

Oracle® Tuxedo® Mainframe Adapter for TCP

Installation Guide

12c Release 1 (12.1.1)

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ORACLE®

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Introduction to Installing Oracle Tuxedo Mainframe Adapter for TCP

The Oracle Tuxedo Mainframe Adapter for TCP (hereafter referred to as TMA TCP) is a gateway connectivity application that enables applications on Oracle Tuxedo systems to perform various non-transactional tasks with applications that reside on different kinds of computers

This document provides the following topics on installing TMA TCP software:

- [“Installing Oracle Tuxedo Mainframe Adapter for TCP Gateway”](#) provides information for installing the TMA TCP Gateway component on a UNIX or Windows system.
- [“Installing Oracle Tuxedo Mainframe Adapter for TCP \(IMS\)”](#) provides information for installing the TMA TCP for IMS component.
- [“Installing Oracle Tuxedo Mainframe Adapter for TCP \(CICS\)”](#) provides information for installing the TMA TCP for CICS component.

What You Need to Know

This document is primarily for system administrators who install and configure the TMA TCP product.

System administrators who work with TMA TCP should be familiar with TCP/IP networking. Programmers and system administrators who work with TMA TCP should be familiar with the concept of distributed multi-tier client/server processing.

Readers of this document should also be familiar with the operating system and Oracle Tuxedo software.

Related Information

The following Oracle publications are available for TMA TCP:

- *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*
- *Oracle Tuxedo Mainframe Adapter for TCP Installation Guide*
- *Oracle Tuxedo Mainframe Adapter for TCP Gateway User Guide*
- *Oracle Tuxedo Mainframe Adapter for TCP IMS User Guide*
- *Oracle Tuxedo Mainframe Adapter for TCP CICS User Guide*

Documentation Conventions

The following documentation conventions are used throughout this document.

Table 1-1 TMA TCP Documentation Conventions

Convention	Item
blue text	Indicates a hypertext link in PDF or HTML
<i>italics</i>	Indicates emphasis or book titles or variables.
"string with quotes"	Indicates a string entry that requires quote marks.
UPPERCASE TEXT	Indicates generic file names, device names, environment variables, and logical operators. <i>Examples:</i> LPT1 SIGNON OR

Table 1-1 TMA TCP Documentation Conventions

Convention	Item
monospace text	<p>Indicates code samples, commands and their options, data structures and their members, data types, directories, and file names and their extensions. Monospace text also indicates text that you must enter from the keyboard.</p> <p><i>Examples:</i></p> <pre>#include <iostream.h> void main () the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float</pre>
monospace boldface text	<p>Identifies significant words in code.</p> <p><i>Example:</i></p> <pre>void xa_commit ()</pre>
{ }	Indicates a set of choices in a syntax line. The braces themselves should never be typed.
[]	<p>Indicates optional items in a syntax line. The brackets themselves should never be typed.</p> <p><i>Example:</i></p> <pre>buildclient [-v] [-o name] [-f file-list]... [-l file-list]...</pre>
	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.

Table 1-1 TMA TCP Documentation Conventions

Convention	Item
...	<p>Indicates one of the following in a command line:</p> <ul style="list-style-type: none">• That an argument can be repeated several times in a command line• That the statement omits additional optional arguments• That you can enter additional parameters, values, or other information <p>The ellipsis itself should never be typed.</p> <p><i>Example:</i></p> <pre>buildclient [-v] [-o name] [-f file-list]... [-l file-list]...</pre>
. . .	<p>Indicates the omission of items from a code example or from a syntax line.</p> <p>The vertical ellipsis itself should never be typed.</p>

Installing Oracle Tuxedo Mainframe Adapter for TCP Gateway

The installation procedure for Oracle Tuxedo Mainframe Adapter for TCP Gateway is slightly different for each platform on which the product can be installed. Follow the directions for the appropriate platform. The following information assists you in successfully installing this product:

- [Preparing to Install](#)
- [Installing TMA TCP Gateway](#)
 - [Installing on UNIX Platforms in Console Mode](#)
 - [Installing on Windows or UNIX Platforms in Graphics Mode](#)
- [Uninstalling Tuxedo Mainframe Adapter for TCP Gateway](#)
- [Distribution Libraries and Executables](#)

Note: To upgrade from previous releases of eLink for Mainframe TCP, refer to *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*.

Preparing to Install

The TMA TCP Gateway product runs on UNIX-based and Windows platforms. Complete the following tasks prior to installing the TMA TCP Gateway software:

- Review the platform support and software requirements sections of the *Oracle Tuxedo Mainframe Adapter for TCP Release Notes* and make sure that the computer upon which you are installing satisfies the listed requirements.

- Install and verify the operation of the following:
 - Oracle Tuxedo 12c Release 1 (12.1.1)
- Verify the installation of one of the following:
 - Java Software Development Kit (JDK), Standard Edition, v 1.5
 - Java Runtime Environment (JRE), International Version, v 1.5

A JDK is required by the InstallAnywhere installation product to install Oracle Tuxedo Mainframe Adapter for TCP. A JDK is installed with Tuxedo. Verify that the system PATH environment variable is set to the correct version of the JDK. If the JDK version displayed is lower than the required version, you will need to configure your PATH environment variable to use the required JDK that is installed with Tuxedo.

- Install and verify the TCP/IP stack software

Installing TMA TCP Gateway

The TMA TCP Gateway product runs on Unix-based platforms and Windows. Refer to the appropriate platform sections for installation instructions.

Installing on UNIX Platforms in Console Mode

Perform the following steps to install the Tuxedo Mainframe Adapter for TCP Gateway software in console mode on a certified UNIX platform:

1. Log on as root.


```
$ su -
Password:
```
2. Execute the installation program in character-based mode by selecting the appropriate file for your platform from the listed files. For example, for the AIX platform, select:


```
# sh <installer>.bin -i console
```
3. The installation program runs and prompts you for responses (see [Listing 2-1](#) for an example).

Listing 2-1 UNIX Console Mode Installation Example

```
Preparing to install...
Extracting the installation resources from the installer archive...
```

Configuring the installer for this system's environment...

Launching installer...

Preparing CONSOLE Mode Installation...

```
=====
(created with InstallAnywhere by Zero G)
-----
```

```
=====
Introduction
-----
```

InstallAnywhere will guide you through the installation of Tuxedo Mainframe Adapter for TCP.

It is strongly recommended that you quit all programs before continuing with this installation.

Respond to each prompt to proceed to the next step in the installation. If you want to change something on a previous step, type 'back'.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE:**ENTER**

```
=====
Choose BEA Home Directory
-----
```

- 1- Create a New BEA Home
- 2- Use Existing BEA Home

Enter a number: **1**

Specify a New BEA Home: **/usr/hea**

=====
Pre-Installation Summary

Please Review the Following Before Continuing:

Product Name:

 Tuxedo Mainframe Adapter for TCP

Install Folder:

 PATH

Java VM to be Used by Installed Product:

 PATH

Product Version

 xxx

Disk Space Information (for Installation Target):

Required: 2,833,299 bytes

Available: 528,988,708,864 bytes

PRESS <ENTER> TO CONTINUE: **<ENTER>**

=====

Installing...

[=====|=====|=====|=====]

[-----|-----|-----|-----]

```

=====...
.
.
.

=====
Install Complete

-----

Congratulations. 'Tuxedo Mainframe Adapter for TCP 10.1' has been
successfully installed to:

    /usr/bea/tuxedo

PRESS <ENTER> TO EXIT THE INSTALLER: <ENTER>

```

Installing on Windows or UNIX Platforms in Graphics Mode

Perform the following steps to install the Tuxedo Mainframe Adapter for TCP Gateway software on a Windows platform or on a UNIX platform in Graphics Mode:

1. Do one of the following, depending on your platform:

On Windows:

- a. Choose Start→Run. The Run dialog displays.
- b. Click Browse to navigate to the installer folder.
- c. Select <installer>.exe.
- d. Click Open.
- e. Install Anywhere runs and the Introduction screen ([Listing 2-1](#)) is displayed.
- f. Proceed to Step 3.

On UNIX:

- a. Log on as root to install the Tuxedo Mainframe Adapter for TCP Gateway software.

```
$ su -  
Password:
```

- b. Execute the installation program.

```
/mnt> sh <installer>.bin
```

- c. Proceed to Step 3.

2. Click Next to continue with the installation. The Choose Install Set screen is displayed. This screen appears in Windows installations only.

Note: If you click the No option button, you will not be able to continue with the installation. You must either exit the installation or go back to the Introduction screen.

3. Click Next to proceed with the installation. The Choose BEA Home Directory screen is displayed.
4. Create or select a BEA Home directory (the default for Windows is `c:\bea`; the default for UNIX is `$HOME/bea`). The BEA Home directory is the root directory in which you install all BEA products.

If you do not already have a BEA Home directory, you can create one by following these steps:

- a. Select the Create a New BEA Home option button.
- b. Accept the default location for your BEA Home directory or click Browse to specify a different location. If you accept the default location, it will be your BEA Home directory and your Tuxedo Mainframe Adapter for TCP Gateway software will install in the corresponding Tuxedo directory. If you do not want to install Tuxedo Mainframe Adapter for TCP Gateway in this default location, you will have the opportunity, in Step 7, to choose another directory in which to install the software.
- c. Click Next to proceed with the installation.

