

# Configuring CICS Universal Client for Windows NT® for eNetwork Personal Communications



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# Chapter 1. Overview

The sample configuration shown in Figure 1 consists of a CICS Universal Client for Windows NT Version 3.1 connecting to CICS Transaction Server for OS/390 Version 1.3 across a network using IBM eNetwork Personal Communications Version 4.3.

Communication is through SNA LU6.2 communication provided by eNetwork Personal Communications on the client workstation, and VTAM on the mainframe server.

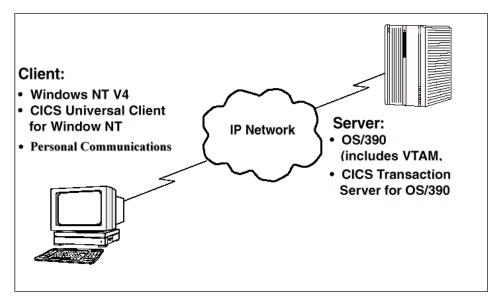


Figure 1. CICS Universal Client for Windows NT connected through eNetwork Personal Communications

Although we used the CICS Transaction Server for OS/390 Version 1.3 for the sample configuration, you could use earlier versions of the CICS Transaction Server for OS/390, or CICS/ESA Version 4.1.

In this document we cover the following topics:

- "Chapter 2. Software checklist" on page 3
- "Chapter 3. Definitions checklist" on page 5
- "Chapter 4. Matching definitions" on page 7

#### Overview

- "Chapter 5. Sample configuration" on page 9
- "Chapter 6. Testing your configuration" on page 23
- "Chapter 7. Security implementation" on page 25
- "Chapter 8. Useful commands and utilities" on page 29

# **Chapter 2. Software checklist**

The levels of software we used in the sample configuration are not necessarily the latest levels available. Check the relevant products for levels of compatible software.

We used the following software on the CICS server:

- OS/390 Version 2.6 including VTAM Version 4.5
- CICS Transaction Server for OS/390 Version 1.3

We used the following software on the client workstation:

- Windows NT Workstation Version 4.0 (service level 4)
- eNetwork Personal Communications Version 4.3
- CICS Universal Client for Windows NT Version 3.1
- Java Runtime Environment (JRE) Version 1.1.8 for Windows NT (necessary for running the configuration tool and other tools.)

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# **Chapter 3. Definitions checklist**

Before you configure the products, we recommend that you acquire definitions for the parameters listed below. Reference keys, for example, are assigned to definitions that must contain the same value in more than one product.

- VTAM
  - NETID 1
  - PU 2
  - LU 3
  - XID 4
  - Token Ring destination address 5
  - APPL 6
  - LogMode 7
- CICS Transaction Server for OS/390
  - Netname 3
  - Applid 6
  - Modename 7
- eNetwork Personal Communications
  - A fully qualified CP name, consisting of:
    - A qualified network name 1 .control point name 2
  - Partner LU name 1.6
  - CP Alias 2
  - Local Node ID 4
  - Destination address 5
  - Local LU Name
  - Mode Name 7
- CICS Universal Client for Windows NT Version 3.1
  - Partner LU name, which can be either of:
    - A qualified network name Network 1 .Partner LUName 6
    - An alias name 6.
  - Local LU name 3
  - Mode name 7

#### **Definitions checklist**

# **Chapter 4. Matching definitions**

In the sample configuration a number of definitions must match. Table 1 shows the definitions that must be the same. The Example column shows the values we used in our configuration (see "Chapter 5. Sample configuration" on page 9).

Table 1. Matching Definitions

Ref: Key	VTAM	CICS Transaction Server	eNetwork Personal Communications	Client configuration	Example
1	NETID	_	First part of Partner LU name	Partner LU name	GBIBMIYA
2	PU	_	CP Alias	_	IYALR01E
3	LU	Netname	Local LU name	Local LU name	IYALT1E0
4	XID	_	Local Node ID	_	05D 316C7
5	Token Ring destination address	_	Destination address	_	400045121088
6	APPL	Applid	Second part of Partner LU name	Partner LU name	IYCNZCA3
7	LogMode	Modename	Mode name	Mode name	LU62PS

## **Matching definitions**

# Chapter 5. Sample configuration

In this section we present examples of each of the definitions mentioned in "Chapter 3. Definitions checklist" on page 5. The values highlighted in the figures refer to the Example column of Table 1 on page 7.

