Installing the Master for Unix

You can run TES on Unix by installing the Unix versions of the master and agent software. The current Unix version of the TES master only works with an Oracle database.

There are two methods to install the Unix version of the TES master:

- Installation Program (see "Installing the Unix Master".)

- Manually - From the command line as described in "Installing the Master for Unix from the Command Line". Before installing the Unix master from the command line, you must manually create the Oracle schema.

The master is installed with default parameters that provide most users with optimum performance, but individual circumstances may require reconfiguring the master parameters after installation. These parameters are managed in a *master.props* file residing on the master machine. Refer to "Configuring the Master" for information on modifying the main master properties.

Installation Prerequisites

The following requirements must be met prior to installation of the Unix master:

- One of the following Unix operating systems and JVM:
  - Solaris 2.9 or 2.10 (Sparc) with Sun JVM 1.7
  - Hewlett-Packard 11i(RISC) with Sun JVM 1.7 (must be using the most current patches) Hewlett-Packard 11i v1 or v2 (Itanium) with Sun JVM 1.7 (must be using the most current patches)
  - AIX 5.3 TL 5,6,9,10,6.1 with IBM JVM 1.7.
  - Linux Redhat Enterprise Server v4,v5 Intel (x86) kernel 2.2.14+– Sun JVM 1.7
  - Linux SUSE Enterprise Server v10,v11 Intel (x86) kernel 2.2.14+–Sun JVM 1.7
  - Java 1.7

- A user account created to own, control and install the Unix master files under. This user does not have to be root although whoever creates the user must be root.

- 300 MB of disk space for the product and its logs

- Installation from an X Windows terminal, either local or remote

- Master machine requires at least 2 Gig of RAM (The use of any TES adapters requires an additional 1 GB.) and dual 500 MHz processors dedicated to TES needs

- Oracle 10g or 11i database instance already installed and running

- Create a 'tidal' user on the unix box for use when installing the master.

- You should have your DBA available during installation to provide database configuration information.

- Apply all patches supplied in the latest hotfix for TES 6.2.

Note   Only one master can be installed on a machine. TES cannot operate correctly if two masters are installed on the same machine.

Installing the Unix Master

To install the Unix master:

Step 1   Copy *install.bin* to the target machine.

Step 2   Change the permissions on the copied *install.bin* file to make the file executable by entering:

chmod 755 install.bin

Step 3   After copying the file to the directory, begin the installation program by entering:

sh ./install.bin

When the installation program starts, the installation splash screen displays, and the **Introduction** panel follows.

Step 4   After reading the introductory text that explains how to cancel the installation or modify a previous entry on a previous screen, click **Next**.

Step 5   On the Choose Installation Folder panel, enter the directory path to the location where you wish to install the master files or click **Choose** to browse through the directory tree to the desired directory.

Step 6   Click **Next**. The Select Appropriate Master panel displays.

Note   The master machines, both primary and backup, must have mirror configurations, meaning that both machines must use the same version of operating system and JVM for fault tolerance to operate correctly.

Step 7   Select whether you are installing a primary or backup master.

The only instance you would select the **Backup** option is if you are installing fault tolerance, which requires a special license. If you are installing fault tolerance, install the primary master before you install the backup master.

Step 8   Click **Next**. The Select Admiral Database Creation Option panel displays.

Step 9   Select **Automatic** or **Manual**.

TES requires its own database to store job information. The installation program will create the database automatically unless you select the **Manual** option. The automatic database creation process creates a schema called 'tidal' and three tablespaces:

- ADMIRAL_DATA

- ADMIRAL_INDEX

- ADMIRAL_TEMP

If the schema name or any of the names of the tablespaces is used already, the installation will fail.

Step 10 Click **Next**. The Enter DBA UserName and Password dialog box displays.

TES must be able to access the Oracle database. You must provide the user name and password required to access the database. Your DBA can provide this information. The DBA user name is usually the 'system' user. The specified database user will create the 'tidal' schema and its three tablespaces.

Step 11 Click **Next**. The JDBC Driver Information panel displays.

Step 12 Provide the following information so the Unix master can connect to the database:

- **Database Hostname**—Name of the computer that hosts the database

> **Note** The master should not be installed on hosts with underscores in their names or the JMS connections will fail between components.

- **Port Number**—Port number to connect to the database
- **SID**—Name of the Oracle database instance

> **Note** The SID is case-sensitive.

Step 13 Click **Next**. The Test JDBC Connection panel displays.

Step 14 Click **Test JDBC Connection** to verify that the information configuring the database connection is correct. The installation program must be able to connect to the database before the installation can continue.

> **Note** If the connection to the database cannot be established, an error message displays explaining what needs to be fixed. If the database cannot be accessed you must resolve the issue before proceeding with the installation SID is case-sensitive.

