TETware *professional*

Installation Guide

for TETware *professional* 1.4

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THE *Open* GROUP

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1. Introduction

1.1 Preface

This is the TETware *professional* Installation Guide.

TETware *professional* is a Test Execution Management System that takes care of the administration, reporting, and sequencing of the tests providing a single common user interface for all of the tests that you.

TETware *professional* has been tested and used on UNIX, Linux and Windows operating systems. It includes all of the functionality of TETware together with a number of new features.

Throughout this document, the Windows NT, 2000 and 9x operating systems are referred to collectively as **Win32** systems. The individual names are only used when it is necessary to distinguish between them.

1.2 Audience

This document is intended to be read by systems administrators, software testing engineers and any one else who will install TETware *professional* on their computer systems.

1.3 Conventions Used in this Guide

The following typographic conventions are used throughout this guide:

- `Courier font` is used for function and program names, literals and file names. Examples and computer-generated output are also presented in this font.

- The names of variables are presented in *italic font*. You should substitute the variable's value when typing a command that contains a word in this font.

- **Bold font** is used for headings and for emphasis.

1.4 Related Documents

Please refer to the following documents for additional information about TETware *professional*:

TETware *professional* Readme File
TETware *professional* User Guide
TETware *professional* Help Pages
TETware *professional* Demonstration Guide

Please refer to the following documents for additional information about TETware, the command-line core of TETware *professional*.

TETware User Guide
TETware Installation Guide for UNIX Operating Systems

1.5 Problem Reporting

If you have subscribed to TETware *professional* support and you encounter a problem while installing and using TETware *professional*, you can send a support request by electronic mail using the dedicated email address that is provided. Evaluators should email tetware_manager@opengroup.org

All Problem Reports are welcome and actively encouraged. The more problems that are found and fixed the better the product will be. Please submit all bugs and queries found. Also, please submit requests for features and upgrades.

2. Installing TETware *professional*

IMPORTANT: TETware *professional* requires `Java 2` (also known as `JDK 1.2`) or later.

2.1 Installation on Windows Systems

Note: Windows users MUST set the path to their JDK in their `AUTOEXEC.BAT` file

TETware *professional* can be installed on 32-bit Windows platforms using either a self-extracting installer or a zip file.

To install TETware *professional* you must select the files that meet your requirements for both the means of installation and the type of testing that you want to carry out, for evaluators these are:

Means of Installation	***Type of Testing***	
	Distributed Testing	**Local Testing**
Installer	`tetware-professional-dist-eval.exe`	`tetware-professional-lite-eval.exe`
Zip File	`tetware_professional_eval_nt40_dist.zip`	`tetware_professional_eval_nt40_lite.zip`

Table 1: Means of Installation

To invoke the Installer run the executable.

To install using the zip-file extract the zip file and then create a shortcut to `TETware_professional.jar`

Note: To successfully install TETware *professional* you should NOT have spaces in the directory path of TET_ROOT. Therefore TETware *professional* is installed by default into `C:` not `C:\Program Files`.

2.2 Installing on UNIX and Linux Systems

If you are working in a UNIX or Linux environment, you install TETware *professional* from a tar file. In this case, you need to select the tar file appropriate for the *Type of Testing* (Distributed or Local) and the *Operating System* that you wish to use for you evaluation. For evaluators, the available tar files are:

Operating System	***Type of Testing***	
	Distributed Testing	**Local Testing**
AIX	`tetware_professional_eval_aix34_dist.tar.z`	`tetware_professional_eval_aix34_lite.tar.z`
HP-UX	`tetware_professional_eval_hpux11_dist.tar.z`	`tetware_professional_eval_hpux11_lite.tar.z`
Linux	`tetware_professional_eval_linux2_dist.tar.gz`	`tetware_professional_eval_linux2_lite.tar.gz`
Solaris 2.6	`tetware_professional_eval_solaris26_dist.tar.z`	`tetware_professional_eval_solaris26_lite.tar.z`
Solaris 7	`tetware_professional_eval_solaris7_dist.tar.z`	`tetware_professional_eval_solaris7_lite.tar.z`

Table 2: Operating Systems and Types of Testing

After downloading the appropriate tar file(s) please type:

`tar xvf <`*`tar file`*`>.tar` to install TETware *professional*.

