TSM for Linux - Install, Configure, Set Up, and Confirm the Scheduler

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Note: If you are installing this on Ubuntu or debathena, please view [these instructions].
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Instructions are for both new installations and updates of a pre-existing one. Assume that all TSM files have been left in their default locations when performing an upgrade.

Note: The dsm GUI command is no longer available. It has been replaced by the dsmj command which has comparable functionality.

Install TSM

1. Download the Linux TSM 6 installation archive and Sun's JRE, if necessary, to your workstation from the Software Grid
2. Extract the contents of the installation file using the command below:
   `tar xvf 6.2.2.0-TIV-TSMBAC-LinuxX86.tar`
   Result: The following files appear:

```
NOTICES.TXT
README_api_enu.htm
README_enu.htm
README_hsm_enu.htm
TIVsm-API.i386.rpm
TIVsm-API64.i386.rpm
TIVsm-BA.i386.rpm
TIVsm-HSM.i386.rpm
gskcrypt32-8.0.13.3.linux.x86.rpm
gskcrypt64-8.0.13.3.linux.x86_64.rpm
gskssl32-8.0.13.3.linux.x86.rpm
gskssl64-8.0.13.3.linux.x86_64.rpm
```

3. Log in as the root user.
4. If you have an existing TSM backup installation, perform the following two sub-steps; otherwise, skip to the next step.
   a. cd to `/opt/tivoli/tsm/client/ba/bin` and add the following line to the "dsm.sys" file with a text editor if it is not already present:

```
ERRORLOGName /opt/tivoli/tsm/client/ba/bin/dsmerror.log
```

   b. cd to the `/etc` directory and add the following line to the `/etc/inittab` file with a text editor if it is not already present:

```
tsm::once:/usr/bin/dsmc sched > /dev/null 2>&1
```

5. For Red Hat Enterprise only (all others skip to the next step), you need to install the `compat-libstdc++-33-3.2.3` rpm if it is not already installed. The easiest way to install it (and other needed Red Hat rpms) is via the Red Hat update service using "yum".
   For example, `yum install compat-libstdc++-33-3.2.3`
6. Java issues:
   - To use the GUI dsmj client, you will need a compatible Java runtime installed and on your path ahead of any other Java versions you may have already installed.
   - IBM specifies a version 1.5 or 1.4.x, with x >=1. A number of Red Hat supplied Java "compat" rpms (such as `java-1.4.2-gcj-compat-1.4.2.0-26jpp.noarch.rpm` supplied with RHEL4) are NOT compatible.

- IBM recommends using Sun's JDK or JRE.
- The self-extracting installer is available from www.java.com

7. Use the `cd` command to move to the directory where the installation packages are located.
8. If you are updating a prior TSM installation, perform Step a. If you are performing a new installation, go to Step b.
    a. Updating a prior installation:
    Enter the following commands to update the TSM Backup-Archive client (command-line, API and GUI), the administrative client (command-line), and the Web client:
        i. 32 Bit:

```
rpm -e TIVsm-BA
rpm -e TIVsm-API
rpm -i gskcrypt32-8.0.13.3.linux.x86.rpm
rpm -i gskssl32-8.0.13.3.linux.x86.rpm
rpm -i TIVsm-API.i386.rpm
rpm -i TIVsm-BA.i386.rpm
```

        ii. 64 Bit:

```
rpm -e TIVsm-BA
rpm -e TIVsm-API64
rpm -e TIVsm-API
rpm -i gskcrypt32-8.0.13.3.linux.x86.rpm
rpm -i gskcrypt64-8.0.13.3.linux.x86_64.rpm
rpm -i gskssl32-8.0.13.3.linux.x86.rpm
rpm -i gskssl64-8.0.13.3.linux.x86_64.rpm
rpm -i TIVsm-API.i386.rpm
rpm -i TIVsm-API64.i386.rpm
rpm -i TIVsm-BA.i386.rpm
```

    b. Starting with a new installation:
    Enter the following commands to install the TSM Backup-Archive client (command-line, API and GUI), the administrative client (command-line), and the Web client.
        i. 32 Bit:

```
rpm -i gskcrypt32-8.0.13.3.linux.x86.rpm
rpm -i gskssl32-8.0.13.3.linux.x86.rpm
rpm -i TIVsm-API.i386.rpm
rpm -i TIVsm-BA.i386.rpm
```

        ii. 64 Bit:

```
rpm -i gskcrypt32-8.0.13.3.linux.x86.rpm
rpm -i gskcrypt64-8.0.13.3.linux.x86_64.rpm
rpm -i gskssl32-8.0.13.3.linux.x86.rpm
rpm -i gskssl64-8.0.13.3.linux.x86_64.rpm
rpm -i TIVsm-API.i386.rpm
rpm -i TIVsm-API64.i386.rpm
rpm -i TIVsm-BA.i386.rpm
```

Configure TSM

If you are setting up TSM on your system for the first time, perform all the steps below.

You'll need to download the MIT TSM sample configuration files for UNIX --"dsm.sys" and "dsm.opt" -- and then edit the "dsm.sys" file as described below.

1. Copy the MIT sample configuration files to this directory: `/opt/tivoli/tsm/client/ba/bin`
2. Open the dsm.sys file in a text editor, and enter your TSM nodename in the "NODename" line.
3. Specify your assigned TSM server by uncommenting the appropriate "TCPServeraddress" line.

If you are unsure of your TSM server, check the confirmation email sent from the Service Desk, or contact the Computing Helpdesk: 617-253-1101 or helpdesk@mit.edu.

Install the Scheduler

1. Become 'root' if you are not 'root' already.
2. Add the following entry to the `/etc/inittab` file:

```
tsm::once:/usr/bin/dsmc sched > /dev/null 2>&1
```

3. After modifying your configuration, your TSM Scheduler needs to be restarted. The easiest way to do this is to reboot. You will need to do this again any time you make further configuration changes.

Confirm Scheduled Backups; Check the TSM Schedule Log Periodically

1. Check the Schedule Log, `/opt/tivoli/tsm/client/ba/bin/dsmsched.log`
2. Use a text editor to open the schedule log.
3. Go to the end of the log and look for confirmation that the backup completed. Look for completion summary beginning with the text:

```
*SCHEDULEREC STATUS BEGIN*
```

4. You may find it helpful to create an alias on the desktop as a reminder to periodically check it.

Other Distributions

Note: The Linux distribution listed below is unsupported by IS&T. Our staff members were able to get TSM 6 running on it and the summary information provided is intended to assist you if you wish to attempt such an installation with TSM 6. We will be able to provide only minimal, "best effort," assistance if you run into difficulties.

As per the detailed RHEL instructions above, if you are updating an existing TSM installation, you must first delete the existing TSM rpms with `rpm -e` followed by an install of the new rpms with `rpm -i`; do not use the `rpm -Uvh` update command.

Fedora Core 14:

1. Install as above.
2. Using `/etc/inittab` to autostart "dsmc sched" doesn't seem to work any more, so using the method below seems to work sufficiently. Create `/etc/init/dsm-sched.conf` with the contents:

```
# dsm-sched.conf
#
# This service starts the Tivoli Storage Manager "dsmc sched" backup
# process and respawns it as the scheduled backup happens or the
# dsmc process gets killed or dies.
start on runlevel [2345]
stop on runlevel [!2345]
respawn
exec /usr/bin/dsmc sched >/dev/null 2>&1
```

3. The first line of `/opt/tivoli/tsm/client/ba/bin/dsmj` needs to be edited to `#!/bin/ksh` as Fedora puts ksh in `/bin`.