When the program accesses the database, a "Connection Successful" message displays.

Step 15 Click **Next**. The Admiral Tablespace Installation panel displays.

Step 16 Specify the location for the Oracle tablespace directories to be created.

- To use any location other than the default location, enter the directory paths to the ADMIRAL_DATA, ADMIRAL_INDEX and ADMIRAL_TEMP tablespaces. Do not change the actual datafile names. Change only the directory paths.
- If your database is on a Windows platform, be sure to use Windows pathname syntax (for example, *C:\Program Files\Microsoft SQL Server\MSSQL\Data*).
- If your database is on the Unix platform, use the proper Unix directory syntax (for example, */opt/oracle/oradata/Admiral/ADMIRAL_DATA*).

Step 17 Click **Next**. The Master Host Name panel displays.

Step 18 Enter the hostname (or machine name) of the machine that you are installing the Unix master on. Do not use the domain name.

Step 19 Click **Next**. The SNMP Information panel displays.

Step 20 Enter the name of the SNMP server machine.

If you want to use SNMP to send traps in TES, you must tell the Unix master how to connect to the SNMP server.

Step 21 Enter the port number of the SNMP server machine. The default port number is **162**. This information can be changed later if necessary.

Step 22 Click **Next** to continue the installation or to skip this step if you are not using SNMP traps. The TES SuperUser panel displays.

Figure 3-1 **TES SUPERUSER panel**
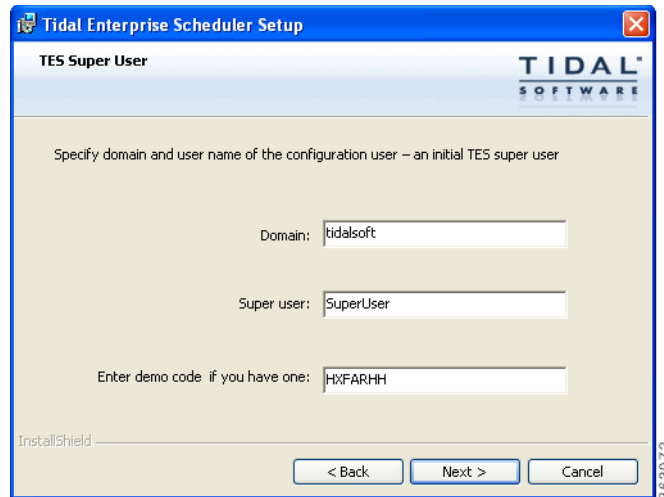
Step 23 Enter the domain name of the initial TES configuration Super User.

Step 24 Enter the name of the initial TES configuration Super User.

Step 25 If you have a Demo license, enter the license number, then click **Next**. The Pre-Installation Summary panel displays.

This screen summarizes the information entered during the installation procedure.

Step 26 Review the information to ensure it is correct.

Step 27 If any information is incorrect, retrace your steps and correct the information by clicking **Previous** until you reach the desired screen.

-or-

If the information is correct, click **Install** to start the installation of the Unix master files.

After the installation process completes, a screen provides a database status report. This report lists the various steps during the creation of the database and if the step was successful.

Step 28 Review the database report for any error notices.

Step 29 If the database was created without any errors, click **Next**.

-or-

If the report displays any errors during database creation, note the errors. You can correct the errors later by manually creating the database. Click **Next**.

Once installation is complete, the Installation Complete panel displays.

Step 30 Click **Done** to exit the installer.

Verifying Successful Installation

You should verify that the installation program installed all of the required files.

Verify that all of master files were installed by going to the directory location that you designated during installation and listing the directory contents with the following command:

ls -lF

The seven main file directories (not counting the *UninstallerData* directory) are listed at the top with the contents of the *bin*, *lib* and *config* directories also displayed.

Installing the Master for Unix from the Command Line

The Unix master can be installed using the installer program or by installing it from the command line.

To install from the command line:

Step 1   Copy *install.bin* to the target machine.

Step 2   Change the permissions on the *install.bin* file in the directory to make the file executable:

chmod 755 install.bin

Step 3   Open a command prompt window and enter:

 # sh ./install.bin -i console

Step 4   Press **Enter**. The following screen displays as the installation program begins.

Figure 3-2   Launching Installer Screen

```
Launching installer...

Preparing CONSOLE Mode Installation...

===========================================================================
ClientManager                      (created with InstallAnywhere by Macrovision)
---------------------------------------------------------------------------
```

The initial installation screen is followed with the Introduction screen that provides instruction for proceeding with the installation program.

Figure 3-3   Introduction Screen

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

InstallAnywhere will guide you through the installation of ClientManager.