If you already have one or more BEA Home directories on your system, you can use one of those directories as follows:

- a. Select the Use Existing BEA Home option button.
- b. Select a BEA Home directory from the list displayed to the right of the option buttons. All valid BEA Home directories are displayed in this list. Valid BEA Home directories are

directories where BEA products have been installed using the standard installation program.

- c. Click Next to proceed with the installation.
5. If the installation encounters a previous version of Oracle Tuxedo Mainframe Adapter for TCP in the selected BEA Home directory, the Previous Installation Found message box displays.

From this message box, do one of the following:

- Click Continue to install over the previous version.
 - Click Cancel to return to the Choose BEA Home Directory Screen and select another directory.
 - Click Exit to exit the installation program.
6. If you do not have a successful installation of Oracle Tuxedo 12c Release 1 in the BEA Home directory, the Oracle Tuxedo 12c Release 1 Not Installed message box displays.

From this message box, do one of the following:

- Click Exit to exit the installation program.
 - Click Previous to return to the Choose BEA Home Directory Screen and select another directory.
7. The Pre-Installation Summary screen is displayed.
 8. If the Pre-Installation Summary information is correct, click Install to continue with the Installation. If information requires editing, click Previous to go back to the screens that require changes. Click Cancel to abort the installation process.
 9. Upon installation completion, the Install Complete screen is displayed. Click Done to exit the installation program.

Uninstalling Tuxedo Mainframe Adapter for TCP Gateway

This section provides instructions for uninstalling the Tuxedo Mainframe Adapter for TCP Gateway component. The following topics are discussed:

- [Uninstalling on UNIX Platforms in Console Mode](#)
- [Uninstalling on Windows Platforms](#)

Uninstalling on UNIX Platforms in Console Mode

To uninstall Tuxedo Mainframe Adapter for TCP Gateway on a UNIX platform:

1. Change directories to your `uninstaller_TMATCP` directory with the following command:

```
> cd <bea/home>/tuxedo/uninstaller_TMATCP
```

2. Start the uninstallation program with the following command:

```
<bea/home> sh UninstallTMATCP -i console
```

[Listing 2-2](#) displays a Tuxedo Mainframe Adapter for TCP Gateway component uninstallation.

Note: The single-dash bar just beneath the double-dash bar in [Listing 2-2](#) is a progress indicator. When the single-dash bar becomes the same length as the double-dash bar, uninstallation is complete.

Listing 2-2 UNIX Uninstallation Example

```
Preparing CONSOLE Mode Uninstall...
```

```
=====
```

```
(created with InstallAnywhere by Zero G)
```

```
-----
```

```
=====
```

```
Uninstall Tuxedo Mainframe Adapter for TCP
```

```
-----
```

```
About to uninstall...
```

```
BEA Tuxedo Mainframe Adapter TCP
```

```
This will remove features installed by InstallAnywhere. It will not remove  
files and folders created after the installation.
```

```
PRESS <ENTER> TO CONTINUE: <ENTER>
```

```
=====
```

```
Uninstalling...
```

```
-----
```

```
[=====|=====|=====|=====]
```

```

[-----|-----|-----|-----]
=====

=====
Uninstall Complete
-----

Some items could not be removed.

PRESS <ENTER> TO EXIT THE UNINSTALLER: <ENTER>

```

Uninstalling on Windows Platforms

Perform the following steps to uninstall the Tuxedo Mainframe Adapter for TCP Gateway software on a Windows platform:

1. Choose Start→Programs→Oracle WebLogic E-Business Platform→Oracle Tuxedo Mainframe Adapter for TCP →Uninstall Oracle Oracle Tuxedo Mainframe Adapter for TCP from the Start menu. The Oracle Tuxedo Mainframe Adapter for TCP Uninstaller screen is displayed.
2. Click Uninstall to start uninstalling TMA TCP. Click Exit to complete the uninstallation.

Distribution Libraries and Executables

The Oracle Tuxedo Mainframe Adapter for TCP software contains the following libraries and executable programs. After installing the TMA TCP software, verify that these libraries and programs are installed on your system.

Solaris

Verify that the following files are installed by TMA TCP Gateway.

Directory	Files
/bin	GWIDOMAIN
/lib	ConvMVS.so.60 ConvMVSC.so.60 libctxcp_10.so WrapTPS.so.60 WrapTPSD.so.60
/locale/C	LIBCWI_CAT LIBCWI.text
/udataobj/codepage	00819x00037 00819x00273 00819x00278 00819x00284 00819x00285 00819x00297 00819x00500 00819x00860 00819x01047 00912x00870 none tuxedo

AIX

Verify that the following files are installed by TMA TCP Gateway.

Directory	Files
/bin	GWIDOMAIN
/lib	ConvMVS.so.60 ConvMVSC.so.60 libctxcp_10.so WrapTPS.so.60 WrapTPSD.so.60

Directory	Files
/locale/C	LIBGWI_CAT LIBGWI.text
/udataobj/codepage	00819x00037 00819x00273 00819x00278 00819x00284 00819x00285 00819x00297 00819x00500 00819x00860 00819x01047 00912x00870 none tuxedo

Windows

Verify that the following files are installed by TMA TCP Gateway.

Directory	Files
/bin	GWIDOMAIN.exe ConvMVS.dll ConvMVSC.dll ctxcp_10.dll libgwi.dll WrapTPS.dll WrapTPSD.dll

Directory	Files
/locale/C	LIBGWI_CAT LIBGWI.text
/udataobj/codepage	00819x00037 00819x00273 00819x00278 00819x00284 00819x00285 00819x00297 00819x00500 00819x00860 00819x01047 00912x00870 none tuxedo

Installing Oracle Tuxedo Mainframe Adapter for TCP (IMS)

Installing Oracle Tuxedo Mainframe Adapter for TCP (IMS) (hereafter referenced as TMA TCP for IMS) consists of the following basic tasks.

- [Preparing to Install](#)
- [Installing TMA TCP for IMS](#)

Note: To upgrade from previous releases of eLink for Mainframe TCP, refer to *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*.

Preparing to Install

Complete the following tasks prior to installing the TMA TCP for IMS software:

- Read the *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*
- Verify the TCP/IP stack software is installed and configured as part of your operating system installation.

Installing TMA TCP for IMS

To install TMA TCP for IMS, complete the following tasks:

- [Task 1: Allocate z/OS Datasets](#)
- [Task 2: Unload the Distribution Files](#)
- [Task 3: Link-Edit TMA TCP for IMS](#)

- [Task 4: Define TMA TCP for IMS to MVS](#)
- [Task 5: Create an TMA TCP for IMS Configuration File](#)
- [Task 6: Create JCL to Run TMA TCP for IMS](#)
- [Task 7: Start Oracle TMA TCP for IMS](#)
- [Task 8: Test the Installation](#)

Task 1: Allocate z/OS Datasets

The directory structures on the TMA TCP for IMS software CD include the following partitioned datasets:

Partitioned Datasets (PDS)	Format	Contents
CONTROL	ASCII	Sample IMS definitions, sample Oracle TMA TCP for IMS configuration files
INCLUDE	ASCII	C header files, COBOL copybooks for use by IMS Client and Server transactions
JCL	ASCII	Job Control Language for linking and executing Oracle TMA TCP for IMS
SOURCE	ASCII	Sample IMS Client and Server transactions for use with Oracle TMA TCP for IMS
OBJECT	BINARY	Object component files of Oracle TMA TCP for IMS
MSGCAT (sequential dataset)	BINARY	File containing runtime messages that TMA TCP for IMS issue

1. FTP the JCL file `INSTALL` from the JCL subdirectory.
2. Execute this job to allocate datasets using high-level qualifiers appropriate to your installation (*hlq1* and *hlq2* are dataset name high-level qualifiers appropriate to your installation).

The following datasets are allocated to receive the Tuxedo Mainframe Adapter for TCP file distribution.

Listing 3-1 Allocating z/OS Datasets

```

DSNAME: hlq1.hlq2.CONTROL
DSORG: PO
DIRBLKS: 10
RECFM: FB
LRECL: 80
BLKSIZE: 23440 (or other valid blocksize)
SPACE: 2 tracks
Usage: IMS sample definitions, sample configuration file

DSNAME: hlq1.hlq2.INCLUDE
DSORG: PO
DIRBLKS: 10
RECFM: FB
LRECL: 80
BLKSIZE: 23440 (or other valid blocksize)
SPACE: 2 tracks
Usage: C header file, COBOL copybooks

DSNAME: hlq1.hlq2.JCL
DSORG: PO
DIRBLKS: 10
RECFM: FB
LRECL: 80
BLKSIZE: 23440 (or other valid blocksize)
SPACE: 2 tracks
Usage: Sample LINK and execute JCL

DSNAME: hlq1.hlq2.MSGCAT
DSORG: PS
DIRBLKS: 10
RECFM: FB
LRECL: 100
BLKSIZE: 32000 (or other valid blocksize)

```

```

SPACE: 2 tracks
Usage: Message text

DSNAME: hlq1.hlq2.OBJECT
DSORG: PO
DIRBLKS: 10
RECFM: FB
LRECL: 80
BLKSIZE: 3200
SPACE: 1 cylinder
Usage: Pre-linked object files

DSNAME: hlq1.hlq2.SOURCE
DSORG: PO
DIRBLKS: 10
RECFM: FB
LRECL: 80
BLKSIZE: 23440 (or other valid blocksize)
SPACE: 1 track
Usage: Sample IMS client and server transactions

```

The following runtime datasets are also allocated.

