

Unicenter[®] SOLVE:CPT[™]

Getting Started

r6.1 sp3



Fifth Edition

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Introduction

This guide introduces you to Unicenter® SOLVE:CPT™. By the time you have finished reading this guide, you will have an overview of the wide scope of the product and its usability will be familiar to you. It is important to us that you feel comfortable with Unicenter SOLVE:CPT before you begin to use it.

Introducing Unicenter SOLVE:CPT

After more than 30 years, CICS still lies at the heart of enterprise transaction and messaging operations with most of the world's financial transactions, including ATM and credit card transactions, processed by CICS.

Today's Business-focused world sees CICS/TS as the most web-enabled application of all mainframe based applications. The web-enablement of CICS/TS has introduced issues regarding the effective management of the associated IP network connections. Unicenter SOLVE:CPT enables you to extend your investment in Unicenter® NetMaster™ IP management. It manages these connections with greater context in regards to their CICS usage, allowing for:

- A heightened awareness of the service they provide
- Improved diagnosis of CICS network connection problems

This chapter provides you with an overview of Unicenter SOLVE:CPT. For a more detailed overview, see Chapter 1: Introduction, of the *Unicenter SOLVE:CPT Administrator Guide*.

The following key areas of Unicenter SOLVE:CPT r6.1 have been enhanced:

- [The Unicenter NetMaster Interface](#)
- [Unicenter SOLVE:CPT Runs Over IBM's TCP/IP](#)
- [IBM C LE Support](#)
- [TCPEEP Tracing of Unicenter SOLVE:CPT Calls](#)
- [The CEP Token Is](#)
- [Servers and Other Transactions Can Be Configured to Start with CPT](#)
- [EZACONFG Compatibility](#)
- [CARIM and CALMP Product Integration](#)

Sites that run CPT 5.2 should examine conversion considerations:

- [Conversion Considerations](#)

The Unicenter NetMaster Interface

Unicenter® NetMaster™ for TCP/IP (Unicenter NetMaster) acts as a central repository for network information in an z/OS and OS/390 enterprise environment. By enabling this interface, all Unicenter SOLVE:CPT endpoints for a sysplex can be managed from a single point.

Once the Unicenter NetMaster interface is enabled, Unicenter SOLVE:CPT does the following:

- Passes additional CICS/TS information about TCP endpoints to Unicenter NetMaster, such as User ID, CICS/TS transaction name, and CICS/TS transaction number.
- All EZASOKET and EZACICAL calls are time stamped at entry and exit. You can tell whether a transaction is executing inside CICS or API code. You can tell how long a call has been active.
- EZASOKET and EZACICAL call statistics are kept at both the session and server level. These session and server level statistics are available for query.
- This information then becomes available via central network management displays within Unicenter NetMaster, refer to the Unicenter NetMaster documentation for additional details.
- Provides an interface, the Unicenter NetMaster command processor allows further drill down inquiries into Unicenter® NetMaster™ Socket Management for CICS endpoints.

Note: Unicenter NetMaster 6.2 requires:

- Service pack 3 (GL0206) installed

- Place statement `PROD=SOCKETMGMT` in the region `RUNSYSIN` file to enable the Socket Management Interface

Unicenter SOLVE:CPT Runs Over IBMs TCP/IP

Unicenter SOLVE:CPT uses the EZASOKET interface to implement CPT calls. This allows Unicenter SOLVE:CPT to run over both Computer Associates and IBM's TCP/IP implementations.

IBM C LE Support

Unicenter SOLVE:CPT provides replacement modules `EZACIC07` and `EZACIC17` that implement socket support for IBM C LE applications.

EZACIC17 provides LE C EZASOKET support to reentrant C applications. Sites can link their C LE reentrant applications either with IBM's or Computer Associates version of `EZACIC17` to run over CPT.

EZACIC07 provides LE C EZASOKET support to non-reentrant C applications. Sites can link their C LE non-reentrant applications either with IBM's or Computer Associates version of `EZACIC07` to run over CPT.

TCPEEP Tracing of Unicenter SOLVE:CPT Calls

TCPEEP tracing traces the following product events:

- CPT, EZASOKET and EZACICAL calls and their parameter lists both into and out of the TCP/IP region
- TCP/IP sessions as their ownership passes between CICS tasks
- EXEC CICS START of a new task
- EXEC CICS READQ
- EXEC CICS WRITEQ

All trace entries use time stamps that detail events down to the micro second level.

Tracing is turned on and off dynamically – invoked via the TCPEEP interface. There is no need to modify CICS transactions or configuration files. Just submit a TCPEEP job with the options you want traced and the trace events are routed to the trace address space.

All trace output is routed to a trace address space. There is no CICS overhead when formatting trace output. Tracing does not overload the CICS message logs.

The CEP Token Is Unique

The CEP token is a unique session token and not the CEP address as in older releases 5.2 and below. This prevents old transactions from taking control of new sessions when the same CEP storage is allocated for a new session.

Servers and Other Transactions Can Be Configured to Start with CPT

The T09MTRAN macro in the T09CONxx configuration file enables sites to configure CICS transactions to be started with CPT. These transactions can be for server, clients or any other activity.

EZACONFG Compatibility

EZACONFG compatibility within the product provides support for:

- Support for the IBM CICS sockets style CFG0000 control block. The CFG0000 control block is used to pass various initialization parameters to user written listener transactions.
- Support for the IBM CICS sockets style LCA0000 control block. The Listener Control Area (LCA) control block is used to check various status states of a user listener.

CARIM and CALMP Product Integration

CALMP is provided as an integral part of CAIRIM (Resource Initialization Manager), another one of the Common Services. Unicenter SOLVE:CPT checks with CARIM at product startup and periodically while running to verify that the Unicenter SOLVE:CPT continues running at a site. Warning messages are issued should the product be close to expiration.

Conversion Considerations

CPT applications compiled and linked before the CPT 6.1 level should not have any problems except when they do the following:

- [SERVICE Parameter No Longer Supported](#)
- [CPT Token Cannot Be Used as the CEP address](#)
- [DNR=NO is the default on the T09M* MACROs](#)
- [Removal of the IUCV SELECT call](#)
- [Do not Install Unicenter SOLVE:CPT in the CSI of a Previous Release](#)
- [SEND Calls Complete After Coping Their Data to the TCPIP Buffers](#)

SERVICE Parameter No Longer Supported

Computer Associates has removed the ability to define connections by their SERVICE names. Few sites use SERVICE names in their application parameters. Almost everyone defines their applications by the PORT parameters.

Sites must use ACMLPORT or ACMRPORT instead of ACMSRVCE in the ACM CB on the CONNECT and LISTEN calls.

You must use ADTLPORT or ADTRPORT instead of ADTSRVCE in the ADT CB.

Inside the T09CON xx configuration file, one must use the PORT parameter instead of the SERVICE parameter on the T09MLSTN and T09MSEND macros.

CPT Token Cannot Be Used as the CEP Address

The ACMTOKEN field at the CPT 6.1 level is a *real* token and no longer the CEP address. Any application attempting to access CEP fields from the ACMTOKEN returned from either CONNECT or LISTEN calls will ABEND.

At the CPT 5.2 level and lower, the CEP token created by either the LISTEN or CONNECT process consisted of the CEP address. This led to many problems whenever multiple transactions shared a CEP Token and had troubles coordinating the session shutdown between all those tasks.

The use of a CEP token as a unique session identifier prevents old transactions from taking control of new sessions when the same CEP storage is allocated for a new session.

Sites that believe they need to access the CEP control block from within their application should contact Computer Associates Customer Support.

DNR=NO Is the Default on the T09M* MACROS

The default DNR parameter has been changed to DNR=NO on the following T09M* macros:

- T09MACM
- T09MLSTN
- T09MSEND

These macros are used by the tools in the T09CON xx configuration file.

DNR calls can consume a lot of time. Many sites do not configure all their IP nodes. A DNR host name query may block a CICS transaction until the DNR timeout value expires. Long time delays are bad programming practice from within CICS. This is why the default behavior of these macros were changed.

Unfortunately, the CONNECT and LISTEN calls still default to performing DNR calls. Applications should set the ACMNODNR option on all CONNECT and LISTEN requests, unless a site has a requirement to have the fully-qualified host name returned.

Removal of the IUCV SELECT Call

The previous release allowed a SELECT call (not to be confused with the SELECT TOOL) to handle multiple sessions running IUCV over IBM's TCPIP. The IUCV SELECT call has not been propagated forward into the current release.

The IUCV SELECT feature never existed in the previous releases when running over CA's TCP/IP implementation.

Do Not Install Unicenter SOLVE:CPT in the CSI of a Previous Release

Sites must *not* install Unicenter SOLVE:CPT into the same CSI where previous releases of Unicenter SOLVE:CPT (5.2 or 2.0) have been previously installed.

SEND Calls Complete After Coping Their Data to the TCPIP Buffers

The SEND calls complete after coping its data to the TCPIP address space buffers. At the CPT 5.2 level and below, a SEND call would complete after the remote side ACKed the data sent across the TCP connection. Thus a CPT 6.1 application may not discover a severed TCP connection until it issues a subsequent RECEIVE call after a SEND call.

CA Technology Services: Delivering Business Value On Your Terms

CA Technology Services provides operational excellence at every stage of an organization's IT development to ensure that CA solutions are functioning optimally by leveraging industry best practices. Teaming with CA Technology Services' global network of certified professionals, customers maximize their investment in CA technology to achieve more efficient IT performance, and better manage their enterprise infrastructure, security, storage, and applications life cycle, which drive meaningful business value and financial results.

CA Education Services: Ready When You Are

CA Education Services lets you realize the full potential of your CA investment by providing comprehensive training focused on how to implement, use, and administer CA products. We deliver these services through flexible options – including traditional classroom, web-based, and self-paced training – that are customized to meet your specific requirements. All CA instructors are fully certified and provide you with real-world hands-on experience and guidance. Armed with the most up-to-date training, you will have the knowledge you need to successfully leverage the capabilities of your CA software and obtain maximum value.

For a complete list of courses that CA Education Services offers, visit <http://ca.com/education> or call 1-800-237-9273.

Computer Associates: Commitment, Quality, Innovation

For more than a quarter century, CA has been developing and supporting software solutions that are currently used by more than 99 percent of the Fortune 500 companies in more than 100 countries. CA is committed to offering leading technologies in flexible partnerships to help you derive full value from your software investments.

At Computer Associates, we are committed to offering simple and meaningful solutions to your complex problems, and to delivering management solutions that offer security, reliability, availability, and performance. We work hard to achieve the highest levels of quality in our solutions to help you meet your changing business needs.

To meet these needs, CA's world-class solutions address all aspects of process management, information management, and infrastructure management with six focus areas:

- Enterprise management
- Security
- Storage
- Portal and business intelligence
- Database management
- Application life cycle management and application development

In addition, our innovative approach to technology is carried over into our innovative business solutions. From a revolutionary new business model to a dedicated customer relationship organization, CA is responding to your changing business needs.

We know what it takes to deliver and support valuable solutions 24 hours a day, 7 days a week, 365 days a year while maintaining the highest standards for quality and innovation:

- We are the first global enterprise software company to meet the exacting standards for worldwide ISO 9001:2000 certification.
- We have earned over 150 patents for innovative software solutions.
- We have the highest caliber software developers and consultants in the industry.

We also know you expect us to stand by our commitments. And we do.

For More Information

After reading this *Getting Started*, you can refer to the numerous resources available to you for additional information. Your product CD contains instructional documents that showcase your software and provide detailed explanations about the product's comprehensive, feature-rich components. In addition, you can obtain procedural information and answers to any questions you may encounter by contacting Customer Support for assistance at <http://ca.com/supportconnect>. For telephone assistance, call 1-800-645-3042 (U.S. and Canada) or (1) 631-342-4683 (International).

Preparing for Installation

This chapter provides a brief overview of the requirements necessary for Unicenter SOLVE:CPT installation.

This information is provided for planning:

- [Installation Materials](#)
- [CAIRIM](#)
- [CA LMP](#)
- [Recommended IBM TCPIP Maintenance](#)

Installation Materials

Before starting the installation procedure, make sure that you have the following Unicenter SOLVE:CPT installation materials:

- The installation tape – the volume serial number is specified on the PML received with the installation package
- The CA Common Services for z/OS and OS/390 tape and documentation
- The *Unicenter SOLVE:CPT Administrator Guide*

CA Common Services for z/OS and OS/390

To help you quickly understand all that CA Common Services for z/OS and OS/390 offers, this section provides a brief description of the common services that can be used by Unicenter SOLVE:CPT.

CAIRIM

CAIRIM, CAI Resource Initialization Manager, is the common driver for a collection of dynamic initialization routines that eliminate the need for user SVCs, SMF exits, subsystems, and other installation requirements commonly encountered when installing systems software. These routines are grouped under the Computer Associates z/OS and OS/390 dynamic service code, S910. Some of the features of CAIRIM include:

- Obtaining SMF data
- Verification of proper software installation
- Installation of z/OS and OS/390 interfaces
- Automatic startup of CA and other vendor products
- Proper timing and order of initialization

No other services are required to operate properly.

Note: CAIRIM is mandatory for Unicenter SOLVE:CPT. It must be installed and started with within 30 minutes of IPL time. CAIRIM is part of the CA Common Services for z/OS and OS/390.

