

CICS® Universal Client Configuration



Configuring CICS Universal Client for Windows NT® for Communications Server

CICS® Universal Client Configuration



Configuring CICS Universal Client for Windows NT® for Communications Server

Contents

Chapter 1. Overview	1	Communications Server for Windows NT	12
Chapter 2. Software checklist	3	CICS Universal Client for Windows NT.	22
Chapter 3. Definitions checklist	5	Chapter 6. Testing your configuration	25
Chapter 4. Matching definitions	7	Chapter 7. Security implementation	27
Chapter 5. Sample configuration	9	Preparing link security for our sample	
VTAM	9	configuration.	27
NETID	9	Signon capable terminals.	28
PU, XID, and LU.	9	Running CICS Universal Client applications	
APPL	10	with link security	28
LogMode	10	Chapter 8. Useful commands and utilities 31	
CICS Transaction Server for OS/390 Version		Establish a connection from Communications	
1.3	10	Server for Windows NT for Windows NT	31
System Initialization Table parameters	10	Establish a connection from the CICS	
DFHISC Group	11	Transaction Server for OS/390	32
LU6.2 Connection	11	Appendix. Trademarks	35

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. Communication is through SNA LU6.2 (APPC) communication, provided by IBM eNetwork Communications Server for Windows NT Version 6.0 (hereafter referred to as Communications Server for Windows NT) on the client workstation and VTAM on the mainframe server.

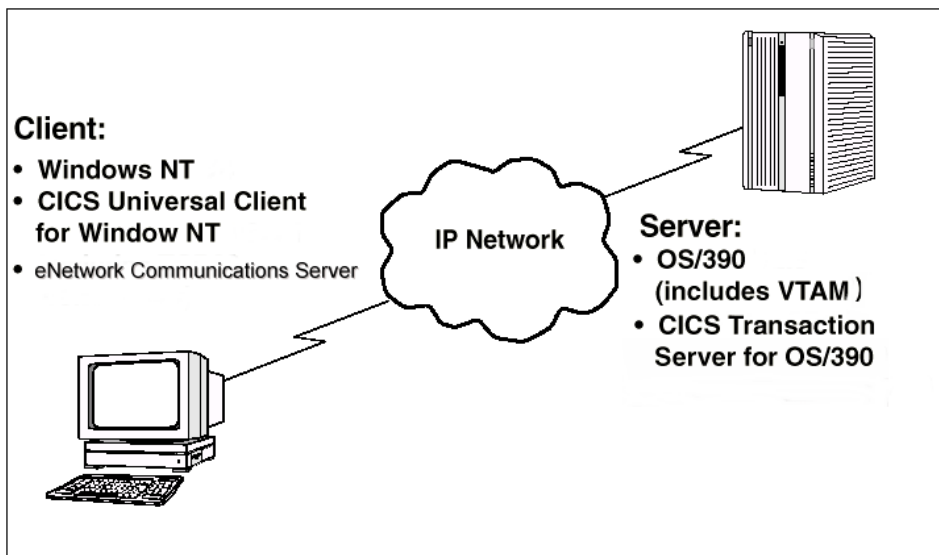


Figure 1. CICS Universal Client for Windows NT connected to CICS TS Version 1.3

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.

We used a token-ring network for this configuration, but you can use other physical links, for example, synchronous data link control (SDLC) or coaxial connections.

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 25
- “Chapter 7. Security implementation” on page 27
- “Chapter 8. Useful commands and utilities” on page 31

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

We used the following software on the client workstation:

- Windows NT Version 4.0 service level 4
- Communications Server for Windows NT Version 6.0
- 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.)