Runtime Datasets	Format	Contents
LOAD	Binary	Load library for Oracle TMA TCP for IMS
CONFIG	ASCII	Configuration file for Oracle TMA TCP for IMS
MSGLOG	ASCII	Message log for Oracle TMA TCP for IMS
SVRLOG	ASCII	A log file containing server responses for Oracle TMA TCP for IMS

Listing 3-2 Allocating Runtime Datasets

```
DSNAME: hlq1.hlq2.LOAD
DSORG: PO
DIRBLKS: 10
RECFM: U
LRECL: 0
BLKSIZE: 6133 (or other valid blocksize)
SPACE: 1 cylinder
Usage: Load library

DSNAME: hlq1.hlq2.CONFIG
DSORG: PS
RECFM: FB
LRECL: 80
BLKSIZE: 23440 (or other valid blocksize)
SPACE: 1 track
Usage: Configuration File

DSNAME: hlq1.hlq2.MSGLOG
DSORG: PS
RECFM: VB
LRECL: 1028
BLKSIZE: 6144 (or other valid blocksize)
SPACE: 1 cylinder
Usage: Message Log

DSNAME: hlq1.hlq2.SVRLOG
DSORG: PS
RECFM: VB
LRECL: 32756
BLKSIZE: 32760 (Note: required blocksize)
SPACE: 1 cylinder
Usage: Server Response Log
```

Task 2: Unload the Distribution Files

The TMA TCP for IMS product is distributed on a single CD-ROM (with other members of the Tuxedo Mainframe Adapter for TCP product). The TMA TCP for IMS distribution files are grouped under one of the following directory structures:

- For UNIX, the directory is `/cdrom/unixmf`.

In this directory structure, `/cdrom` is the directory where the drive is mounted.

- For Windows, the directory is `D:\ntmf`.

In this directory structure, `D:` is the CD-ROM drive.

Because the distribution files are located on a CD-ROM, you probably use a UNIX-based system or a PC-based system to access the files on the CD-ROM and file transfer them to z/OS.

Transfer the contents of each subdirectory to the corresponding distribution library on the z/OS system. Use a file transfer program (such as FTP) or any other mechanism that allows you to transfer files to your z/OS system. The file transfer program must be able to:

- Properly transfer both text and binary files
- Properly create members in a target library (PDS)

The IBM File Transfer Program (FTP, distributed as part of TCP/IP for z/OS) satisfies both of these requirements.

Each file in each subdirectory on the distribution CD-ROM corresponds to a member of the associated target library. For example, file `BEATCPI` in the `JCL` subdirectory corresponds to member `BEATCPI` in the `JCL` distribution library.

Note: All files in the `CONTROL`, `INCLUDE`, `JCL`, and `SOURCE` subdirectories are text files; be sure to specify text (or ASCII) mode when you transfer these files from the CD-ROM to their corresponding z/OS distribution library members.

The `MSGCAT` file and all files in the `OBJECT` subdirectory are binary files; specify binary (or image) mode when you transfer these files from the CD-ROM to the corresponding z/OS distribution library members.

Task 3: Link-Edit TMA TCP for IMS

The TMA TCP for IMS program is delivered as a pre-linked object file. Use the `LNKBEA34` JCL file for linking with IBM's TCP/IP.

Tailor the JCL as required to match your installation's standards and naming conventions. Review the following items and make the necessary changes before you submit the job.

1. Supply an appropriate Job Card for the job.
2. Change the names of product datasets as required to match those in your particular installation, including LE/370 datasets (for example, `SYS1.SCEELKED`), TCP/IP for z/OS datasets (for example, `SYS1.SEZACMTX`), and IMS (for example, `IMSV5R1.RESLIB`).
3. Change the names of TMA TCP for IMS datasets as required to match those you allocated in Step 1 (for example, `BEATCPI.DIST.OBJECT`).
4. Change the name of the link-editor (`HEWL`) as required to match the name used by your installation.

Note: The link job references components supplied by LE/370, TCP/IP for z/OS, and IMS.

When the job completes successfully, you receive a return code of 0 from the link-edit steps and an executable load module is placed into the specified target load library. The load module should have attributes of `AMODE=31`, `RMODE=24`. There should be no unresolved external references.

Sample JCL for Linking TMA TCP for IMS

[Listing 3-3](#) is JCL to link the distributed object files into an executable load module.

Listing 3-3 Sample JCL for Linking Distributed Object Files

```
//JOBNAME JOB ETC.
//LKED      EXEC PGM=HEWL,COND=(4,LT),
//          REGION=2M,PARM='AMODE=31,MAP,XREF'
//SYSLIB    DD DSN=SYS1.SCEELKED,DISP=SHR
//          DD DSN=SYS1.SEZACMTX,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSLMOD   DD DISP=SHR,DSN=BEATCPI.DIST.LOAD
//SYSUT1    DD UNIT=VIO,SPACE=(TRK,(10,10))
//RESLIB    DD DISP=SHR,DSN=IMSV5R1.RESLIB
//SYSLIN    DD DISP=OLD,DSN=BEA.HLQ.OBJECT(PREBEA34)
//          DD *
INCLUDE RESLIB(DFSLI000)
ENTRY CEESTART
NAME BEATCPI(R)
```

```
/*  
//
```

Task 4: Define TMA TCP for IMS to MVS

To integrate TMA TCP for IMS into your IMS environment, you must properly define it to MVS.

OTMA Definition

To use OTMA to integrate TMA TCP for IMS into your z/OS environment, you must properly define it in the program property table (PPT). [Listing 3-4](#) is a sample program entry for the Tuxedo Mainframe Adapter for TCP product. Also, you must link the program to an APF authorized library.

Listing 3-4 Sample Program Property Table

PPT PGMNAME(BEATCP34)	/* PROGRAM NAME = BEATCP34	*/
CANCEL	/* PROGRAM CAN BE CANCELED	*/
KEY(7)	/* PROTECT KEY ASSIGNED IS 7	*/
SWAP	/* PROGRAM IS SWAPPABLE	*/
NOPRIV	/* PROGRAM IS NOT PRIVILEGED	*/
DSI	/* REQUIRES DATA SET INTEGRITY	*/
PASS	/* CANNOT BYPASS PASSWORD PROTECTION	*/
SYST	/* PROGRAM IS A SYSTEM TASK	*/
AFF(NONE)	/* NO CPU AFFINITY	*/
NOPREF	/* NO PREFERRED STORAGE FRAMES	*/

Task 5: Create an TMA TCP for IMS Configuration File

Oracle TMA TCP for IMS makes use of a text configuration file which is read and processed during initialization to establish the configuration. Any text editor (such as the ISPF Editor) can be used to create the configuration file. `CONFIGOT`, the OTMA sample in the `CONTROL` distribution library is a sample configuration file which you may use as a starting point for creating configuration files tailored to your particular installation.

Place your completed configuration file in the configuration dataset allocated in the [“Task 1: Allocate z/OS Datasets”](#) section. A configuration file includes the following basic sections:

- `SYSTEM` Statement Definition
- Local Gateways Definition
- Remote Gateways Definition
- Remote Services Definition
- Local Services and IMS Host Systems Definition

Note: You must define local services and IMS host systems if running OTMA.

For detailed information about syntax and parameter definitions for the configuration file, refer to the Oracle Tuxedo Mainframe Adapter for TCP IMS User Guide.

SYSTEM Statement Definition

`SYSTEM` parameters control the overall operational environment of Oracle TMA TCP for IMS. Because TMA TCP for IMS cannot “wait” on the IMS Message Queue, the queue is periodically interrogated (polled) to determine if any new work has arrived (for example, IMS Client requests or Server responses). Set the `SleepTime` parameter to specify the amount of time that TMA TCP for IMS “sleeps” (waits) during idle periods before checking the IMS Message Queue for work.

Local Gateways Definition

You must provide at least one `GATEWAY TYPE=LOCAL` statement to define access to your local (IMS) gateway by remote systems. In this statement, specify the following:

- The IP Address that remote systems use to establish TCP/IP connections with this gateway.
- The IP Address should be that of the z/OS machine on which Oracle TMA TCP for IMS is running.
- The Port Number that remote systems use to establish TCP/IP connections with this gateway.
- You should specify a Port Number that is not a well-known port number and one that is not used by any other TCP/IP application.
- The Account ID and Password (if used) that must be supplied by remote systems to successfully establish an inbound session with this gateway

- The maximum number of concurrent inbound sessions (TCP/IP connections initiated by remote systems) that is accepted via the specified port

Make sure that remote systems are correctly configured with the corresponding IP Address, Port Number, Account ID (if used), and Password (if used). Otherwise, attempts by remote systems to connect to this gateway fail.