CA LMP

The CA License Management Program (LMP) provides a standardized and automated approach to the tracking of licensed software. It uses common realtime enforcement software to validate the user's configuration. CA LMP reports on license, usage, and financial activities of Unicenter SOLVE:CPT. The routines that accomplish this are integrated into the Computer Associates z/OS and OS/390 dynamic service code, S910 (the CAIRIM service). Some of the features of CA LMP include:

- Common key data set can be shared among many CPUs
- *Check digits* are used to detect errors in transcribing key information
- Execution keys can be entered without affecting any CA software solution already running
- No special maintenance requirements

Requirements

Unicenter SOLVE:CPT requires CA Common Services for z/OS and OS/390 at genlevel 9901 and OS/390 2.10.

Using CA LMP

Unicenter SOLVE:CPT requires CA LMP (License Management Program), one of the CA Common Services for z/OS and OS/390 services, to initialize correctly. CA LMP also provides a standardized and automated approach to the tracking of licensed software.

CA LMP is provided as an integral part of CAIRIM (Resource Initialization Manager), another one of the Common Services. If CAIRIM has not already been installed on your system, you must do so now. Once CAIRIM has been installed or maintained at Service Level C1/9901 or higher, CA LMP support is available for all CA LMP–supported CA software solutions. See the *CA Common Services for z/OS and OS/390 Getting Started* guide for detailed instructions on installing CAIRIM.

Examine the CA LMP Key Certificate you received with your Unicenter SOLVE:CPT installation or maintenance tape. That certificate contains the following information:

Field	Description
Product Name	The trademarked or registered name of the CA software solution licensed for the designated site and CPUs.
Product Code	A two-character code that corresponds to Unicenter SOLVE:CPT for CICS.
Supplement	The reference number of your license for Unicenter SOLVE:CPT, in the format <i>nnnnnn - nnn</i> . This format differs slightly inside and outside North America, and in some cases may not be provided at all.
CPU ID	The code that identifies the specific CPU for which installation of Unicenter SOLVE:CPT is valid.
Execution Key	An encrypted code required by CA LMP for Unicenter SOLVE:CPT initialization. During installation, it is referred to as the LMP Code.
Expiration Date	The date (<i>ddmmmyy</i> as in 01AUG00) which your license for Unicenter SOLVE:CPT will expire.
Technical Contact	The name of the technical contact at your site responsible for the installation and maintenance of Unicenter SOLVE:CPT. This is the person to whom CA addresses all

Field	Description
	CA LMP correspondence.
MIS Director	The name of the Director of MIS, or the person who performs that function at your site. If the title but not the individual's name is indicated on the Certificate, you should supply the actual name when correcting and verifying the Certificate.
CPU Location	The address of the building where the CPU is installed.

The CA LMP execution key, provided on the Key Certificate, must be added to the CAIRIM parameters to ensure proper initialization of Unicenter SOLVE:CPT.

To define a CA LMP execution key to the CAIRIM parameters, modify member KEYS in the OPTLIB data set.

The parameter structure for member KEYS is as follows:

```
PROD(pp) DATE(ddmmyy) CPU(tttt-mmm/sssss) LMPCODE(kkkkkkkkkkkkkkk)
```

Where:

<i>pp</i>	Required. The two-character product code. For any given CA LMP software solution, this code agrees with the product code already in use by the CAIRIM initialization parameters for earlier genlevels of that software solution. The two-character product code for Unicenter SOLVE:CPT: ZD.
<i>ddmmyy</i>	The CA LMP licensing agreement expiration date.
<i>ttt-mmm</i>	Required. The CPU type and model (for example: 3090-600) on which the CA LMP software solution is to run. If the CPU type or model requires less than four characters, blank spaces are inserted for the unused characters.
<i>sssss</i>	Required. The serial number of the CPU on which the CA LMP software solution is to run.
<i>kkkkkkkkkkkkkk</i>	Required. The execution key needed to run the CA LMP software solution. This CA LMP execution key is provided on the Key Certificate shipped with each CA LMP software solution.

For a full description of the procedure for defining the CA LMP execution key to the CAIRIM parameters, see *CA Common Services for z/OS and OS/390 Getting Started*.

Recommended IBM TCPIP Maintenance

Sites which plan to use IBM's TCPIP should apply the following maintenance:

- PQ98733
- OA09697
- UK00581

Installation

This chapter outlines the steps required to install Unicenter SOLVE:CPT from tape. Configuration of the product is covered in subsequent chapters.

***Important!** Unless other wise indicated, read and follow all the instructions in this chapter in the order in which they are presented.*

See the “Introducing Unicenter SOLVE:CPT” chapter of this guide for a detailed overview of Unicenter SOLVE:CPT.

This chapter discusses the following topics:

- [Installation Notes](#)
- [Before Running the Installation Jobs](#)
- [Running the Installation Jobs](#)
- [After Running the Installation Jobs](#)

Installation Notes

The latest release of Unicenter SOLVE:CPT is r6.1, SP3, and is delivered on Tape CP61S3. This release is installed on FMID C2K6100. There is an older CPT product named Unicenter NetMaster Socket Management for CICS r1.0 , (which is no longer supported) and was installed on FMID C2F1000. The more recent release of Unicenter® NetMaster Socket Management for CICS, r1.1, is also installed in C2K6100. Also included on this tape, are cumulative PTF updates for Unicenter® TCPaccess™ Communications Server r6.0, and cumulative PTF updates for Unicenter SOLVE:CPT [r6.1](#).

This guide provides installation instructions for Unicenter SOLVE:CPT [r6.1](#) tape. The tapes serial number can help you identify the install tape as either a new product release tape or a service pack tape for a supported release.

New release tapes use the product code followed by the two-digit release number, for example: CP61. Some time after the initial release of the product, service pack tapes containing the latest maintenance for this release will be distributed. Service pack serial numbers have the same first four characters as a release tape, followed by Sx. The x identifies the service pack number for this particular product release, for example:CP61S1.

Using either a New Release tape or a Service Pack tape, enables you to apply the latest maintenance to Unicenter TCPaccess [r6.0](#) common FMIDs, and install the Unicenter SOLVE:CPT product with the latest maintenance.

Before Running the Installation Jobs

Before you run the installation jobs, do the following:

- It is *not* recommended that you install in an existing SMP/E CSI. However, if you do:
 - Back up all SMP/E CSIs and libraries
 - Compress all libraries

Note the following:

- A complete installation of Unicenter SOLVE:CPT requires 185 cylinders of DASD space. You should choose your target volumes accordingly.
- If you are planning to install Unicenter TCPaccess Communications Server [r6.0](#) for the *first time*, you should complete that installation *before* you start this one. For more information about installing Unicenter TCPaccess Communications Server, see *Unicenter TCPaccess Communications Server Getting Started*.

- Unicenter SOLVE:CPT [r6.1](#) *must* be installed in a CSI *separate from* Unicenter TCPAccess 5.2 or 5.3 or SOLVE:CPT 5.2 installations.

Unload the Installation Library

Copy and execute the following JCL statements to unload the control file from which you can install and customize Unicenter SOLVE:CPT. This control file, INSTLJCL, is the first file on your Unicenter SOLVE:CPT installation tape.

Important! To install Unicenter SOLVE:CPT, you must have READ access to the data sets on the installation tape. A list of these data sets is provided in the *Installation Data Sets* section of the \$READT09 member in the installation library.

```
//UNLOAD JOB
//*
//UNLOAD EXEC PGM=IEBCOPY
//*
//SYSIN DD *
COPY INDD=(( INDD,R) ),OUTDD=OUTDD
//SYSPRINT DD SYSOUT=*
//*
//INDD DD DSN=INSTLJCL,
// UNIT=tapeunit,VOL=SER=tapevolser,
// LABEL=(1,SL,,EXPDT=98000),
// DISP=OLD
//*
//OUTDD DD DSN=trgindx.CNTL,
// UNIT=trgunit,VOL=SER=trgvol,SPACE=(CYL,(1,1,25)),
// DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=6160,
// DISP=(NEW,CATLG,DELETE)
```

Read Installation-Specific Information

The \$READT09 member in the installation library contains information about the contents of the tape, and may contain important last-minute information about how to complete the install. Review it before you proceed.

Using the TCPNAMES CLIST

The TCPNAMES ISPF edit macro is a member of the INSTLJCL control file that lets you do fast and reliable customization of the installation jobs.

It does the following:

- Inserts a copy of the locally customized JOB statement
- Updates all data set high-level qualifiers to your local standards
- Updates all DASD unit names and volume serials to your local standards
- Updates all tape unit names and volume serials to your local standards

Set Up the TCPNAMES CLIST

To use the TCPNAMES edit macro, you need to prepare your TSO environment to recognize it.

To do so, follow these steps:

1. Copy the TCPNAMES member in the installation library to a command library listed in the SYSPROC concatenation of your TSO logon procedure. You can find the proper command library by following these steps:
 - a. Determine the name of your logon procedure. It is a field on your TSO logon screen.
 - b. Determine the data set that your logon procedure resides in. It is probably in SYS1.PROCLIB; if not, execute command LISTA from your TSO command line. This lists all data sets allocated to your TSO session, and your TSO logon procedure is typically located in a data set with final qualifier of PROCLIB.
 - c. Determine the CMDLIB you will use.
 - i. Select the member containing your logon procedure.
 - ii. Find the SYSPROC DD statement.
 - iii. Select a CMDLIB into which to copy TCPNAMES.
Note: In many locations a *userid*.CLIST data set is available for this purpose.
 - d. If you are copying the TCPNAMES EXEC into a library with a variable-length record format, enter unnum at the command line before you copy the member. This deletes the sequence numbers at the far right side of the member, allowing the CLIST to run with variable-length records.
 - e. If after following these suggestions, you are still not able to tell which CLIST library to use, contact your TSO administrator.
2. Update the JOBCARD member in the installation library for use by the CLIST. This JOB statement will be inserted as the first line in every job that you run TCPNAMES on.
3. If you are using JES3, replace the JOBPARM statement with the following:

```
//*MAIN LINES=(999,W)
```
4. If you want all data sets to be SMS controlled, make the following global changes:
 - a. For T00ALLOC, issue the following command:

```
`C ALL VOLUME(  STORCLAS( '
```
 - b. For T00ALLOC, issue the following command:

```
`C ALL VOL=SER  STORCLAS'
```


- c. For T09ALLOC, issue the following command:
`C ALL VOL=SER STORCLAS`
- d. For T00ALLOC and T09ALLOC: Substitute the SMS storage class for all occurrences of SMPVOL, TRGVOL, and DSTVOL.

Use the TCPNAMES CLIST to Customize Installation Jobs

The TCPNAMES CLIST is an ISPF edit macro. To use it, you must initiate an ISPF edit of the installation job and type the *TCPNAMES* command and parameters on the primary command line as shown below.

As distributed, the TCPNAMES CLIST assumes that you want to use the same tape unit, disk unit, disk volume, and SMS storage class for all the disk data sets in a particular installation job. Two high-level qualifiers, *hlq.smp* and *hlq.dsn*, are provided so you can include newer releases of products in a common CSI. If this does not suit your purposes, you can update the CLIST directly.

Note: If you want to update the CLIST, make sure that you save a copy for reference beforehand.

If you can use the same high-level qualifiers, disk unit, and disk volume for all the disk data sets, you do not need to edit the TCPNAMES CLIST. Instead, you can enter the command with parameters as follows:

```
TCPNAMES hlq.smp hlq.dsn diskvolser diskunit tapevolser tapeunit smsclass
```

The parameters are as follows:

<i>hlq.smp</i>	High-level qualifier for SMP index.
<i>hlq.dsn</i>	High-level qualifier for other data set names.
<i>diskvolser</i>	Volume serial name of a disk drive in your environment.
<i>diskunit</i>	Valid unit name for a disk drive in your environment.
<i>tapevolser</i>	Volume serial name of the install tape.
<i>tapeunit</i>	Valid unit name for a tape drive in your environment.
<i>smsclass</i>	Storage class for SMS-managed data sets.

An example of this usage is:

```
TCPNAMES TCP.V600SMS CPT.V610 MVS001 3390 CP61S3 TAPE NMDCLASS
```

This command would reflect the following environment:

TCP.V600SMS	Use TCP.V600SMS as the high-level qualifier for SMP data sets.
CPT.V610	Use CPT.V610 as the high-level qualifier for created data sets.
MVS001	Put all created data sets on disk volume MVS001.
3390	Indicate that volume MVS001 is a 3390.
CP61S3	The tape's volume serial number is CP61S3 .
TAPE	The tape is to be mounted on a TAPE unit.
NMDCLAS	SMS-managed data sets are to use storage class NMDCLASS.

Download the Most Recent PTFs from SupportConnect

The Unicenter TCPAccess suite of products contain co-requisite PTFs which cross product components. For instance, there are PTFs written for Unicenter SOLVE:CPT that require co-requisite PTFs in Unicenter TCPAccess Communications Server common FMIDs. If these co-requisites are not available when you install your product, or even when you apply maintenance, the procedure may fail.

