Installation TSM 8.1.6

ftp://public.dhe.ibm.com/storage/tivoli-storage-management/maintenance/client/v8r1/Linux/LinuxX86_DEB/BA/v816/

installation info

https://www.ibm.com/support/knowledgecenter/en/SSGSG7_7.1.8/client/t_inst_linuxx86client.html

1. remove old tsm if installed
sudo su

dpkg -l | grep tivsm
dpkg -l | grep gsk

apt-get purge <package>
(in this order)
apt-get purge tivsm-jbb
apt-get purge tivsm-ba
apt-get purge tivsm-api64
apt-get purge gskcrypt64
apt-get purge gskssl64

rm -r /opt/tivoli/

cd to tsm download

2. compile filepath file
unpack tivsm-filepath-source.tar.gz
cd jbb_gpl
make RELNUM=8.1.6-0 deb
-> generates tivsm-filepath-8.1.6-0.deb

3. install in the following order
dpkg -i gskcrypt64_8.0-50.86.linux.x86_64.deb
dpkg -i gskssl64_8.0-50.86.linux.x86_64.deb
dpkg -i tivsm-api64.amd64.deb
dpkg -i tivsm-apicit.amd64.deb
dpkg -i tivsm-ba.amd64.deb
dpkg -i tivsm-bacit.amd64.deb
dpkg -i jbb_gpl/tivsm-filepath-8.1.6-0.deb
dpkg -i tivsm-bahdw.amd64.deb
####################################

*you might get some error/warning messages about missing libraries or links to libraries, continue installing the packages. When all packages are installed change directory to /usr/lib and execute the following commands
sudo su
cd /usr/lib
ln -s /opt/tivoli/tsm/client/api/bin64/libgpfs.so libgpfs.so
ln -s /opt/tivoli/tsm/client/api/bin64/libdmapi.so libdmapi.so
ln -s /usr/local/ibm/gsk8_64/lib64/libgsk8ssl_64.so libgsk8ssl_64.so
ln -s /usr/local/ibm/gsk8_64/lib64/libgsk8iccs_64.so libgsk8iccs_64.so
ln -s /usr/local/ibm/gsk8_64/lib64/libgsk8cms_64.so libgsk8cms_64.so
ln -s /usr/local/ibm/gsk8_64/lib64/libgsk8sys_64.so libgsk8sys_64.so

6.) Konfiguration

```
cd /opt/tivoli/tsm/client/ba/bin
sudo cp dsm.sys.smp dsm.sys
sudo cp dsm.opt.smp dsm.opt
```

you have to make sure you are allowed to change these files

```
sudo chmod u+w dsm.sys
sudo chmod u+w dsm.opt
```

open dsm.sys with an editor and change it as shown in the example

```
------------------dsm.sys---------------------------------------------------------

************************************************************************
* Tivoli Storage Manager                                               *
*                                                                      *
* Sample Client System Options file for UNIX (dsm.sys.smp)             *
************************************************************************

*  This file contains the minimum options required to get started
*  using TSM.  Copy dsm.sys.smp to dsm.sys.  In the dsm.sys file,
*  enter the appropriate values for each option listed below and
*  remove the leading asterisk (*) for each one.

*  If your client node communicates with multiple TSM servers, be
*  sure to add a stanza, beginning with the SERVERNAME option, for
*  each additional server.

************************************************************************

SErvername  server_a
   COMMMethod         TCPIP
   TCPPort            1565
   TCPServeraddress   tsm-a.uni-due.de
   NODENAME           Cjl002
   PASSWORDACCESS     GENERATE

   Schedlogretention      7 D
   Errorlogretention      7 D
   SCHEDLOGNAME      "/var/log/dsmsched.log"
   ERRORLOGNAME      "/var/log/dsmerror.log"
   VIRTUALMOUNTPOINT /data
   DOMAIN            /data

   memoryefficientbackup  yes
-------------------------------------------------------------------------------
```

TCPPOrt,Tcpserveraddress and nodename have to be changed according to the names in the email you received after registration.
In DOMAIN you can specify the filesystem you want to backup, if it is not a mountpoint of a filesystem in addition you need to declare it as a VIRTUALMOUNTPOINT

```
----------------------dsm.opt-----------------------------------------------

************************************************************************
* Tivoli Storage Manager                                               *
*                                                                      *
* Sample Client User Options file for UNIX (dsm.opt.smp)               *
************************************************************************

*  This file contains an option you can use to specify the TSM
*  server to contact if more than one is defined in your client
```

```
*  system options file (dsm.sys).  Copy dsm.opt.smp to dsm.opt.
*  If you enter a server name for the option below, remove the
*  leading asterisk (*).

************************************************************************

 SErvername       server_a

------------------------------------------------------------------------------
```

7.) start TSM

sudo dsmc

it should show the nodename you specified in the dsm.sys file and ask for a user id. Just press return you don't need to enter any id.
Next you are aked for the TSM password you specified during registration.
Enter the password and quit TSM with **quit.**

Try to start TSM again, this time it should not ask for an id or password.

8.)set up automatic start of TSM every time you boot your computer

cd /etc/init.d

copy the following script in a file called „dsmc“ and move it to /etc/init.d

```
-----------------------------------------
           #!/bin/sh

                       # Start/stop TSM client scheduler

                       LANG="de_DE.UTF-8"
                       LC_ALL="de_DE.UTF-8"

                       DAEMON="/usr/bin/dsmc"
                       NAME=dsmc
                       DESC="TSM scheduler"
                       RUNDIR=/var/run
                       PIDFILE=$RUNDIR/dsmc.pid
                       LOGDIR=/var/log
                       LOGFILE=$LOGDIR/dsmc.out

                       test -e $DAEMON || exit 0

                       case "$1" in
                start)
                echo "Starting $DESC:\c"
                cd $LOGDIR
                nohup $DAEMON sched > $LOGFILE 2>&1 &
                echo $! > $PIDFILE
                echo " $NAME."
                ;;
                stop)
                echo "Stopping $DESC:\c"
                kill `cat $PIDFILE`
                echo " $NAME."
        ;;
                *)
                echo "Usage: /etc/init.d/dsmc {start|stop}"
                exit 1
                ;;
```

```
                        esac

-------------------------------------------------------------
to render the script executable execute the following

sudo chmod 755 /etc/init.d/dsmc

add links to start and stop in the desired runlevels
 e.g. start in runlevels 3 and 5
      stop in runlevels 0,1,2,6

sudo update-rc.d dsmc defaults

start TSM once manually

dsmc q fil

and quit

start TSM as root

sudo /etc/init.d/dsmc start

check the log file (/var/log/dsmsched.log) if the service started successfully

boot your computer to check if the script is working

############################################################
!!! name your folders and files without 'Umlaute' or other language specific
characters, it might be these files won't be backed up !!!

to start a backup immediatly start TSM

sudo dsmc

and type

incr

to look into your backup node

query backup  “/yourDomainDirectory/*“

to restore your data

rest /yourDomainDirectory/* -sub=yes
tsm > query filespace

query backup "/home/lange/Dokumente/*"


restore /data/heider/Backup/Gene_pairing.zip -inactive=yes /home/

restore /data/heider/* -subdir=yes -inactive=yes /home/nfs_data/

restore /home/lange/Dokumente/Biodiversity/ampliconDuo_paper/git_paper_rep/
-inactive=yes /home/lange/Dokumente/ -pick
```