Remote Gateways Definition

`GATEWAY TYPE=REMOTE` statements define access to remote systems by the IMS gateway. In particular, each `GATEWAY TYPE=REMOTE` statement specifies:

- The IP Address to use to establish a TCP/IP connection (that is, connect) with the remote gateway
- The Port Number to use to establish a TCP/IP connection (that is, connect) with the remote gateway
- The Account ID and Password (if used) that must be supplied to establish an outbound session with the remote gateway
- The minimum and maximum number of concurrent, outbound sessions that are established with the remote gateway
- If you specify a value other than zero for the minimum number of sessions, TMA TCP for IMS attempts to establish the specified number of outbound sessions with the remote system during initialization.

The IP Address, Port Number, Account ID, and Password must match the configuration of the remote system. Otherwise, attempts to establish an outbound session with the remote system fails.

Remote Services Definition

`SERVICE TYPE=REMOTE` statements define remote services to which TMA TCP for IMS has access. Each statement specifies:

- The corresponding local and remote service names
- The Local Service Name is the name used by an IMS Client transaction to request the service. The Remote Service Name is the name of the service as defined on the remote system. These need not be the same, but note that the Remote Service Name *must* match the configuration of the remote system.
- The remote system (Logical Machine ID) that offers the service

- The remote system offering the service is identified by a Logical Machine ID, which must correspond to the Logical Machine ID specified in a `GATEWAY TYPE=REMOTE` statement.
- A time limit for processing the request
- The Time Limit (in seconds) specifies how long TMA TCP for IMS “waits” for a response to a request sent to a remote system before assuming that the request has “timed out” and that no response is forthcoming. Specify a value that makes a reasonable allowance for network latency and overall system load. Small values should be avoided because they may result in requests timing out under otherwise normal circumstances.

Note: It is permissible to have more than one `SERVICE TYPE=REMOTE` statement for the same (local) service name. When this is the case, each statement must identify a different remote Logical Machine ID. This allows TMA TCP for IMS to “spread” requests for a particular service among multiple remote systems offering the service, thus balancing the load and improving overall throughput.

Local Services and IMS Host Systems Definition

`SERVICE TYPE=LOCAL` statements define local services offered by a local IMS host. There can be multiple `SERVICE TYPE=LOCAL` statements and multiple statements defining the same service, provided each specifies a different local `IMSID`. Each statement requires the following information:

- The corresponding local and remote service names
The Local Service Name is the name used by an IMS Client transaction to request the service. The Remote Service Name is the name of the service as defined on the remote system.
Note: The local and remote service names can be different; however, the Remote Service Name *must* match the configuration of the remote system.
- The `IMSID` (Logical IMS ID) that offers the service
The `IMSID` is a symbolic name that uniquely identifies an IMS system definition. This name must match a logical IMS ID (`IMSID`) specified in a `HOST, TYPE=IMS` statement.

Task 6: Create JCL to Run TMA TCP for IMS

You must create JCL to run the Oracle TMA TCP for IMS product. The following section specifies how to create JCL for running as an OTMA client.

JCL for OTMA Clients

When running the product as an OTMA client, TMA TCP for IMS runs in its own address space under z/OS as a started task or long running job. Member `RUNOTM` in the JCL distribution library is a sample job for executing TMA TCP for IMS.

When tailoring the JCL for your OTMA installation, pay particular attention to the following:

- You need to supply an appropriate Job Card for the job. The job card should specify `TIME=1440`, since TMA TCP for IMS executes as a non-ending job.
- TMA TCP for IMS is written in the C language and requires access to the LE/370 runtime environment. Add DD cards to the `STEPLIB` for the LE/370 runtime datasets, including `SYS1.SCEERUN` and `SYS1.SCEELKED`. Use whatever dataset names are appropriate for your installation.
- For diagnostic purposes, you may wish to add DD cards for `SYSUDUMP` and/or `CEEDUMP`. In the event of an abnormal termination (`ABEND`), LE/370 writes a formatted dump to `CEEDUMP`.
- Add a DD card for `SYSTCPD` pointing to the TPC/IP Data file (for example, `TCPIP.V3R1.DATA` – change the dataset name as necessary to conform to your installation). This dataset is used by TCP/IP in the TMA TCP for IMS address space (when using IBM TCP/IP).
- If you want to preserve messages from previous executions of TMA TCP for IMS, code `DISP=MOD` in the `MSGLOG` DD statement; new messages are appended to the end of the dataset (existing messages are preserved). If you want the Message Log to be overwritten with each new execution of TMA TCP for IMS, code `DISP=OLD` (or `DISP=SHR`) in the `MSGLOG` DD statement; existing messages are lost.

Task 7: Start Oracle TMA TCP for IMS

Before you attempt to start TMA TCP for IMS the first time, make sure that the proper IMS definitions are in place.

If you are using RACF for security, you must set up a `FACILITY` Class Profile in RACF of `IMSXCF.group.client`. You can configure the *group* and *client* names for TMA TCP for IMS.

Start TMA TCP for IMS by submitting the JCL prepared in the “[Task 6: Create JCL to Run TMA TCP for IMS](#)” section.

For additional information on operating this product, refer to the Oracle Tuxedo Mainframe Adapter for TCP IMS User Guide.

Task 8: Test the Installation

When you start TMA TCP for IMS for the first time, you should do so in a controlled environment, using a small, simple configuration to methodically test the system to verify your installation and the configuration. For additional information on using this product, refer to the Oracle Tuxedo Mainframe Adapter for TCP IMS User Guide.

Distribution Libraries and Executables

The Tuxedo Mainframe Adapter for TCP CD-ROM contains the following libraries and executable programs. After installing the TMA TCP for IMS software, verify that these libraries and programs are installed on your system.

Directory	Files
(top)	msgcat
CONTROL	beacrp01 beacrq01 beacrr01 beasvr01 beatcpi configbp configot
INCLUDE	beatcpi client server
JCL	INSTALL LNKBEA34 RUNBMP RUNOTM
OBJECT	PREBEA34
SOURCE	beacrp01 beacrq01 beacrr01 beaotm beasvr01 dfsydru0 dfsyprx0

Installing Oracle Tuxedo Mainframe Adapter for TCP (CICS)

Installing Oracle Tuxedo Mainframe Adapter for TCP (CICS) (hereafter referenced as TMA TCP for CICS) consists of the following basic tasks and topics.

- [Preparing for Installation](#)
- [Installing TMA TCP for CICS](#)

Note: To upgrade from previous releases of eLink for Mainframe TCP, refer to *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*.

Preparing for Installation

Before you install TMA TCP for CICS, complete the following tasks.

- [Task 1: Verify System Requirements](#)
- [Task 2: Check Pre-Installation Considerations](#)

Task 1: Verify System Requirements

Prior to beginning the installation, verify hardware and software requirements. For system requirements, refer to the *Oracle Tuxedo Mainframe Adapter for TCP Release Notes*. Ensure that your installation workstation is connected to z/OS through TCP/IP, and is capable of running FTP.

Task 2: Check Pre-Installation Considerations

Verify that all block sizes in the supplied JCL are appropriate for the device types being used. By default, 3380 is assumed.

Installing TMA TCP for CICS

Complete the following tasks to install Oracle TMA TCP for CICS

- [Task 1: Allocate Temporary Data Sets](#)
- [Task 2: Transfer the Installation JCL](#)
- [Task 3: Create the PDS Libraries](#)
- [Task 4: Upload the Distribution Files](#)
- [Task 5: Define the CICS VSAM Files](#)
- [Task 6: Verify Contents of PROCS](#)
- [Task 7: Change Resource Names \(Optional\)](#)
- [Task 8: Define the CICS Table Entries](#)
- [Task 9: Build TMA TCP for CICS Executables](#)
- [Task 10: Verify the CICS Setup](#)
- [Task 11: Assemble and Link the CICS DCT](#)
- [Task 12: Modify the CICS Startup JCL](#)

Task 1: Allocate Temporary Data Sets

Allocate a temporary data set on z/OS direct access storage device (DASD) for the installation job as shown in the following example.

Note: Specify either the Volume Serial parameter or the Generic Unit parameter, but not both.

Listing 4-1 Allocating the Install Data Set

```
Data Set Name:YOURHLQ.TEMP.INSTALL
Volume serial:nnnnn          (Blank for authorized default volume)
```

```

Generic unit:                (Generic group name or unit address)
Space units:  TRACK          (BLKS, TRKS, CYLS, KB, MB or BYTES)
Primary quantity:1          (In above units)
Secondary quantity:1        (In above units)
Directory blocks:0          (Zero for sequential data set)
Record format:FB
Record length:80
Block size:6160
Expiration date:             (YY/MM/DD, YYYY/MM/DD YY.DDD,
                              YYYY.DDD in Julian form DDDD for
                              retention period in days or blank)

Enter "/" to select option
Allocate Multiple Volumes

```

Task 2: Transfer the Installation JCL

The TMA TCP for CICS product is distributed on a single CD-ROM (with other members of the Oracle TMA TCP product). The TMA TCP for CICS distribution files are grouped under one of the following directory structures:

- To FTP from UNIX to the mainframe, the distribution files are in:
 /cdrom/unixmf/cics directory,
 /cdrom is the directory where the drive is mounted.
- To FTP from Windows to the mainframe, the distribution files are in:
 D:\ntmf\cics
 D: is the CD-ROM drive.