3 After Installing TETware *professional*

3.1 De-installation on Windows Systems

To remove TETware *professional* files from your machine:

1. Click on `Start` on your Windows Task Bar. Select Settings, then `Control Panel`.
2. Double Click on the `Add/Remove` Programs Icon.
3. Click on TETware *professional* in the list of programs and then select the `Add/Remove` Button.
4. Follow the on-screen instructions that will enable you to remove TETware *professional* from your machine.

3.2 Configuring the Database Connection

Before you can extract journal file parameters to a database, the following procedures must be carried out to establish a connection with the database. It should only be necessary to carry this function out once for each machine on which TETware *professional* is installed.

3.2.1 Setup Function (Admin) (32-bit Windows Platform)

1. Click the `Start` button on your Windows Task Bar (Windows 9x and NT users). Then select `Settings`, then `Control Panel`. (If you are using Windows 2000 click on `Administrative Tools`). Double click on the `ODBC Data Source (32-bit)` icon.
2. Select the `System DSN` tab, and then click on the `Add` button.
3. Choose the driver for your data source (*e.g.* Microsoft Access Database Driver). Then click on `Finish`.

4. The ODBC Microsoft Access Setup window will open. Type in the Data Source Name (*e.g*. TETbase) then type its description (*e.g*. Microsoft Access Driver [*.mdb]). Then Click on either `Select` or `Create`.
5. If you clicked `Select`, a dialog box captioned '`Select Database`' will be displayed, then you will have to look for your file in the drive and the directory where you already have your Database set, then click on `OK`.
6. If you picked `Create`, a dialog box captioned '`New Database`' then chooses the drive and directory where you have your Database file. (We suggest you use the same directory where you have your TETware *professional* program installed, *i.e*. your `TET_ROOT` directory). Then give the file a name and click on `OK`.
7. This will return you to the Setup Screen. Now click on `OK`.
8. An ODBC Microsoft Access message box will open, with a message "`Database` *Z:\ddd\eee.mbd* was successfully created" (where '*Z*' is the Drive letter, '*ddd*' is the directory, and *eee.mbd* is the name of the Database file). Then click on `OK`.
9. Now close the entire `ODBC Setup` windows by clicking on `OK` or `Exit` all the way through.

3.2.2 Setup Function (Admin) (UNIX® and Linux® Operating Systems)

Unlike the Windows platforms, there is no need to go through any Database set up on either UNIX or Linux Operating Systems. The user will perform the only Database setup that needs to be carried out while configuring a `Test Run`, (please refer to Section 7.2 of the TETware *professional* User Guide).

3.3 Launching TETware *professional*

Note: Before you can run TETware *professional* you must have installed the `license_file` provided in your `TET_ROOT` directory. That is the same directory that the `TETware_professional.jar` file is installed.

To launch TETware *professional* go to the directory that contains `TETware_professional.jar` file and use the command (note this is case sensitive)

```
java -jar TETware_professional.jar
```

Windows users may double click on the TET icon installed on their desktop, or on `TETware_professional.jar` file from within Windows Explorer. (There is a TET icon in the \images directory that may be used for a desktop shortcut).

3.4 Help

TETware *professional* Help Files can be viewed from within TETware *professional* or, outside TETware *professional*, accessed via the TETworks website:

http://tetworks.opengroup.org/Help/Index.htm

3.5 Support

If you have subscribed to TETware *professional* support and you encounter a problem while installing and using TETware *professional*, you can send a support request by electronic mail using the dedicated email address that is provided. Evaluators should email tetware_manager@opengroup.org .

4 Configuring the Environment

If you are planning to run Local tests using TETware *professional* Lite you should refer to Sections 3.1, 3.2 and 3.3 below. If you are planning to run Remote or Distributed tests using Distributed TETware *professional* then you should refer to all Sections in this Chapter.

4.1 Configuring the Windows Environment

Make sure that the setting of your `PATH` environment variable includes `tet-root\bin`.

Set your `TET_ROOT` environment variable to refer to `tet-root`. To do this, open up your `AUTOEXEC.BAT` and include a line as the example below:

```
PATH = C\tet-root\bin
```

4.2 Configuring the UNIX or Linux Environment

Make sure that the setting of your `PATH` environment variable includes `tet-root/bin`.

