

Transaction Processor

Version 4.3.x.x

Quick Start Guide for UNIX/Linux
Revision 1.410

CLEO

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Introduction

Overview

This Quick Start Guide provides first-time installation information for the Transaction Processor (TP) running on the Solaris or Linux operating system. It also includes licensing, initial configuration, and testing information. It is intended to be a starting point for users of the Transaction Processor.

The Transaction Processor is one component of Cleo's *Transaction Development Kit*, a set of tools designed to simplify program access to mainframe and application server data. This kit is composed of:

- *Transaction Designer* (TD) – records screens and creates transactions.
- *Transaction Processor* (TP) – processes the transactions in real time.
- *Transaction Processor Client* (TP Client) – provides the basic API functions.
- A set of *Transaction Processor Administration, Configuration, and Connection Manager* tools (TP Admin) – web based utilities used to set configuration parameters, provide session monitoring, display log messages and statistics for the TP Service and initialize the connection pools for redundant and secure client support.

Other supporting documents include (available on the Cleo Website at:)

<http://www.cleo.com>

Transaction Designer User's Guide

This guide explains how to record screen clips and create transactions.

Transaction Processor Client Quick Start Guide

This guide lists prerequisites and provides an installation procedure for the Transaction Processor Client.

Transaction Processor Administration Guide

This document describes the functions provided by the Transaction Processor Configuration, Administration, and Connection Manager Tools.

Transaction Processor Programmer's Guide

This guide provides information about developing applications that utilize the Transaction Processor.

Installation

Pre-Installation Checklist

Before installing the Transaction Processor, have available the following:

- Transaction Processor Quick Start Guide (this document)
- Cleo's Transaction Processor Installation CD or CPIO image available via download containing the TP service installation files.

Note: CPIO images containing installation files are available for download from the Cleo web site. Please contact technical support at supportEN@cleo.com to request a download link.

To extract the installation files from a CPIO image, perform the following:

- 1) Log in to the target system as *root*
- 2) Create a temporary download directory on the target system
`cd /tmp`
`mkdir cleodl`
- 3) FTP (using binary mode) the platform specific CPIO image provided in the download link to the temporary download directory on the target system.
- 4) Change directory on the target system to the directory from which the installation will be performed:
`cd /tmp`
- 5) Extract the installation files from the platform specific CPIO image:
Linux: `cpio -iduvB < /tmp/cleodl/CleoTPLINUX43010cpio`
Solaris: `cpio -ivBdumc < /tmp/cleodl/CleoTPSOLARIS43010cpio`

The installation files have now been extracted to the /tmp directory from which the installation will subsequently be performed.

Determine what version of Java is installed on your system by typing "**java -version**". If the java command cannot be found, or the version is less than 1.5:

- Issue the following command, logged in as root:
`"find / -name java -print"`
- If no 1.5 or 1.6 versions of java are found, install the java package delivered on the CD.
- Set the PATH environment variable to include the version 1.5 or 1.6 java command.
For example, on Solaris or Linux:
`# export PATH=/usr/jre1.5.0_22/bin:$PATH`

Additional documentation is available on the Installation CD or can be downloaded from the Cleo website at

<http://www.cleo.com>

- QuickStart.pdf - instructions for installation, licensing, and initial setup of the Transaction Processor
- AdminGuide.pdf - configuration and administration guide
- ProgGuide.pdf - programmer's guide
- README.txt - release notes

Hardware Requirements

- Solaris Sparc or Linux server (Pentium P4 2.8 Ghz. or equivalent and higher)
- 4 Gb. RAM (4 Gb. or more of memory is recommended)
- 500 Mb. of disk space (1 Gb. or more of disk space is recommended)
- CD Drive
- Network Card/Modem

Software Requirements

- **Solaris**
Sparc Operating System, version 5.7 or greater
 - **Linux**
Red Hat Enterprise Linux server, version 3.0, 4.0, or 5.0.
 - **Java Virtual Machine:** Version 1.5 of the JVM is required for Transaction Processor version 4.3.x.x. (The most current revision of the 1.5 JVM is recommended. A compatible version is available for installation from the TP Installation CD if needed.)