FTP the file called `INSTALL` to the temporary data set created in the [“Task 1: Allocate Temporary Data Sets”](#) section. Listing 3-2 is the process for downloading the `INSTALL` file using FTP.

Listing 4-2 Uploading Distribution Files

```

% ftp zos-machine
Connected to zos-machine.
Name (zos-machine:unix-id): tso-id
331 Send password please.

```

```

Password: tso-password
230 tso-id is logged on.
Remote system type is z/OS.
ftp> quot site rec=fb
ftp> quot site lr=80
ftp> put INSTALL 'data set name allocated'
200 Port request OK.
125 Storing data set 'data set name allocated'
2749 bytes sent in 0.00 seconds (555.12 Kbytes/s)
ftp> quit
221 Quit command received. Goodbye.

```

Task 3: Create the PDS Libraries

Tailor the JCL as required to match your installation's standards and naming conventions. Review the following items and make the necessary changes before you submit the job.

Note: This is an instream PROC; the variables are at the end of the PROC.

1. Modify the JOBCARD to your standards.
2. Modify the variable "YOURHLQ." If you intend to rename them, modify the variables JCL, OBJECT, and SOURCE.
3. Submit the revised INSTALL JCL. This JCL creates six partitioned data sets based on the "high-level-qualifier" you have specified as the value of the JCL parameter (&HLQ) in the JCL.

The INSTALL JCL includes the name BEATCPC as part of the data set name. For example.

Listing 4-3 Sample INSTALL JCL

```

//JDOE1    JOB (INSTALL), 'J DOE', NOTIFY=&SYSUID,
//          CLASS=C, MSGCLASS=X, MSGLEVEL=(1,1), TIME=1440
// *
//INSTALL  PROC   HLQ=,                      ** YOUR HIGH LEVEL QUALIFIER
//          DASD=,                          ** DASD DEVICE TYPE
//          VOLUME=,                        ** SERIAL NUMBER OF TARGER VOLUME
//          BLKFB=6160,                     ** BLKSIZE FOR FIXED BLOCK FILE
// *=====
// *      THESE JCL WILL CREATE THE PDS FILES REQUIRED FOR
// *      THE INSTALLATION OF BEA TMA TCP FOR CICS
// *=====
//          PDS_CNTL= 'CONTROL',             ** 'YOURHLQ'.BEATCPC.CONTROL
//          PDS_INCL= 'INCLUDE',             ** 'YOURHLQ'.BEATCPC.INCLUDE

```

```

//          PDSJCL='JCL' ,                ** 'YOURHLQ'.BEATCPC.JCL
//          PDSOBS='OBJECT' ,            ** 'YOURHLQ'.BEATCPC.OBJECT
//          PDSLKED='PLKED' ,            ** 'YOURHLQ'.BEATCPC.PLKED
//          PDSSRCE='SOURCE' ,           ** 'YOURHLQ'.BEATCPC.SOURCE
//          PDSLKED='PLKED' ,            ** 'YOURHLQ'.BEATCPC.PLKED
//          PDSSRCE='SOURCE' ,           ** 'YOURHLQ'.BEATCPC.SOURCE
// *-----
// * WE RECOMMEND THAT YOU KEEP THE NODE 'BEATCPC' IN THE data set NAMES
// *-----
//EXEC  PGM=IEFBR14
//PDSCTL DD  DSNAME=&HLQ..BEATCPC.&PDSCTL , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=&BLKFB) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(1,1,5))
// *
//PDSJCL DD  DSNAME=&HLQ..BEATCPC.&PDSJCL , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=&BLKFB) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(1,1,5))
// *
//PDSINCL DD  DSNAME=&HLQ..BEATCPC.&PDSINCL , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=&BLKFB) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(1,1,5))
// *
//PDSOBS DD  DSNAME=&HLQ..BEATCPC.&PDSOBS , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3200) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(3,1,5))
// *
//PDSLKED DD  DSNAME=&HLQ..BEATCPC.&PDSLKED , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=&BLKFB) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(3,1,5))
// *
//PDSSRCE DD  DSNAME=&HLQ..BEATCPC.&PDSSRCE , DISP=(NEW,CATLG,DELETE) ,
//          DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=&BLKFB) ,
//          UNIT=&DASD,VOL=SER=&VOLUME,SPACE=(CYL,(1,1,5))
// *
//          PEND
// *-----
// * CUSTOMIZE THE PARAMETER ACCORDING TO YOUR INSTALLATION
// *-----
//          EXEC PROC=INSTALL,
//              DASD=3390,** YOUR DEVICE TYPE
//              VOLUME=MVS201,** YOUR VOLUME SERIAL NUMBER
//              HLQ='PRODUCTS.BEA.TMA',** YOUR HIGH LEVEL QUALIFIER
//              PDSCTL='CONTROL',** BEATCPC CONTROL
//              PDSINCL='INCLUDE',** BEATCPC INCLUDE
//              PDSJCL='JCL',** BEATCPC JCL
//              PDSOBS='OBJECT',** BEATCPC OBJECT
//              PDSLKED='PLKED',** BEATCPC PLKED
//              PDSSRCE='SOURCE'** BEATCPC SOURCE

```

Task 4: Upload the Distribution Files

Upload all the files on the distribution medium to the partitioned data sets allocated by the job `INSTALL` in the [“Task 3: Create the PDS Libraries”](#) section.

The TMA TCP for CICS distribution files are grouped under one of the following directory structures:

- To FTP the distribution files from UNIX to the mainframe, the files are in:

`/cdrom/unixmf/cics`

`/cdrom` is the directory where the drive is mounted.

- To FTP files from Windows to the mainframe, the files are in:

`D:\ntmf\cics`

`D:` is the CD-ROM drive.

The previous directory structures include the following partitioned data sets.

Table 4-1 Partitioned Data Sets

From	To
<code>./control</code>	Your PDS for <code>CONTROL</code> (<code>YOURHLQ.BEATCPC.CONTROL</code>) (ASCII mode)
<code>./jcl</code>	Your PDS for <code>JCL</code> (<code>YOURHLQ.BEATCPC.JCL</code>) (ASCII mode)
<code>./source</code>	Your PDS for <code>SOURCE</code> (<code>YOURHLQ.BEATCPC.SOURCE</code>) (ASCII mode)
<code>./include</code>	Your PDS for <code>INCLUDE</code> (<code>YOURHLQ.BEATCPC.INCLUDE</code>) (ASCII mode)
<code>./object</code>	Your PDS for <code>OBJECT</code> (<code>YOURHLQ.BEATCPC.OBJECT</code>) (Binary mode)
<code>./plked</code>	Your PDS for <code>PLKED</code> (<code>YOURHLQ.BEATCPC.PLKED</code>) (Binary mode)

Listing 4-4 Uploading Distribution Files Using FTP

```
% ftp zos-machine
Connected to zos-machine.
Name (beavs:tso-id):
331 Send password please.
Password: tso-password
230 tso-id is logged on.
Remote system type is z/OS.
ftp> prompt off
Interactive mode off
ftp> quot site rec=fb
200 SITE command was accepted
ftp> quot site lr=80
200 SITE command was accepted
```

Upload the CONTROL files.

Note: You must set ASCII mode on.

Listing 4-5 Upload control Files

```
ftp> lcd /cdrom/unixmf/cics/control
Local directory now /cdrom/unixmf/cics/control
ftp> cd 'YOURHLQ.BEATCPC.CONTROL'
250 "'YOURHLQ.BEATCPC.CONTROL'" partitioned data set is working directory
ftp> ascii
200 Representation type is Ascii
ftp> mput *
local: CSDU remote: CSDU
200 Port request OK.
125 Storing data set "YOURHLQ".BEATCPC.CONTROL (CSDU)
250 Transfer completed successfully.
5740 bytes sent in 0.01 seconds (747.10 Kbytes/s)
.
.
```

.

Upload the JCL files.

Note: You must set ASCII mode on.

Listing 4-6 Uploading JCL Files

```
ftp> lcd /cdrom/unixmf/cics/jcl
Local directory now /cdrom/unixmf/cics/jcl
ftp> cd 'YOURHLQ.BEATCPC.JCL'
250 "'YOURHLQ.BEATCPC.JCL'" partitioned data set is working directory.
ftp>ascii
200 Representation type is Ascii
ftp> mput *
local: BLDVSAM remote: BLDVSAM
200 Port request OK.
125 Storing data set "YOURHLQ".BEATCPC.JCL (BLDVSAM)
250 Transfer completed successfully.
2214 bytes sent in 0.00 seconds (563.49 Kbytes/s)
.
.
.
```

Upload the SOURCE files.

Note: You must set ASCII mode on.