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

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

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

PRESS <ENTER> TO CONTINUE:

===========================================================================
```

Step 5   Press **Enter**. The Choose Install Folder screen displays.

Step 6   Enter the directory path where the master files should be installed. It is recommended that you use the default directory path when installing.

Step 7   Press **Enter**. The Select Master Type screen displays.

Figure 3-4   Select Master Type Screen

Step 8   Select whether you are installing a primary or backup master.

Select the **Primary** option by entering **1** at the prompt.

-or-

Select the **Backup** option by entering 2 at the prompt if you are installing fault tolerance, which requires a special license. (If you are using fault tolerance, be sure to install the primary master before you install the backup master. Refer to the *Cisco Tidal Enterprise Scheduler Installation Guide* for more information on installing fault tolerance.)

Step 9   Press **Enter**. The JDBC Driver screen displays.

Step 10   Supply the following information so the Unix master can connect to the database:

- Database HostName – Enter the hostname of the database server.
- Port – Enter the port number of the JDBC driver. The default port is 1433.
- SID – Enter the Oracle System ID (Oracle only).

Step 11   Press **Enter**. The Master Hostname screen displays.

Figure 3-5   Master Hostname Screen

Step 12   Type the name of the machine where you are installing the master.

> **Note**   Do not include the domain name. If you are installing fault tolerance, this screen does not display when installing the backup master.

Step 13   Press **Enter**. The SNMP Information screen displays.

Figure 3-6   SNMP Information Screen

If you want to use the email function in TES, you must tell the Unix master how to connect to the SNMP server. (The default SNMP port number is **162**.) This information can be changed later in the *master.props* file, if necessary.

Note   To bypass this screen, press **Enter**.

Step 14   Enter the following information:

- **SNMP Server Machine Name**—name of the SNMP server machine
- **SNMP Trap Listener Port**—Enter the name of the SNMP trap listener port.

Step 15   Press **Enter**. The TES SuperUser screen displays.

Figure 3-7   TES SuperUser Screen

Step 16   Enter the domain name of the initial TES configuration Super User, then press **Enter**.

Step 17   Enter the name of the initial TES configuration Super User, then press **Enter**. The Pre-Installation Summary screen displays.

Step 18   Review the accuracy of the information.

Step 19   Press **Enter** to begin the installation.

-or-

If any of the information is incorrect, you can type **QUIT** to cancel the installation or you can continue with the installation and make corrections in the *master.props* configuration file.

The Installing screen displays.

Once installation is complete, the Installation Complete screen displays.

Step 20   Press **Enter** to exit the installer.

Step 21   Verify successful installation of the master files by following the procedure described in "Verifying Successful Installation".

Note   If you are installing the Unix master from the command line, you must also manually install the database as a separate procedure. This procedure is described in the following section.

Updating Oracle Schema Manually

Although it is recommended that the installation process create the master database for Oracle, users can create the Oracle schema manually. If you are installing the Unix master from the command-line then you must first create the Oracle schema manually. Have your Oracle DBA perform the following procedures.

To update the Oracle schema manually:

Step 1   Locate the *connectdb.sql* script within the *sql* directory.

Step 2   Edit the following parameters in this script:.

Note   For debugging purposes, you can run a spool file as you run the installation script.

- **create tablespace admiral_data datafile 'ADMIRAL_DATA' size 200m reuse autoextend on;**

- **create tablespace admiral_index datafile 'ADMIRAL_INDEX' size 100m reuse autoextend on;**

- **create temporary tablespace admiral_temp datafile 'ADMIRAL_TEMP' size 200M reuse;**

- **create user tidal identified by <call Technical Services for password> default tablespace admiral_data quota unlimited on admiral_data quota unlimited on admiral_index temporary tablespace admiral_temp;**

    (Contact Technical Services for the password to enter in the brackets < >.)

- **grant create session, create table to tidal;**
  connect tidal/<call Technical Services for password>@ <tnsname>;

    (Contact Technical Services for the password to enter in the brackets < >. Replace the string "tnsname" at the end of the **CONNECT** statement with the real TNSName that is used to connect to the Oracle database.)

Note   If you wish to install the datafiles in a specific directory, the Oracle DBA can change the CREATE TABLESPACE statements to specify a different directory location for the datafiles. The datafile growth options may also be modified if desired. Do not lower the default SIZE values.

Step 3   Enter the information you received from Technical Services in the appropriate brackets in the *connectdb.sql* script.

Step 4   Save the script.

Step 5   Locate the *orapopulate.sql* script within the *sql* directory.