Software checklist

Chapter 3. Definitions checklist

Before you configure the products, we recommend that you acquire definitions for the parameters listed below. Reference keys, for example, **1** 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
 - ISC SIT override
 - Netname in the LU6.2 connection definition **3**
 - Applid **6**
 - DFHISC group
 - Modename in the LU6.2 sessions definition **7**
- Communications Server for Windows NT
 - A fully qualified CP name, consisting of:
 - A qualified network name.control point name **2**
 - Partner LU name **1** . **6**
 - CP Alias **2**
 - Local Node ID **4**
 - Destination address **5**
 - Local LU Name **3**
 - 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	Communications Server for Windows NT	Client configuration	Example
1	NETID	—	First part of Partner LU name	Partner LU name	GBIBMIYA
2	PU	—	CP Alias	—	PYKT0898
3	LU	Netname	Local LU name	Local LU name	PYKS898A
4	XID	—	Local Node ID	—	05D 30898
5	Token Ring destination address	—	Destination address	—	400071511089
6	APPL	Applid	Second part of Partner LU name	Partner LU name	IYCLZCER
7	LogMode	Modename	Mode name	Mode name	SKYEMODE

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. These are the definitions 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.

```
PU ADDR=01, 2  
  IDBLK=050, IDNUM=30898, 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  
*  
PYKS898A LU LOCADDR=0, DLOGMOD=SKYEMODE 3  
::
```

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

The LU PYKS898A **2** is an independent LU6.2 definition.

Sample configuration

APPL

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

```
AP26CICS VBUILD TYPE=APPL 6
*
IYCLZCER APPL AUTH=(ACQ,PASS,VSPACE),VPACING=0,EAS=29,PARSESS=YES,
SONSCIP=YES,MODETAB=MTCICS
*
:::
```

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=SKYEMODE, 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 definitions required for the CICS Transaction Server for OS/390 Version 1.3.

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=IYCLCZER
::

```

Figure 6. CICS Transaction Server for OS/390 APPLID definition

DFHISC Group

To enable ISC on CICS Transaction Server for OS/390, you must install the DFHISC group. You can use resource definition online (RDO) to install the group, or add the group to your startup list (GRPLIST).

LU6.2 Connection

Figure 7 shows 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( C130 )
  Connection   : C130
  Group       : C130
  Description  :
CONNECTION IDENTIFIERS
  Netname     : PYKS898A 3
  INdsys     :
REMOTE ATTRIBUTES
  REMOTESYSem :
  REMOTEName  :
  REMOTESYSNet :
CONNECTION PROPERTIES
  AAccessmethod : Vtam          Vtam | IRc | INdirect | Xm
  PRotocol     : Appc          Appc | Lu61 | Exci
  Conntype     :              Generic | Specific
  SInglesess   : No           No | Yes
  DAtastream   : User        User | 3270 | SCs | STRfield | Lms
+ RECOrdformat : U           U | Vb
                                SYSID=YCQ5 APPLID=IYCLCZER

PF 1 HELP 2 COM 3 END                6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL

```

Figure 7. CICS Transaction Server for OS/390: SNA Connection definition

Figure 8 on page 12 shows the sessions definition required for the sample configuration. The LU6.2 connection definition and LU6.2 sessions definition must reside in the same group and be installed simultaneously. We used Group(C130) in our sample configuration.

Sample configuration

```
OBJECT CHARACTERISTICS                                CICS RELEASE = 0530
CEDA View Sessions( SKYEMODE )
Sessions      : SKYEMODE
Group        : C130
Description   :
SESSION IDENTIFIERS
Connection   : C130
SESSName     :
NETnameq    :
MODename    : SKYEMODE 7
SESSION PROPERTIES
Protocol     : Appc                Appc | Lu61 | Exci
Maximum     : 008 , 004           0-999
RECEIVEPfx  :
RECEIVECount :                    1-999
SENDPfx     :
SENDCount   :                    1-999
SENDSize    : 00256               1-30720
+ RECEIVESize : 00256             1-30720

                                SYSID=YCQ5 APPLID=IYCLCZER

PF 1 HELP 2 COM 3 END                6 CRSR 7 SBH 8 SFH 9 MSG 10 SB 11 SF 12 CNCL
```

Figure 8. CICS Transaction Server for OS/390: SNA Sessions definition

Communications Server for Windows NT

In this section we describe in detail how to define your values to Communications Server for Windows NT for our sample configuration. We recommend that you use a new configuration file because adding values to an existing configuration file may cause conflicts with existing values.