#### **VTAM**

In this section we present the VTAM definitions required for accessing the server across the network.

#### **NETID**

Define the NETID **1** for your network node in the VTAM start command for your VTAM system. Figure 2 shows the NETID we used in our sample configuration.

```
:::
NETID=GBIBMIYA, 1
:::
```

Figure 2. VTAM: NETID definition

#### PU, XID, and LU

Figure 3 shows the VTAM PU **2**, XID **4**, and LU **3** definitions for our Client gateway. These are the definitions for the Client gateway known to the VTAM system we used in the sample configuration. The XID consists of two parts. The block number, IDBLK, is the first three digits, and the node number, IDNUM, is the last five digits.

```
IYALR01E PU ADDR=01, 2
IDBLK=05D,IDNUM=316C7, 4
ANS=CONT,DISCNT=NO,
IRETRY=NO,ISTATUS=ACTIVE,
MAXDATA=265,MAXOUT=1,
MAXPATH=1,
PUTYPE=2,SECNET=NO,
MODETAB=POKMODE,DLOGMOD=DYNRMT,
USSTAB=USSRDYN,LOGAPPL=SCGVAMP,
PACING=1,VPACING=2

*
IYALT1E0 LU LOCADDR=0,DLOGMOD=LU62PS 3
::
```

Figure 3. VTAM: PU, XID, and LU definitions

The LU IYALT1E0 3 is an independent LU6.2 definition.

#### **APPL**

Figure 4 shows the VTAM APPL 6 definition for the CICS Transaction Server for OS/390 required for the sample configuration.

Figure 4. VTAM: APPL definition

We used LU6.2 parallel sessions (PARSESS=YES) rather than single sessions.

#### LogMode

Figure 5 shows the VTAM LogMode 7 definition required for the CICS Universal Client to connect to the CICS Transaction Server for OS/390.

```
LU62PS MODEENT LOGMODE=LU62PS, 7
TYPE=0,
                 ONLY TYPE RECOGNISED
FMPROF=X'13',
                 SNA
TSPROF=X'07',
                 SNA
PRIPROT=X'B0',
               PRIMARY PROTOCOL
SECPROT=X'B0',
               SECONDARY PROTOCOL
COMPROT=X'79A5', COMMON PROTOCOL
SSNDPAC=X'00',
SRCVPAC=X'00'.
RUSIZES=X'8989', RUSIZES IN-4096 OUT-4096
PSNDPAC=X'00',
PSERVIC=X'060200000000000000122F00
```

Figure 5. VTAM: LogMode definition

#### CICS Transaction Server for OS/390 Version 1.3

In this section we present the CICS Transaction Server for OS/390 definitions required for the sample configuration shown in Figure 1 on page 1.

### System Initialization Table parameters

Figure 6 on page 11 shows the SIT parameters required to enable ISC and to define the CICS Transaction Server for OS/390 APPLID 6.

```
::
ISC=YES
APPLID=IYCNZCA3
::
```

Figure 6. CICS TS Version 1.3: APPLID definition

#### LU6.2 Connection and Sessions

Figure 7 and Figure 8 on page 12 show the independent LU6.2 connection definitions that we installed on the CICS Transaction Server for OS/390.

```
OBJECT CHARACTERISTICS
                                                              CICS RELEASE = 0530
 CEDA View Connection( C022 )
  Connection : C022
  DEscription :
  CONNECTION IDENTIFIERS
  Netname : IYALT1E0 3
  INDsys
  REMOTE ATTRIBUTES
  REMOTESYSTem :
   REMOTEName
   REMOTESYSNet
  CONNECTION PROPERTIES
                                         Vtam | IRc | INdirect | Xm
  ACcessmethod : Vtam
  ACCESSMETHOD : Vtam
PROTOCOl : Appc
Conntype :
SInglesess : No
DAtastream : User
RECordformat : U
                                         Appc | Lu61 | Exci
                                         Generic | Specific
                                         No | Yes
User | 3270 | SCs | STrfield | Lms
 + RECordformat : U
                                          U ¦ Vb
                                                          SYSID=ZCA3 APPLID=IYCNZCA3
PF 1 HELP 2 COM 3 END
                                     6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL
```

Figure 7. CICS TS Version 1.3: SNA Connection definition (first screen)

Figure 8. CICS TS Version 1.3: SNA Connection definition (second screen)

For eNetwork Personal Communications, you must specify security **ATtachsec** = **Verify** on your connection definition. It is not necessary to specify SEC=YES as a SIT parameter.