Therefore, we highly recommend that you download the latest PTFs for your product group. For this [CP61S3](#) installation, the product group would be Unicenter SOLVE:CPT - MVS, which also includes fixes for the Unicenter TCPAccess Communications Server common FMIDs. Please see the section on [Get PTFs Online](#) for instructions on doing this.

After you have downloaded the fixes, put them in a data set that can be referenced by the SMPPTFIN DD statement in the routines SRVPAC1, or T09INST1. These routines are described in the section [Running the Required Jobs](#).

Running the Installation Jobs

The following sections describe the installation jobs you must perform.

Determining Your Installation Type

Before you run any installation jobs, you need to determine which type of installation is appropriate for your current configuration. Use the following criteria to determine what your installation type is:

Installation Type A

You have not previously installed any of the products listed below:

- Unicenter® NetMaster™ Socket Management for CICS [r1.0](#)
- Unicenter® TCPaccess™ Communications Server [r6.0](#)
- Unicenter® TCPaccess™ Telnet Server r6.0, r6.1, or r6.2
- Unicenter® TCPaccess™ FTP Server r6.0 or r6.1

Installation Type B

You have installed one or more of the products listed in Installation Type A above. Now you want to install the latest SOLVE:CPT [r6.1](#). (This will also automatically remove NetMaster Socket Management for CICS [r1.0](#) if it is installed.)

Installation Type C

You have previously installed Unicenter SOLVE:CPT [r6.1](#), and simply want to upgrade it with the latest maintenance.

Running the Required Jobs

When you have determined your installation type, use it and the following table to determine which installation jobs to run.

Note: You must run the jobs in order from top to bottom, and you must not run any jobs that do not have a Yes entry in the table for your installation type. Explanations of each job follow the table.

Job Name	Description	A	B	C
SRVPAC1	Receive latest release maintenance.		Yes	Yes
SRVPAC2	Apply service pack maintenance.		Yes	Yes
T00ALLOC	Initialize the SMP/E environment.	Yes		
T09ALLOC	Initialize data sets for SOLVE:CPT.	Yes	Yes	

T09INST1	Receive the SOLVE:CPT functions.	Yes	Yes	
T09INST2	Apply and accept the SOLVE:CPT functions.	Yes	Yes	

Job Descriptions

For any of these jobs, you can run the TCPNAMES edit macro to easily make the necessary global changes to the installation job JCL stream. See [Using the TCPNAMES CLIST](#) above for details on usage.

Important! Examine the Important Notes comments in each job, and take any required action before you run the job.

Job SRVPAC1

Maximum acceptable return code: 4.

The SRVPAC1 job receives service pack maintenance for the Unicenter SOLVE:CPT, and the common Unicenter TCPaccess FMIDS.

Before running this job, make sure you have downloaded the latest PTFs, as described in the section [Download the Most Recent PTFs from SupportConnect](#) and replaced the field L_MAINT in SRVPAC1 to point to the data set containing them. The HOLDDATA file identifies any fixes that are found to be in error PED since the installation tape was distributed.

The highest PTFs included on the tape are identified in the \$READT09 file in the INSTLJCL members. Reference the section [Get PTFs Online](#) for instructions on how to download PTFs from SupportConnect.

Run the SRVPAC1 receive job and review the hold data, especially that of type ACTION, and take appropriate action.

Important! If you have run the SRVPAC1 and SRVPAC2 jobs previously, you may receive a GIM24801W warning "NO SYSMODS STATISFIED THE OPERANDS SPECIFIED." This indicates that there were no new PTFs received and you do not need to run the SRVPAC2 job--it will fail. One reason this might occur is that you recently completed another installation and applied this Service Pack maintenance to the same CSI. In this case, simply skip job SRVPAC2 and proceed to the following job, job T09ALLOC.

Job SRVPAC2

Maximum acceptable return code: 4.

The SRVPAC2 job applies service pack maintenance for Unicenter SOLVE:CPT, and the common Unicenter TCPaccess FMIDS. Before you remove the comment markers from the BYPASS option, make sure that you have taken any necessary actions noted in the hold data.

We recommend that you run SRVPAC2 with the CHECK and BYPASS options, to see if any errors are picked up. Assuming that you have all the required PTFs and no errors are identified, comment out the CHECK statement and run SRVPAC2 again.

Note: The GSKSSL DD statement is only required for maintenance of Unicenter TCPaccess Telnet Server. If you do not have Unicenter TCPaccess Telnet Server installed, comment out the GSKSSL DD statement because it will cause a JCL error if the path does not exist. The path name is case-sensitive and may be installation-dependent. See the *Unicenter TCPaccess Telnet Server Getting Started* guide for details.

Job T00ALLOC

Maximum acceptable return code: 0.

The T00ALLOC job allocates the data sets needed for the SMP/E environment and for shared components. The shared components includes features used by all the products like:

- Tracing components
- Translate tables
- SAS/C run-time modules

Job T00ALLOC initializes the CSI and adds all the required SMP/E definitions.

After you run the TCPNAMES CLIST, if you want all data sets to be SMS controlled, make the following global changes to T00ALLOC:

- `'C ALL VOLUME(STORCLAS('`
- `'C ALL VOL=SER STORCLAS '`
- Substitute the SMS storage class for all occurrences of SMPVOL, TRGVOL, and DSTVOL.

Note:

- The Language Environment link-time library SCEELKED is required for SMP/E apply processing.
- The SMPLTS library is allocated as a PDSE. If your site does not support PDSEs, replace the STORCLAS and DSNTYPE parameters with the UNIT and VOL=SER parameters. The SMPLTS *must* be allocated as a PDSE if you plan on performing the Unicenter TCPAccess Telnet Server installation.

Job T09ALLOC

Maximum acceptable return code: 4.

The T09ALLOC job allocates the data sets needed for Unicenter SOLVE:CPT, and adds all required SMP/E definitions for them.

Modules from *cics_{hlq}.SDFHLOAD* and modules from *cics_{hlq}.SDFHEXCI* are required during SMP/E apply processing. You **MUST** update the string "??CICS.HLQ??" in the SMP UCLIN statement DDDEF(CICSLIB) and DDDEF(CICSEXC) with a valid HLQ for your local CICS/TS SDFHLOAD data set and CICS/TS SDFHEXCI data set.

After you run the TCPNAMES CLIST, if you want all data sets to be SMS controlled, make the following global changes:

- Issue the following command:
`'C ALL VOL=SER STORCLAS'`
- Substitute the SMS storage class for all occurrences of SMPVOL, TRGVOL, and DSTVOL

Job T09INST1

Maximum acceptable return code: 4.

The T09INST1 job receives the functions necessary to run the Unicenter SOLVE:CPT, associated hold data, and any last-minute maintenance. Before running this job, make sure you have downloaded the latest PTFs, as described in the section [Download the Most Recent PTFs from SupportConnect](#) and replaced the field L_MAINT in T09INST1 to point to the data set containing them. The HOLDDATA file identifies any fixes that may have been PEd since the installation tape was distributed.

Note:

- Unicenter SOLVE:CPT [r6.1](#) must be installed in a CSI *separate from* Unicenter Solve:CPT 5.2 installations.

- If you are using a tape management system such as CA1, you must modify the label parameter on your DD statements to include EXPDT=98000.

```
LABEL=( 2,SL, ,EXPDT=98000 )
```

Job T09INST2

Maximum acceptable return code: 4.

The T09INST2 job applies and accepts the functions necessary to run the Unicenter SOLVE:CPT, and applies any last-minute maintenance. Before you run it, make sure that you have taken any necessary actions noted in the hold data.

Get PTFs Online

You can check for the most recent PTFs by visiting the SupportConnect web site at <http://ca.com/supportconnect>.

Note: You must register for the SupportConnect web site. For information about how to register, see [Enroll for SupportConnect](#) in this chapter.

After you have registered for the SupportConnect web site, you can use the web site by entering your login and password information. Perform the following steps to access PTFs:

1. Log in to SupportConnect.
2. Click Published Solutions in the left frame.
3. Select Unicenter SOLVE:CPT-MVS, from the Product box.
4. Check Select All.
This selects the Unicenter SOLVE:CPT Product drop-down list, which includes the required FMIDs.
5. You get fixes for the support components and for the Unicenter SOLVE:CPT.
6. To find the PTFs that have been built and published since the install tape was produced, consult the *Last Published Date* included in the \$READT09 member in the installation library, then enter the following date in the *Confirmed Since* box.
7. Click *Search* for your results. You can then check each of the *Add to Cart* boxes for each PTF you want to download. Then click *Go To Solution Cart* and follow the directions to download your PTFs.

Note: All of the PTFs for one component are shown before starting with those of another component.

Important! If you have problems with the SupportConnect download process, contact Customer Support or your Customer Relationship Manager.

Enroll for SupportConnect

Existing users of CAs Support.ca.com, Webtrack.ca.com and eSupport.ca.com do not need to reenroll to get access to SupportConnect. These users should follow the procedures in Existing CA Support Users, provided below, to migrate their customer information to the SupportConnect web site.

New users should use the procedure outlined in the next section to enroll in SupportConnect.

New User Enrollment

You can get enrollment forms by visiting the SupportConnect home page at <http://www.ca.com/supportconnect> and clicking *Enroll Now*. Once you have submitted your enrollment, CA will send you a confirmation email. When your enrollment is processed, you will get an email that includes instructions on logging in. You can then log in with the email address and password that you specified in your enrollment form, or you can install the digital certificate.

Note: Digital certificates give you a more secure way to access your SupportConnect account information.

Existing CA Support Users

For a limited time, CA will provide a seamless way to migrate your information from Support.ca.com, Webtrack.ca.com and eSupport.ca.com to SupportConnect. During this period, existing accounts can be converted to SupportConnect by visiting <http://www.ca.com/supportconnect> and clicking *Convert Existing Account* on the home page. After this period, you will be required to use the procedure described previously.

Once the account is converted, customers can either install a digital certificate or use an existing email address and password to log in.

Get Hold Data

To get hold data that is more current than that on your installation or service pack tape, perform one of the following:

- (Recommended) Get the latest hold data through the web by following these steps:
 1. Go to <http://www.ca.com/supportconnect> and log in. (You must be enrolled as described in the section above.)
 2. Click Published Solutions in the left frame.
 3. In the Enter a fix number box, enter **QO20643**, and submit.
 4. Click Add To Cart, and then on Go To Solution Cart.
 5. Left click \$\$HOLD.VIEW, this enables you to view the entire text of the hold data.
 6. Right clicking \$\$HOLD.BIN, enables you to download the hold data file in binary.

- Call Customer Support and ask for the latest hold data
- Optional customization needs

After Running the Installation Jobs

The following information explains the tasks you need to perform after you run the installation jobs.

Applying Downloaded Maintenance

The following steps apply the maintenance you downloaded after the installation process. See the section on Getting PTFs Online. These steps show sample job streams. Although the steps are described in terms of PTFs, you can also use them for APARs.

Receive PTFs

Shown below is sample JCL for a job to perform the receive procedure. This procedure reads the PTFs that were moved to a disk file from the SupportConnect Web site. An installation may maintain several different copies of the operating system (a production version, a test version, and so on) and there may be different versions of the SMP/E CSI for maintaining each of these.

Note: For APARs the SMPPTFIN DD statement should point to the file containing the APAR text, typically a disk file.

```
//RECEIVE JOB ...
//*
//* Change the JOB statement to comply with installation standards.
//* Change "<hlq>" to match your high-level-qualifier of your CSI.
//* Change "<ptf_file>" to point at the PTF/APAR you wish to receive.
//*
//S1      EXEC PGM=GIMSMP,
//        PARM='PROCESS=WAIT,CSI=<hlq>.CSI',
//        DYNAMNBR=120
//*
/** NOTE:      SMP ZONE-RELATED FILES ARE DYNAMICALLY ALLOCATED,
/**          THIS INCLUDES THE SMPPTS, SMPLOG, AND SMPTLIB DATA SETS,
/**          IF APPLICABLE.
/**
/** SMP FILES
/**
//SMPPTFIN DD DISP=(SHR,KEEP),DSN=<ptf_file>
//SMPCNTL DD *
//        SET BOUNDARY (GLOBAL) .
//        RECEIVE SYSMODS .
/**
```

Check PTFs

This procedure goes through the PTFs and validates each without modifying the actual system files. You should carefully review the log file from this procedure before continuing:

```
//APPLYCHK JOB ...
/**
/**  Change the JOB statement to comply with installation standards.
/**  Change "<hlq>" to match your high-level-qualifier of your CSI.
/**  Change "<tpxxxxx>" to match the PTF/APAR you wish to apply.
/**
/**  If your target zone is not TCPTZN then change:
/**    SET    BOUNDARY(TCPTZN) .
/**  statement (below) to match your target zone.
/**
/**  If the you receive a return code of 4 from this job then check
/**  the output for any HOLD information that was bypassed.  The HOLD
/**  information will show any documentation or action that may be
/**  required after the PTF/APAR is applied.
/**
//S1      EXEC PGM=GIMSMP,
//        PARM='PROCESS=WAIT,CSI=<hlq>.CSI',
//        DYNAMNBR=120
/**
/** NOTE:      SMP ZONE-RELATED FILES ARE DYNAMICALLY ALLOCATED,
/**           THIS INCLUDES THE SMPPTS, SMPLOG, AND SMPTLIB DATA SETS,
/**           IF APPLICABLE.
/**
/** SMP FILES
/**
//SMPCNTL DD *
SET      BOUNDARY(TCPTZN) .
APPLY    BYPASS(HOLDSYSTEM) GROUP JCLINREPORT
CHECK
SELECT(<ppxxxxx>)
RETRY(YES) .
```