To configure Communications Server for Windows NT:

1. In the IBM Communications Server for Windows NT folder, select **SNA Node Configuration**. Select **Create New Configuration**, and the Choose a Configuration Scenario panel is displayed, see Figure 9 on page 13.

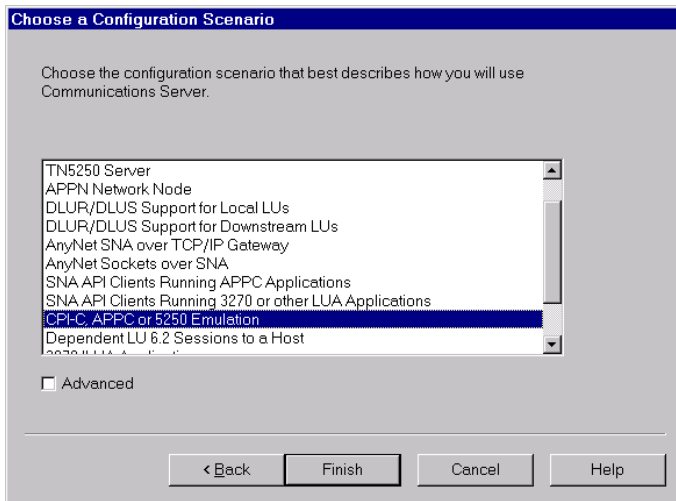


Figure 9. Communications Server for Windows NT: Choose a Configuration Scenario

2. Select **CPI-C, APPC or 5250 Emulation** and then **Finish**. The Node Configuration panel is displayed, see Figure 10.

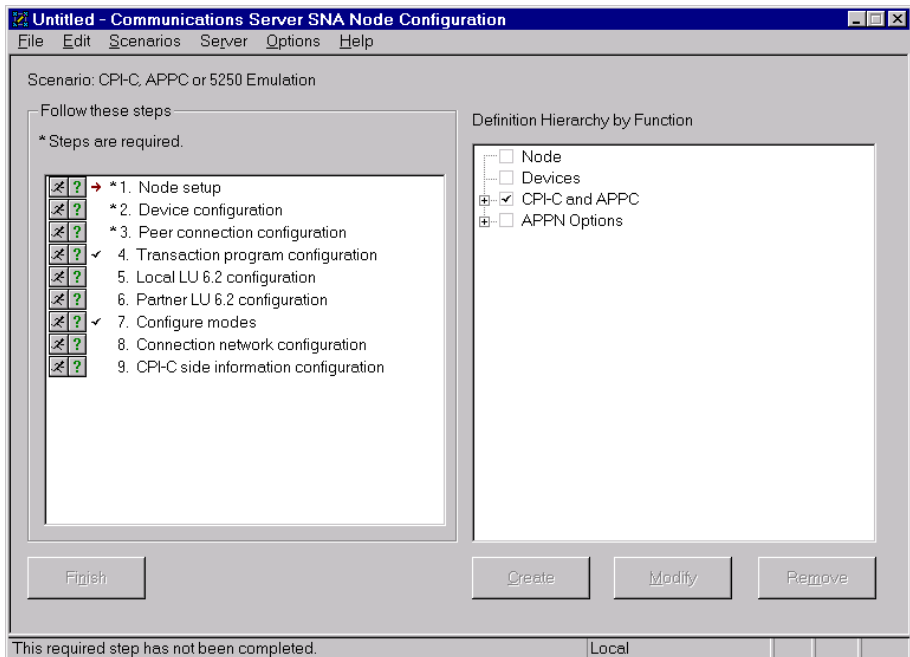


Figure 10. Communications Server for Windows NT: Node Configuration Panel

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

Sample configuration

3. On the Node Configuration panel, select **Node Setup** to display the Define the Node panel, see Figure 11, Enter the fully qualified control point name, the CP alias **2**, and Local Node ID **4**.