NOTE: When installing on a Solaris system, kernel tuning is performed in order to provide resources for more than 5 sessions. **As a final step to installation, the Solaris system must be rebooted for the kernel tuning to take effect.** Kernel tuning is not performed on Linux. Thus, rebooting is not required when installing on Linux.

Installation Instructions

The Cleo Transaction Processor can only be installed, if a Unix User ID

cleo

and a Unix Group

cleo

are present on the Linux or Solaris system. And the “cleo” User ID must belong to the “cleo” Group.

If a “cleo” User ID does not already exist, please create a “cleo” User ID using the Unix command:

```
useradd
```

If a “cleo” Group does not already exist, please create a “cleo” Group using the Unix command:

```
groupadd
```

If the “cleo” User ID does not belong to the “cleo” Group, please add the “cleo” User ID to the “cleo” Group, using the Unix command:

```
usermod -G cleo cleo
```

The Cleo Transaction Processor should **ONLY** be activated and managed from the command line, by the “cleo” user, using the commands:

```
tpadmin start
```

```
tpadmin stop
```

```
tpservice start
```

```
tpservice stop
```

```
fomonitor start
```

```
fomonitor stop
```

NOTE ABOUT INTERACTIVE USERS ON SOLARIS:

On Solaris if you start the Cleo TP Admin from an interactive “cleo” user login, then when you exit the Solaris System, the Cleo TP Admin will STOP running.

To avoid this problem, on Solaris Systems **ONLY**, the “tpadmin” command starts the Cleo TP Admin by issuing a “batch” command. That way, when the interactive “cleo” user exits the Solaris system, the Cleo TP Admin will continue to run.

If you do not wish to have the “tpadmin” command on Solaris start the Cleo TP Admin using a batch command, then please use the following command instead:

```
tpadminnobatch
```

The “tpadminnobatch” command acts identically to the “tpadmin” command, except that it does not start the Cleo TP Admin by using a “batch” command. As a result when you exit the Solaris System, after having used “tpadminnobatch start” to start the Cleo TP Admin, the Cleo TP Admin will stop running.

On Solaris, in order for batch jobs to be run by a user, there are certain conditions that must be met. In order to use the “tpadmin” command on Solaris, these conditions must be true for the “cleo” user:

- There is no /usr/lib/cron/at.allow file and there is either an empty /usr/lib/cron/at.deny file, or the /usr/lib/cron/at.deny file does NOT contain the “cleo” user as an entry.
- If there is a /usr/lib/cron/at.allow file, it MUST contain the “cleo” user as an entry.

If either of the conditions above is NOT true, then the “tpadmin” command will fail to be able to start the Cleo TP Admin. Please see the Solaris “man batch” command for a more thorough explanation of the conditions necessary for the “cleo” user to be able to use “batch” commands.

The Cleo Transaction Processor must be installed from the console:

1. Logon as root.
2. Execute the TP service installation script based on the media (CD or CPIO image) available for the installation:

To run the TP service installation script from CD:

- a. Insert the Cleo TP Installation CD into the CD drive.
- b. Based on the platform, change directory (cd) to:
 - /cdrom/cdrom0** if on Solaris
 - /mnt/cdrom** if on Red Hat Linux version 3
 - /media/cdrom** if on Red Hat Linux version 4 or 5
- c. Launch the installer by typing “./cleoinstall.tp”.