Figure 9 on page 13 shows the sessions definition required for the sample configuration. You can create the connection and sessions definitions for eNetwork Personal Communications by using RDO. The connection and sessions must be defined in the same group, and they must be installed simultaneously. We used Group(C022) in our sample configuration.

```
OBJECT CHARACTERISTICS
                                                          CICS RELEASE = 0530
 CEDA View Sessions (LU62PS)
  Sessions : LU62PS
Group : C022
  DEscription :
 SESSION IDENTIFIERS
   Connection : C022
   SESSName
  NETnameg
  MOdename : LU62PS 7
 SESSION PROPERTIES
  Protocol : Appc
                                       Appc | Lu61 | Exci
  MAximum : 008, 004
RECEIVEPfx :
  RECEIVECount :
                                       1-999
  SENDPfx
SENDCount :
SENDSize : 00256
+ RECEIVESize : 00256
                                       1-999
                                       1-30720
                                       1-30720
                                                      SYSID=ZCA3 APPLID=IYCNZCA3
PF 1 HELP 2 COM 3 END
                                   6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL
```

Figure 9. CICS TS Version 1.3: Sessions definition

#### **Configuring eNetwork Personal Communications**

In this section we describe the steps we used to install and set up eNetwork Personal Communications in our sample configuration.

To install eNetwork Personal Communications, run the setup program and follow the instructions on the panels. When you reach the panel shown in Figure 10 on page 14, select **3270 Emulation and Services** and **IBM SNA Protocols**.

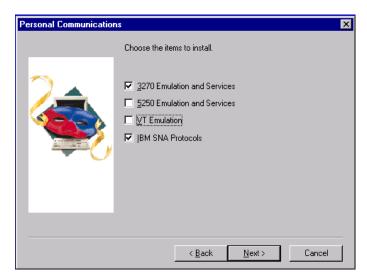


Figure 10. eNetwork Personal Communications: Installation Items

When you reach the panel shown in Figure 11, select **Yes**, **install the IEEE 802.2 LAN Interface** and then **Finish** to complete the installation.

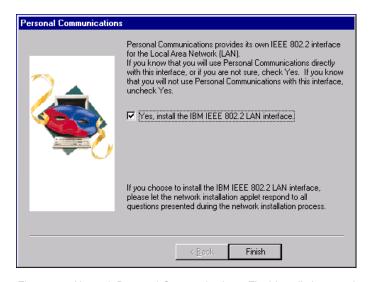


Figure 11. eNetwork Personal Communications: Final Installation panel

To configure eNetwork Personal Communications:

1. In the IBM eNetwork Personal Communications folder, select **SNA Node Configuration**. The Node Configuration panel is displayed, see Figure 12.

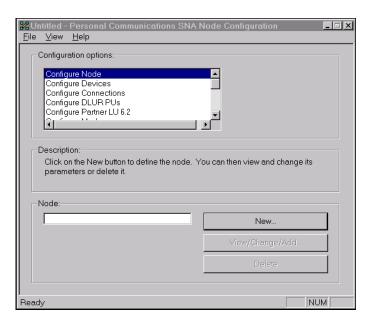


Figure 12. eNetwork Personal Communications: Node Configuration panel

From this panel you select each of the required configuration options.

2. On the Node Configuration panel, select **Configure Node** to display the Define the Node panel, see Figure 13 on page 16, Enter the fully qualified control point name **1**. **2**, the CP alias **2**, and Local Node ID **4**.

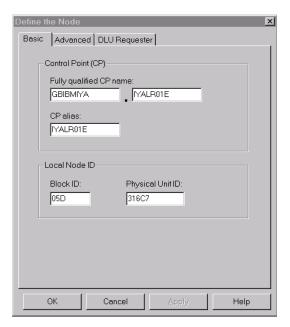


Figure 13. eNetwork Personal Communications: Define the Node

3. On the Node Configuration panel, select **Configure Devices** to display the Define a LAN Device panel, see Figure 14. Select **OK** to accept the defaults on the panel.