The screenshot shows the 'Define the Node' dialog box with the following details:

- Tab: Basic
- Control Point (CP): Fully qualified CP name: GBBIMPYK.PYKT0898; CP alias: PYKT0898
- Local Node ID: Block ID: 05D; Physical Unit ID: 30898
- Node Type: End Node, Network Node, Branch Extender Node
- Buttons: OK, Cancel, Apply, Help

Figure 11. Communications Server for Windows NT: Define the Node

4. On the Node Configuration panel, select **Device Configuration** and then **LAN** to display the Define a LAN Device panel, see Figure 12. Select **OK** to accept the defaults on the panel.

The screenshot shows the 'Define a LAN Device' dialog box with the following details:

- Tab: Basic
- Port name: LAN0_04
- Adapter number: 0 (IBM Auto 16/4 Token-Ring ISA Adapter Driver)
- Local SAP: 04
- Buttons: OK, Cancel, Apply, Help

Figure 12. Communications Server for Windows NT: Define a LAN Device

- On the Node Configuration panel, select **Peer Connection Configuration** to display the Define a Lan Connection panel, see Figure 13. Fill in the panel including the Destination Address **5**.

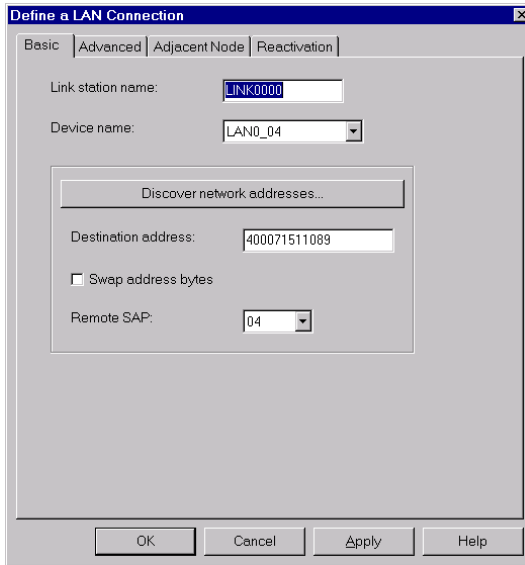


Figure 13. Communications Server for Windows NT: Define a LAN Connection

- If you want a connection to be established automatically when the SNA node is started, select the **Advanced** tab, and select **Activate link at start**, see Figure 14 on page 16.

Sample configuration

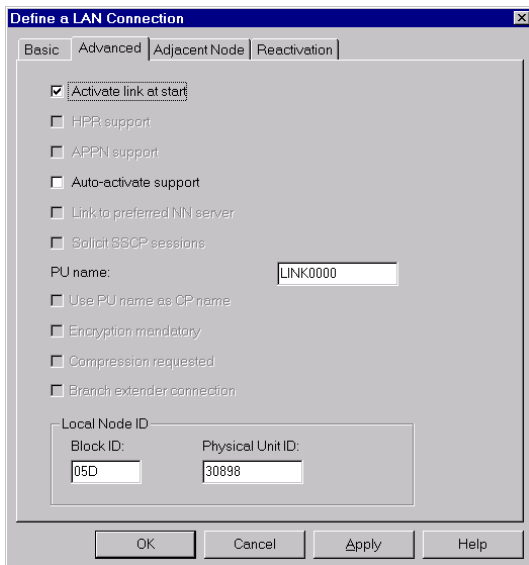


Figure 14. Communications Server for Windows NT: Define a LAN Connection (Advanced)

7. Now, select **Adjacent Node** tab, and enter the **Adjacent CP name**, see Figure 15.

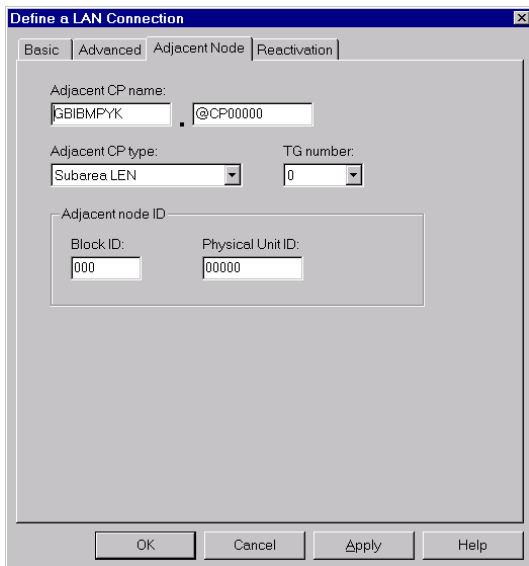


Figure 15. Communications Server for Windows NT: Define a LAN Connection (Adjacent Node)

8. You are asked whether you want to automatically route all APPC sessions over this connection. Select **Yes**.

- On the Node Configuration panel, select **Local LU 6.2 configuration** 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.

