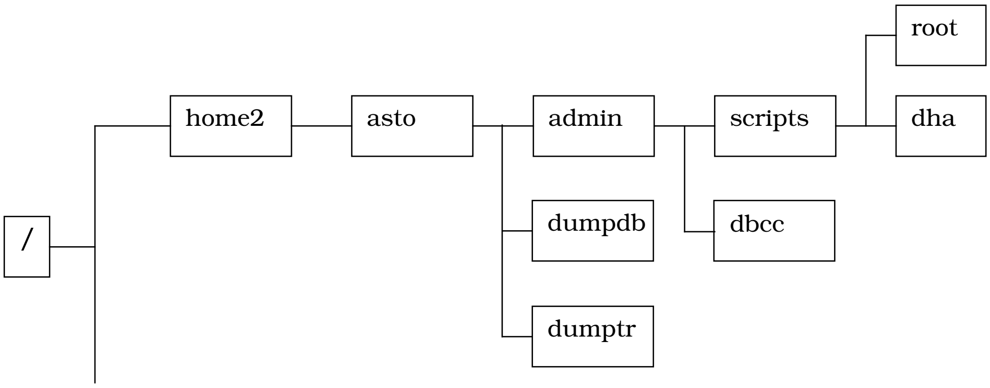
SUGGESTED STRUCTURE for keeping administration files



dumpdv : Dumpdevice for database files
dumptr : Dumpdevice for transaction log files
dbcc : output files from database consistency check (DBCC)
dha : all scripts (sql, unix, etc.) for administration data tasks.

Hopefully a similar structure will be in all servers.

MONTHLY

1. Reboot SYBASE Server
   get connected to asto as sybase
   stay in $HOME directory and run
   stop
   to restart the database you should run the steps mentioned in:
   “DAILY routines”, Chapter 1. paragraph g)

2. Reboot UNIX System
   get connected to asto as root
   shutdown -h 0
   Restart the machine.

3. Generate disk growth space report for each server

WEEKLY

Once a week (the day you arrive to La Silla) you should:

1. Check referential integrity of all tables in database

Log into asto as sybase
go to /vltdata/sybase/install/Consultas
get into SQL running:

```
isql -Usa -icheckdb -o/home2/sybase/checkdb.<yyyy-mm-dd>
```

*(where **<yyyy-mm-dd>** is the current date)*
(check the output file for errors)

2. Update statistics - check the space

```
isql -Usa -iactestaddb
```

```
isql -Usa -conespadb -o/home2/sybase.space.<yyyy-mm-dd>
```

*(where **<yyyy-mm-dd>** is the current date)*
(check the output file)

3. Dump database (ASTOLS)

get connected to asto as sybase
go to $HOME/install
run dump_db **<yyyy-mm-dd>**
*(where **<yyyy-mm-dd>** is the current date)*

10. CD-ROM backup

Check asto to create a CD-ROM backup
open 3 asto windows login in as archeso: ($HOME directory)

1. *run astoStatus*
2. *run mediaIngest -i <media ID>*
   Ej.: mediaIngest -i 6
   if there is enough data (650MB - 100%) then you could run:
   3. *mediaQueue -i <media ID>*
      Ej.: mediaQueue -i 6
   4. *run cdMake -i <media ID> -n <media unit name> -d <directory>*
      Ej.: cdMake -i 6 -n NTT_OTH_0120 -d CD1
      (you should run this process twice - 2 CD-ROM copies needed)

   Once both copies have been done, then you should run:

   5. *mediaCleanup -i <media ID> -n <media unit name>*
      Ej.: mediaCleanup -i 6 -n NTT_OTH_0120

(more details see VLT Archive storage Subsytem Report)

5. **Wemmi backup (tar)**
get connected to wemmi as ins
stay in $HOME directory
run wemmi-backup

(this script will create a new directory /insroot/SYSTEM/DETDATA/yyyy-mm-dd where <yyyy-mm-dd> is normally yesterday then will move all the fits files from /insroot/SYSTEM/DETDATA to /insroot/SYSTEM/DETDATA/yyyy-mm-dd and then copy all the files in this directory to a DAT tape using "tar"command)

6. **Wsofi backup (tar)**
get connected to wsofi as sofi
go to /home2/sofi/bin directory *(this directory is included in $PATH)*
run wsofi-backup

(this script will create a new directory /data/SOFI/SYSTEM/DETDATA/yyyy-mm-dd where <yyyy-mm-dd> is normally yesterday then will move all the fits files from /data/SOFI/SYSTEM/DETDATA to /data/SOFI/SYSTEM/DETDATA/yyyy-mm-dd and then copy all the files in this directory to a DAT tape using "tar"command)

7. **Wg5arc backup (tar)**
get connected to wg5arc as archeso
du -sk $DHS_DATA/*
(this will let you know how many nights you are able to backup onto one DAT tape)
go to $HOME/SCRIPTS
run wg5arc-backup <*dir1*> <*dir2*> <*dir3*> ...
<dirn>: *$DHS_DATA directory or directories which you wanted to save on tape*

(the script enforces use of the directories at once as parameters, min 1 - max 5 and validates all the user inputs.