Listing 4-7 Uploading SOURCE Files

```
ftp> lcd /cdrom/unixmf/cics/source
Local directory now /cdrom/unixmf/cics/source
ftp> cd 'YOURHLQ.BEATCPC.SOURCE'
```

```

250 "'YOURHLQ.BEATCPC.SOURCE'" partitioned data set is working directory.
ftp>ascii
200 Representation type is Ascii
ftp> mput *
local: BEACCLN1 remote: BEACCLN1
200 Port request OK.
125 Storing data set YOURHLQ.BEATCPC.SOURCE(BEACCLN1)
250 Transfer completed successfully.
10578 bytes sent in 0.01 seconds (1013.85 Kbytes/s)
.
.
.

```

Upload the INCLUDE files.

Note: You must set ASCII mode on.

Listing 4-8 Uploading INCLUDE Files

```

ftp> ascii
ftp> lcd /cdrom/unixmf/cics/include
ftp> cd "'YOURHLQ".BEATCPC.INCLUDE'
250 "'YOURHLQ.BEATCPC.INCLUDE'" partitioned data set is working directory
ftp>ascii
200 Representation type is Ascii
ftp> mput *
200 Port request OK.
125 Storing data set "YOURHLQ".BEATCPC.INCLUDE'(CLIENT)
250 Transfer completed successfully.
local: CLIENT remote: CLIENT
3736 bytes sent in 0.0081 seconds (4.5e+02 Kbytes/s)
.
.
.

```

Upload the OBJECT files.

Note: You must set binary mode on.

Listing 4-9 Uploading OBJECT Files

```
ftp> binary
200 Representation type is IMAGE.
ftp> lcd /cdrom/unixmf/cics/object
Local directory now /cdrom/unixmf/cics/object
ftp> cd 'YOURHLQ.BEATCPC.OBJECT'
250 "'YOURHLQ.BEATCPC.OBJECT'" partitioned data set is working directory.
ftp>binary
200 Representation type is Image
ftp> mput *
local: BEACFGSV remote: BEACFGSV
200 Port request OK.
125 Storing data set "YOURHLQ".BEATCPC.OBJECT(BEACFGSV)
250 Transfer completed successfully.
6240 bytes sent in 0.00 seconds (1466.96 Kbytes/s)
.
.
.
```

Upload the PLKED files.

Note: You must set binary mode on.

Listing 4-10 Uploading PLKED Files

```
ftp> binary
200 Representation type is Image
ftp> lcd /cdrom/unixmf/plked
```

```

ftp> cd '"YOURHLQ".BEATCPC.PLKED'
250 "'YOURHLQ.BEATCPC.PLKED'" partitioned data set is working directory
ftp>binary
200 Representation type is Image
ftp> mput *
200 Port request OK.
125 Storing data set "YOURHLQ.BEATCPC.PLKED(BEACIC00)
250 Transfer completed successfully.
local: BEACIC00 remote: BEACIC00
64560 bytes sent in 0.7 seconds (90 Kbytes/s)
.
.
.

```

Verify that the distribution libraries were uploaded. For the listing of files that should be on your system, refer to the [“List of Distribution Files and Members”](#) section.

Task 5: Define the CICS VSAM Files

Define the CICS VSAM files (Connections, Requesters, Service Names, User Connection, Inbound Service).

1. Modify DELETE/DEFINE control cards VCON, VREQ, VSVC, VUSR, and VISN in the PDS
"YOURHLQ".BEATCPC.CONTROL. [Listing 4-11](#) is an example of a modified DELETE/DEFINE.

Listing 4-11 Sample DELETE/DEFINE Control Card

DELETE	YOURHLQ.BEATCPC.BEAVSVC	-
	CLUSTER PURGE	-
DEFINE	CLUSTER (-
	NAME (YOURHLQ.BEATCPC.BEAVSVC)	-
	SHAREOPTIONS (2 3)	-
	KEYS (16 0)	-
	CISZ (1024)	-
	TRACKS (5 1)	-

```

VOLUMES (CICS01) -
DATA ( -
    RECORDSIZE (56, 56) -
NAME (YOURHLQ.BEATCPC.BEAVSVC.DATA) -
INDEX ( -
NAME (YOURHLQ.BEATCPC.BEAVSVC.INDEX) )

```

Change all instances of `YOURHLQ.BEATCPC.BEAVSVC` to a physical data set name that meets your standards. Change the `TRACKS` and `VOLUMES` parameters to appropriate values for your installation. The provided value for the `TRACKS` parameter works for most installations, but this value can be increased if necessary.

2. For the `BLDVSAM` JCL, complete the following steps.
 - a. Modify the `JOB` CARD to your standards.
 - b. Modify `YOURHLQ.BEATCPC.XXXX`, where `XXXX` is `BEAVCON`, `BEAVREQ`, `BEAVSVC`, `BEAVUSR`, and `BEAVISN`.
 - c. Submit `BLDVSAM`.
3. Verify the results. There should be three data sets in `YOURHLQ.BEATCPC` corresponding to each of the five `VSAM` files. The three data sets are as follows:
 - One data set has no extension
 - One data set has `DATA` as the extension
 - One data set has `INDEX` as the extension

Note: A condition code of 8 is acceptable on `DELETE` steps. If you receive condition codes other than zero for `DEFINE` steps, you should evaluate this for potential problems.

Task 6: Verify Contents of PROCS

Before you go on to the next step, we recommend that you check the following items in `PROCS` `CMPBPC`, `CMPLMAP`, `CMPLKED`, and `LNKIBM` in the PDS `YOURHLQ.BEATCPC.JCL`.

You may need to modify them to meet your standards. You will need to review the following:

- All references to `CICS` and `TCP/IP` data set names.

- The data set names associated with the STEPLIB, SYSMSGs, SYSXMSCS, SYSPATH, and SYSLIB DD names.
- Unit = references.

Task 7: Change Resource Names (Optional)

The default names for Oracle TMA TCP for CICS Mapsets, Programs, Transids, and VSAM data sets are listed in Appendix A, “Changing Resource Names.” If you want to use a different naming convention, use the procedure for changing names included after each table.

Note: You must have the C 370 compiler to customize resource names.

Task 8: Define the CICS Table Entries

1. Verify the CICS table entry definitions (PCTs, PPTs, FCTs) in CSDU (from the PDS "YOURHLQ".BEATCPC.CONTROL).
2. Modify the group and list name in CSDU (from the PDS "YOURHLQ".BEATCPC.CONTROL).
3. In the JCL in CSDUPD (from the PDS "YOURHLQ".BEATCPC.JCL), complete the following steps.
 - a. Modify the JOBCARD to your standards.
 - b. Modify the STEPLIB and DFHCSD data set names.
 - c. Modify the SYSIN DSN=YOURHLQ.BEATPC.CONTROL.
 - d. Submit CSDUPD.
 - e. Verify the results.

Note: A “COND CODE 0004” may result due to the DELETE commands for non-existent CSD objects.

Task 9: Build TMA TCP for CICS Executables

To build the executables for Oracle TMA TCP for CICS, you need to complete the following tasks.

1. If there is not a PDS allocated where the executables for your CICS region reside, allocate such a PDS before running any JCL that builds executables.

2. Link the CICS Admin maps (MainMenu, Connection, Requester, Outbound Service Name, Inbound Service Name, User Connection Account, Handler Configuration). In the JCL in MAKLMAP (from the PDS "YOURHLQ".BEATCPC.JCL"), complete the following steps.
 - a. Modify the JOBCARD to your standards.
 - b. Modify the PROCS JCLLIB card with the correct HLQ.
 - c. Modify the variables YOURHLQ, PDSOBS and LNKLIB for your PDS.
Note: LNKLIB is where your CICS region executable binary files reside.
 - d. Modify the variable PROG, if you renamed mapsets.
 - e. Submit MAKLMAP.
 - f. Verify the results.
3. Complete one of the following procedures depending on your compiler:
 - [Pre-Link/Link TMA TCP for CICS](#)
 - [Linking without the C 370 Compiler](#)

Pre-Link/Link TMA TCP for CICS

The following sections explain the procedures for linking programs and mapsets prior to running the Oracle TMA TCP for CICS product.

Note: The following sections apply for a C 370 compiler.

Linking the CICS Admin Programs

Pre-Link/Link the CICS Admin Programs (MainMenu, Connection, Requester, Outbound Service Name, Inbound Service Name, User Connection Account, Handler Configuration). In the JCL in MAKL1 (from the PDS "YOURHLQ".BEATCPC.JCL"), complete the following steps.

1. Modify the JOBCARD to your standards.
2. Modify the PROCS JCLLIB card with the correct HLQ.
3. Modify the variables YOURHLQ, PDSOBS, TCPLIB and LNKLIB for your PDS.
Note: LNKLIB is where your CICS region executable binary files reside.
4. Modify the LKED.SYSIN program names, if you renamed programs.
5. Submit MAKL1.

6. Verify the results.

Note: A "COND CODE = 004" is normal.

Linking the CICS Utility Programs

Pre-Link/Link the CICS utility Programs (Pre-Requester, Application Handler, Shutdown, and Configuration Converter). In the JCL in MAKL0 (from the PDS "YOURHLQ".BEATCPC.JCL"), complete the following steps.

1. Modify the JOBCARD to your standards.
2. Modify the PROCS JCLLIB card with the correct HLQ.
3. Modify the variables YOURHLQ, PDSOBS, TCPLIB and LNKLIB for your PDS.