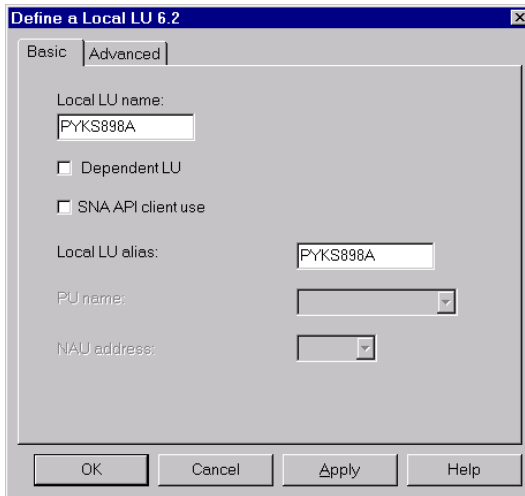


Figure 16. Communications Server for Windows NT: Define a Local LU 6.2

- On the Node Configuration panel, select **Partner LU6.2 Configuration** to display the Define a Partner LU 6.2 panel, see Figure 17 on page 18. Enter the Partner LU Name **1 . 6** and the Partner LU Alias **6**.

Sample configuration

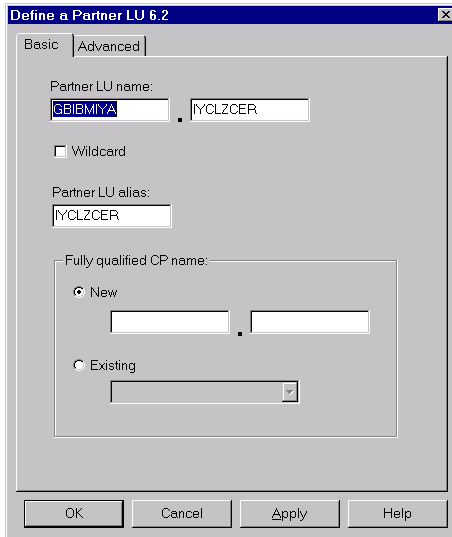


Figure 17. Communications Server for Windows NT: Define a Partner LU 6.2 (Basic)

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

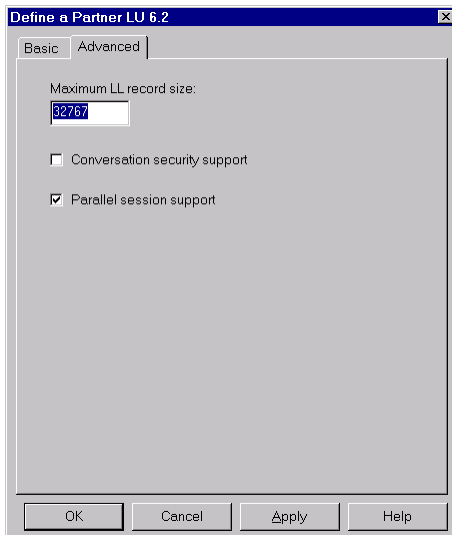


Figure 18. Communications Server for Windows NT: Define a Partner LU 6.2 (Advanced)

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

Figure 19. Communications Server for Windows NT: Define a Mode (Basic)

- Select **Advanced**, and fill in the panel as shown in Figure 20.

Figure 20. Communications Server for Windows NT: Define a Mode (Advanced)

Sample configuration

14. On the Node Configuration panel, select **Transaction Program configuration**, and fill in the displayed panel as shown in Figure 21 for your transaction programs.