Apply PTFs

This step performs the actual modification. Check for SMP holds on the PTFs. You may need to issue a BYPASS(HOLDSYSTEM) on the apply:

```
//APPLY    JOB ...
/**
/** Note: Run the APPLYCHK first to see if any HOLDDATA exists and
/**       to insure you have all the PRE-REQ's.
/**
/**  Change the JOB statement to comply with installation standards.
/**  Change "<hlq>" to match your high-level-qualifier of your CSI.
/**  Change "<tpxxxxx>" to match the PTF/APAR you wish to apply.
/**
/**  If your target zone is not TCPTZN then change:
/**    SET    BOUNDARY(TCPTZN) .
/**  statement (below) to match your target zone.
/**
//S1      EXEC PGM=GIMSMP,
//        PARM='PROCESS=WAIT,CSI=<hlq>.CSI',
//        DYNAMNBR=120
/**
/** NOTE:      SMP ZONE-RELATED FILES ARE DYNAMICALLY ALLOCATED,
/**           THIS INCLUDES THE SMPPTS, SMPLOG, AND SMPTLIB DATA SETS,
```

```
//*          IF APPLICABLE.  
//*  
//* SMP FILES  
//*  
//SMPCNTL DD *  
  SET    BOUNDARY(TCPTZN) .  
  APPLY  BYPASS(HOLDSYSTEM) GROUP JCLINREPORT  
        SELECT(<ppxxxxx>)  
        RETRY(YES) .
```

Configuration Steps

Unicenter SOLVE:CPT requires minimal CICS customization. Proceed to the instructions in the “Initial Minimal Configuration” chapter. It provides you with:

- Initial Unicenter SOLVE:CPT configuration
- CICS/TS startup JCL changes
- Installation verifications

Initial Minimal Configuration

This chapter provides you with the instructions you need to create an initial working Unicenter SOLVE:CPT configuration and CICS/TS startup JCL changes.

Unicenter SOLVE:CPT requires CICS customization. Jobs in this chapter will help you define the minimal CICS customization.

You will be guided through the RDO definitions for Unicenter SOLVE:CPT programs, transactions, and TDQs, using the sample member T09RDO in the T09SAMP library.

Note: Throughout this guide you are referred to the “Configuration Reference” and “CICS/TS Resource Definition Reference” chapters in the *Administrator Guide* for more detail on many items. You may want to keep the *Administrator Guide* handy for easy reference.

Refer to the “Introduction” chapter of the *Administrator Guide* for a detailed overview of Unicenter SOLVE:CPT.

Important! *Unless otherwise noted within the section you are reading, sequentially read and follow all the instructions in-line as presented.*

This chapter discusses the following topics:

- [Modifying CICS for Unicenter SOLVE:CPT](#) – CICS CSD entries needed by Unicenter SOLVE:CPT
- [CICS Sockets Compatibility](#) – Set up EZACIC01
- [Customizing the Configuration File](#) – This file is central to the operating environment of Unicenter SOLVE:CPT
- [Modifications to the CICS/TS Execution JCL](#) – You must make changes to your CICS JCL to properly run Unicenter SOLVE:CPT
- [Unicenter SOLVE:CPT Installation Verification Procedure \(IVP\)](#) – You should always verify proper CPT/API workings of your installation and initial configuration with any new release of Unicenter SOLVE:CPT

- [Unicenter NetMaster Socket Management for CICS IVP \(Installation Verification Procedure\)](#) – You should always verify proper EZASOKET API workings of your installation and initial configuration with any new release of Unicenter SOLVE:CPT
- [Common Optional Customization Steps](#) – This section guides you some of the common optional customization steps such as NetMaster security; SIT; PLT, and translation table updates

Modifying CICS for Unicenter SOLVE:CPT

Unicenter SOLVE:CPT requires CICS customization of CSD definitions.

A sample DFHCSDUP input file, member name T09RDO, is provided in the T09SAMP library for defining programs, transactions, and destination TDQ entries using CICS/TS RDO. Please use this sample and update the CSD for the CICS region running Unicenter SOLVE:CPT. The only change required to the sample is to remove the “?” in column one of the “DELETE GROUP” command, this was done intentionally to prevent accidental deletion of a production group.

If the CICS SIT override parameter STGPROT=YES is coded, it will be necessary to convert the T09CPT group definitions to group T09CPTC. Some of our transactions and programs must run with EXECKEY(CICS) coded on its CSD entries when STGPROG=YES has been set inside the SIT overrides.

Sample member T09RDOC should be used to make the necessary updates. Place group T09CPTC group (instead of group T09CPT) in to an active LIST for your CICS region GRPLIST parameter.

***Important!** If you are upgrading from an older release of Unicenter SOLVE:CPT you must still run this step, since changes have been made to the RDO definitions for Unicenter SOLVE:CPT. If you do not update your definitions, you chance exposures to SOC1s and SOC4s at initialization.*

CICS Sockets Compatibility

Any application program in CICS that makes a program call to EZASOKET or EZACICAL uses the EZACIC01 TRUE.

Unicenter SOLVE:CPT allows sites to configure which (CA’s or IBM’s) EZACIC01 TRUE implementation will run inside the CICS region. This allows CICS regions the flexibility to run EZASOKET applications over the IBM TCPIP stack at the same time CPT runs over CA’s TCPaccess TCPIP stack.

IBM's EZACIC01 TRUE is started by either the "EZA0 START" transaction or by placing program EZACIC20 inside the PLTPI startup member. When running IBM's EZACIC01 TRUE sites should set EZATRUE=N on the T09MCICS statement in the T09CONxx configuration file.

CA EZACIC01 TRUE is started by placing setting EZATRUE=Y on the T09MCICS statement in the T09CONxx configuration file.

The four possible scenarios (options) for running the EZACIC01 TRUE are:

- [Sites Running IBM's TCPIP and CA's EZACIC01 TRUE Exit inside CICS](#)
- [Sites Running IBM's TCPIP and IBM's EZACIC01 TRUE Exit inside CICS](#)
- [Sites Running CA's Unicenter Solve:TCPaccess and CA's EZACIC01 TRUE Exit inside CICS](#)
- [Sites Running the EZACIC01 TRUE over IBM'S TCPIP While CPT Runs over CA's Unicenter Solve:TCPaccess TCPIP Stack](#)

Sites Running IBM's TCPIP and CA's EZACIC01 TRUE Exit inside CICS

CPT can run over the IBM TCPIP stack inside the CICS address space by utilizing CA's EZACIC01 TRUE. By enabling CA's EZACIC01 TRUE a site can use utilize Sockets Management to run, monitor and help debug CPT, EZASOKET or EZACIC01 applications.

Set the following parameters on the T09MCICS macro inside the T09CONxx configuration file:

```
APIMODNM=EZASOH03
```

```
EZATRUE=Y
```

Ensure the CICS JCL DD concatenations are set as follows:

- Place IBM's SEZALOAD library containing module EZASOH03 in the STEPLIB DD.
- Place CA's T09LOAD library containing module EZACIC01 ahead of IBM's SEZATCP library in the DFHRPL DD.

Sites Running IBM's TCPIP and IBM's EZACIC01 TRUE Exit inside CICS

A site can reserve IBM's EZACIC01 TRUE for use by the IBM TCPIP stack inside the CICS address space. IBM's TCPIP address space will handle CPT, EZASOKET and EZACICAL calls. Sockets Management will only be able to monitor CPT applications.

IBM's EZACIC01 TRUE is started by either the "EZA0 START" transaction or by placing program EZACIC20 inside the PLTPI startup member.

Set the following parameters on the T09MCICS macro inside the T09CONxx configuration file:

```
APIMODNM=EZASOH03
```

```
EZATRUE=N
```

Ensure the CICS JCL DD concatenations are set as follows:

- Place IBM's SEZALOAD library containing module EZASOH03 in the STEPLIB DD.
- Place IBM's SEZATCP library containing module EZACIC01 ahead of the CA's T09LOAD library in the DFHRPL DD.

Sites Running CA's Unicenter Solve:TCPaccess and CA's EZACIC01 TRUE Exit inside CICS

CPT can run over the CA's TCPIP stack inside the CICS address space by utilizing CA's EZACIC01 TRUE. By enabling CA's EZACIC01 TRUE a site can use utilize Sockets Management to run, monitor and help debug CPT, EZASOKET or EZACIC01 applications.

Set the following parameters on the T09MCICS macro inside the T09CONxx configuration file:

```
APIMODNM=EZASOH03
```

```
EZATRUE=Y
```

Ensure the CICS JCL DD concatenations are set as follows:

- CA's LINK library containing module EZASOH03 in the *STEPLIB* DD must be found ahead of IBM's SEZALOAD library.
- Place CA's T09LOAD library containing module EZACIC01 ahead of IBM's SEZATCP library in the *DFHRPL* DD.

Sites Running the EZACIC01 TRUE over IBM'S TCPIP While CPT Runs over CA's Unicenter Solve:TCPaccess TCPIP Stack

A site can reserve IBM's EZACIC01 TRUE for use by the IBM TCPIP stack inside the CICS address space. IBM's TCPIP address space will handle EZASOKET and EZACICAL calls while CA's TCPaccess will handle CPT calls. Sockets Management will only be able to monitor CPT applications.

IBM's EZACIC01 TRUE is started by either the "EZA0 START" transaction or by placing program EZACIC20 inside the PLTPI startup member.

Set the following parameters on the T09MCICS macro inside the T09CONxx configuration file:

```
APIMODNM=T02PHPNS
```

```
EZATRUE=N
```

Ensure the CICS JCL DD concatenations are set as follows:

- Place IBM's SEZALOAD library containing module EZASOH03 in the *STEPLIB* DD ahead of the CA LINK library containing T02PHPNS.
- Place IBM's SEZATCP library containing module EZACIC01 ahead of the CA's T09LOAD library in the *DFHRPL* DD.

Customizing the Configuration File

The Unicenter SOLVE:CPT configuration file T09CON xx defines the operating environment. The Unicenter SOLVE:CPT configuration file must be assembled and link edited before the Unicenter SOLVE:CPT initialization program is executed.

For full details on the configuration macros, see the “Configuration Reference” chapter in the *Administrator Guide*. This section however should provide you with enough information to initially get Unicenter SOLVE:CPT working in your environment.

Note: Through out the manual the Unicenter SOLVE:CPT configuration file members begins with six characters “T09CON” followed by a 2 character suffix. The default configuration file is T09CONFG. Use of T09CON xx in the documentation refers to any valid configuration file name. A valid configuration file follows all the rules for a valid PDS member name. The use of T09CONcp, T09CONez and T09CONmr in the documentation refers to actual sample configuration files one can find in the T09SAMP library. The two lowercase characters suffix at the end of a configuration member will actually be uppercase in the T09SAMP library.

Configuration File Macros Overview

The following sections introduce you to Unicenter SOLVE:CPT’s required and optional macros.

Required T09CON xx Configuration Macros

The Unicenter SOLVE:CPT configuration file, T09CON xx , requires the following macros:

T09MCICS defines the basic operating environment. The environmental information includes the TCP/IP job name for communications with the transport provider, transaction IDs, log support and transient data queue names. It is the first macro in the configuration file.

T09MEND is used by internal configuration processing and contains no user-defined fields. It is placed at the end of the configuration file.

Optional T09CONxx Configuration Macros

The following are optional macros for the Unicenter SOLVE:CPT configuration file, T09CONxx:

T09MLSTN defines a LISTEN tool. Each TCP server port can be defined, along with its associated data processing transaction ID. This transaction ID can be the RECEIVE tool or a user-written program. The LISTEN tool can be defined to let the client determine either the transaction ID to start or the transient data queue in which to write client-specified data. You can also define a CSKL replacement listener.

T09MRECV defines a RECEIVE tool. The RECEIVE tool provides a simplex data transfer mechanism for receiving network data. Data received from the network is parsed according to configured options and then written to a transient data queue. The transient data queue name can be configured or dynamically resolved.

T09MSEND defines a SEND tool. The SEND tool or client facility provides a simplex data transfer mechanism for transmitting network data. Data is read from a transient data queue and parsed according to configured options before it is transmitted over the network. Additionally, static or dynamic server resolution can be configured.

T09MSLCT defines the SELECT tool. The SELECT tool or pseudo-conversational tool provides a way for transactions using the RECEIVE API to be pseudo-conversational and not be long running tasks.

T09MCMDS defines the server that handles the interface to Unicenter NetMaster.

T09MTRAN starts user server transactions at both product startup and while the product is running. It can be used to start any transaction it doesn't necessarily have to be a server.

Distributed Sample Configuration File

Unicenter SOLVE:CPT
Default Configuration
File T09CONcp

The following is the default CPT configuration file, T09CONcp. It is customized to run the CPT IVP. Many comments included in the sample, were left off for size and readability.