To run the TP service installation script contained within a CPIO image:

- a. Extract the installation related files from the downloaded CPIO installer image if they have not yet been extracted as part of the pre-installation activities. (Details can be found in the Pre-Installation Checklist section of this document.)
- b. Change directory (cd) to:
 - /tmp**
 - Linux: `cpio -iduvB < /tmp/cleodl/CleoTPLINUX43010cpio`
 - Solaris: `cpio -ivBdumc < /tmp/cleodl/CleoTPSOLARIS43010cpio`
- c. Launch the installer by typing “./cleoinstall.tp”

3. You will see the Cleo End User License Agreement(EULA) displayed as several messages you will need to respond to with Y, if you agree or N, if you do not agree. Responding with N aborts the install process.
4. You will be asked to specify the Full Path to Java, as follows:
 - Please input the Full Path to the HOME DIRECTORY of your java version 1.5/1.6
 - FOR EXAMPLE: `/usr/jre1.5.0_15`

The install will verify that the Full Path to Java is input correctly and will allow for modification to the Full Path, if the correct Java version is not found.

5. When the installation completes you should see the message:
LINUX: CLEO INSTALL of LINUX CLEO TP COMPLETED
SOLARIS: CLEO INSTALL of SOLARIS CLEO TP COMPLETED
6. An installation log is kept in the file:
/tmp/CLEOTPinstall.log

NOTE:

Installation of the Cleo TP results in the following file being installed
/etc/init.d/CleoTPstart

The “CleoTPstart” file will be run when the Linux or Solaris system is rebooted.
The “CleoTPstart” file runs the following commands, by su’ing to the “cleo” user when the Linux or Solaris system is rebooted.

```
/usr/bin/su cleo -c “/usr/bin/tpadmin start”  
/usr/bin/su cleo -c “/usr/bin/tpservice start”
```

If you do not want the Cleo TP Admin and TP Service started automatically when the Linux or Solaris system is rebooted, please remove the /etc/init.d/CleoTPstart file.

If you want to automatically have the Cleo TP Admin or TP Service started, but not both, when the Linux or Solaris system is rebooted, please comment out the appropriate line in the /etc/init.d/CleoTPstart file.

The /etc/init.d/CleoTPstart file also has a commented out line which can be used to automatically invoke the Fail Over Monitor Service when the Solaris or Linux system is rebooted

```
#/usr/bin/su cleo -c “/usr/bin/fomonitor start”
```

If you want to automatically have the Cleo Fail Over Monitor Service started when the Unix system reboots, please remove the “#” character at the start of the line.

You would only want to use the Cleo Fail Over Monitor if you were going to define Host Session POOLS using the TP Connection Manager.

The TP Client Component

The Transaction Processor Client is made up of the set of connectors or interfaces that can be used to access the Transaction Processor through any application running locally or remotely to the TP.

The provided connectors are:

- Java
- .NET (for Windows only)
- VoiceXML
- XML
- Web Service

The Transaction Processor Client is installed automatically with the Transaction Processor Service. A separate client installer is also available if the TP Client needs to be installed on a remote system. (Consult the TP Client Quick Start Guide for detailed installation, setup, and testing instructions.)

Licensing and Configuration

Obtaining a License

To obtain a license, contact Cleo at supportEN@cleo.com. A form will be sent for you to fill out. The Host ID name of your system (see below) and Serial Number (located on the CD case) must be provided to obtain a license. Cleo will send you the license file that you'll need to install.

NOTE: *The Host ID is a unique alphanumeric string that identifies a particular computer. The Host ID is used to generate a license key. The license key that is generated is therefore bound to a single computer and cannot be transferred to any other computer.*

To determine the Host ID name of your system issue the following command:
“*uname -n*”.

Accessing the TP Web Pages

To access either the TP Administration or Configuration Page, the TP Selection Page must be brought up using your browser. To access the Selection Page, run the Transaction Processor Web Admin from a web browser:

1. Start the TP Admin web server by issuing the following command from the “cleo” user:
“**tpadmin start**”.
2. Enter the following URL into the address line of your browser: “http://<ipaddress>:38080” where <ipaddress> is the host name or IP address of the system where the Transaction Processor is installed.
3. You will be directed to the TP Login Page

4. The default User Name is “admin” and the default Password is “admin”
5. Click the “Login” button and you will be redirected to a page that requires you to change the Password.

