

License Manager Daemon

Introduction

The Test Spectrum License Manager (tsilmd) is an application which manages floating licenses to various Test Spectrum applications. It operates as a TCP/IP server daemon in Linux and can be interacted with through the command line, or managed through the appropriate Linux service GUI. This document explains how to both install and operate the License Manager as a Linux service.

Install the license server, either Redhat or Debian

- 1) You will need 'root' privilege. Either log in as 'root' or get 'sudo' authority.
- 2) Download the installation binary, 'tsilms_linux_redhat.bin' for a Redhat type installation, or 'tsilmd_linux_debian.bin' for a Debian type installation.
- 3) Run the appropriate command from a shell prompt.
Redhat: `./tsilmd_linux_redhat.bin <cr>`
Debian: `./tsilmd_linux_debian.bin <cr>`

A GUI installation program will start, follow the instructions provided. The user may choose to change the installation directory during the install.

Install the license file

The license server reads in the license file provided by Test Spectrum in order to allocate the appropriate amount of product licenses, plus product features. In order for the tsilmd service to read the license file, the user (person performing the installation) will have to copy the file to a location readable by the service. The default location and name of the license file is '/opt/tsilmd/license.txt'.

The user has the option of copying the provided file into that location, with the identical name, or they can edit the config file to point to the location and name. The config file is named 'tsilmd.conf'. It is installed in the default location, or an alternate directory that the user named during the GUI installation. The following variables are editable by the user.

```
#
# name and location of the license file
#
LICFILE="/opt/tsilmd/license.txt"
#
# name of the default log file
#
LOGFILE="/var/log/tsilmd.log"
#
# name of the default pid file
#
PIDFILE="/var/run/tsilmd_linux.pid"
#
# name of the lock file used on redhat systems
#
LOCKFILE="" /var/lock/subsys/tsilmd_lock"
```

Modifying the License File

Two fields in the license file are changeable by the user, SERVER and PORT. SERVER is the name of the machine that the License Manager is running on and PORT is the TCP/IP port used to communicate with applications requesting a license. Changing any other fields will render the license unusable. Firewall settings might need to be edited to allow communication over the selected port.

Setting up the Service on Redhat

To enable the server to run as a service, the user will need to add the 'tsilmd' program to the list of active services.

Add Service using the 'chkconfig' command line utility

The user must logon as 'root' or run the command using the 'sudo' utility.

```
To add the service type:      chkconfig --add tsilmd <cr>
To verify the service type:  chkconfig --list tsilmd <cr>
                             <output> tsilmd      0:off 1:off 2:on 3:on 4:on 5:on 6:off
```

Once successfully added, start the service by typing as 'root'

```
/etc/init.d/tsilmd start <cr>
<output>Starting tsilmd:                [ OK ]
```

Verify it is running by typing as 'root'

```
/etc/init.d/tsilmd status <cr>
<output>tsilmd_linux (pid 3666) is running...
```

Stop the service by typing as 'root'

```
/etc/init.d/tsilmd stop <cr>
<output>Stopping tsilmd:                [ OK ]
```

Restart the service by typing as 'root'

```
/etc/init.d/tsilmd restart <cr>
<output>Restarting tsilmd: Stopping tsilmd: [ OK ]
Starting tsilmd:                        [ OK ]
```

Add Service using 'system-config-services' GUI utility

Start the utility from the command line or from the 'System' -> 'Administration' -> 'Server Settings' -> 'Services' menu.

To add the service: select 'Actions' -> 'Add Service' from the menu. Then enter 'tsilmd' for the name of the service. Once added scroll down the list of service to you see 'tsilmd' and select it. It should show stopped or not running.

To start the service: select the 'tsilmd' service, the click the 'start' button. The GUI should update and show the PID of the service.

Setting up the service on Debian

The user must run the following command as 'root' or use the 'sudo' utility to setup the links needed for the startup services on a Debian system.

To add the service links: 'update-rc.d tsilmd defaults 95 10'.
This will setup links to run the 'tsilmd' service in run levels 2345 and stop the service in run levels 016.

To start the service after the links are added by typing as 'root'

```
service tsilmd start <cr>
```

To verify the service is running by typing as 'root'

```
service tsilmd status <cr>  
<output>* tsilmd_linux is running
```

Setting up in a 'rc.local' file

The user must have write access to the '/etc/rc.local' file. This file is used to run initialization programs after all the system inits.