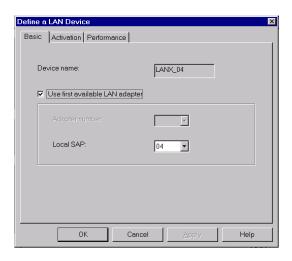


Figure 14. eNetwork Personal Communications: Define a LAN Device

4. On the Node Configuration panel, select **Configure Connections** to display the Define a Lan Connection panel, see Figure 15. Fill in the panel including the Destination Address **5**.

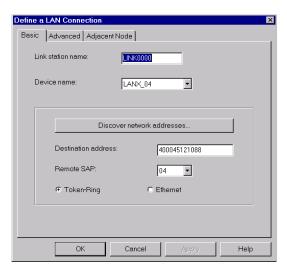


Figure 15. eNetwork Personal Communications: Define a LAN Connection

5. On the Node Configuration panel, select **Configure Local LU 6.2** to display the Define a Local LU 6.2 panel, see Figure 16. Enter the Local LU Name, which is the same as the Local LU Alias **3** Also, make sure that **Dependent LU** is not checked.

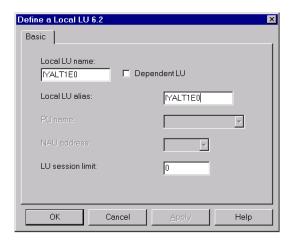


Figure 16. eNetwork Personal Communications: Define a Local LU 6.2

6. On the Node Configuration panel, select **Configure Partner LU6.2** to display the Define a Partner LU 6.2 panel, see Figure 17. Enter the Partner LU Name **1**. **6** and the Partner LU Alias **6**.

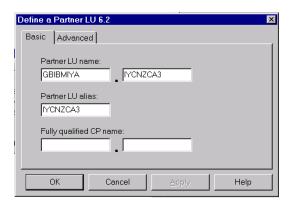


Figure 17. eNetwork Personal Communications: Define a Partner LU 6.2 (Basic)

7. Now select the **Advanced** tab, and uncheck **Conversation security support**, see Figure 18.



Figure 18. eNetwork Personal Communications: Define a Partner LU 6.2 (Advanced)

8. On the Node Configuration panel, select **Configure Modes** to display the Define a Mode panel, see Figure 19 on page 19. Enter the Mode name **7**, and select **OK** to accept the default values for the other fields.

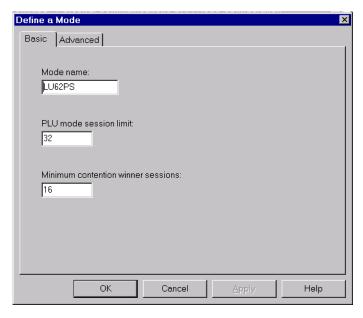


Figure 19. eNetwork Personal Communications: Define a Mode (Basic)

9. Now select the **Advanced** tab, and fill in the panel as shown in Figure 20.



Figure 20. eNetwork Personal Communications: Define a Mode (Advanced)

10. To enable Automatic Transaction Initiation (ATI) against CICS Universal Client terminals, you must define the transaction program CRSR. On the Node Configuration panel, select Configure Transaction Programs, and fill in the diaplayed panel as shown in Figure 21 on page 20.

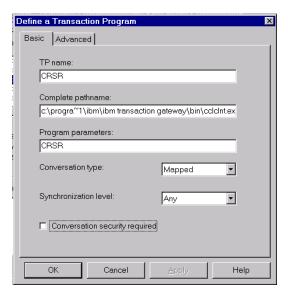


Figure 21. eNetwork Personal Communications: Define a Transaction Program (Basic)

11. Now select the **Advanced** tab, and fill in the panel as shown in Figure 22.

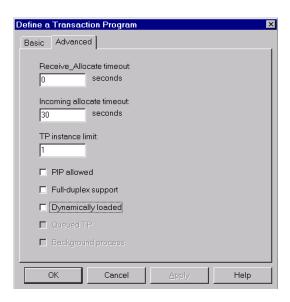


Figure 22. eNetwork Personal Communications: Define a Transaction Program (Advanced)

12. On the Node Configuration panel, select **File** and **Save** your configuration. The default file type is \*.ACG and the default directory is the \private subdirectory of your eNetwork Personal Communications directory.

