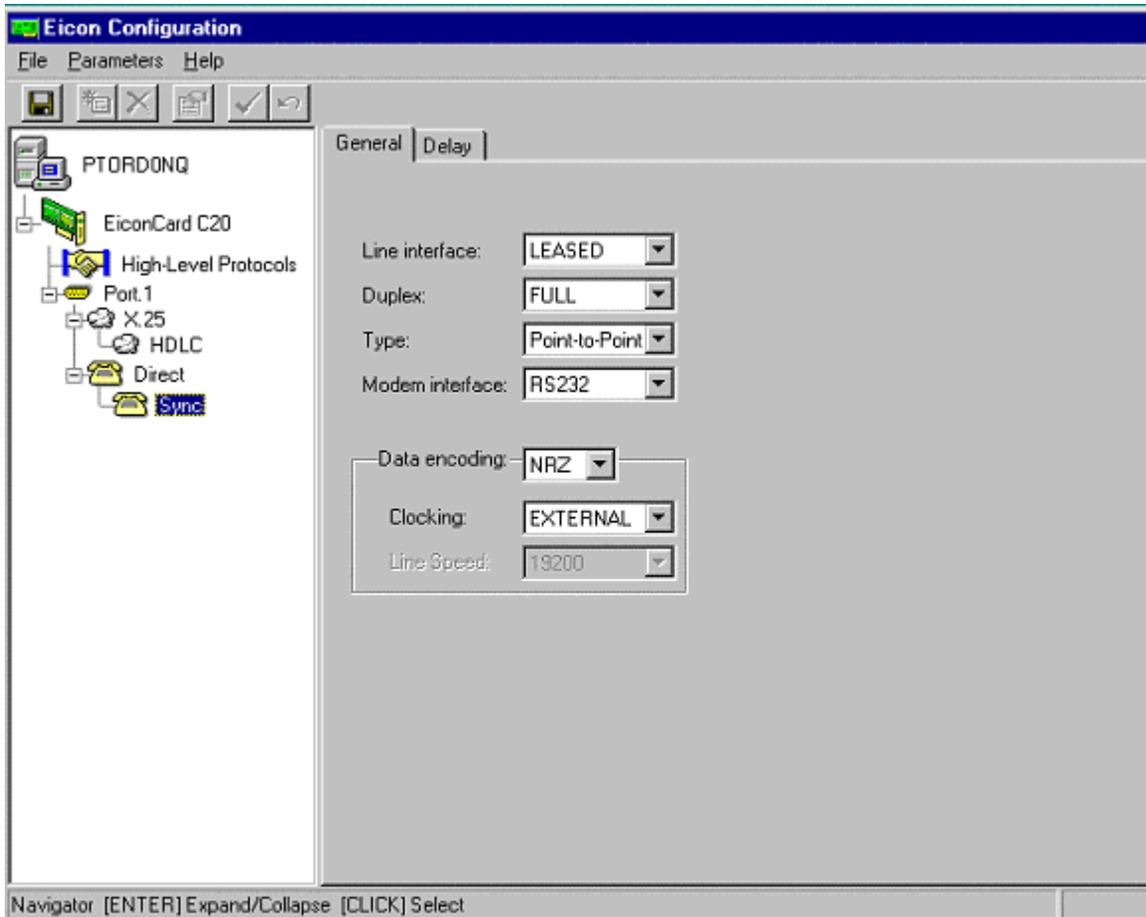


g Direct - values as in Figure 48

Figure 48 Eicon Configuration Direct

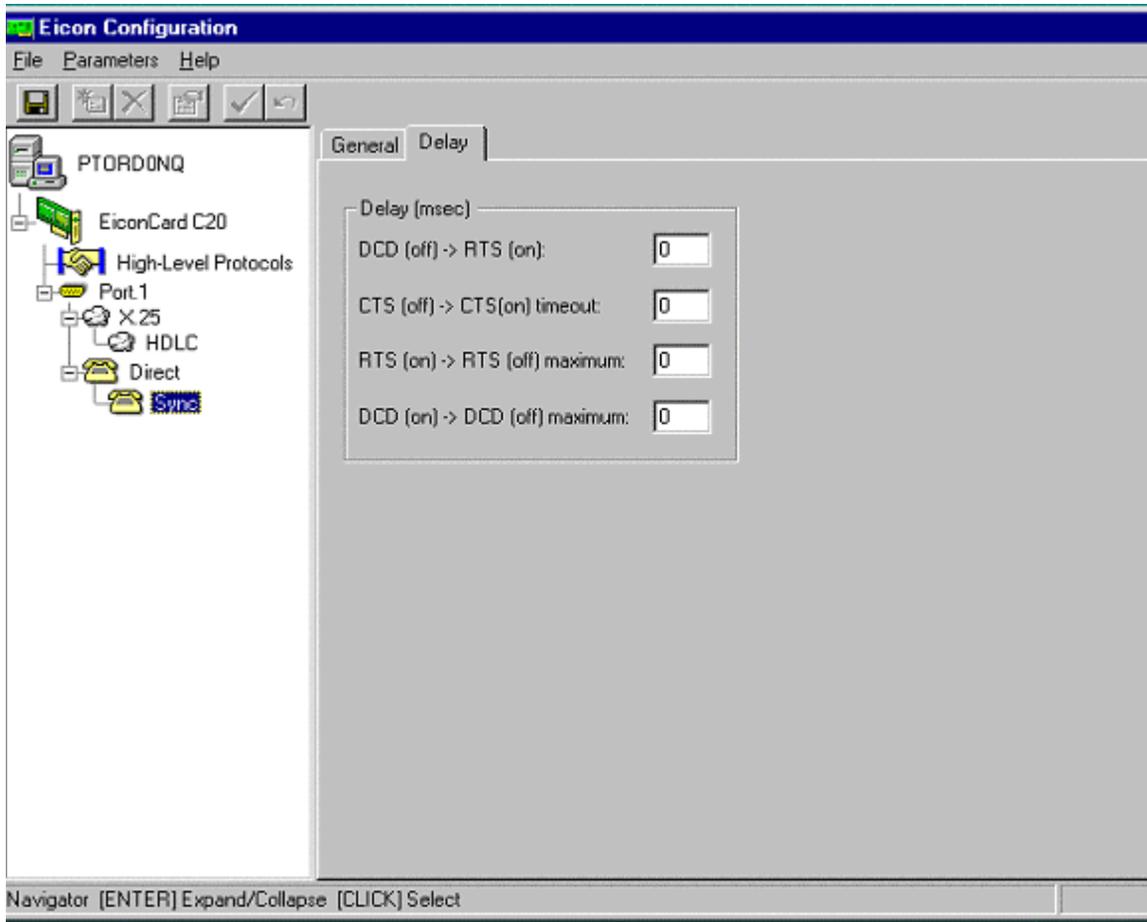


h Synch: General - values as in Figure 49

Figure 49 Eicon Configuration Synch:General

i Synch: Delay - values as in Figure 50

Figure 50 Eicon Configuration Synchrony:Delay



Appendix B: DMS/MSL100 Table Definitions & Examples

This Appendix refers to “Configuring the DMS/MSL-100 switch” on page 57. It provides the table definitions and examples of the table contents that are relevant

for a call centre for DMS/MSL 100 (SCAI Linkset).

BGDATA

Table BGDATA is used to store information relating to multiswitch business groups (MBG). This table sets the customer group that the linkset will be able to access. If a line is in another customer group than the one defined in this table the call center will not be allowed to acquire/monitor the line or ACD group

BGID BGXLA OPTIONS

LOCAL 2 \$ (CUSTGRP TAS1 N 24 Y 0 0) \$

SCAICOMS

Table SCAICOMS defines a linkset for use by a switch/computer applications interface (SCAI) group. This table sets the type and address of the host application. Most of the sites will be TCP type. The IPADDRESS in this table MUST match the IP of the host application or the switch will not allow login. The ENHASSOC feature allows for a max of 100 CDN's to be acquired on this link.