Set your `TET_ROOT` environment variable to refer to `tet-root`, Please open up your .bat or .profile file and include a line as the example below:

```
PATH = /tet-root/bin
```

4.3 Creating the `/tmp` directory

You need to specify a temporary directory that should be used for files generated while executing a test suite either on the Local system or on the Remote system(s).

4.4 Configuring Distributed TETware *professional*

If you are planning to run Remote or Distributed tests, you must have installed Distributed TETware *professional*, you now must configure **each system** that will participate in your tests. You may need to have administrative privilege in order to perform some of the operations described here.

Binary distributions of Distributed TETware *professional* for UNIX systems that normally built to use the socket network interface and include the **inetd** version of `tccd`[1] (Please see Section 4.4 of the TETware Installation Guide for UNIX Operating Systems).

The following subsections describe entries that you must make in system databases on each system.

4.4.1 Services database entry

You must add an entry to the **services** database[2] on each system where Distributed TETware *professional* is installed.

When `tccd` is built to use the socket network interface, it listens for requests on the known Internet TCP port number specified for the **tcc** service in the **services** database. This port number must be the same on all systems that are to participate in a set of remote or distributed tests. The **tcc** port number should be that of a non-privileged port (i.e., 1024 or greater).

For example, to define the well-known port as TCP port 1234, you might add the following line to the **services** database on each Distributed TETware *professional* system:

```
tcc 1234/tcp
```

[1] This is the Distributed Test Case Controller daemon. It is used in executing various functions on the Local and Remote systems that are participating in Remote and Distributed test cases.

[2] This is a file that contains Internet TCP port numbers, TETware *professional* listens to requests from this port. It usually resides in the file `/etc/services` (On UNIX) and in the file `winnt35/system32/drivers/etc/services` (on Windows NT)

4.4.2 The System equivalence file

If Distributed TETware *professional* has been built to use the socket network interface, you must create a file called `systems.equiv`[3] which specifies the names of systems from which `tccd` may accept connection requests. This file resides in the home directory of the user `tet` (or in the home directory of the user that you will specify when you decide to run `tccd.`

You should create an entry in this file for each system that is to be permitted to send requests to `tccd` on this system. `tccd` will only process requests from another system if an entry for that system appears in the `systems.equiv` file.

An example `systems.equiv` file is included in the TETware *professional* distribution. You may copy this file to the TETware *professional* user's home directory and edit it as required.

4.4.3 Makefiles

You must check the test case `makefiles`[4] **on each system** to ensure that they will build the test cases correctly.

You may need to add the names of libraries to the `SYSLIBS` variable in order to resolve external function names used in the TETware *professional* Test Case Manager and API. For example, if you have built TETware *professional* to use the socket network interface, you may need to append `–lsocket` and `–lnsl` to this variable on systems running on UNIX.

If you are running either part of the distributed demonstration on a `Windows 2000 or NT system`, you will need to customize the file name suffix variables in the `makefiles` as well as the `SYSLIBS` variable (please open the `makefile` to see explanation of what to change).

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[3] This is the file which specifies the names of systems from which `tccd` may accept connection requests. The file resides in the directory specified by the `HOME` environment variable.

[4] This file contain system-specific definitions.

4.4.4 Password database entry (UNIX only)

When the Test Case Controller daemon `tccd` starts up on a UNIX system, it attempts to change its user and group `IDs` to those specified for the user `tet` in the system password database. In addition, `tccd` changes directory to the home directory specified for the user `tet`. You should create a home directory for the user `tet` and add a suitable entry to the password database on each system. The user and group IDs allocated to the user `tet` need not imply any special privilege

4.4.5 Starting `tccd`

You should make arrangements for `tccd` to be started on each participating machine where Distributed TETware *professional* is installed.

Although it is possible for some of the versions of `tccd` to be started interactively by users, it is recommended that you arrange for `tccd` to be started automatically on each TETware *professional* system.

There are different methods of starting `tccd`. For each machine on which you want `tccd` to be started, you should perform the instructions in only **one** of the sections below depending on which version of `tccd` has been built. (All the binary distribution for UNIX system normally include the **INETD** version of `tccd`).

Additional command-line options are required by `tccd` when Distributed TETware *professional* is built to use the XTI network interface. (Further information about `tccd` is presented in Appendix J of the TETware User Guide).