#### Configuring CICS Universal Client for Windows NT

You use the CICS Universal Client's configuration tool to define the settings for SNA communication. The configuration tool generates the CTG.INI file, which is located in the \bin subdirectory. The CICS Universal Client uses the CTG.INI file to establish a connection to a CICS server.

For information on using the configuration tool, refer to your CICS Universal Client Administration book.

You need to define the following **Server** configuration settings (see Figure 23 on page 22):

#### Server name

An arbitrary name for a particular CICS server.

#### **Description**

An arbitrary description for the CICS server.

#### **Network protocol**

The protocol for communication with the CICS server, in this case, SNA.

#### Partner LU name 1.6

The LU Name of the server as it is known to the APPC configuration at the CICS Universal Client. This can be a qualified 17-character name as in our example, GBIBMIYA.IYCNZCA3, or an alias name (as long as **Use LU Alias names** is selected).

#### Local LU name 3

The name of a local LU to be used when connecting to the server. The same LU can be used for all server connections.

#### Mode name 7

The mode name to be used when connecting to the server.

#### Use LU alias names

This setting enables the Partner LU name and Local LU name to be specified as alias names instead of real LU names. This means, for example, that it is possible to switch between servers without stopping the CICS Universal Client. The default is that LU alias names are not used.

The CICS Universal Client Administration book and the configuration tool's online help provide descriptions of the configuration settings for CICS Universal Client.

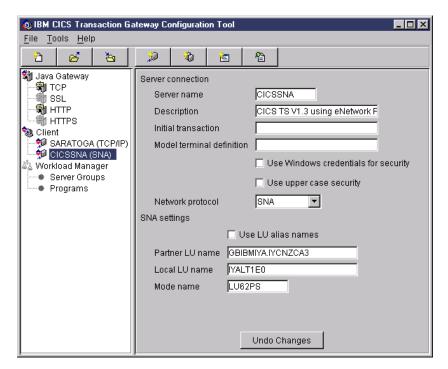


Figure 23. Configuration tool settings for eNetwork Personal Communications

Figure 24 shows an excerpt from the resultant CTG.INI file.

```
SECTION CLIENT = *
   :::
ENDSECTION
SECTION SERVER = CICSSNA
   DESCRIPTION=CICS TS V1.3 using eNetwork Personal Communications
   UPPERCASESECURITY=N
   USENPI=N
   PROTOCOL=SNA
   LOCALLUNAME=IYALT1E0
   MODENAME=LU62PS
   NETNAME=GBIBMIYA.IYCNZCA3
   LUALIASNAMES=N
ENDSECTION
SECTION DRIVER = SNA
   DRIVERNAME=CCLWNTSN
ENDSECTION
```

Figure 24. CICS Universal Client: CTG.INI file definitions

# **Chapter 6. Testing your configuration**

After you have installed and configured all relevant products for the sample configuration, we recommend that you:

- 1. Start the CICS Transaction Server for OS/390.
- 2. Start eNetwork Personal Communications.
- 3. Start the CICS Universal Client for Windows NT Version 3.1 on the client workstation, using the CICSCLI /S=CICSSNA command. CICSSNA is the name of the server in the client configuration (see Figure 24 on page 22).
- 4. Check the status of the CICS Universal Client, using the CICSCLI /L command. The connection status to the CICS server should show "Available."
- 5. Issue the CICSTERM /S=CICSSNA command to install a terminal on the CICS Transaction Server for OS/390
- 6. If a CICS Universal Client security pop-up appears, enter a valid RACF user ID and password.
- 7. Run a CICS server transaction, for example, CEMT or CECI.
- 8. Problems? If the following error appears in the CICS Universal Client error log, CICSCLI.LOG, during connection to eNetwork Personal Communications:

CCL4668 SNA node not started, APPC return code X'001B'

it is likely that there is a conflict between eNetwork Personal Communications Server and another SNA product installed, Ensure that you have no other SNA products or components of other SNA products or components installed, for example Microsost SNA Server Client, or IBM Communications Server for Windows NT Client.

You can also check the eNetwork Personal Communications Administrative and PD Aids Log Viewer for error messages.