Step 6   Find the following statement and change **DOMAINNAME** and **SUPERUSERNAME** to be the domain and user name of the initial super user account:

insert into usrmst (usrmst_id, usrmst_domain, usrmst_name, usrmst_fullname, usrmst_desc, usrmst_phoneno, usrmst_pagerno, usrmst_email, usrmst_emailtype, secmst_id, lngmst_id, usrmst_password, usrmst_suser) values (1, DOMAINNAME, 'SUPERUSERNAME', 'SUPERUSERNAME', null, null, null, null, null, 6, 1, null, 'Y');

Note   **DOMAINNAME** can be null. If it is not null, be sure to add single quotes around the domain name in the sql statement. Your Oracle TES database should now be installed.

Step 7   Save the script.

Step 8   Login as the SYSTEM user (or equivalent).

Step 9   Run the *connectdb.sql* script to create a user called *tidal* and to create the database tablespaces. Run the following scripts as the tidal user you just created.

    a. Run the *adoracle.sql* script and if there are no errors issue a commit; statement.

    b. Run the *orapopulate.sql* script and if there are no errors issue a commit; statement.

    c. Run the *nodmst.sql* script and if there are no errors issue a commit; statement.

Your Oracle TES database should now be installed. If any errors occurred when running those scripts, do <u>not</u> continue. Collect as much information on the errors as possible and contact either the consultant assisting your installation or Technical Services at Cisco.

Controlling the Unix Master

Control the Unix master from the command line using tesm command as described in the following table:

Command	Description
tesm start	Starts the Unix master.
tesm stop	Stops the Unix master.
tesm status	Checks the status of the Unix master.
	If the master is not running, a message displays that the server is stopped or paused. If the server is running, the command line will not only indicate the status and details the specifications and versions of the system software used with the Unix master.
	For example:
	Server is running **TIDAL Product Name: TIDAL TES for Unix** **TIDAL Product Version: 6.2.0** **TIDAL Home Directory: /u01/buildersa/TIDAL/master/bin/..** **Operating system name: AIX** **Operating system architecture: ppc64** **Operating system version: 6.2** **User's account name: builder** **User's home directory: /home/builder** **Java Runtime Environment Version: 1.7** **Java Runtime Environment vendor: IBM Corporation** **Java installation directory: /usr/java13_64/jre** **Java Virtual Machine specification version: 1.0** **Java Virtual Machine specification vendor: Sun Microsystems Inc.** **Java Virtual Machine implementation version: 1.7**
	Java Virtual Machine implementation vendor: IBM Corporation **Java Virtual Machine implementation name: Classic VM** **Java Runtime Environment specification version: 1.7** **Java class path: /u01/buildersa/TIDAL/master/bin/../lib/Scheduler.jar**
tesm version	Checks the version of the Unix master.

Note   **./** may not be required on some systems. Consult your system administrator to determine how the commands should be used.

Using the Command Line

You can use the command line to directly access the Unix master but you can only access it from the machine that the Unix master is installed on. (You do not need to provide the name of the machine in the command.) You can use single or multiple-command mode when entering commands.

Uninstalling the Unix Master

There are two ways to uninstall the master. The first is done using the contents of the *Uninstaller* folder. The second is done through the command line. Use the method you are most comfortable with.

Uninstalling From the Uninstaller Folder

The uninstallation procedure will not be successful if attempted while the master is running. You must stop the Unix master before you can remove it.

To uninstall from the *Uninstaller* folder:

Step 1   Check the status of the master to see if it is running, by entering:

./tesm status

Step 2   If the status check shows the master is not running, proceed to the next step. If the status check shows the master is running, stop the master by entering:

./tesm stop

Step 3   Once the master is stopped, use the Unix file manager to locate the uninstaller folder called *UninstallerData*.

Step 4   From the *UninstallerData* folder, run *Uninstall_UnixMaster*. The Uninstall Master panel displays.

Step 5   Click **Uninstall**. A status panel is displayed to illustrate the progress of the uninstallation program. Once the uninstall is complete, the Uninstall Complete panel displays.

The Unix master is now uninstalled. Any files that were created after the master is installed are not removed. Files that were not removed must be manually removed.

Step 6   Click **Done** to exit.

Note   The uninstallation program only removes the Client Manager files installed at the time of installation. If you created other files in the master directory after installation, these files are not removed. You must manually delete these additional files.

Uninstalling Using the Command Line

The uninstallation procedure will not be successful if the master is running. Stop the master before beginning uninstallation.

To uninstall using the command line:

Step 1   Check the status of the master to verify that it is not running by entering:

./tesm status

Step 2   If the status check shows the master is not running, proceed to the next step. If the status check shows the master is running, stop the master by entering:

./tesm stop

Step 3   Once the master is stopped, return to the master directory.

Have your Unix administrator remove the master directory and its contents.