6. To change the password type a new password into the “New Password” and “Repeat Password” fields and then click “Change”.

7. You will then be taken to the Selection Page

WARNING: If you forget your password, you may be required to reinstall the Transaction Processor.



Figure 1: TP Web Selection Page

Missing or Invalid License

Each session (i.e., communication channel with the host application) will require a license. In order to configure sessions for use by the Transaction Processor, you must obtain the appropriate license for the number of sessions you plan to use.

If a license has not been installed, or the license has expired or is invalid (due to an improper license key or Host ID), the following screen will display when accessing the Transaction Processor Selection Page:



Figure 2: Configuration Page (invalid license)

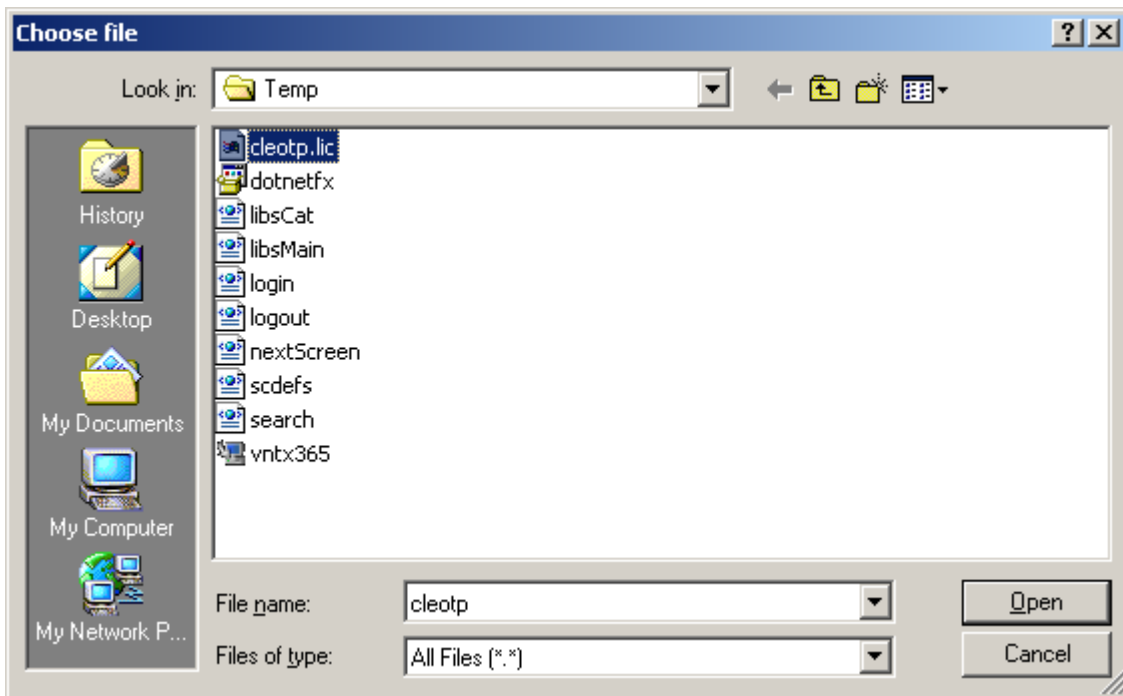
where,

- ***Host ID*** is a unique descriptor identifying the computer running the Transaction Processor
- ***Serial Number*** is a unique 6-digit number that is assigned to the Transaction Processor software by Cleo.
- ***Licensed Sessions*** is the number of configurable sessions that are allowed by the license
- ***Expiration Date*** provides the date when the license expires and the Transaction Processor will be disabled. If this field displays “PERMANENT”, then the license does not have an expiration date.