## **Testing your configuration**

# Chapter 7. Security implementation

To provide the necessary security for your CICS regions, CICS Transaction Server for OS/390 uses the MVS SAF to route authorization requests to an External Security Manager, such as RACF, at appropriate points within CICS transaction processing. There are many types of security available, from transaction security to CICS resource security. The CICS Transaction Server for OS/390 provides the following security mechanisms for the APPC environment:

- Bind-time (or session) security prevents an unauthorized connection between CICS regions.
- Link security defines the authority of the remote system to access transactions or resources to which the connection itself is not authorized.
- User security checks that a user is authorized both to attach a transaction and to access all resources the transaction requires.

For CICS Universal Clients connecting to the CICS Transaction Server for OS/390, you may want to consider configuring link security.

#### Preparing link security for our sample configuration

For link security on incoming ECI, EPI, and CICSTERM requests, CICS Transaction Server for OS/390 needs the following settings in the SECURITY section of the connection definition for the client:

**SEcurityname** = HOLLING (RACF-authorized TSO ID)

**ATtachsec** = Verify

**Usedfltuser** = Yes for signon incapable terminals;

= No for signon incapable terminals, see

"Signon capable terminals".

In addition, you must specify SEC=YES as a SIT override.

### Signon capable terminals

Security checking done in the server for transactions started at a signon capable terminal installed by a Client application does not depend on what is specified by the **ATtachsec** option for the connection representing the Client. Instead security checking depends on whether the user signs on while using the terminal.

#### Security implementation

If the user does not sign on, the Client installed terminal is associated with the default user defined for the server in the SIT. When a transaction is run, the security checks are carried out against this default user. A check is also done against the userid associated with the connection to see whether the Client itself has authority to access the resource.

When a user does sign on, the terminal is associated with the userid just authenticated. For transactions attempting to access reosurces, security checking is done against the userid associated with the connection and the signed-on user's userid.

It is recommended that the **Usedfltuser** parameter on the server connection definition is set to Yes if using signon capable terminals and to No if using signon incapable terminals.

#### Running CICS Universal Client applications with link security

To establish a connection between the CICS Universal Client and CICS Transaction Server for OS/390 issue the CICSCLI /S=server command as described in see "Chapter 6. Testing your configuration" on page 23. Link security is initiated when the first ECI, EPI, or CICSTERM request is made on a newly established connection.

If you have not provided a userid and password, CICS Universal Client may request that you enter a valid userid and password in a security pop-up window (see Figure 25).

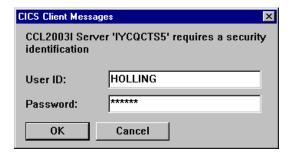


Figure 25. Example of CICS Universal Client security pop-up window

For more information about the circumstances under which security pop-ups are displayed, see the CICS Universal Client Administration book.

To prevent the security pop-up window from appearing you can:

- Specify the CICSCLI /C /U /P options to assign a userid and password to each request sent to the server specified by the /C option.
- Pass the userid and password in the ECI parameter block.

#### Security implementation

- Specify the CICSCLI /N option to suppress all pop-ups. In this case a security error is returned to the ECI, EPI, or CICSTERM request.
- Ensure that **Enable popups** is not selected in the client configuration.
- Set a default userid and password using the ESI function CICS\_SetDefaultSecurity.
- Use the Network Provider Interface (NPI), which allows you to sign on to a CICS server using the same user ID and password that you use to log on to Windows NT. In this case, you must enable the Use NPI security configuration setting.

# Security implementation

# Chapter 8. Useful commands and utilities

You will find the commands discussed in this section useful during installation and configuration.

#### SNA configuration file and verification utility

The SNA configuration file has a file type of .ACG and is stored in the \private subdirectory of your eNetwork Personal Communications directory by default. When you double-click the file in Windows Explorer, the configuration tool is launched.

You can edit or view the .ACG file with an ASCII text editor, however we recommend that you use the configuration tool. If you do manually edit the SNA configuration file, we strongly suggest that you use the SNA Node Configuration Verification utility before using the file for the first time. For more information, see the *eNetwork Personal Communications: System Management Programming* book.

#### Using aliases

When configuring a product for the first time, it is wise to use the same name for the alias as the real name. For example, make the LU name and the LU alias names the same.

Once you are sure that the configuration is working, you can change the alias names to more meaningful names.

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