LINKSET SCAILINKS OPTIONS

NORTEL TCP 47 104 99 88 N (ENHASSOC 100) \$

SCAIGRP

Table SCAIGRP stores all the switch computer application interface (SCAI) groups within a switch. Each SCAI group has a password, network node identifier (ID) and business group ID (BGID). This table sets the login options for the linkset. The PASSWORD, NETNODID and BGID must be unique. The password and netnodid are defined only in this table. The BGID is the one datafilled in table BGDATA

SCAIDNAM PASSWORD NETNODID BGID OPTIONS

NORTEL ABC123 1 LOCAL 2 (LINKSET (NORTEL) \$)\$

SCAIPROF

Table SCAIPROF serves as a lookup table for switch computer application interface (SCAI) CompuCALL service profiles. A service profile is a set of CompuCALL messages and associated options that are available during a HIGHEST level of messaging that the link can support. The Subservice must be datafilled in table SCAISSRV in order to put it in this table. The Service ID is also datafilled in this table as part of the KEY Field.

NORTEL 1(CTXEVENT13\$) (ACDEVENT12\$) (ROUTING35\$) (TPCC14\$)
(RESOURCE11\$) (TPAC12\$) (CALLINIT07\$) (SCAI3WC14£)
(SCAIMWTI13\$) (DNQUERY07\$) (SCAICC08\$) (TPQC10\$) (ICCM10\$)
(CPEVENT14\$)\$

Note: The \$ after the subservice name denotes a default subservice that was already datafilled in table SCAISSRV.

SCAISSRV

Table SCAISSRV acts as a reference table for CompuCALL service categories. This table sets the type of data you will get during the call flow for each type of CompuCALL message. This table can be changed, but it is highly suggested that it not be changed from the default without careful engineering and customer call flow consideration

CTXEVENT12\$ CTXEVENT (SETOFFHK Y Y Y) (CALLOFFR Y Y Y Y Y Y
Y Y Y Y Y Y Y Y) (CALLANSWR Y Y Y Y Y Y Y Y Y Y Y Y Y Y)
(CALLREL Y Y Y Y) (CALLNAME Y Y Y Y Y)\$

CUSTNTWK

Table CUSTNTWK is used to define options available to the customer group. This table only needs one option added to the customer group that was defined in table BGDATA. The option ECM must be assigned to the customer group so that NON-ACD lines with the option ECM added to them in servord can be controlled or monitored with the CTI.

CUSTNAME NETNAME NETCGID DNREVLXLA OPTIONS

TAS1 PRIVATE 1 \$ (CLID INTRAGRP) (ECM) (NTWKEMW) (RNID
INTRAGRP) \$

LIUINV

Table LIUINV contains the configuration data for each ASU in an LPP or ELPP. The EIU is an interface between the DMS-bus and an Ethernet local area network (LAN). The MAC address in this table has to come from the program manager for the site.

LIUNAME LOCATION LOAD PROCINFO CARDINFO

- - - - -

EIU 2 MS 12 0 2 8 ETC15BC NTEX22BB NT9X84AA NT9X8522 NO
000075F01AD0

IPNETWRK

The IPNETWRK table describes the CM node and default EIU. Table LIUINV must be datafilled before table IPNETWRK. Changes made to the IP address component in table IPNETWRK force automatic reconfiguration of the IP address components of all nodes listed in tables IPHOST and IPROUTER. SCRFLAG must always be set to N. By default all ICMP messages will go out the first EIU datafilled in this table. In this case it would be tuple 0. This IPAddress of 0 is the ELAN IP for the call centre. All telnet and ftp connections will take place on the second EIU in this table. Only two EIU's can be datafilled or physically inserted in the switch for a SNSE. Adding a third EIU will cut the amount of bandwidth into 3 equal pipes, even though the third one is not in service.

KEYREF CMIPADDR SUBNET OPTION PARMAREA

0 156 42 126 193 8 \$ (SCRFLAG N) (EIU_INTERFACE EIU 2)\$ 1 156 42 19 1
8 \$ (SCRFLAG N) (DFLT_GTWY_IPADDR 156 42 4 252) (EIU_INTERFACE
EIU 13) (DFLT_INTERFACE Y) \$

IPHOST

The IPHOST table is responsible for configuring DMS nodes as Internet hosts. It activates the TCP layer and its applications on those nodes. For interface EIU's, only datafill the CM in this table.