8. **Label and store tape media in a secure location**

9. **OLAS to ASTO transference**
log into wg5arc as archeso
go to $DHS_DATA/<yyyy-mm-dd>
Make a directory listing (ls *fits* | wc -l)
*where **<yyyy-mm-dd>** is the directory of the data night that you want to process*

log into asto as archeso (two windows)

1. stay in $HOME directory
*run start-astoSubscribe -backsince **<yyyy-mm-dd>** -backto **<yyyy-mm-dd>***
*where **<yyyy-mm-dd>** is the directory you want to process (normally yesteraday)*

2. go to $DHS_LOG
check the log file to see if the transfer was completed:
Example: if today is March 23, 1998 then you should check:
cat DhsSubscribe.1998-03-23 | grep fits | wc -l
*(keep doing this command until the number reaches the files in wg5arc, then you must clean the Subscriber by running : **cleanup-dhsSubscribe.** - Details in OLAS Operator Guide)*

are relevant to the error problem.

Re-start vcsolac in consultation with the team coordinator and let it work through the queue. Monitor the vcsolac log file to check that no errors repeat.

R2. Files were queued but they do not appear in the olas file report

a) Files have been transferred but have been found to be BAD-FILES.
dhs will check every FITS frame upon reception for completness. In the case that the file is not a valid FITS frame (pixels missing or the header is corrupted) dhs will put the file under a special directory wg5arc:$BAD_DIR (normally /home2/Arch-Bad).

Also, the archive system needs to assign each data product a unique data product ID. This ID is based on the MJD-OBS keyword. When the value of MJD-OBS is wrong or the keyword is missing dhs will also put the file under $BAD_DIR awaiting to be recovered manually next morning. See next section for how to recover bad files.

Performing a directory listing of $BAD_DIR/<YYYY-MM-DD> will reveal filenames that contain the error code as a prefix.

If there are files with the NOMJD error code present in $BAD_FILES, communicate this asap to the team coordinator in order to prevent this to happen again next night.

For the time being recovery of bad files will only be done in Garching. Make a tape containing all files in $BAD_DIR and send it to us. In Paranal there will be tools to fix bad files that can be fixed.

b) Files that failed to transfer to wg5arc

Manually put the files into the vcsolac queue. This is accomplished by making soft links on /insroot/SYSTEM/ARCDATA to the missing files (see example below). Note that the files themselves must have permissions r--r--r-- (444) otherwise vcsolac will ignore them.

For example, if the file /insroot/SYSTEM/DETDATA/RILDCT02_20.fits failed to transfer one can queue it for archiving by typing:

```
% cd /insroot/SYSTEM/ARCDATA
% chmod 444  /insroot/SYSTEM/DETDATA/RILDCT02_20.fits
% ln -s /insroot/SYSTEM/DETDATA/RILDCT02_20.fits .
```

Continue with R1.fd

3. Dump transaction logs (ASTO)

get connected to asto as sybase
go to $HOME/install
run dump_tr <*yyyy-mm-dd*>
(where <yyyy-mm-dd> is the current date)

4. Check space on each disk

The directory /data/SOFI/SYSTEM/ARCDATA (the olas queue) is used by volac to queue files for archiving. This is done by putting a soft link to the the original file in this directory.
If vcsolac is running it should detect the link, transfer the file and remove the link.

j) Check that all files from wemmi/wsofi have arrived on wg5arc.

Wemmi
If wemmi was available last night then you should:
get connected to wemmi as ins
stay in $HOME directory
run wemmi-checklist <*logfile*> <*yyyy-mm-dd*>

<logfile>: *log file name, check in /vltdata/tmp/*
<yyyy-mm-dd>: *description parameter (normally yesterday)*

(this script will extract all the files queued after the last holding check from volac log file and send them to wg5arc)

Wsofi
If wsofi was available last night then you should:
get connected to wsofi as sofi
go to /home2/sofi/bin directory *(this directory is included in $PATH)*
run wsofi-checklist <*logfile*> <*yyyy-mm-dd*>

<logfile>: *log file name, check in /vltdata/tmp/*
<yyyy-mm-dd>: *description parameter (normally yesterday)*

(this script will extract all the files queued after the last holding check from volac log file and send them to wg5arc)

Wg5arc
get connected to wg5arc as archeso
go to $HOME/SCRIPTS
run wg5arc-checklist <*instrument_name*> <*yyyy-mm-dd*>

<instrument_name>: *should be “wemmi” or “wsofi”*
<yyyy-mm-dd>:*description parameter (normally yesterday) should be the same that you used on wemmi/wsofi description parameter.*

(this script will check if all the files have been arrived to the archive server (database), it will display a summary report for the current situation and the actions that you should take.)

