



Introduction

Tidal Enterprise Scheduler Design Concepts

Overview

Welcome to Cisco Tidal Enterprise Scheduler (TES), the premiere enterprise job scheduling solution. TES automates repetitive computer-related tasks and can be easily tailored to your specific business needs. If your business requires small or large amounts of batch processing on a regular basis, TES is the software for the job.

TES Scheduling Layer

TES exists as a scheduling layer above your jobs to control when, where, and how they are run. It is expandable to many users and can run many jobs throughout your network, all from a centralized master production schedule.

TES makes it easy to run your jobs on a repeating schedule. Daily, weekly, monthly, or even yearly schedules can be created easily, and can be tested in advance before jobs are run on them. Jobs can even depend on the status of other jobs and files, to make sure that all your resources are in place before running the jobs.

Network Support

TES has all the tools for controlling and organizing jobs on your network. It includes a fully configurable queue feature to distribute, prioritize, and queue up jobs so that your network load is optimized at all times. It includes smart agent communication that runs jobs on behalf of the system, and reports back when the jobs finish. Agents are available on Windows, Unix, z/OS or MPE/iX platforms and dependencies can be set up between them. TES integrates your network to run like a giant processing machine, maximizing throughput.

Monitoring and Messaging Services

TES includes exception-based job monitoring and messaging services. It monitors the progress of each job that is submitted, and can provide user-defined messaging when jobs enter phases of the production schedule. For example, if your job stops for some reason, you can be automatically notified of the

problem, then diagnose it from a remote location, and start the job again. Messaging services include console alerts, email notifications, SNMP traps for network management systems, and telephone and pager notifications. Using TES tools, you can achieve previously unequaled levels of scheduling efficiency.

Additionally, TES includes a complete messaging and auditing system that fully tracks all actions taken by users, all error messages, and all system messages. Within TES, search tools and filters enable you to diagnose and cure problems quickly.

Security

TES supports a secured, configurable working model through security policies and per-agent passwords. You can subdivide scheduling tasks among various types of users based on their scheduling responsibilities. Agents can be restricted to specific users. Scheduling activity can be filtered for a production environment that is safe and customized to accommodate your expanding business.

Flexibility

TES supports the way people work on scheduling projects with its workgroups feature. Users can configure their own workgroup environment, enabling a group of users to have access to a set of jobs and other supporting data objects (i.e. calendars) owned by the group. Users can be insulated from the vast scheduling activity that is possible. All users can change and view only the information that is allowed by their security profile.

Fault Tolerance

Fault tolerance is an optional module for TES. Fault tolerance ensures that you have uninterrupted scheduling when a primary master scheduler goes down. It includes a fault monitoring system that will automatically and seamlessly transfer control to a backup master. If your scheduling activity is mission critical, you need fault tolerance.



Note

To add fault tolerance to your TES network, you need to purchase a license agreement.

TES Components

Master (or Primary Master)

The master is the computer that conducts all scheduling tasks. You can have one or more masters in your network. If you are using fault tolerance, the first master installed becomes the primary master and the second master installed is known as the backup master. Fault tolerance requires one backup master for each primary master.

The master can be installed on either the Windows platform or the Unix platform. The basic functionality of TES remains the same regardless of the platform of the master. The different hardware and software requirements for the master are listed in the *Installation and Configuration Guide*.

Each master computer must supply a unique port number to which Client Managers connect. This port number ensures that communication between the Client Manager and master is clear.

Client Manager

Two main components of the TES architecture are the Master and Client Manager. Client Manager allows TES to achieve higher performance and scalability needs. The purpose of the Client Manager is to service requests from user initiated activities, such as through the Tidal Web Client, Tidal Transporter and from other external sources that utilize the Command Line Interface (CLI) or published TES Web services. Client Manager allows the Tes Master to focus more capacity on core scheduling needs related to job execution and job compilations, while the Client Manager addresses demands from activities such as users viewing/configuring scheduling data and output. A single Client Manager is mandatory and additional Client Managers can be deployed to address additional performance needs.

Agent

An agent is a separate installation of TES that runs jobs on behalf of the master. Offloading jobs to agents frees the master for intensive scheduling tasks such as production compiles. Agents exist for various platforms. Check with your sales representative for the current list of the types of agents available.

Each agent can connect to a master by specifying the master-to-agent communication port and the master-to-agent file transfer port numbers.

Backup Master

The backup master is used in a fault tolerance setup. It operates exactly like the primary master, but is activated only if the primary master experiences a system, network or machine failure. The backup master must run on the same platform and version of software used by the primary master. The hardware specifications of the backup machine should be equal or greater than the specifications for the primary machine.

The backup master must specify the backup-to-master port number for transferring scheduling data from the primary master to keep the masters synchronization.

Fault Monitor

The fault monitor is part of the TES fault tolerance module. The fault monitor continually monitors a primary master and backup master for error conditions. If a failure indicator appears on the primary master, the fault monitor transfers control to the backup master. The fault monitor must be installed on a separate machine independent from the primary and backup machines

Network Configuration

TES can be configured on a network in many different ways. You can connect any number of licensed masters using any number of licensed agents, each located anywhere on your network.

Fault Tolerance Configuration

Fault tolerance can be added to a TES network to provide an extra degree of scheduling reliability. In a fault tolerant environment, each primary master is connected to a dedicated backup master and a fault monitor machine.

In this setup, the primary master periodically shares data with the backup master during normal operation. Only one master (normally the primary master) has control of scheduling at any time. If the primary master has a network, power, or software failure, control is transferred to the backup master.

System Requirements

**Note**

Contact support or your account manager for the latest information on the system requirements for TES.

There are different requirements for the Windows and Unix platforms. Both platforms use the Client Manager.

Your *Cisco Tidal Enterprise Scheduler Installation Guide* contains the minimum system requirements for installing and running TES. The specified quantities of CPU, memory and disk space must be available for exclusive use by Tes. Use additional RAM and disk space as necessary for your particular environment.