INDEX NODENAME NODEINFO

- - - - -

0 CM 0 47 8 8

IPTHRON

Table IPTHRON contains IP THROtting numbers. The IP message flow from switch hosts requires throttling to control message congestion in the bandwidth-limited shared communication resources between the local message switch (LMS) and message switch (MS). The IP throttling numbers datafilled in this table derive the level of such throttling to and from each of the IP hosts.

Throttling capacity fields should not be zeros, the IP throttling numbers default to zero (100% throttling) for all EIUs datafilled in table LIUINV. If the throttling capacity numbers are not datafilled to non zero values, the EIU cannot communicate to destination nodes.

LMSNODE TXCAPCT RXCAPCT OPTION

- - - - -

EIU 2 32000 32000 (CM 32000) \$

EIU 13 32000 32000 \$

Appendix C: DN Association Management Examples

The following figures (demonstrate examples of “DN Association Management” on page 19, using Message Sequence charts.

Figure 51 DN Association Management - Example 1

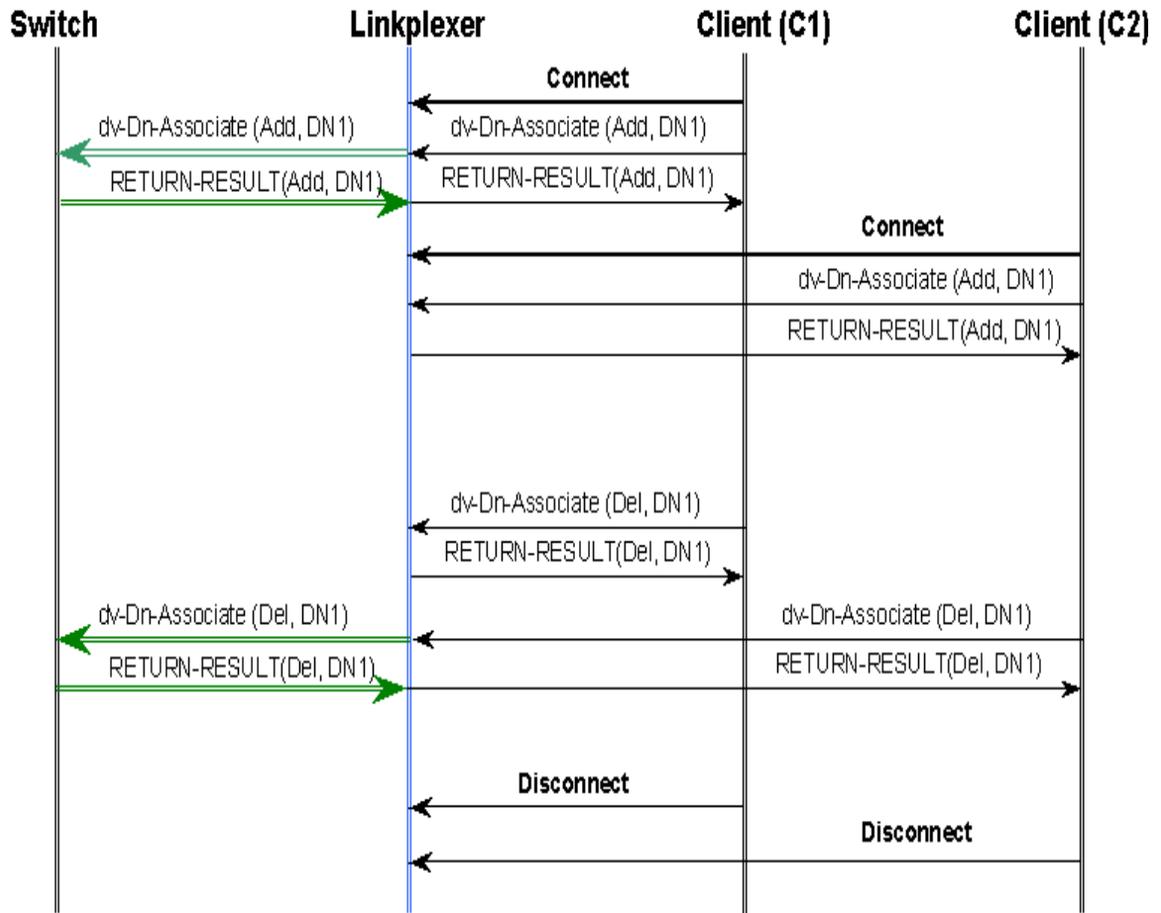
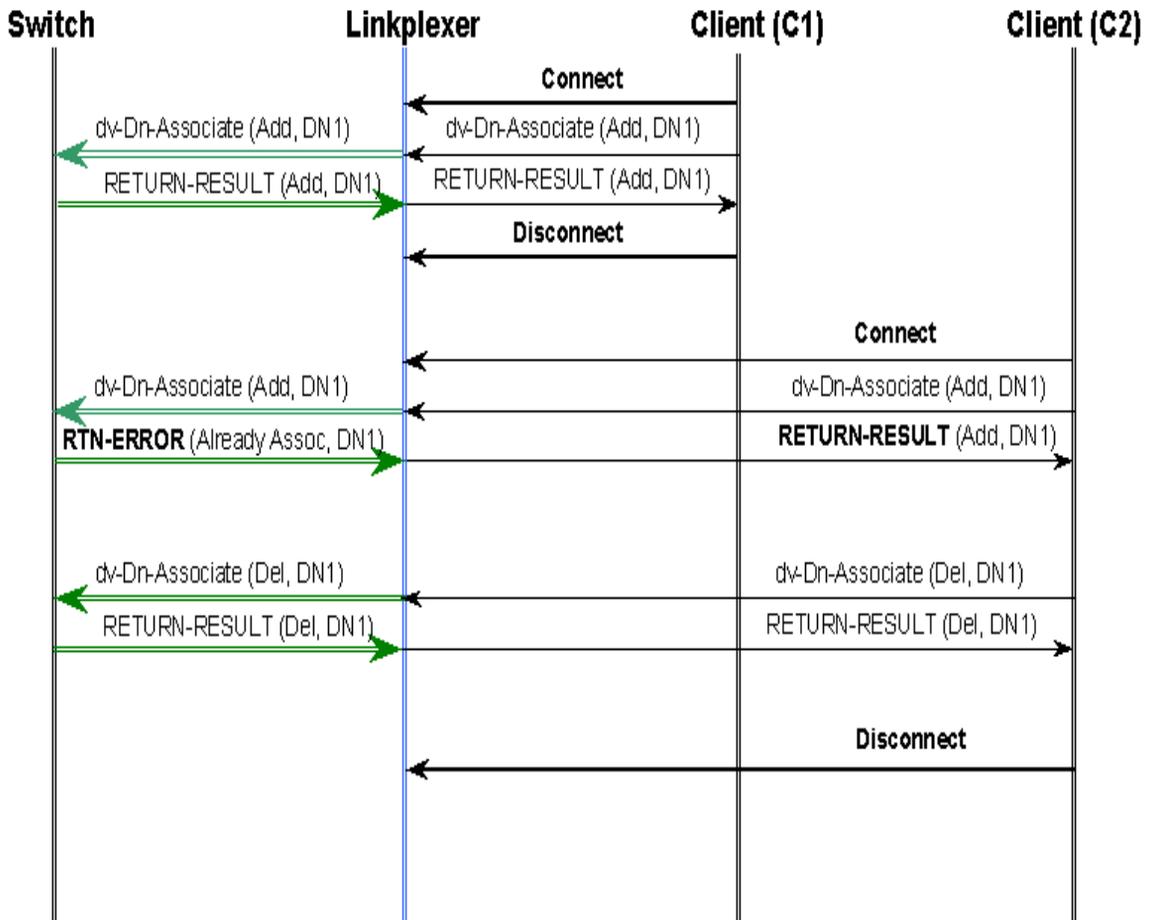