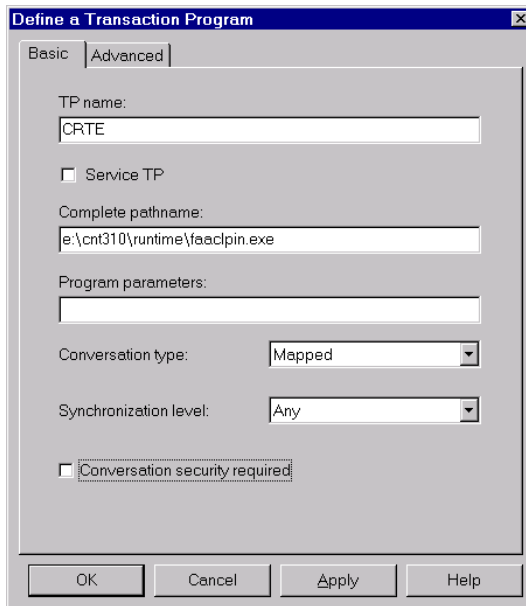


Figure 21. Communications Server for Windows NT: Define a Transaction Program (Basic)

15. Now select the **Advanced** tab, and fill in the panel as shown in Figure 22 on page 21.

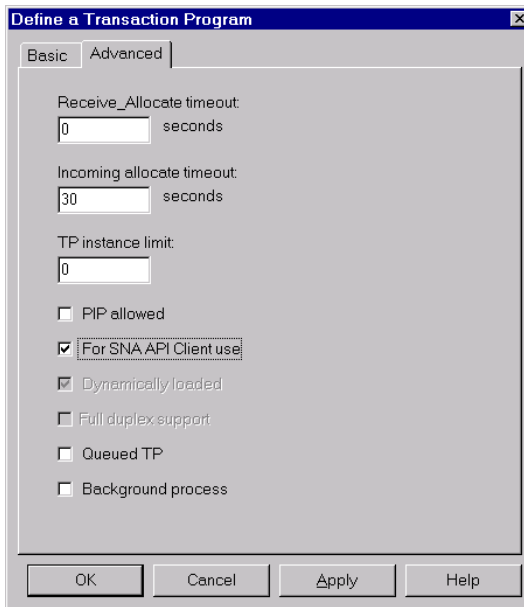


Figure 22. Communications Server for Windows NT: Define a Transaction Program (Advanced)

To enable Automatic Transaction Initiation (ATI) against CICS Universal Client terminals, you must define the transaction program CRSR, and this is defined in the same way except that the pathname should point to the cclclnt.exe in the \bin subdirectory of your CICS Universal Client directory.

16. On the Node Configuration panel, select **File** and **Save** your configuration. The SNA confofiguration file is saved with the file type of .acg.

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 23):

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 **6**

The LU Name of the server as it is known to the APPC configuration at the CICS Universal Client. In our example we used an alias name, IYCNZCER, see the description of **Use LU Alias names** below.

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.