Install the License

After you receive the license file from Cleo, perform the following:

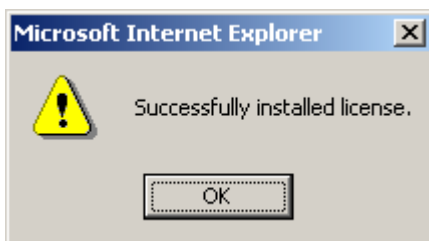
1. Move the license file as obtained from a Cleo representative (see Obtaining a License) to any location on your PC. (For example: C:\Temp\cleotp.lic)
2. Bring up the TP Selection Web Page as described in Accessing the TP Web Pages
3. Click **Browse** to select the location on your PC where the license file was previously copied, using the file chooser shown below:



4. Click **Open**, and the following should be displayed:

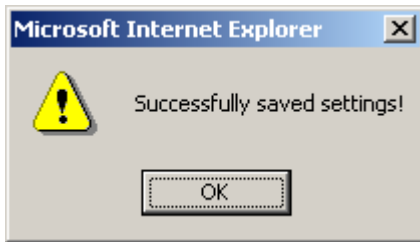
License File:

5. Click **Install**. If the installation of the license was successful, the following dialog will appear.



6. Click **OK**.

- The installed settings will then be saved. From the new dialog that appears, click **OK**.



- You should now be at the Configuration page. Verify that the number of sessions you have licensed are correctly displayed.



- In order to run the "sample" application, check to see that the "sample" transaction set and "sample" host are selected and that "Enabled" is checked for each session to be tested.

Starting the Service and Testing the Install

Start the Service

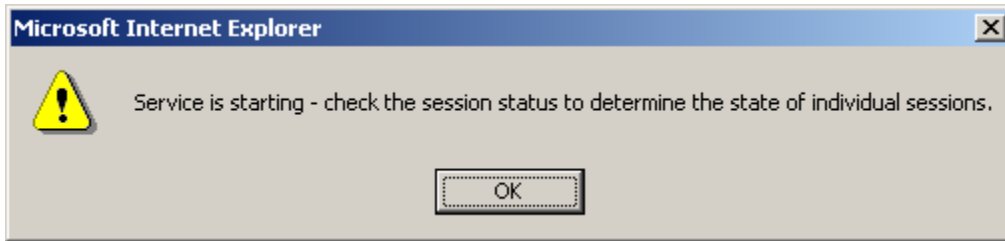
1. Access the Administration Page by accessing the TP Selection Page. The Selection Page can be accessed from the Configuration Page by clicking **Return To Cleo Component Selection**.
2. Select Administration from the drop-down list that is displayed on the Selection Page and click **GO**.



3. The Administration Page should appear. If not, check that the Transaction Processor is properly licensed and that the Transaction Processor Web Admin server is running (see Accessing the TP Web Pages).



4. Start the Transaction Processor Service by clicking the **Perform Function** button with function set to **Start Service**. The following dialog will appear. Click **OK**.



5. The current session status will then be displayed under the View Session Status header. Refresh the display by clicking the **Refresh Status** button until the session status transitions to **PARKED**. (Note that the display can automatically be refreshed by specifying the refresh interval and enabling the automatic refresh by checking the check box immediately to the right of the **Refresh Status** button.)

