```
clear screen

rem demo ADVM and ACFS use
pause

rem clean up to start over
pause

rem make sure drivers are loaded
pause

host sudo /u01/app/oracle/product/11.2.0/grid/bin/acfsload start

rem unmount the mount point
pause

host sudo umount /home/oracle/asmfs

rem now check it
pause

host mount

rem now remove the mount metadata from the acfs registry
pause

host sudo /sbin/acfsutil registry -d /home/oracle/asmfs

rem now check it
pause

host sudo /sbin/acfsutil registry

rem now delete the volume
pause

host asmcmd voldelete -G DATA demovol

rem now check it
pause

host asmcmd volinfo -a

rem also check the device files
pause

host ls /dev/asm

rem remove the drivers
pause

host sudo /u01/app/oracle/product/11.2.0/grid/bin/acfsload stop

rem check the drivers
pause

host /sbin/lsmod |grep oracle

rem see how they  may be loaded automatically if required
pause

host sudo cat /etc/init.d/acfsload

rem see the services config
pause

host sudo /sbin/chkconfig --list |grep acfsload

rem so now load the drivers manually
pause

host sudo /u01/app/oracle/product/11.2.0/grid/bin/acfsload start

rem check again that they are loaded
pause

host /sbin/lsmod |grep oracle
pause

rem check the disk groups available with asmcmd
pause

host asmcmd lsdg

rem now use v$asm_diskgroup
```

```
pause

desc v$asm_diskgroup

pause

col name for a10
col compatibility for a20
col database_compatibility for a20

select name,state,total_mb,free_mb, compatibility,database_compatibility
from v$asm_diskgroup
order by name;

rem we will create a volume file in the DATA DG
pause

host asmcmd volcreate -G DATA -s 512M --redundancy unprotected demovol

rem see the device file now on the file system
pause

host ls -als /dev/asm

rem use the advm utility to see the volume
pause

host sudo /sbin/advmutil volinfo /dev/asm/demovol-357

rem now check volume info  with asmcmd
pause

host asmcmd volinfo -G DATA -a

rem see the volume in the dynamic performance view
pause

desc v$asm_volume

pause

col volume_name for a10
col usage for a10
col volume_device for a21
col mountpath for a20

select volume_name,volume_number,volume_device,mountpath,usage,
state,redundancy,size_mb,stripe_columns,stripe_width_k
from v$asm_volume;

rem note that there is currently no mount point for any acfs file system
pause

rem now check for acfs volumes using v$asm_acfsvolumes
pause

desc v$asm_acfsvolumes

pause

col fs_name for a30
col vol_device for a30
col vol_label for a10

select *
from v$asm_acfsvolumes;

rem now check volume stats with asmcmd
pause

host asmcmd volstat

rem check that the mount point exists
pause

host ls -ld  /home/oracle/asmfs

rem now create an asm file system on the device
pause

host sudo /sbin/mkfs -t acfs /dev/asm/demovol-357

rem check it now
pause
```

```
host sudo /sbin/acfsutil info fs

rem as it is not mounted we can not check yet
pause

rem now add it to the acfs registry
pause

host sudo /sbin/acfsutil registry -a /dev/asm/demovol-357 /home/oracle/asmfs

rem now see it in the registry
pause

host sudo /sbin/acfsutil registry

rem now mount it using mount
pause

host sudo mount -t acfs /dev/asm/demovol-357 /home/oracle/asmfs

rem see it mounted
pause

host mount

rem now check it again
pause

host sudo /sbin/acfsutil info fs

rem now check the v$ view again to see it mounted
pause

select volume_name,volume_number,volume_device,mountpath,usage,
state,redundancy,size_mb,stripe_columns,stripe_width_k
from v$asm_volume;

rem check the acfs volumes again
pause

select *
from v$asm_acfsvolumes;

rem try to do an fsck of the acfs system
pause

host sudo /sbin/fsck -t acfs /dev/asm/demovol-357

rem so unmount it
pause

host sudo umount /home/oracle/asmfs

rem check it
pause

host mount

rem now fsck the acfs system with the file system unmounted
pause

host sudo /sbin/fsck -t acfs /dev/asm/demovol-357

rem now mount it using asmfs registry
pause

host sudo /sbin/mount.acfs -o all

rem see it mounted
pause

host mount

rem and check it again
pause

host sudo /sbin/acfsutil info fs

rem now try to create a file in the file system
pause

host echo "Test acfs data" > /home/oracle/asmfs/demofile

rem see the owner and group
pause
```

```
host ls -ld /home/oracle/asmfs

rem we must set owner and group correctly
pause

host sudo chown oracle:dba /home/oracle/asmfs

rem check again
pause

host ls -ld /home/oracle/asmfs

rem now try again to create the file
pause

host echo "Test acfs data" > /home/oracle/asmfs/demofile
rem now see it
pause

host ls -asl /home/oracle/asmfs

pause

host cat /home/oracle/asmfs/demofile

rem now check volume stats again with asmcmd
pause

host asmcmd volstat

rem now create an acfs snapshot using acfsutil
pause

host sudo /sbin/acfsutil snap create mysnap /home/oracle/asmfs

rem now see the snap directory
pause

host sudo ls -ld /home/oracle/asmfs/.ACFS/snaps/mysnap

rem see the snapshot of our file
pause

host cat /home/oracle/asmfs/.ACFS/snaps/mysnap/demofile

pause see the metadata using acfsutil
rem

host sudo /sbin/acfsutil info fs

rem see it in v$asm_acfssnapshots
pause

desc v$asm_acfssnapshots

pause

col fs_name for a24
col vol_device for a24
col snap_name for a16

select *
from v$asm_acfssnapshots
order by 1;

rem now modify with append to the original file
pause

host echo "Changes to my acfs data" >> /home/oracle/asmfs/demofile

rem now see the changes
pause

host cat /home/oracle/asmfs/demofile

rem and see the snapshot still containing the original
pause

host cat /home/oracle/asmfs/.ACFS/snaps/mysnap/demofile

rem now "restore" our damaged file
pause

host cp /home/oracle/asmfs/.ACFS/snaps/mysnap/demofile /home/oracle/asmfs/demofile
```

```
rem see the "restored" file
pause

host cat /home/oracle/asmfs/demofile

rem now clean up
pause

host sudo /sbin/acfsutil snap delete mysnap /home/oracle/asmfs

host sudo umount /home/oracle/asmfs

host sudo /sbin/acfsutil registry -d /home/oracle/asmfs

host asmcmd voldelete -G DATA demovol

host sudo /u01/app/oracle/product/11.2.0/grid/bin/acfsload stop
```