Use this as a starting point for creating your customized environment.

```

T09MCICS TRANSID=(IPPR,IPTL,IPST,IPT2),          X
      TRCSSN=ACTR,                                X
      JOBNAME=TCPIP
*
*-----
*      Listen tool: Server definitions required
*                      for the IVP to run
*-----
*
T09MLSTN PARM=IVPRECV1,                          X
      PORT=1350,                                  X
      TRANSID=IPTR,                              X
      APISTAT=(CONN,TERM)
*
T09MLSTN PARM=IVPRECV2,                          X
      PORT=1351,                                  X
      TRANSID=IPTR,                              X
      APISTAT=(CONN,TERM)
*
T09MLSTN PARM=IVPRECV3,                          X
      PORT=1352,                                  X
      TRANSID=IPTR,                              X
      APISTAT=(CONN,TERM)
*
T09MLSTN PARM=IVPRECV4,                          X
      PORT=1353,                                  X
      TRANSID=IPTR,                              X
      APISTAT=(CONN,TERM)
*
*-----
*      IBM CICS Sockets CSKL replacement server definition
*-----
*
T09MLSTN PORT=1847,                               X
      SOCKCOMP=Y,          Required for CSKL type listeners X
      CLNTRNS=NO,         X
      CLNTLEN=4,          X
      CLNTIME=1
*
*-----
*      CPT/API Client Data style listener/server definition
*-----
*
T09MLSTN PORT=2345,                               X
      SOCKCOMP=N,          (Default) Use CPT/API           X
      CLNTRNS=NO,         X
      CLNTLEN=6,          X
      CLNTIME=1
*
*-----
*      Receive tool definitions required for the IVP to run
*-----
*
Note: These are always paired one to one with a

```

```

*          listen tool via the PARM= parameter shown
*          on the corresponding listen tool above
*
IVPRECV1 T09MRECV QNAME=IPRF,                                X
          OPTIONS=(RAW,FILE),                                X
          TRNSTAT=(TERM)
*
IVPRECV2 T09MRECV QNAME=IPRL,                                X
          OPTIONS=(LL),                                      X
          TRNSTAT=(TERM)
*
IVPRECV3 T09MRECV QNAME=IPRA,                                X
          OPTIONS=(RAW,ALL),                                X
          TRNSTAT=(TERM)
*
IVPRECV4 T09MRECV QNAME=IPRS,                                X
          OPTIONS=(RAW,SEP),                                X
          TRNSTAT=(TERM)
*
*-----
*          Send tool definitions required for the IVP to run
*-----
*
*          Note: These are always paired one to one with
*          the listen/receive tool pair above.
*          See the corresponding PORT= parameter
*          shown on the listen tool above
*
          T09MSEND QNAME=IPSF,                                X
          PORT=1350,                                         X
          IPNAME=127.0.0.1,                                  X
          OPTIONS=(RAW,FILE),                                X
          TRNSTAT=TERM,                                      X
          APISTAT=(CONN,TERM)
*
          T09MSEND QNAME=IPSL,                                X
          PORT=1351,                                         X
          IPNAME=127.0.0.1,                                  X
          OPTIONS=(LL),                                      X
          TRNSTAT=TERM,                                      X
          APISTAT=(CONN,TERM)
*
          T09MSEND QNAME=IPSA,                                X
          PORT=1352,                                         X
          IPNAME=127.0.0.1,                                  X
          OPTIONS=(RAW,ALL),                                  X
          TRNSTAT=TERM,                                      X
          APISTAT=(CONN,TERM)
*
          T09MSEND QNAME=IPSS,                                X
          PORT=1353,                                         X
          IPNAME=127.0.0.1,                                  X
          OPTIONS=(RAW,SEP),                                  X
          TRNSTAT=TERM,                                      X
          APISTAT=(CONN,TERM)
*
*-----
*          Select Tool definition
*-----
*
          T09MSLCT MAXCONN=100      <===adjust accordingly
*
*-----
*          Sample CA-NetMaster Command Control Server T09MCMSD
*          entry when Security has not been configured.
*-----

```

```
*
T09MCMD5 PORT=2257,
          TRANSID=IPCP,
          SECURITY=N,
          SECENT=$SKTVIEW.CICS.CMDAUTH
*
T09MEND
END
```

Customizing the Configuration File for Your Environment

The default configuration table name is T09CONFIG. It is recommended that sites configure, assemble and link the T09CONFIG member into their T09LOAD or table library. No T09CONFIG member is shipped with the product. Sites should create a T09CONFIG for local use using T09CONCP as a model. Sample JCL to assemble and link a T09CONFIG member is in the T09ASMLK member of the T09SAMP library .

Product startup is simplified when sites use the default T09CONFIG configuration member name. It allows a more straightforward product startup by:

- Starting the product with the IPST transaction (associated with program T09TSTRT) without any parameters
- Allowing you to place program T09TSTRT in the PLTPI table without having to code a SIT INITPARM override for the proper configuration parameter override

You may need to make the following changes to your copy of the T09CONCP sample member. If you change T09CONCP, first copy it into a new member name preferably T09CONFIG for ease of use. This is necessary since the T09CONCP and T09CONEZ members are under the control of SMP and may be overwritten any time maintenance is applied to Unicenter SOLVE:CPT libraries.

1. Create a T09CONFIG member for local use using T09CONCP member as a model. The T09CONCP sample member is contained in the T09SAMP distribution library.
2. The JOBNAME parameter on the T09MCICS statement must be set to the step name of the TCP/IP started task name (or job name).
3. The QNAME parameter on the T09MCICS statement defines error, statistics, and trace transient data queues named (ACER, ACST and ACTR). These CICS destination queues are defined in T09RDO member in the T09SAMP library.
4. The TRANSID parameter on the T09MCICS statement defines key CICS transactions (IPPR, IPTL, IPST and IPT2) for running the product.
5. Use the Socket Compatibility Section as a guide on how to set the EZATRUE (default Y) and APIMODNM (default EZASOH03) parameter on the T09MCICS statement for your site.

Sites will be running IBM's EZACIC01 TRUE when they specify "EZAO START" transaction or by placing program EZACIC20 inside the PLTPI startup member. When running IBM's EZACIC01 TRUE sites should set EZATRUE=N on the T09MCICS statement in the T09CONxx configuration file.

Sites running the IBM's EZACIC01 TRUE over IBM'S TCPIP while CPT runs over CA's Unicenter Solve:TCPaccess TCPIP Stack should set APIMODNM=T02PHPNS. Otherwise let APIMODNM default to EZASOH03.

6. The TRANSID parameter on the T09MCMD5 statement defines the IPCP transaction, which allows CA-NetMaster to monitor the product. These CICS transactions are defined in T09RDO member in the T09SAMP library.

7. To run the IVP you must verify that the following definitions do not conflict with any of your local standards. The IVP definitions for transactions and queue names can be found in the T09CONCP configuration member for:

Transaction IDs: IPCK, IPTR, and IPTS

TDQ names: IPRF, IPRL, IPRA, IPRS,
IPSF, IPSL, IPSA, IPSS

These CICS destination queues and transactions are defined in T09RDO member in the T09SAMP library.

8. Verify ports 1350-1353 are available for use

Note: Any of the above CICS definitions or ports, can easily be changed by carefully coordinating changes to this T09CONFIG configuration file and to the sample CPT CICS RDO definitions contained in member T09RDO in the T09SAMP library.

9. Verify the CSKL replacement server (listening) port is not being used by an existing TCP/IP application. In the example, the port is 1847. This port is not a well-known reserved port. Change the port number to a value that is valid for your environment – any unused port number is valid.
10. Verify the CPT/API Client Data style server (listening) port is not being used by an existing TCP/IP application. In the example, the port is 2345. This port is not a well-known reserved port. Change the port number to a value that is valid for your environment – any unused port number is valid.
11. If you are using the Unicenter NetMaster command server interface then verify that the server (listening) port is not being used by an existing TCP/IP application. In the example, the port is 2257. This port is not a well-known reserved port. Change this port number to a value that is valid for your environment – any unused port number is valid.

If a change to the server listening port is required, verify that the corresponding remote client well-known port is also changed to match.

IBM TCP/IP only: Given the above port numbers, you may need to define port security in the PORT section of the profile.tcpip data set as follows. Where TCP ports 1350 through 1353, 1846, 2257 and 2345 are associated with job cicsprod:

```
1350      TCP cicsprod
1351      TCP cicsprod
1352      TCP cicsprod
1353      TCP cicsprod
1846      TCP cicsprod
2257      TCP cicsprod
2345      TCP cicsprod
```

TCPaccess only: If you have enabled port security – Given the above port numbers, you may need to define port security in the PORT section of the TCPBNDxx configuration file. Sample PORT statements to reserve TCP ports 1350 through 1353, 1846, 2257 and 2345 are associated with job CICSPROD in the TCPBNDxx configuration file:

```
PORT NUM(1350:1353)
      PROTO(TCP)
      JOBN(CICSPROD)
      ACCESS(SHR)
*
PORT NUM(1846)
      PROTO(TCP)
      JOBN(CICSPROD)
      ACCESS(SHR)
*
PORT NUM(2257)
      PROTO(TCP)
      JOBN(CICSPROD)
      ACCESS(SHR)
*
PORT NUM(2345)
      PROTO(TCP)
      JOBN(CICSPROD)
      ACCESS(SHR)
```

Where CICSPROD is the CICS region name.

12. Use T09ASMLK from the SAMP library to assemble and link your T09CONxx (preferably T09CONFIG) configuration member into an executable load module. Remember when linking into a table library that it must be ahead of the DFHRPL T09LOAD library to ensure that there are no module conflict issues.

Modifications to the CICS/TS Execution JCL

Make the following changes to the CICS/TS startup JCL:

1. Concatenate the Unicenter SOLVE:CPT T09LINK library to the STEPLIB DD statement.
2. For those customers using IBM TCP/IP, you must concatenate the TCPIP.SEZALOAD library to the STEPLIB DD statement. For customers running z/OS 1.3 or earlier you must concatenate the TCPIP.SEZALINK library instead of the TCPIP.SEZALOAD library.

***Important!** Customers running z/OS 1.3 or earlier, you may want to note that you will have to make this change when you migrate to z/OS 1.4.*

3. For those customers using Unicenter TCPaccess TCP/IP, you must concatenate the *tcpaccessHLQ*.LINK library to the STEPLIB DD statement.
4. Concatenate the Unicenter SOLVE:CPT T09LOAD library to the DFHRPL DD statement.
5. Add a SYSTCPD DD statement.

It is recommended that you use what you already have for your existing TCP/IP stack definitions. However, no parameters are required other than having a valid JOBNAME parameter on the T09MCICS macro in your T09CONcp configuration file. If you are creating this file *new*, it is recommended that it contain the following minimal parameters:

```
TCPIPJOBNAME  tcpip
HOSTNAME      yourhostname
; update to your SSID and uncomment the following if using TCPaccess
; DNRSSID ACSS
DOMAINORIGIN  ??? .COM
NSINTERADDR   123.234.345.456
DATASETPREFIX tcpip
```

Note: The previous set is provided for your use in sample member T09STCPD in the T09SAMP library. Any sequential file format, such as a PDS member or a flat file is valid for use as a SYSTCPD DD.

6. When SECURITY=Y has been set on the T09MCMDS statement then the Unicenter NetMaster command interface requires that a CICS terminal must be made available for use by the command control server transaction IPCP.

The T09SAMP member T09TCT CICS terminal definition provides a mechanism to provide a terminal called TCMD for use with the IPCP transaction. T09TCT requires the following DD statement in the CICS region startup JCL:

```
//PRNT001 DD DUMMY,DCB=BLKSIZE=80
```

7. Restart your CICS/TS region.

Unicenter SOLVE:CPT Installation Verification Procedure (IVP)

This section describes the IVP (CPT) for Unicenter SOLVE:CPT. When you install the product, the IVP is also installed. If you followed the recommendations for the distributed sample T09CONCP configuration member earlier in this chapter, you should be ready to verify your installation at this point. The T09CONCP configuration member contains definitions that allow a site to run the Unicenter SOLVE:CPT IVP over ports 1350 through 1353.

The following describes the four variations of the IVP.

Transaction Syntax 1	Transaction Name 2	WriteQ 3	ReadQ 4	TCP Port Used 5
IPCK IPSF IPRF	IPCK	IPSF	IPRF	1350
IPCK IPSL IPRL	IPCK	IPSL	IPRL	1351
IPCK IPSA IPRA	IPCK	IPSA	IPRA	1352
IPCK IPSS IPRS	IPCK	IPSS	IPRS	1353

- 1 The full syntax for each of the four IVP transactions for verifying basic product functionality.
- 2 This column separates the CICS transaction name of IPCK.
- 3 The name of the CICS TDQ to which the CPT send tool writes.
- 4 The name of the CICS TDQ to which the CPT receive tool writes.
- 5 Specifies which TCP/IP port is used by the IVP transaction for the test.

Note: In column 1, there is a space between the transaction name, the writeq and the readq.

To execute the IVP, type in or cut and paste the previous syntax format at any CICS terminal connected to a CICS region running Unicenter SOLVE:CPT. You should run all four formats of the IVP. The following response to the IVP should appear at the CICS terminal that you executed the transaction:

```
T09699I CPT IVP LOOPBACK TEST WAS SUCCESSFUL!!!
```

If you do receive the above message then you need to review your installation and initial configuration for completeness and accuracy to instructions, and call support for further guidance.