Note: LNKLIB is where your CICS region executable binary files reside.

4. Modify the LKED.SYSIN program names, if you renamed programs.
5. Submit MAKL0.
6. Verify the results.

Note: A "COND CODE = 004" is normal.

Linking the CICS TCP Programs

Pre-Link/Link the CICS TCP Programs (Requester and Handler). In the JCL in MAKL3 (from the PDS "YOURHLQ".BEATCPC.JCL"), complete the following steps.

1. Modify the JOBCARD to your standards.
2. Modify the variables YOURHLQ, PDSOBS, TCPLIB and LNKLIB for your PDS.

Note: LNKLIB is where your CICS region executable binary file resides.

3. Modify the INCLUDE OBJECT program name, if you renamed programs.
4. Modify the LKED.SYSIN program names, if you renamed programs.
5. Submit MAKL3.
6. Verify the results.

Note: A "COND CODE = 004" is normal.

Linking without the C 370 Compiler

If you do NOT have the C 370 compiler, use the following procedure to Linkedit the PreLinked objects. Link the Prelinked objects of the following programs.

- CICS TCP Programs (Requester and Handler).
- CICS Utility Programs (Pre-Requester, Application Handler, Shutdown, and Configuration Converter).
- CICS Admin Programs (MainMenu, Connection, Requester, Service Name).

In the JCL in MAKLKED (from the PDS "YOURHLQ.BEATCPC.JCL"), complete the following steps.

1. Modify the JOBCARD to your standards.
2. Modify the variables YOURHLQ, TCPLIB and LNKLIB for your PDS.

Note: LNKLIB is where your CICS region executable binary file resides.

3. Submit MAKLKED.
4. Verify the results.

Task 10: Verify the CICS Setup

Log on to your CICS region to install and verify the components you set up for Oracle TMA TCP for CICS.

- CEDA INSTALL GROUP (____)

This is the group name you used in CSDU

- CEMT INQUIRE PROG (____)

Verify the mapsets and programs

- CEMT INQUIRE TRAN (____)

Verify the transids

- CEMT INQUIRE FILE (____)

Verify the VSAM files

Task 11: Assemble and Link the CICS DCT

Note: Recent releases of CICS allow this task to be with CSD instead of this method.

1. Add the following entries to the CICS DCT.

Entry
BEALOG DFHDCT TYPE=SDSCI,
DSCNAME=BEALOG,
BLKSIZE=136,
RECSIZE=132,
RECFORM=VARUNB,
TYPEFLE=OUTPUT,
BUFNO=1
BEAL DFHDCT TYPE=EXTRA,
DESTID=BEAL,
DSCNAME=BEALOG

2. Assemble and link the DCT.

Task 12: Modify the CICS Startup JCL

1. Add the Oracle Tuxedo Mainframe Adapter load library (LNKLIB) to the DFHRPL concatenation.
2. Add the following DD statement to CICS file concatenation.

```
//BEALOG DD SYSOUT=*,DCB=(DSORG=PS,RECFM=V,BLKSIZE=136)
```
3. Add DD statement to make the connection between the logical names of the VSAM files and the DSN.

Note: If DSN statements were added to the CSDU, this step is not necessary.

The following is an example of a CICS startup JCL.

Listing 4-12 Sample CICS Startup JCL with TMA TCP additions

```
//CICSREG JOB
//CICSCNTL EXEC PGM=IDCAMS,REGION=1M
//SYSPRINT DD SYSOUT=*
//SYSIN DD DISP=SHR,DSN=CICSTS31.SYSIN(DFHRCYES)
//DTCNTL EXEC PGM=IDCAMS,REGION=1M
//SYSPRINT DD SYSOUT=*
//SYSIN DD DISP=SHR,DSN=CICSTS31.SYSIN(DFHRCNO)
//*
//CICS EXEC PGM=DFHSIP, REGION=32M, TIME=1439, COND=(1,NE,CICSCNTL),
// =START=COLD, SYSIN, SEC=NO, GRPLIST=ETPLIST
//STEPLIB DD DISP=SHR,DSN=CICSTS31.SVTSC.SDFHAUTH
// DD DISP=SHR,DSN=CICSTS31.SDFHAUTH
// DD DISP=SHR,DSN=MASTCAT.MQM112.SCSQAUTH
// DD DISP=SHR,DSN=COB2140.COB2CICS.MODLIB
// DD DISP=SHR,DSN=C370.SEDCLINK
// DD DISP=SHR,DSN=ADLE370.V1R3M0.SCEECICS
// DD DISP=SHR,DSN=ADLE370.V1R3M0.SCEERUN
//DFHRPL DD DISP=SHR,DSN=CICSTS31.SVTSC.SDFHLOAD
// DD DISP=SHR,DSN=CICSTS31.SDFHLOAD
// DD DISP=SHR,DSN=BEA.BEA100.BEALOAD
// DD DISP=SHR,DSN=TCPIP.V3R1.SEZALINK
// DD DISP=SHR,DSN=TCPIP.V3R1.SEZATCP
// DD DISP=SHR,DSN=MQM112.SCSQCICS
// DD DISP=SHR,DSN=MQM112.SCSQLOAD
// DD DISP=SHR,DSN=COB2140.COB2CICS
// DD DISP=SHR,DSN=MASTCAT.COB2140.COB2LIB
// DD DISP=SHR,DSN=MASTCAT.PLI230.PLILINK
// DD DISP=SHR,DSN=C370.SEDCLINK
// DD DISP=SHR,DSN=ERW121.SERWLOAD
// DD DISP=SHR,DSN=ADLE370.V1R3M0.SCEECICS
// DD DISP=SHR,DSN=ADLE370.V1R3M0.SCEERUN
//SYSIN DD DISP=SHR,DSN=CICSTS31.CICS.SYSIN(TCICS)
//DFHCSD DD DISP=SHR,DSN=CICSTS31.DFHCSD
//DFHCMACD DD DISP=SHR,DSN=CICSTS31.DFHCMACD
//DFHJ01A DD DISP=SHR,DSN=CICSTS31.CICS.DFHJ01A
//DFHJ01B DD DISP=SHR,DSN=CICSTS31.CICS.DFHJ01B
//DFHJ01X DD DISP=SHR,DSN=CICSTS31.CICS.DFHJ01X
//DFHAUXT DD DISP=SHR,DSN=CICSTS31.CICS.DFHAUXT,
//DFHBUXT DD DISP=SHR,DSN=CICSTS31.CICS.DFHBUXT,
//DFHDMPA DD DISP=SHR,DSN=CICSTS31.CICS.DFHDMPA
//DFHDMPB DD DISP=SHR,DSN=CICSTS31.CICS.DFHDMPB
//DFHRSD DD DISP=SHR,DSN=CICSTS31.CICS.DFHRSD
//DFHGCD DD DISP=SHR,DSN=CICSTS31.CICS.DFHGCD
//DFHLCD DD DISP=SHR,DSN=CICSTS31.CICS.DFHLCD
//DFHXMSG DD DISP=SHR,DSN=CICSTS31.CNTL.CICS.DFHXRMSG
//DFHXCTL DD DISP=SHR,DSN=CICSTS31.CNTL.CICS.DFHXRCTL
```

```

//DFHTEMP DD DISP=SHR,DSN=CICSTS31.CNTL.CICS.DFHTEMP
//DFHINTRA DD DISP=SHR,DSN=CICSTS31.CNTL.CICS.DFHINTRA
//DFHJACD DD DISP=SHR,DSN=CICSTS31.CICS.DFHJACD
//DFHJPDS DD DISP=SHR,DSN=CICSTS31.DFHJPDS
//DFHJOUT DD SYSOUT=(A,INTRDR)
//DFHCXRF DD SYSOUT=X
//MQMSG DD SYSOUT=*
//LOGUSR DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=136)
//MSGUSR DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=136)
//TCPDATA DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=136)
//BEALOG DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=136) ** BEA Connect
//COUT DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=137)
//PLIMSG DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=137)
//COUT DD SYSOUT=*, DCB=(DSORG=PS,RECFM=V, BLKSIZE=137)
//SYSABEND DD SYSOUT=*
//TRACEOUT DD SYSOUT=*
//PRINTER DD SYSOUT=*,DCB=BLKSIZE=121
//*
//PRTDMPA EXEC PGM=DFHDUP, PARM=SINGLE, REGION=0M, COND=(1,NE,DTCNTL)
//STEPLIB DD DSN=CICSTS31.SDFHLOAD,DISP=SHR
//SYSIN DD DUMMY
//DFHMPDS DD DISP=SHR,DSN=CICSTS31.CICS.DFHMPA
//DFHTINDX DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//DFHPRINT DD SYSOUT=*
//*
//PRTDMPB EXEC PGM=DFHDUP, PARM=SINGLE, REGION=0M, COND=(1,NE,DTCNTL)
//STEPLIB DD DSN=CICSTS31.SDFHLOAD,DISP=SHR
//SYSIN DD DUMMY
//DFHMPDS DD DISP=SHR,DSN=CICSTS31.CICS.DFHMPB
//DFHTINDX DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//DFHPRINT DD SYSOUT=*
//*
/* PRTAUXT EXEC PGM=DFHTUP, REGION=0M, COND=(1,NE,DTCNTL)
/* STEPLIB DD DSN=CICSTS31.SDFHLOAD,DISP=SHR
/* DFHAUXT DD DISP=OLD,DSN=CICSTS31.CICS.DFHAUXT
/* DFHAXPRT DD SYSOUT=*
/* DFHAXPRM DD DUMMY
/*
//PRTBUXT EXEC PGM=DFHTUP, REGION=0M, COND=(1,NE,DTCNTL)
//STEPLIB DD DSN=CICSTS31.SDFHLOAD,DISP=SHR
//DFHAUXT DD DISP=SHR,DSN=CICSTS31.CICS.DFHBUXT
//DFHAXPRT DD SYSOUT=*
//DFHAXPRM DD DUMMY

```

List of Distribution Files and Members

The following tables list and describe the members that make up each distribution partitioned data set.