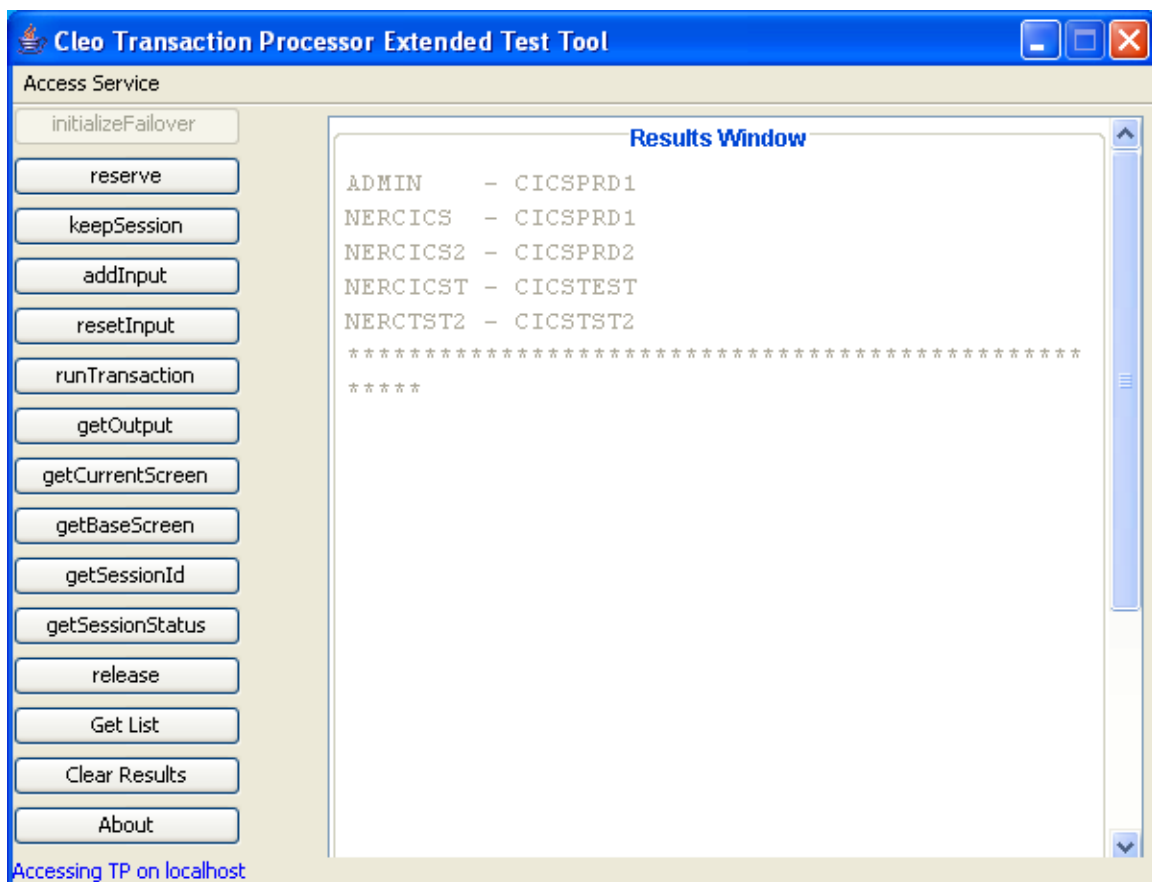
View Session Status					
Refresh Status <input type="checkbox"/> every <input type="text" value="30"/> seconds.					
Session Range: <input type="text" value="1-10"/> ▼					
LU	Transaction Set	Host Server	Status	Last Transaction	Since
1	sample	sample-TN	PARKED	login	05/04/05 12:34:17:769

Using the Java Tester

A Java tester is provided with the Transaction Processor, serving as an example of an application using the Java connector. The tester tests the basic functions of the Transaction Processor by running a 3270 transaction to a public host. For the scope of this document, the tester will be used to ensure that all components are installed properly.

To test the install:

1. Verify that the Transaction Processor has been started using the web-based administration page. Verify that the enabled sessions assigned to the “sample” transaction set have a **PARKED** status.
2. Launch the tester by typing “tptester GUI” in an xterm window.
3. Click the **Get List** button found on the lower left portion of the tester window.
4. Enter a 4-6 character keyword(e.g. cleo). The keyword being sent to the host will result in a list of available Mainframe Systems being sent from the host.
5. Click **OK**.
6. The results for the get list will display in the **Results Window**.
7. Click **Refresh Status** on the Cleo Admin page to see changes as a result of running **Get List**.