For more details on the IVP, refer to the "Installation Verification Procedure" chapter in the *Administrator Guide*.

Unicenter NetMaster Socket Management for CICS IVP (Installation Verification Procedure)

This section describes the IVP (CPT) for Unicenter NetMaster Socket Management for CICS. This feature is a requirement for Unicenter SOLVE:CPT. When you install the product, the IVP is also installed. If you followed the recommendations for the distributed sample T09CONCP configuration member earlier in this chapter then you should now be ready to verify your installation. Both the T09CONCP and T09CONEZ configuration members can run the EZASOKET IVP. The CSKL replacement server definition for port 1847 provides server functionality for the IVP:

```
T09MLSTN PORT=1847,           X
      SOCKCOMP=Y,           Required for CSKL type listeners X
      CLNTRNS=NO,           X
      CLNTLEN=4,           X
      CLNTIME=1
```

If the product allows IBM to run its EZACIC01 TRUE exit then one could possibly specify the port as a parameter for a non-translate CSKL type listener during transaction initiation.

After the product is started, use the IPEC transaction to verify EZASOKET functionality. The IPEC transaction can be started by it self or it can optionally take a port parameter.

Sample IPEC transactions:

```
IPEC
IPEC 1847
```

When the IPEC transaction works the following message appears on the CICS terminal:

```
T09699I SOCKET MANAGEMENT FOR CICS IVP WAS SUCCESSFUL!!!
```

Should the IPEC IVP fail, it issues an error message to both the terminal and the CICS logs.

The following is a sample IPEC error message displayed on the terminal:

```
T09224E T09TIPEC FAILED RTNCODE=0000000F DC=0000003D
```

The following are sample related error messages in the CICS logs for the previous error:

```
00069 17:45:53 T09237E T09TIPEC CONNECT FAILED, RC=FFFFFFFF PROTOCOL ADDR=000204D28DCAC691
00069 17:45:53 T09233E T09TIPEC CALL CONNECT          ERRNO=0000003D  RC=FFFFFFFF
00069 17:45:53 T09224E T09TIPEC FAILED RTNCODE=0000000F DC=0000003D
```

Common Optional Customization Steps

There are many optional customization steps that can apply to your environment. Review the list, which contains optional steps common to many customers to see if they apply in your environment. You do not need to perform any of the following steps to get the IVPs to work. However, some of the steps may be required to turn on a feature you want or to run more standard in your environment. The introductory paragraph in each section should assist you in determining if the customization applies to your environment.

Unicenter NetMaster Interface Security Enablement

If you are using the Unicenter NetMaster interface with the security enabled, you must make an addition to your TCT table. You can make the TCT update anytime prior to enabling security. We recommend that you enable security only after you verify that the interface is first working correctly without security on.

A sample of the terminal definitions required for Unicenter SOLVE:CPT can be found in the sample member T09TCT in the T09SAMP library. This table can be used as is or everything between the initial and final statements can be copied to an existing TCT.

Please note the following key correlations:

- The two places are coded PRNT001 must match each other and the CICS startup JCL DD name
- The TCMD termID must match what is coded on the T09CMDS macro in the configuration file

For more detail, refer to Terminal Control (TCT) Entries section in the “CICS/TS Resource Definition Reference” chapter of the *Administrator Guide*.

CICS SIT Requirements

To change the default configuration table name with a SIT override to start the product using the T09CONA2 configuration table during CICS startup:

```
INITPARM=(T09TSTRT='A2')
```

Note: You must also be using PLTSI as shown below:

CPTMRO Requires the following two entries for SIT overrides:

```
ISC=YES
```

```
IRCSTRT=YES
```

For greater detail, see the System Initialization Tasks (SIT) Entries section in the “CICS/TS Resource Definition Reference” chapter of the *Administrator Guide*.

Automatic Product Startup and Shutdown Using the PLT

The product can use the standard CICS facilities to be started and terminated with CICS.

Enable Unicenter SOLVE:CPT startup and shutdown programs by adding the sample members T09PLTPI and T09PLTSD in the T09SAMP library to your existing PLT tables.

Note: See SIT overrides above for starting any configuration table name other than T09CONFIG.

For greater detail on these table definitions, refer to the Program List Table (PLT) Entries section in the “CICS/TS Resource Definition Reference” chapter of the *Administrator Guide*.

Customizing the Translation Table

The ability to modify or create new translation tables is controlled through the SMP/E USERMOD facility. To incorporate a modified or new translation table into Unicenter SOLVE:CPT, you need to receive and apply the modules to SMP/E CSI as described below.

It is recommended that sites do not modify the default or distributed translation table named T09XENG. Distributed maintenance could regress site modifications.

A default translation table is specified in the T09MCICS configuration macro. This default is used for all translation functions unless overridden. You can override the default by another configuration macro statement at a lower level. For example you can override in the T09MLSTN macro or in the CPT/API translate call.

Customization Steps for Changing Translation Tables

To use an alternate translation table, do the following:

1. Create a new member name and copy in the table from sample member T09XENG in your T09SAMP library or any sample member in the SAMP library..

Note:

- Do not use the T09XENG or any other member directly since it may be overridden by future SMP/E maintenance
 - The member must be in the T09SAMP library for Step 3 usermod to work as shown in the following example.
2. Customize the table created in Step 1 to fit your needs.
 3. Create a valid program table entry in an installed Resource Definition Online (RDO) group using the newly created name from Step 1.

An example of this is:

```
DEFINE PROG (T09XENG) LANG (ASSEMBLER) DA (ANY) GROUP (T09CPT)
```

4. Create a new JCL member name and copy in sample member T09UTRAN from the T09SAMP library. A sample of this JCL is shown below.

Make the following updates before submitting the job to apply a new translation table:

- a. Copy in a valid JOBCARD.
- b. Globally change SMPINDEX to your SMPE high level qualifier.
- c. Change " ++ SRC (T09XENG) " to the name of the table you created.
- d. Verify FMID(C2K6100), this is valid for Unicenter SOLVE:CPT 6.1.

```
//<NAME> JOB (000), 'TRANS USER MOD'
//*
//SMPE      EXEC PGM=GIMSMP,REGION=4096K,TIME=960,
//          PARM='CSI=SMPINDEX.CSI,PROCESS=WAIT'
//SMPHOLD   DD DUMMY
//SMPLOG    DD DSN=SMPINDEX.SMPLOG,DISP=MOD
//SMPOUT    DD SYSOUT=*
//SMPPTFIN  DD *
++ USERMOD (MULTRAN) .
++ VER (Z038)
   FMID(C2K6100)
++ SRC (T09XENG) TXLIB(T09SAMP) DISTMOD(T09LOAD) DISTLIB(AT09SAMP)
/*
//SMPCNTL  DD *
   SET BDY(GLOBAL) .
   RECEIVE S(MULTRAN) .
   SET BDY(TCPTZN) .
   APPLY  S(MULTRAN) .
/*
```

5. Verify that the table is contained in a library that is part of the CICS/TS DFHRPL concatenation.

6. Restart CICS/TS if changes were needed in Step 4.
7. Restart Unicenter SOLVE:CPT.

CPTMRO Installation and Configuration

This chapter contains the instructions you need to perform for initial customization and startup of the Unicenter SOLVE:CPT CPTMRO feature. A site has the option whether to implement the CPTMRO feature. The CPTMRO distributes server workload among multiple CICS regions.

The multiple region Unicenter SOLVE:CPT CPTMRO feature extends portions of CPT to take advantage of the multiple region operation capability of CICS. CPTMRO allows the LISTEN tool to run in its own address space and distribute new connections into several CICS regions. The connections can be distributed over a number of CICSs based on selection criteria such as storage, number of sockets, and other CICS information. CPTMRO uses the CICS/ESA 4.1 EXCI feature so CICS must be at least at release 4.1 and also be configured to run ISC connections.

A site can run the IVP to verify that the CPTMRO server sessions can be passed into CICS regions.

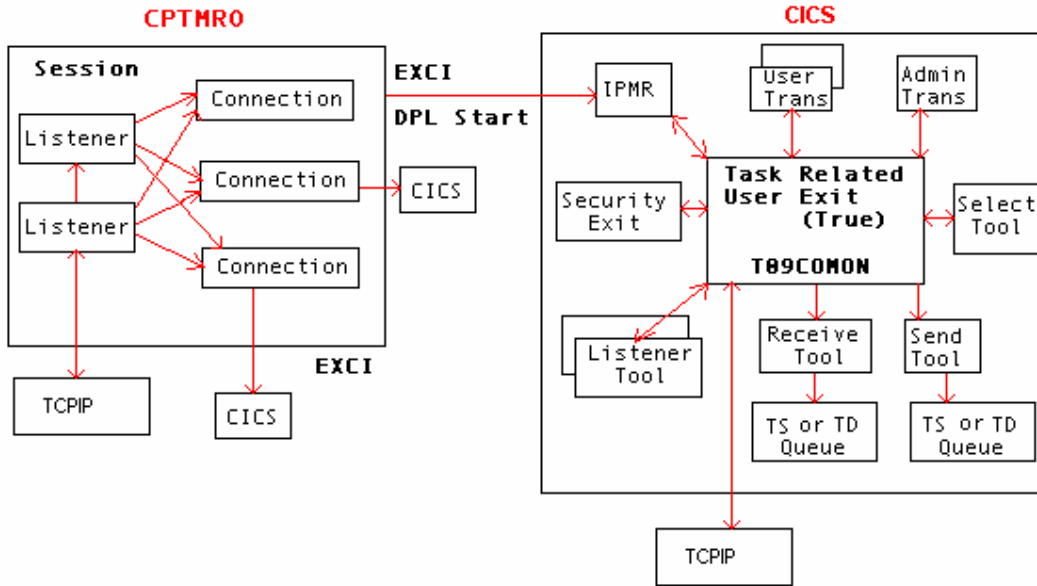
Throughout this guide, you are referred to the “The CPTMRO Environment” chapter in the *Administrator Guide* for more detail on many items. You may want to keep the *Administrator Guide* handy for easy reference.

Important! *The CPTMRO feature installation requires that you have successfully completed the normal installation and IVP as documented in the “Installation Steps” Chapter.*

The following diagram shows the relationship between the various Unicenter SOLVE:CPT CPTMRO objects that deal with specific types of functions.

Unicenter SOLVE:CPT Objects

CPT Address Spaces



CPTMRO Feature Installation Summary

The following steps represent a summary of the installation procedure. When necessary, further breakouts and expansions of a more major step, such as a customization of configuration members are documented in separate sections to allow the process to flow better.

1. If you have not already done so, complete the normal installation and IVP as documented in the “Installation Steps” chapter before attempting installation of the CPTMRO feature.

Note: You *must* have completed all steps and successfully run both the standard IVPs as documented in the final steps in the “Initial Minimal Configuration” chapter before installing the CPTMRO feature.

Refer to the introduction in the “The CPTMRO Environment” chapter in the *Administrator Guide* for a more detailed overview of the CPT multi-region environment.

2. Follow the instructions in [Customizing CICS for CPTMRO](#). This section provides information about the CICS SIT; CICS CSD/RDO and CPT configuration requirements for the CPTMRO feature.
3. Follow the instructions in [Customizing the CPTMRO Address Space](#). This section provides information about the configuration customization and execution JCL needed to run the external CPTMRO region.
4. Review the [Interrelationships Between CSD Commands and Configuration Statements](#) section for any easy to miss configuration dependencies.
5. Recycle CICS/TS if needed to implement any changes or additions you made in Step 2.
6. Run the IVP: The following sub steps are covered in greater detail in the [Installation Verification Procedure for CPTMRO](#).
 - a. Start CPT – “IPST MR” at a CICS terminal.

Important! To properly initialize, CPT must first be started in the CICS region before starting the external CPTMRO address space.

- b. Start CPTMRO – start the RUNMRO procedure.
 - c. Run the IVP – “IPCK” at a CICS terminal.
7. Once you successfully complete the CPTMRO IVP, you can remove the IVP required definitions in both the Unicenter SOLVE:CPT configuration file T09CONMR and the CPTMRO configuration exec T09MRO00.

You can delete any definitions that are not used in the configurations. However, it is recommended that you at least keep the LISTEN, RECEIVE and SEND tools for port 1450 as defined in the original T09CONMR sample for future use in sanity checking the CPT and CPTMRO installation. In the case of CPTMRO, the IVP causes no longer running listener transactions in a CICS region only in the external CPTMRO region. Therefore, leaving the IVP definitions configured does not cause any real capacity issues.

Customizing CICS for CPTMRO

CPTMRO uses the CICS' External CICS Interface (EXCI), which is activated by RDO definitions and SIT table overrides.

The following information details how to customize a CICS region to allow it to communicate with a CPTMRO address space using the EXCI interface.

CICS SIT Requirements

Both ISC=YES and IRCSTRT=YES must be set in your CICS/TS SIT startup parameters.

CSD RDO Changes

Sample member T09RDOMR in the T09SAMP library should be used as SYSIN input when running CICS utility DFHCSDUP. Refer to the comments in the member itself and to the "CICS/TS Resource Definition Reference" chapter of the *Administrator Guide* for details on RDO definitions.