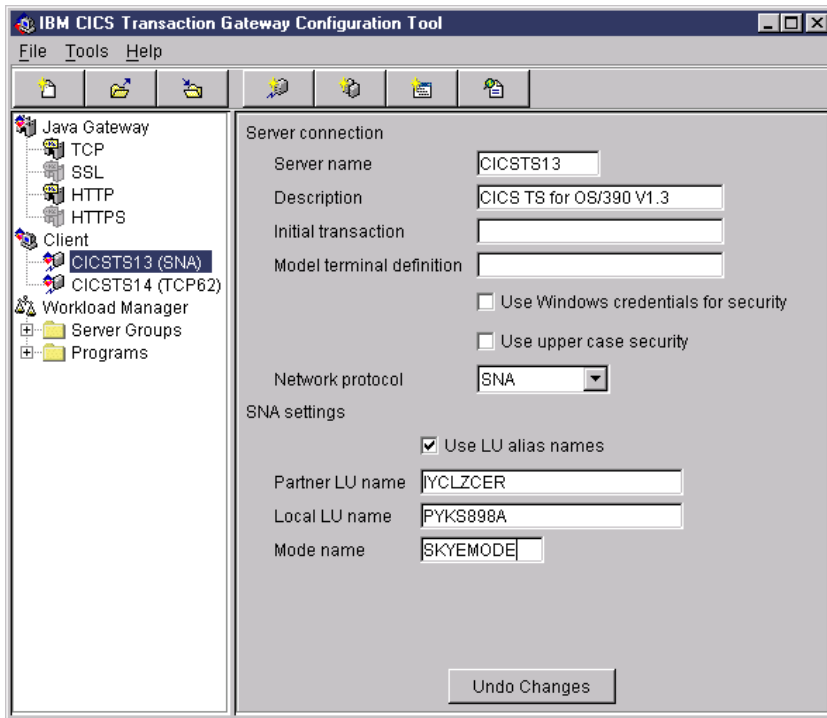


Figure 23. Configuration tool settings for Communications Server for Windows NT

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

```
SECTION CLIENT = *
:::
ENDSECTION
:::
SECTION SERVER = CICSTS13
DESCRIPTION=CICS TS for OS/390 V1.3
UPPERCASESECURITY=N
PROTOCOL=SNA
LOCALLUName=PYKS898A
MODENAME=SKYEMODE
NETNAME=IYCLZCER
LUALIASNAMES=Y
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 the Communications Server for Windows NT.
3. Establish an LU6.2 connection between Communications Server for Windows NT and CICS Transaction Server for OS/390 Version 1.3. You may find see “Chapter 8. Useful commands and utilities” on page 31 useful when establishing your LU6.2 connection.
4. Start the CICS Universal Client for Windows NT Version 3.1, using the `CICSCLI /S=CICSTS13` command. (CICSTS13 is the name we gave to the server in the client configuration.
5. Check the status of the CICS Universal Client, using the `CICSCLI /L` command. The connection status to the CICS server should show “Available.”
6. Issue the `CICSTERM /S=CICSTS13` command to install a terminal on the CICS Transaction Server for OS/390.
7. Run a CICS server transaction, for example, CEMT or CECI.

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	For example, HOLLING (RACF-authorized TSO ID)
ATtachsec	Verify
Usedfltuser	Yes, for signon incapable terminals; No, for signon capable terminals, see “Signon capable terminals” on page 28.

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

Security implementation

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.

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 resources, 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 25. 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 on page 29).

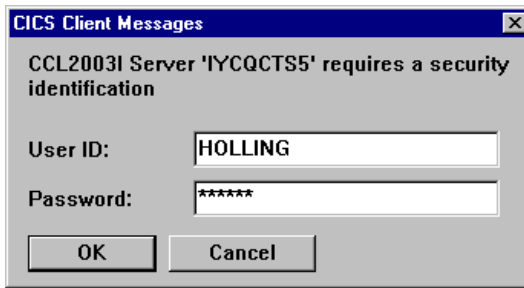


Figure 25. Example of CICS Universal Client security pop-up window

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.
- 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.

Establish a connection from Communications Server for Windows NT for Windows NT

To establish an LU6.2 connection from Communications Server for Windows NT for Windows NT:

1. In the Communications Server for Windows NT folder, select **SNA Node Operations**.
2. On the SNA Node Operations panel, select **Start Node**, see Figure 26.

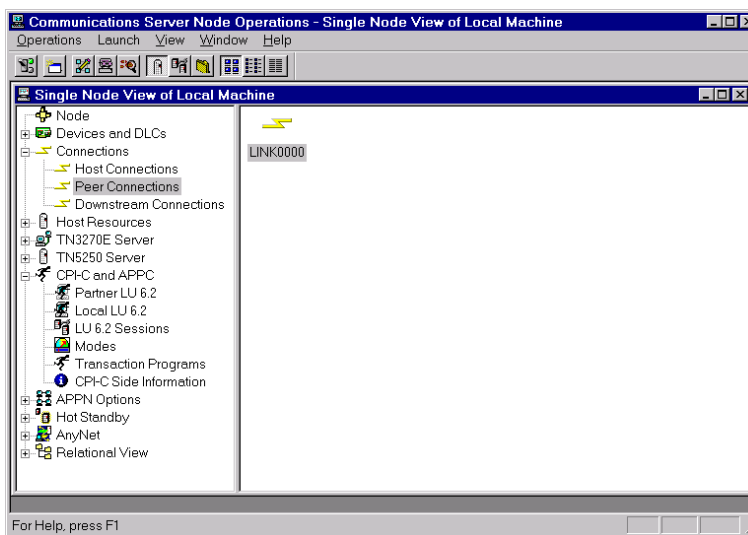


Figure 26. Communications Server for Windows NT: SNA Node Configuration

If you selected **Activate link at start**, when you defined the LAN connection, the connection is established automatically, and the link icon is yellow (see Figure 14 on page 16).

3. If the connection is not established, the link icon is red. You must right-click the icon and select **Start** to establish the connection.

Useful commands and utilities

You can click on the Link icon to display the details of the connection, see Figure 27.

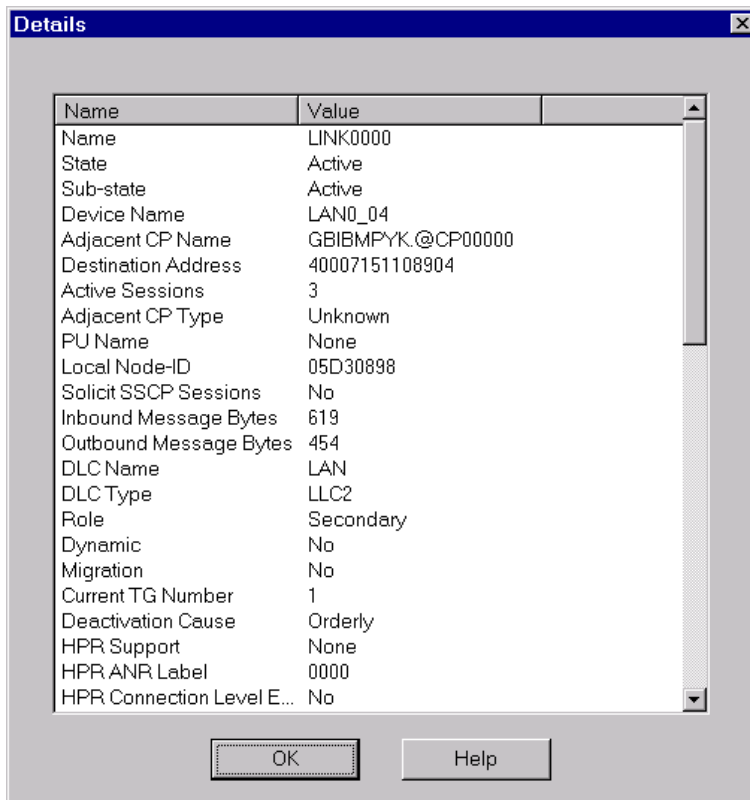


Figure 27. Communications Server for Windows NT: Connection Details

Establish a connection from the CICS Transaction Server for OS/390

To establish an LU6.2 connection from CICS Transaction Server for OS/390 Version 1.3:

1. From a 3270 terminal emulator connected to your CICS region, enter the CEMT INQ CONN command and locate your connection name.
2. If the connection status shows Rel (for Released), overtype the R with A (for Acquire).
3. Press the Enter key to refresh the connection status. Figure 28 on page 33 shows the connection acquired for the sample configuration.

```
CEMT INQ CONN(C130)
STATUS: RESULTS - OVERTYPE TO MODIFY
Con(C130) Net(PYKS898A) Ins Acq Vta Appc
```

Figure 28. CICS TS Version 1.3: Connection status

4. The CEMT INQ MODE CONN(C130) command displays the LU6.2 session status for the sample configuration (see Figure 29).

```
CEMT INQ MODE CONN(C130)
STATUS: RESULTS - OVERTYPE TO MODIFY
Mod(SNASVCMG) Con(C130) Max(002) Ava( 002 ) Act(002)
Mod(SKYEMODE) Con(C130) Max(008) Ava( 008 ) Act(008)
```

Figure 29. CICS TS Version 1.3: LU6.2 Session status

Appendix. Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

Anynet	CICS
IBM	OS/390
VTAM	

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java, and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, or other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.