Figure 52 DN Association Management - Example 2



Appendix D: LinkPlexer Configuration Changes

As discussed in “LinkPlexer 1.2 Configuration” on page 49, there has been configuration file changes made between LinkPlexer 1.1 and LinkPlexer 1.2. The following changes have been made:

IP address to Host Name Resolution

LinkPlexer 1.1 performed a lookup on the IP address entered in the configuration file to obtain a host name for display purposes. On some networks the look-up process was unacceptably slow (~20 seconds). When configured with SCCS acting as a session controller, the slow response can lead to failure of LinkPlexer 1.1 successfully completing the logon process initiated by SCCS. This feature has been removed in LinkPlexer 1.2

Configuration Keywords

The following configuration keywords are no longer supported:

DNAssocFilter

SessionPort

ListenerPort

Configuration Entries Renamed

Table 7 indicates the configuration entries that have been renamed

Table 7 Renamed LinkPlexer 1.1 Configuration Entries

LinkPlexer 1.1	LinkPlexer 1.2
Type	Switch
DMSAddress	SwitchAddress
DMSPort	SwitchPort
RequestTimeout	SwitchReplyTimeoutMilliSecs
HexTraceLevel	lcmMessageLogging

Appendix E: LinkPlexer Comparison Matrix

The following matrix compares the features of LinkPlexer 1.2 with the LinkPlexer 1.1 feature set.

Table 8 Comparison between LinkPlexer 1.1 and LinkPlexer 1.2 features

Description	Functional Comparison between 1.1 and 1.2
Windows NT Service Architecture	No Change between 1.1 and 1.2
ICM Application Multiplexing	No Change between 1.1 and 1.2
DN Association Sharing	Existing 1.1 functionality enhanced as discussed in "DN Association Management" on page 19
Connectivity of ICM client to CompuCall	No Change between 1.1 and 1.2
Session Management	DN Assoc filtering no longer supported. External session management no longer supported
Client Connection Management	No Change
PEP Installation and Tracking	No Change
Software Version Control	No Change
Software License Control	No Change
Supportability Options	<p>All DMSerrorX.log files have been amalgamated into a single file LP_Curr.log, as discussed in "Log files" on page 89</p> <p>DMSsendX.log and DMSrcvX.log files have been amalgamated into LP_SndRcvCurr.log, as discussed in "Log files" on page 89</p> <p>Log file sizes are now configurable (in configuration file) and dynamic, as discussed in "LinkPlexer 1.2 Configuration" on page 49</p>
Configuration	DMSLocal.ini and DMSGlobal.ini no longer supported and have been replaced by LPConfig.ini, refer to "LinkPlexer 1.2 Configuration" on page 49
DMS/MSL-100	No Change
Co-residency	Co-residency support based on target Operating System, as discussed in "Co-residency" on page 23
Microsoft Windows Operating System	Windows NT 4.0/2000 server supported. No checking done at install time.
Symantec pcAnywhere	Now support for pcAnywhere 10.5, refer to Chapter 5, "Installing and configuring pcAnywhere," on page 65
TCP/IP	No Change
X.25	No Change -supported

Table 8 Comparison between LinkPlexer 1.1 and LinkPlexer 1.2 features

Description	Functional Comparison between 1.1 and 1.2
Minimum Server Specification	Server specification increased to support minimum specification for Windows 2000
Installation and Upgrade	LinkPlexer 1.2 will not check for target operating system
Engineering Guidelines	Engineering data will be captured as part of the Validation cycle and used to provide guidelines for operation and co-residency
Maintainability	Updates to support pcAnywhere 10.5
Installability/Upgrades	No Change
Reliability	No Change

Appendix F: Softphone Message Sequence Chart

This section refers the feature “Generation of dv-Set-Offhook-U on behalf of Softphone” on page 22. Figure 53 shows the Message Sequence Chart that demonstrates the message sequencing for the proposed solution.

Figure 53 Softphone feature Message Sequence Chart