RECOVERY FROM ERRORS

R1. The vcsolac queue is not empty

Check that vcsolac is running (show-vcsolac), don’t start it for now if it is not running. If vcsolac is not running, consult with the telescope team to check for any possible prolems that occured during the night.

Look at wemmi:$DHS_LOG/VCSOLAC.<YYYY-MM-DD> and search for any errors.
Look at wg5arc:$DHS_LOG/DHS.<YYYY-MM-DD> and search for any errors.
Look at wg5arc:$DHS_LOG/FrameIngest.<YYYY-MM-DD> and search for any errors.
Look at wemmi: /var/adm/syslog/syslog.log and search for any possible sys errors during the suspicious time.

In all cases send us (eangelon, mperon, malbrech) the log files (vcsolac, syslog.log) that

DAILY

1. Check availability / Performance database and backup server

OLASLS Server

a) get connected to wg5arc as archeso
b) go to $SYBASE/install
c) check availability (showserver)
for instance:

```
archeso@wg5arc% showserver
UID   PID  PPID  C    STIME TTY      TIME COMMAND
root 1072     1  0         Mar 13  ?      138:39 /opt/sybase/bin/dataserver -d/dev/vg01/rmaster -sOLASLS -e/o
sybase 11520 11519  0  Mar 14  ?        0:00 /opt/sybase/bin/backupserver -SOLASLS_BACKUP -e/opt/sybase/i
```

in this example both (dataserver / backupserver) are running

if they were not you should run the startserver:
for instance:

```
archeso@wg5arc% startserver -f RUN_OLASLS                          <if just the backupserver is running)
archeso@wg5arc% startserver -f RUN_OLASLS -f RUN_OLAS_BACKUP       <if no one is running)
```

d) check error log file

```
archeso@wg5arc% tail -n200 OLASLS_errorlog
```

ASTOLS Server

e) get connected to asto as archeso
f) go to $SYBASE/install
g) check availability (showserver)
for instance:

```
archeso@asto% showserver
UID   PID  PPID  C    STIME TTY      TIME COMMAND
sybase  1091  1090  0    Mar  2  ?       0:05 /opt/sybase/bin/backupserver -SASTOLS_BACKUP -e/opt/sybase/i
sybase 10205     1  2     Mar 10  ?      141:54 /opt/sybase/bin/dataserver -d/dev/sybaseb/rmaster -sASTOLS -
```

in this example both (dataserver / backupserver) are running

if they were not you should run the starserver:
for instance:

```
archeso@wg5arc% startserver -f RUN_ASTOLS                          <if just the backupserver is running)
archeso@wg5arc% startserver -f RUN_ASTOLS -f RUN_ASTOLS_BACKUP     <if no one is running)
```

h) check error log file

```
archeso@asto% tail -n200 ASTOLS_errorlog
```

2. Checklist data holdings between instrument workstation and archive server

This checklist must be executed everyday at the end of the night and before calibrations are taken.

i) <u>Checking the vcsolac queue</u>

CHECK : Directory listing of wemmi:/insroot/SYSTEM/ARCDATA (ls -ltr)
OK : The queue is empty, no files are listed
NOK : Queue is not empty, see R1 in the recovery section below.

CHECK : Directory listing of wsofi:/data/SOFI/SYSTEM/ARCDATA (ls -ltr)
OK : The queue is empty, no files are listed
NOK : Queue is not empty, see R1 in the recovery section below.

CHECKLIST ROUTINE

Data Handling Administrator

DAILY

1. Check availability / Performance database and backup server
2. Checklist data holdings between instrument workstation and archive server
3. Dump transaction logs (ASTOLS)
4. Check space on each disk
5. Wemmi backup (tar)
6. Wsofi backup (tar)
7. Wg5arc backup (tar)
8. Label and store tape media in a secure location
9. OLAS to ASTO transference
10. CD-ROM backup

WEEKLY

1. Check referential integrity of all tables in database
2. Update statistics - check the space
3. Dump database (ASTOLS)

MONTHLY

1. Reboot UNIX system
2. Reboot SYBASE server
3. Generate disk growth space report for each server