4.4.5.1 The `tccd` bootstrap program – `tccdstart (Win32)`

On Win32 systems, `tccd` is started on demand by a bootstrap program called `tccdstart` which operates in a way similar to `inetd` on a UNIX system. To arrange for `tccd` to start on demand, you should open a new Korn shell window and type

```
tccdstart.exe
```

at the command prompt. If all is well you will see a startup message printed on the standard output.

4.4.5.2 Starting `in.tccd` (the INETD version of `tccd`) (UNIX)

The name of the **inetd** version of `tccd` is `in.tccd`.

If you are using `in.tccd`, you should add the following line to the file `/etc/inetd.conf`:[5]

```
tcc stream tcp nowait tet tet-root/bin/in.tccd in.tccd [options ...]
```

where *options* are any command-line arguments that you want to pass to `in.tccd`.[6] (Information about command-line arguments is presented in the `tccd` manual page near the back of the TETware User Guide.)

Then, use `ps` to determine the process ID of `inetd` and type

```
kill -1 inetd-pid
```

where *inetd-pid* is the process ID of `inetd`. This will cause `inetd` to take account of the new entry in `/etc/inetd.conf` and start an instance of `in.tccd` each time a TETware *professional* process connects to the well-known **tcc** port.

Since `in.tccd` is run on demand by `inetd`, no START message is printed to the file `/tmp/tccdlog` and it is not possible to use `ps` to check whether or not `in.tccd` is running until another process connects to the well-known **tcc** port. If you have difficulties in getting `in.tccd` to start when you attempt to run a remote or distributed test case, it might be helpful to try and run one of the other versions of `tccd` first in order to isolate the cause of the problem.

4.4.5.3 Starting the INITTAB version of `tccd` (UNIX)

If you are using the **inittab** version of `tccd`, you should add the following line to the file

---

[5] . Note that older versions of `inetd` require that this line should appear **before** lines describing `inetd` internal services.

[6] . Note that on some systems the number of command-line arguments that `inetd` will pass to executed commands is limited. If you want to pass more arguments to `in.tccd` than are supported by `inetd` on your system, you will need to provide a shellscript wrapper for `in.tccd` and specify that in the `/etc/inetd.conf` file instead.

`/etc/inittab`:[7]

```
tet1:3:respawn:tet-root/bin/tccd
```

Then, type

```
init q
```

to make `init` take account of the new `/etc/inittab` entry and start `tccd`. When you have done this, check that `tccd` has printed a time-stamped START message to the file `/tmp/tccdlog`. Then, use `ps` to check that an instance of `tccd` is indeed running. If `tccd` failed to start correctly, you should check the file `/tmp/tccdlog` for diagnostic messages indicating the reason why `tccd` was unable to start execution.

4.4.5.4 Starting the RC version of `tccd` (UNIX)

If you are using the **rc** version of `tccd`, you should add the following lines at a suitable place in one of the `/etc/rc` files:

```
if test -x tet-root/bin/tccd
then
        tet-root/bin/tccd && echo tccd started
```

Once this is done, `tccd` will be started each time the system enters multi-user mode. It will be necessary for you to reboot the system in order to start `tccd`. When you reboot the system, look for the message

```
tccd started
```

on the system console when the system comes up multi-user, and check that `tccd` has printed a time-stamped START message to the file `/tmp/tccdlog`. Then, use `ps` to ensure that an instance of `tccd` is indeed running. If `tccd` failed to start correctly, you should check the file `/tmp/tccdlog` for diagnostic messages indicating the reason why `tccd` was unable to start execution.

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[7] Note that this example assumes that your system starts multi-user operation with network services enabled when `init` enters run level 3. If your system uses a different run level (or levels) for this purpose, you must replace the `3` in this example with the correct value(s).

4.4.5.5 Using `tccd` with XTI (UNIX)

The information in this section applies to both the **rc** and **inittab** versions of `tccd` when Distributed TETware *professional* is built to use the XTI network interface. (An **inetd** version of `tccd` cannot be built when the XTI network interface is used.)

When Distributed TETware is built to use the XTI network interface, you must specify additional command-line options when you start `tccd`.

The following options should appear on the `tccd` command line:

`-M` *mode* Specifies which transport provider to use.

`-P` *tpi* Specifies the name of the transport provider identifier to use in XTI function calls. This is usually the name of a streams special file; for example `/dev/tcp`.

Appendix A - TETware *professional* License

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