Edit your rc.local file and add the following (paths may vary)

```
'/opt/tsilmd/tsilmd_linux -c /opt/tsilmd/license.txt -l /var/log/tsilmd.log'
```

Once you add this line, you can run your rc.local file and then examine the logfile to ensure you get this message:

```
11:24:47 (tsilmd) -----  
11:24:47 (tsilmd) Starting Test Spectrum License Manager: Tue Apr 26 11:24:47 2016  
11:24:47 (tsilmd) Daemon: tsilmd_linux  
11:24:47 (tsilmd) Version: 20130108  
11:24:47 (tsilmd) License File: /opt/tsilmd/license.txt  
11:24:47 (tsilmd) tsilmd.exe pid: 2447  
11:24:47 (tsilmd) License Manager started on host: bale.testspectrum.com at port: 5800  
11:24:47 (tsilmd) -----  
11:24:47 (tsilmd)  
11:24:47 (tsilmd)  
11:24:47 (tsilmd)  
11:24:49 (tsilmd) Accepting requests for service
```

Testing the License Server

The method to test your license server is the same in both Debian and Redhat systems. The command used to test the server is 'tsilmd_linux' and is located in the installation directory, or as a symbolic link in '/usr/sbin' or directly in the install directory '/opt/tsilmd'.

Test the server by typing at the command line:

```
/usr/sbin/tsilmd_linux -test -s <server name or IP address> -p <port number> <cr>
```

<Example Output>

```
[sal@bale tsilmd]$ /usr/sbin/tsilmd_linux -test -s bale -p 5800
```

Waiting for Status

tsilmd - Copyright (c) 2007 by Test Spectrum Inc. All rights reserved.
License Manager Daemon status on Tue Jan 22 11:05:38 2013

Daemon Status: UP Version: 20130108
port - 5800
host - bale.testspectrum.com
file - /opt/tsilmd/license.txt

```
-----  
Product - VectorPort  
Licenses (Available/Total) - (5/5)  
Expiration Date (12/02/2014)  
Maintenance Expiration (12/02/2014)  
Licensed Features:  
    Writer_SmarTest, (Available/Total) - (5/5)  
    Other_Waveform_Viewer, (Available/Total) - (5/5)  
    Writer_IGXL_Ultra, (Available/Total) - (5/5)  
    Writer_Toolbox, (Available/Total) - (5/5)  
    Reader_STIL, (Available/Total) - (5/5)  
    Reader_WGL, (Available/Total) - (5/5)  
    Writer_VCD, (Available/Total) - (5/5)  
    Writer_IGXL, (Available/Total) - (5/5)  
  
Checked Out:  
    None  
  
Product - DataView  
Licenses (Available/Total) - (5/5)  
Expiration Date (12/02/2014)  
Maintenance Expiration (12/02/2014)  
Licensed Features:  
    Other_Tektronix_Production, (Available/Total) - (5/5)  
    Other_Wafermap, (Available/Total) - (5/5)  
  
Checked Out:  
    None  
  
Product - VectorPro  
Licenses (Available/Total) - (5/5)  
Expiration Date (12/02/2014)  
Maintenance Expiration (12/02/2014)  
Licensed Features:  
    Other_Binning_Mode, (Available/Total) - (5/5)  
    Reader_VCD, (Available/Total) - (5/5)  
    Other_DB_Compare, (Available/Total) - (5/5)  
    Writer_WGL, (Available/Total) - (5/5)  
    Writer_STIL, (Available/Total) - (5/5)  
    Reader_EVCD, (Available/Total) - (5/5)  
  
Checked Out:  
    None  
  
Product - TestPort  
Licenses (Available/Total) - (5/5)  
Expiration Date (12/02/2014)  
Maintenance Expiration (12/02/2014)  
Licensed Features:  
    Reader_WGL, (Available/Total) - (5/5)  
    Reader_IGXL_J750, (Available/Total) - (5/5)  
    Reader_SmartTest_93K, (Available/Total) - (5/5)  
    Writer_Diamond_D10, (Available/Total) - (5/5)  
    Reader_IGXL_Ultra, (Available/Total) - (5/5)  
  
Checked Out:  
    None  
-----
```

If any products or licensed features were checked out, the name of the user, system, and time would be displayed for each product/feature in use.

Setting up a Test Spectrum application to use the floating license server

- 1) Start the application (VectorPro, VectorPort, TestPort, Dataview, or CodeReport).
- 2) Then in the main menu bar go to 'Edit' -> 'License Manager' on the window. A new window will pop up called <Application> License Manager.
- 3) For the 'type of license' select 'Floating License'
- 4) In the Floating License section. For 'Host Name' enter in either the server name of the license server or the IP address of the server. For 'Port' enter in the default '5800' or the number the user assigned to the license server during installation.
- 5) Verify the server status by clicking the 'Server Status' button. A listing such as shown above should result. A failure will result in a 'Unable to communicate with license server' message. If that occurs, contact the user that installed the license server to verify your settings.
- 6) Activate your setting by clicking the 'ok' button. You should receive a message saying the appropriate products/features were checked out by the license server.
- 7) To check in your licenses, just exit the application. The user must have an active network connection to server in order for the license(s) to be checked back into the server. Exiting the application without a network connection will result in the license(s) being stranded by the user. In this event, the license server will need to be restarted.