The tester is very useful for validating that host transactions created using the Transaction Designer work properly before being put into production.

To see logs generated when running the tester, use an editor to view clientlog.log file existing in the default location of /opt/cleotp/tomcat/logs. The location of the clientlog.log file can be changed by modifying the client logging configuration file

/opt/cleotp/tomcat/bin/log4j.properties

See the Programmer's Guide for more information on TP client logging and settings in the client logging configuration file /opt/cleotp/tomcat/bin/log4j.properties.

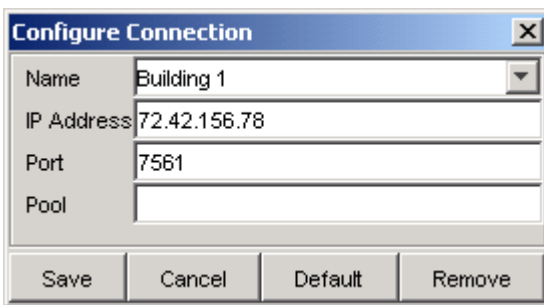
Test a Remote Installation

The following instructions require that the Transaction Processor be installed on both the local and the remote systems.

The Java Tester that is provided with the Transaction Processor has the ability to test a TP installation on a remote system.

To test a remote install using the Java Tester:

1. Click on **Access Service** from the menu bar and click on **Configure Connection.** This will open the **Configure Connection** window.



2. Enter a name for this connection as you may configure multiple connections to test installations on different machines.
3. Enter in the corresponding IP Address and Port Number (by default, the Transaction Processor uses Port 7561).
4. Leave the **Pool** field blank. See the Administration Guide for information on using the Connection Manager to set up a pool to implement dynamic failover.
5. Click on **Save** and you will see a dialog box telling you that the settings were saved successfully. Notice that the text in blue in the lower left hand corner of the Java Tester will reflect the new IP Address you just configured.
6. Follow the instructions from step 3 of Error! Reference source not found..

NOTE: You may remove any of your configured connections by clicking the **Remove** button. In addition, you can reset your connection to the default settings by clicking on the **Default** button.

Removal

To remove the Transaction Processor:

1. Log on using the “cleo” user.
2. Stop the tomcat web server by issuing the following command from the “cleo” user:
tpadmin stop
3. Stop the Transaction Processor service by typing *tpservice stop*.
4. Either “su” to the “root” user, or log out and then log on using the “root” user.
5. Move to a directory NOT under the Cleo Transaction Processor Directory structure. For example:
`cd /tmp`
6. Type the command */opt/cleotp/remove.tp*.
7. Follow the instructions displayed on the screen.

NOTE:

You will be given the choice of either doing a
PARTIAL REMOVAL

Or a

TOTAL/FULL REMOVAL

PARTIAL REMOVAL

This is the option to use if you have already been using the Cleo TP and have Transactions in place created using the Cleo TD and have created Mainframe and TP configuration files.

A PARTIAL REMOVAL will keep all of your current transactions, configuration files, licensing, and kernel tuning in place.

A PARTIAL REMOVAL is useful for upgrading to a new Cleo TP Version.

TOTAL/FULL REMOVAL

This is the option to use to completely remove any presence of the Cleo TP Software and files created by the Cleo TP.

A TOTAL/FULL REMOVAL also restores the Solaris Kernel Tuning Parameters, by removing any additions made to these Kernel Tuning Parameters when the Cleo TP was originally installed. By doing so, Kernel Tuning Parameters are adjusted down to what they would be without the Cleo TP installed. Even if the Kernel Tuning Parameters had been increased after the Cleo TP was installed.

After doing a TOTAL/FULL REMOVAL, a Solaris Unix System should be re booted.