BEATCPC.DIST.CONTROL

Verify that the following members are installed by Oracle TMA TCP for CICS.

Member	Description
CSDU	Del/Def Parameters for (PCTs, PPTs, FCTs)
VCON	Del/Def Parameters for (VSAM Connections)
VISN	Del/Def Parameters for (VSAM Inbound Services)
VREQ	Del/Def Parameters for (VSAM Requesters)
VSVC	Del/Def Parameters for (VSAM Service Names)
VUSR	Del/Def Parameters for (VSAM User Connections)

BEATCPC.DIST.JCL

Verify that the following members are installed by Oracle TMA TCP for CICS.

Member	Description
BLDVSAM	Jcl to Del/Def VSAM files (BEAVCON, BEAVREQ, BEAVSVC, BEAVUSR, BEAVISN)
CMPCB	Proc to Compile/link C program (Configuration)
CMPLKED	Proc to Link the PreLinked PLKED
CMPLMAP	Proc to Link CICS Mapsets(TCP Admin)
CSDUPD	Jcl to Del/Def CICS (PCTs, PPTs, FCTs)
LNKIBM	Proc to PreLink/Link Pgm objects

Member	Description
MAKBC	Jcl to Compile/link C program (Configuration)
MAKL0	Jcl to PreLink/Link Pgm objects(PreRequester, Shutdown)
MAKL1	Jcl to PreLink/Link Pgm objects(TCP Admin)
MAKL3	Jcl to PreLink/Link Pgm objects(Requester, Handler)
MAKLKED	Jcl to Link the PreLinked PLKED
MAKLMAP	Jcl to Link CICS Mapsets(TCP Admin)

BEATPC.DIST.SOURCE

Verify that the following members are installed by Oracle TMA TCP for CICS.

Member	Description
BEACCLN1	Program Sample Test Client
BEACSVR1	Program Sample Test Server
BEACFGSV	Program Name Configuration (Files, Maps, Programs, Trns)

BEATPC.DIST.INCLUDE

Verify that the following members are installed by Oracle TMA TCP for CICS.

Member	Description
BEACFGSV	Include for the name configuration (Files, Maps, Programs, Trns)
CLIENT	Copybook for COBOL CICS Client Request/Response Header
CLIENTH	Include for C CICS Client Request/Response Header

Member	Description
TWACOPY	Copybook for COBOL CICS Server TWA Message size
TWAINCL	Include for C CICS Server TWA Message size

BEATCPC.DIST.PLKED

Verify that the following members are installed by Oracle TMA TCP for CICS.

Member	Description
BEAAPPLC	Prelinked object of Application Handler
BEACIC00	Prelinked object of Handler
BEAPCON	Prelinked object of Admin Connections
BEAPISN	Prelinked object of Admin(Inbound Service Names)
BEAPMNU	Prelinked object of Admin(Main Menu)
BEAPREQ	Prelinked object of Admin(Requesters)
BEAPRERQ	Prelinked object of Pre-Requester
BEAP SVC	Prelinked object of Admin(Outbound Service Names)
BEAPUSR	Prelinked object of Admin(User Connection Account)
BEAREQST	Prelinked object of Requester
BEASHUT	Prelinked object of Shutdown
CNVTISNC	Prelinked object of Configuration Converter

BEATCPC.DIST.OBJECT

Verify that the following members are installed by Oracle TMA TCP for CICS:

- BEAAPPLC
- BEACFGSV

- BEACIC00
- BEAERRNO
- BEAEVT2
- BEALOGC
- BEAMCON
- BEAMMNU
- BEAMREQ
- BEAMSUB
- BEAMSVSVC
- BEAMUSR
- BEAMISN
- BEAPCON
- BEAPMNU
- BEAPREQ
- BEAPRERQ
- BEAPSVSVC
- BEAPUSR
- BEAPISN
- BEAREQST
- BEARQSUB
- BEASHUT
- EBCASC
- BEASUBS
- BEAGHBN
- BEASKIBM

- BEASKVAR
- CNVTISNC

Changing Resource Names

The default names for Oracle TMA TCP for CICS Mapsets, Programs, Transids, and VSAMs are listed in the following sections. If you want to use a different naming convention, use the procedure for changing names included after each table.

Note: You must have the C 370 compiler to customize resource names.

Contents of SOURCE(BEACFGSV)

The names in the following table are located in PDS "YOURHLQ".BEATCPC.SOURCE(BEACFGSV)

Name	Type	Description
BEAM	Transid	Main Menu
BEAPMNU	Program	Main Menu
BEAMMNU	Mapset	Main Menu
BEAC	Transid	Connection Administration
BEAPCON	Program	Connection Administration
BEAMCON	Mapset	Connection Administration
BEAR	Transid	Requester Administration
BEAPREQ	Program	Requester Administration

Name	Type	Description
BEAMREQ	Mapset	Requester Administration
BEAS	Transid	Service Name Administration
BEAP SVC	Program	Service Name Administration
BEAM SVC	Mapset	Service Name Administration
BEAU	Transid	User Connection Administration
BEAPUSR	Program	User Connection Administration
BEAMUSR	Mapset	User Connection Administration
BEAI	Transid	Inbound Service Administration
BEAPISN	Program	Inbound Service Administration
BEAMISN	Mapset	Inbound Service Administration
BEAVCON	VSAM	Connection Table
BEAVREQ	VSAM	Requester Table
BEAV SVC	VSAM	Service Name Table
BEAVUSR	VSAM	User Connection Table
BEAVISN	VSAM	Inbound Service Table
BEAPRERQ	Program	Pre-requester
BREQ	Transid	To start Requester
BEAL	TDQid	Log Message TD Queue
BEAA	Transid	Application Handler Transid
BEAHBDWN	TSQid	Handler Shutdown TS Queue

Changing Resource Names for SOURCE(BEACFGSV)

To change any of the default names shown in the previous table, complete the following steps.

1. Modify Program (BEACFGSV) located in PDS "YOURHLQ".BEATCPC.SOURCE

2. For the JCL (MAKBC) located in PDS "YOURHLQ".BEATCPC.JCL, complete the following steps.
 - a. Modify the JOBCARD to your standards.
 - b. Modify "YOURHLQ.BEATCPC.SOURCE" and "YOURHLQ.BEATCPC.OBJECT".
 - c. Submit MAKBC.
3. Verify the results.

Contents of CONTROL(CSDU)

The names in the following table are located in PDS "YOURHLQ".BEATCPC.CONTROL(CSDU)

Name	Type	Description
BEAPCON	Program	Connection administration
BEAPMNU	Program	Main menu
BEAPREQ	Program	Requester administration
BEAPSVL	Program	Outbound service administration
BEAPUSR	Program	User connection administration
BEAPISN	Program	Inbound service administration
BEASHUT	Program	Shutdown
BEAPRERQ	Program	Pre-Requester
BEAREQST	Program	Requester
BEACIC00	Program	Handler
BEAAPPLC	Program	Application Handler
BEAC	Transaction	Connection administration
BEAM	Transaction	Main menu
BEAR	Transaction	Requester administration
BEAS	Transaction	Outbound service administration

Name	Type	Description
BEAU	Transaction	User connection administration
BEAI	Transaction	Inbound service administration
BDWN	Transaction	Shutdown
BREQ	Transaction	Requester
BEAH	Transaction	Handler
BEAA	Transaction	Application Handler
BEAMCON	Mapset	Connection administration
BEAMMNU	Mapset	Main menu
BEAMREQ	Mapset	Requester administration
BEAMSVC	Mapset	Outbound service administration
BEAMUSR	Mapset	User connection administration
BEAMISN	Mapset	Inbound service administration
BEAVCON	File	Connection table
BEAVREQ	File	Requester table
BEAVSVC	File	Outbound service table
BEAVUSR	File	User connection table
BEAVISN	File	Inbound service table

Changing Resource Names for CONTROL(CSDU)

After changing resource names in `BEACFGSV`, you need to modify the file (CSDU) located in PDS "YOURHLQ". `BEATCPC.CONTROL`.

Changes to the CSDU member must correspond to changes in the `BEACFGSV` member.

You can also change the names of the `BDWN` and `BEAH` transactions. If the name of the `BEAH` transaction changes, the `CICSHAND` parameter in the `GWICONFIG` file of the Oracle TMA TCP Gateway must also reflect the change.