CPTMRO RDO Sample
T09RDOMR

The following is a sample set of CICS RDO definitions that are required to support the CPTMRO feature, T09RDOMR. It is customized to run the CPT IVP (Installation Verification Program).

Use this as a starting point for creating your customized environment.

```

*-----*
*
*           CICS Programmer's Toolkit RDO Entries
*
*           Optional CPTMRO Application Definitions
*
*-----*
*
* The below "?" is intended to cause a failure so that this sample
* does not accidentally delete an existing RDO group.
*
* Make sure that you want to use GROUP T09$EXCI
* Make sure that you want to use LIST T09LIST
*
?REMOVE GROUP(T09$EXCI) LI(T09LIST)
?DELETE GROUP(T09$EXCI)

*-----*
*
*           Define T09CONMR configuration member as a CICS program
*
*-----*

DEFINE PROG(T09CONMR) LANG(ASSEMBLER) DA(ANY) GROUP(T09$EXCI)

*-----*
*
*           Defines a group T09$EXCI
*           which is copied from IBM group DFH$EXCI.
*
*-----*

COPY GROUP(DFH$EXCI) TO(T09$EXCI)

*-----*
*
*           Defines alias IPMR to the EXCI transaction.
*
*           The IPMR transaction must match the TRANSID
*           parameter on the CONNECTION statement in the
*           T09MRO00 configuration statement in the
*           CPTMRO address space.
*
*-----*

ALTER TRANSACTION(EXCI) GROUP(T09$EXCI) ALIAS(IPMR)

*-----*
*
*           Add GROUP T09$EXCI to an active CSD LIST.
*
*-----*
*
* Make sure that you want to use GROUP T09$EXCI
* Make sure that you want that your LIST is T09LIST
*
?ADD GROUP(T09$EXCI) LI(T09LIST)

```

```

*-----*
*
*       Define the IRC IPMR CONNECTION and T09SESS SESSIONS
*       for the CPTMRO address space.
*
*       The NETNAME CPTMRO on the DEFINE CONNECTION below
*       must match the NETNAME parameter on the
*       CONNECTION statement in the T09MRO00 configuration
*       file in the CPTMRO address space.
*
*       The IPMR CONNECTION below is connected to the
*       T09SESS SESSIONS by the IPMR CONNECTION parameter.
*-----*

DEFINE CONNECTION(IPMR) GROUP(T09$EXCI) NETNAME(CPTMRO)
ACCESSMETHOD(IRC) PROTOCOL(EXCI) CONNTYPE(SPECIFIC)
ATTACHSEC(LOCAL)

DEFINE SESSIONS(T09SESS) GROUP(T09$EXCI) CONNECTION(IPMR)
PROTOCOL(EXCI) RECEIVECOUNT(999) RECEIVEPF(<)

LIST GROUP(T09$EXCI) OBJECTS

```

Modifying T09RDOMR Sample Member

1. Create a T09RDOMR member for local use using T09RDOMR member as a model. The T09RDOMR sample member is contained in the T09SAMP distribution library.
2. There are several statements with ? in the first column to prevent them from accidentally being executed.

Note: Verify the group and list names and whether you need to execute these commands.
3. Verify and update if necessary an appropriate local group name to use for GROUP T09\$EXCI.
4. Verify and update if necessary an appropriate local list name to use for LIST T09LIST.

Note:

- The IPMR transaction must be an alias for EXCI transaction.
- The NETNAME on the on the DEFINE CONNECTION RDO statement must match the NETNAME on the DEFINE CONNECTION statement in the T09MRO00 configuration parameter.
- The DEFINE CONNECTION(<name>) RDO statement must match the CONNECTION(<name>) parameter on the DEFINE SESSIONS statement in the T09MRO00 configuration parameter file.

Interrelationships Between CSD Commands and Configuration Statements

The CSD entries in the T09RDOMR have relationships between both other CSD statements and parameters in the CPTMRO configuration file T09MRO00.

The following is an example of the CSD entries that must be coordinated with CPTMRO T09MRO00 configuration file CONNECTION statement:

1. The *IPMR* ALIAS in the ALTER TRANSACTION RDO statement matches the TRANSID *IPMR* on the CONNECTION statement
2. The DEFINE CONNECTION(*IPMR*) RDO parameter statement must match the CONNECTION(*IPMR*) parameter on the DEFINE SESSIONS RDO statement.
3. The NETNAME *CPTMRO* on the on the DEFINE CONNECTION RDO statement must match the NETNAME of *CPTMRO* on the DEFINE CONNECTION statement in the T09MRO00 configuration parameter.
4. The CICS APPLID is called *CICSxxxx*.

The following diagram shows the previously described correlations that are needed for the CPTMRO feature to work.

T09RDOMR Sample Member Excerpts from T09SAMP Library

```

ALTER TRANSACTION(EXCI) GROUP(T09$EXCI) ALIAS(IPMR)
DEFINE CONNECTION(IPMR)
  GROUP(T09$EXCI) NETNAME(CPTMRO)
  ACCESSMETHOD(IRC) PROTOCOL(EXCI) CONNTYPE(SPECIFIC)
  ATTACHSEC(LOCAL)
DEFINE SESSIONS(T09SESS) GROUP(T09$EXCI) CONNECTION(IPMR)
  PROTOCOL(EXCI) RECEIVECOUNT(999) RECEIVEPF(<)
  
```

T09MRO00 Sample Member Excerpts from T09SAMP Library

```

DEFINE LISTENER LISTEN01 PORT 1450
  TCPIPJOB TCPIP
  SELECTMETHOD READY
DEFINE LISTENER LISTEN02 PORT 1451
  TCPIPJOB TCPIP
  SELECTMETHOD CIRCULAR
DEFINE CONNECTION CONNECT01 APPLID CICSxxxx
  NETNAME CPTMRO
  TRANSID IPMR
  TYPE SPECIFIC
DEFINE SESSION SESS01 LISTENER LISTEN01
  CONNECTION CONNECT01
  TRANSID IPTR
  RECEIVEPARM IVPRECV1
DEFINE SESSION SESS02 LISTENER LISTEN02
  CONNECTION CONNECT01
  TRANSID IPTR
  RECEIVEPARM IVPRECV2
  
```

T09CONMR Sample Member Excerpts from T09SAMP Library

```

T09MCICS TRANSID=(IPPR, IPTL, IPST, IPT2),
  TRCSSN=ACTR,
  JOBNAM=TCPIP
IVPRECV1 T09MRECV QNAME=IPRF,
  OPTIONS=(RAW, FILE),
IVPRECV2 T09MRECV QNAME=IPRL,
  OPTIONS=(LL),
T09MSEND QNAME=IPSF,
  PORT=1450,
  IPNAME=127.0.0.1,
  OPTIONS=(RAW, FILE),
T09MSEND QNAME=IPSL,
  PORT=1451,
  IPNAME=127.0.0.1,
  OPTIONS=(LL),
  
```


Customizing the Distributed Configuration File for CPTMRO

The Unicenter SOLVE:CPT configuration file T09CONMR defines the operating environment. Sites must update the T09CONMR configuration file for local environmental conditions. The configuration file must be assembled and link edited before running the CPTMRO address space. We provide a sample T09CONMR IVP configuration file to verify the CPTMRO functionality.

For a partial introduction to the configuration file, see the “Initial Minimal Configuration” chapter. For full details on the configuration macros, see the “Configuration Reference” chapter in the *Administrator Guide*.

Unicenter SOLVE:CPT
Default Configuration
File T09CONMR

The following is the sample Unicenter SOLVE:CPT configuration file for the CPTMRO feature, T09CONMR. It is customized to run the CPT IVP. Many comments including in the sample, have been left off for size readability.

Use this as a starting point for creating a customized CPTMRO environment.

```
T09MCICS TRANSID=(IPPR, IPTL, IPST, IPT2),           X
          TRCSSN=ACTR,                               X
          JOBNAME=TCPIP
*
*-----
*
* Please note that the Listen tools/Server
* definitions required to run the IVP have
* been moved to the external CPTMRO region
*
*-----
*
* Please also note that it is perfectly valid
* to mix locations of where your listeners run.
* In other words, it is perfectly valid to put
* high volume listeners in CPTMRO and leave
* low volume listeners directly in the appropriate
* CICS region's CPT configuration file.
*
*-----
*
* Receive tool definitions required for the IVP to run
*-----
*
* Note: These are always paired one to one with a
* listen tool via the RECEIVEPARM parameter
* shown on the corresponding DEFINE SESSION
* that is associated with DEFINE LISTENER
* in the sample member T09MRO00
* in the T09SAMP library
*
IVPRECV1 T09MRECV QNAME=IPRF,                       X
          OPTIONS=(RAW, FILE),                       X
          TRNSTAT=(TERM)
*
IVPRECV2 T09MRECV QNAME=IPRL,                       X
          OPTIONS=(LL),                              X
          TRNSTAT=(TERM)
*
IVPRECV3 T09MRECV QNAME=IPRA,                       X
          OPTIONS=(RAW, ALL),                        X
          TRNSTAT=(TERM)
*
```

```

IVPRECV4 T09MRECV QNAME=IPRS,          X
          OPTIONS=(RAW,SEP),           X
          TRNSTAT=(TERM)
*-----
*           Send tool definitions required for the IVP to run
*-----
*
*           Note: These are always paired one to one with
*           the receive tool above and with the listen
*           tool defined in the sample member T09MRO00
*           in the T09SAMP library. See the corresponding
*           PORT parameter on the DEFINE LISTENER
*           statement in the T09MRO00 sample.
*
T09MSEND QNAME=IPSF,                   X
          PORT=1450,                   X
          IPNAME=127.0.0.1,            X
          OPTIONS=(RAW,FILE),          X
          TRNSTAT=TERM,                X
          APISTAT=(CONN,TERM)
*
T09MSEND QNAME=IPSL,                   X
          PORT=1451,                   X
          IPNAME=127.0.0.1,            X
          OPTIONS=(LL),                X
          TRNSTAT=TERM,                X
          APISTAT=(CONN,TERM)
*
T09MSEND QNAME=IPSA,                   X
          PORT=1452,                   X
          IPNAME=127.0.0.1,            X
          OPTIONS=(RAW,ALL),           X
          TRNSTAT=TERM,                X
          APISTAT=(CONN,TERM)
*
T09MSEND QNAME=IPSS,                   X
          PORT=1453,                   X
          IPNAME=127.0.0.1,            X
          OPTIONS=(RAW,SEP),           X
          TRNSTAT=TERM,                X
          APISTAT=(CONN,TERM)
*
*
T09MEND
END

```

Modifying T09CONMR Sample Member

1. Back up the T09CONFIG member or use another name for the configuration file created in Step 2.
2. Create a T09CONxx member for local use using T09CONMR member as a model. The T09CONMR sample member is contained in the T09SAMP distribution library.
3. Verify the JOBNAME= *parameter*, this must be the step name of the TCP/IP started task name.
4. Use T09ASMLK from the T09SAMP library to assemble and link your T09CONxx configuration member into an executable load module.

Note: Remember, when linking into a table library that it must be ahead of the DFHRPL T09LOAD library to ensure that there are no module conflict issues.

Customizing the CPTMRO Address Space

This section describes the steps to configure the CPTMRO address space so a site can run the CPTMRO IVP

CPTMRO Feature Execution JCL

The CPTMRO feature runs as a separate address space from CICS/TS. It is important to note CPTMRO feature is not true CICS MRO, it simply simulates this type of behavior for TCP connections coming into CICS. CPTMRO externalizes your listeners and then dispatches the connections to your configured CICS regions.

Customizing the Distributed JCL Sample for CPTMRO

CPTMRO sample JCL The following is the sample CPTMRO region JCL
RUNMRO

Use this as a starting point for creating your local procedure.

```
//T09MRO  PROC TRGINDX='CPT.V610',      Hi-level Qual for CPT
//*      TCPLINK='TCP.V610.LINK',      Link Library for TCPaccess
//*      TCPLINK='TCP/IP.SEZALINK',    Link Library for IBM TCP/IP
//      CICSINDX='CICSTS.V220',      Hi-level Qual for CICS/TS
//      USERPARM='&TRGINDX',        DSN for your local parmlib
//      CNFG=T09MRO00,              CPTMRO Config member
//      SOUT='*'                    SYSOUT class
//*
//*      Sample JCL Procedure to run CPTMRO
//*
//T09MRO  EXEC PGM=T09MRCPT,PARM=&CNFG
//STEPLIB DD DISP=SHR,DSN=&TRGINDX..T09LOAD
//      DD DISP=SHR,DSN=&TRGINDX..SASLINK
//*      DD DISP=SHR,DSN=&TCPLINK
//      DD DISP=SHR,DSN=&CICSINDX..SDFHLOAD
//      DD DISP=SHR,DSN=&CICSINDX..SDFHEXCI
//PARMLIB DD DISP=SHR,DSN=&USERPARM
//      DD DISP=SHR,DSN=&TRGINDX..T09SAMP
//SYSPRINT DD SYSOUT=&SOUT
//SYSTEM   DD SYSOUT=&SOUT
//SYSUDUMP DD SYSOUT=&SOUT
//SYSTCPD  DD DISP=SHR,DSN=TCP/IP.DATA
```

Modifying RUNMRO Sample JCL Member

Perform the following steps to create a working set of JCL for the CPTMRO region:

1. Create a RUNMRO proc member for local use by copying the RUNMRO sample member is located in the T09SAMP distribution library.
2. Edit the TRGINDX, TCPINDX, CICSINDX, and SOUT symbolic parameters (or override them when executing this JCL Procedure) to meet your local environment.
3. Edit the TCPLINK parameter to find module EZASOH03 (HPNS). This library provides an EZASMI API connection to your TCPIP address space.

Note: In a standard IBM TCP or Unicenter TCPaccess installation this step should not be required.

4. Edit USERPARM symbolic parameter (or delete both references to it when executing this JCL procedure). This allows you to have a separate parameter library for your local use that is independent of the SMP/E controlled data sets. It is highly recommended you do this, since much CPTMRO functionality can be put into EXECs that reside in this library.

Note: In a standard IBM TCP or TCPaccess installation, this step should not be required. If your environment is not using standard TCPIP data search list, then you may need to use a SYSTCPD DD. If so, uncomment the SYSTCPD DD and point it to a valid tcpip data file.

Customizing the CPTMRO Region Configuration

The multiple-region Unicenter SOLVE:CPT architecture is object oriented. It consists of objects that deal with specific types of functions. These objects are independent of one another with commands to control their interaction. Operator commands define and control the objects. The goal of the architecture is to make multiple-region Unicenter SOLVE:CPT as dynamically configurable and flexible as possible while still maintaining a high degree of performance and throughput. Some of the objects require tables from PARMLIB to control their behavior.

The major objects that comprise multiple region Unicenter SOLVE:CPT are: Listeners, Sessions, Connections, and Log.

- The *Listener* object controls the listen objects. Each listen object listens on a different port for remote connections. Once the connection is accepted it is given to a CICS task via a Connection object. The Listener specifies the criteria it wishes to use in selecting which CICS task gets the remote connection.
- The *Connection* object controls the Connection tasks. The connection task is always connected via the EXCI interface to a given CICS. The socket connection is given to the Unicenter SOLVE:CPT running in the CICS region that will start a transaction to take the socket.
- The *Session* object defines sessions between the Listener objects and Connection objects. Sessions specify the program that will be run in CICS to take the remote connection along with other parameters like statistics and tracing.
- The *Log* object contains logging functions needed by all the other objects. The log provides messaging and logging to present external information.

The CPTMRO feature region is independent of CPT that runs in CICS. Therefore, you must have a separate configuration EXEC.

For full details on the configuration EXEC, see the “The CPTMRO Environment” chapter in the *Administrator Guide*.

Customizing the Distributed Configuration EXEC for CPTMRO

CPTMRO
Configuration EXEC
T09MRO00

The following is the sample configuration exec for the CPTMRO feature, T09MRO00. It is customized to run the CPT IVP across the CPTMRO EXCI interface. Many comments including in the sample, have been left off for size readability.

Use this as a starting point for creating your customized environment.

```

*
* Sample CPTMRO startup EXEC
*
*-----
* Set Global CPTMRO parameters
*-----
*
SET   MRCPT                TRACE          0                -
                                MESSAGELEVEL  WARN              -
                                MESSAGELEVEL  NOINFO             -
                                LOGLEVEL       WARN              -
                                LOGLEVEL       INFO
*
*-----
* Set Log parameters
*-----
*
* Log will not be spun based on time or records. Log messages will
* be mixed case.
*
* Edit the following as appropriate:
*
* CLASS c - SYSOUT class of the Log dataset
*
SET   LOG                  TRACE          0                -
                                MESSAGELEVEL  WARN              -
                                MESSAGELEVEL  INFO               -
                                LOGLEVEL       WARN              -
                                LOGLEVEL       INFO               -
                                CLASS          c                  -
                                SPINREC       0                   -
                                SPINTIME      0                   -
                                NOSPINSYNC
                                NOUPPER
*
* The first log spin causes logging to become active
*
SPIN  LOG
*

```

```

*-----
* Define CPT Listener tasks needed to run the IVP
*-----
*
* These Listeners will accept connections on the
* specified ports and pass them to the CICS region
* defined on the Connection via an available Session.
*
* SELECTMETHOD defines the criteria used to choose a
* Session/Connection/CICS to which to pass the end point.
*
* Verify PORT and TCPIPJOB meet your local TCP environment
*
DEFINE LISTENER    LISTEN01  PORT      1450      -
                   TCPIPJOB  TCPIP      -
                   SELECTMETHOD  READY      -
                   LOGLEVEL   WARNING     -
                   LOGLEVEL   DEBUG       -
                   MESSAGELEVEL WARNING    -
                   MESSAGELEVEL INFO      -
*
DEFINE LISTENER    LISTEN02  PORT      1451      -
                   TCPIPJOB  TCPIP      -
                   SELECTMETHOD  CIRCULAR   -
                   LOGLEVEL   WARNING     -
                   LOGLEVEL   DEBUG       -
                   MESSAGELEVEL WARNING    -
                   MESSAGELEVEL INFO      -
*
DEFINE LISTENER    LISTEN03  PORT      1452      -
                   TCPIPJOB  TCPIP      -
                   SELECTMETHOD  SOCKETS    -
                   LOGLEVEL   WARNING     -
                   LOGLEVEL   DEBUG       -
                   MESSAGELEVEL WARNING    -
                   MESSAGELEVEL INFO      -
*
DEFINE LISTENER    LISTEN04  PORT      1453      -
                   TCPIPJOB  TCPIP      -
                   SELECTMETHOD  TASKS      -
                   LOGLEVEL   WARNING     -
                   LOGLEVEL   DEBUG       -
                   MESSAGELEVEL WARNING    -
                   MESSAGELEVEL INFO      -
*
*-----
* Define a CPT Connection task.
*-----
*
* This Connection specifies a CICS region with
* which to establish an EXCI association.
*
* TRANSID defines the EXCI mirror transaction defined to CICS.
* NETNAME is the name used to associate the EXCI client with
* a CONNECTION definition in CICS of type SPECIFIC
*
DEFINE CONNECTION  CONNECT01  APPLID    CICSxxxx  -
                           NETNAME    CPTMRO    -
                           TRANSID    IPMR       -
                           TYPE        SPECIFIC   -
                           LOGLEVEL   WARNING    -
                           LOGLEVEL   DEBUG      -
                           MESSAGELEVEL WARNING  -
                           MESSAGELEVEL INFO     -
*

```



```

*-----
* Define Sessions to associate the Listeners with the specified
* Connection(s).
*-----
*
* RECEIVEPARM is equivalent to the PARM keyword on the T09MLSTN
* macro in T09CONxx configuration file.
*
DEFINE SESSION      SESS01      LISTENER      LISTEN01      -
                   CONNECTION    CONNECT01     -
                   TRANSID       IPTR              -
                   RECEIVEPARM    IVPRECV1         -
                   APITRACEFLAGS  0
*
DEFINE SESSION      SESS02      LISTENER      LISTEN02      -
                   CONNECTION    CONNECT01     -
                   TRANSID       IPTR              -
                   RECEIVEPARM    IVPRECV2         -
                   APITRACEFLAGS  0
*
DEFINE SESSION      SESS03      LISTENER      LISTEN03      -
                   CONNECTION    CONNECT01     -
                   TRANSID       IPTR              -
                   RECEIVEPARM    IVPRECV3         -
                   APITRACEFLAGS  0
*
DEFINE SESSION      SESS04      LISTENER      LISTEN01      -
                   CONNECTION    CONNECT01     -
                   TRANSID       IPTR              -
                   RECEIVEPARM    IVPRECV4         -
                   APITRACEFLAGS  0
*
*-----
* Start everything
*-----
*
START LISTENER      *
START CONNECTION    *
START SESSION       *

```

Modifying T09MRO00 Sample Member

1. Create a new T09MROxx member for local use using T09MRO00 member as a model. This member should be added to the PARMLIB DD dataset you created earlier along with the execution JCL. The T09MRO00 sample member is contained in the T09SAMP distribution library.
2. Remember if you use a member name other than T09MRO00 then you need to update the CPTMRO JCL CNFG= parameter to match this name.
3. In the DEFINE LISTENER section, update all four listeners TCPIPJOB parameters to a valid TCPIP job name.
4. Verify ports 1450-1453 are available for use

Note: Any of the above ports, can easily be changed by carefully coordinating changes to this T09MRO00 configuration exec and the send tool definitions defined in the T09CONMR configuration file.

IBM TCP/IP only: Given the above port numbers, you may need to define port security in the PORT section of the profile.tcpip data set as follows (Where TCP ports 1450, 1451, 1452 and 1453 are associated with job MROCPT):

```
1450      TCP MROCPT
1451      TCP MROCPT
1452      TCP MROCPT
1453      TCP MROCPT
```

TCPaccess only: If you have enabled port security, given the above port numbers, you may need to define port security in the PORT section of the TCPBNDxx configuration file. Sample PORT statements to reserve TCP ports 1450 through 1453 for job MROCPT in the TCPBNDxx configuration file:

```
PORT NUM(1450:1453)
      PROTO(TCP)
      JOBN(MROCPT)
      ACCESS(SHR)
```

5. In the DEFINE CONNECTION section, update the APPLID parameter with a valid VTAM application ID for the CICS region you are connecting to.
6. In the DEFINE CONNECTION section the TRANSID parameter (*IPMR* in our example) must match the *IPMR* ALIAS in the ALTER TRANSACTION RDO statement:

```
ALTER TRANSACTION(EXCI) GROUP(T09$EXCI) ALIAS(IPMR)
```

7. In the DEFINE CONNECTION section the NETNAME parameter must match the NETNAME parameter (*CPTMRO* in our example) from the RDO entries on the DEFINE CONNECTION CSD entry from the T09RDOMR file:

```
DEFINE CONNECTION(IPMR) GROUP(T09$EXCI) NETNAME(CPTMRO)          *
ACCESSMETHOD(IRC) PROTOCOL(EXCI) CONNTYPE(SPECIFIC)             *
ATTACHSEC(LOCAL)
```

Installation Verification Procedure for CPTMRO

Note: See the “Installation Verification Program” chapter in the *Administrator Guide* for more details on this procedure.

This section describes the IVP (CPT) for Unicenter SOLVE:CPTMRO feature. When you install the product, the IVP is also installed. If you followed the recommendations for the distributed samples T09CONMR and T09MRO00 configuration files, and the T09RDOMR member earlier in this chapter, you should be ready to verify your installation at this point. The T09CONMR configuration member contains definitions that allow a site to run the Unicenter SOLVE:CPT IVP using the CPTMRO feature over ports 1450 through 1453. You run the IVP the exact same way as without CPTMRO, the only difference now is that the listeners(servers) reside in the CPTMRO address space independent of the CICS region.

The table following tables describes the four variations of the IVP.

Transaction Syntax 1	Transaction Name 2	WriteQ 3	ReadQ 4	TCP Port Used 5
IPCK IPSF IPRF	IPCK	IPSF	IPRF	1450
IPCK IPSL IPRL	IPCK	IPSL	IPRL	1451
IPCK IPSA IPRA	IPCK	IPSA	IPRA	1452
IPCK IPSS IPRS	IPCK	IPSS	IPRS	1453

- 1 The full syntax for each of the four IVP transactions for verifying basic product functionality.
- 2 This column separates the CICS transaction name of IPCK.
- 3 The name of the CICS TDQ to which the CPT send tool writes.
- 4 The name of the CICS TDQ to which the CPT receive tool writes.
- 5 Specifies which TCP/IP port is used by the IVP transaction for the test.

Note: Column 1 contains a space between the transaction name, the writeq and the readq.

The CPT IVP can be run to verify that the CPTMRO feature is operating properly. In order to do this, you must perform the following steps:

1. Start CPT in the CICS region
In the following example, the IPST transaction is used to start the Unicenter SOLVE:CPT product with the T09CONMR configuration file:

```
IPST MR
```

The following message displays at the terminal:

```
T09181I T09TSTRT INITIALIZATION SUCCESSFUL FOR Unicenter SOLVE:CPT 6.1
```

Important! To properly initialize, CPT must first be started in the CICS region before starting the external CPTMRO address space.

2. Start the CPTMRO procedure—Refer to the section “IVP for CPTMRO” in the Administration Guide chapter “Installation Verification Procedure (IVP)” for full details of expected startup messages. In general, the subset of startup messages below indicate a successful initialization.

```
T09MX035I Connection 'CONNECT01' startup complete
T09IL011D Listener 'LISTEN01' listening for connections on port 1450
T09MX035I Listener 'LISTEN01' startup complete
T09MX035I Session 'SESS01' startup complete
T09IC014D Connection 'CONNECT01' Connection manager EXCI request successful.
```

3. To execute the IVP, type or cut and paste the previous syntax format from the previous table at any CICS terminal connected to a CICS region running Unicenter SOLVE:CPT. You should run all four formats of the IVP. The following response to the IVP should appear at the CICS terminal where you executed the transaction:

```
T09699I CPT IVP LOOPBACK TEST WAS SUCCESSFUL!!!
```

If you do not receive the above message then you need to review your installation and initial configuration for completeness and accuracy to instructions, and call support for further guidance.

For more information on the IVP, refer to the “Installation Verification Procedure” chapter in the *Administrator Guide*.

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