ZFSCYCLE V1.1

This tool ZFSCYCLE (zFS recycle) allows to recycle the zFS STC in a z/OS UNIX sysplex file system sharing environment without a need to take down applications, except some special handling in case of having exported zFS file systems mounted locally. ZFSCYCLE can be used from z/OS UNIX, TSO or most preferable as a SYSREXX routine.

You get the best description how to use the utility by entering the command without parameters:

```
F AXR,ZFSCYCLE
ZFSCYCLE on SC70    :                                          - 606
Syntax : ZFSCYCLE < Prepare | Restore > < zfscycle_dsn >

Prepare: Save zFS file system status information and switch to status
         Automove for all locally mounted zFS file systems.
Restore: Move back and restore status of zFS file systems.
zfscycle_dsn: Optional data set name used to keep the zFS file system
         status information. If not specified the default value
         HERING.ZFSCYCLE.TABLE is used.
         (If ddname ZFSCYCLE is active, "zfscycle_dsn" is ignored.)
```

A ZFSCYCLE table data set must be allocated before you can use the utility. It is sufficient to create it as a small flat file with VB80 records. The data set is used to log all zFS file systems which are mounted locally (this means OMVS-owned) with the most important settings about the automove setting. Taking care of these file systems is sufficient. We do not need to look for file systems which are only zFS-owned locally as that is correctly handled without additional actions.

The default name for the table file is ZFSCYCLE.TABLE with an HLQ of the userid running the tool. In the help sample output the user name is HERING.

If you use ZFSCYCLE in a TSO batch job you can assign a zfscycle data set via ddname ZFSCYCLE.

```
//ZFSCYCLE DD DSNAME=&SYSUID..ZFSCYCLE.TABLE,DISP=OLD
```

Nevertheless, most efficient is to use the tool as a SYSREXX routine as shown in the following example. The first step is to run the prepare action.

```
F AXR,ZFSCYCLE,T=0 P WTSCPLX2.ZFSCYCLE.TABLE
ZFCYC001I File System OMVS.WAS70.MLBASEA.MLNODEA.ZFS is mounted
Automove=U. This will be changed temporary to Automove=Y.
ZFCYC001I File System BB17070.SBBOHFS is mounted Automove=U. This
will be changed temporary to Automove=Y.
ZFCYC001I File System WASOEM.V7R0.TPCRSC70.ZFS is mounted Automove=U.
This will be changed temporary to Automove=Y.
ZFCYC001I File System OMVS.SC70.TPCR340.VAR.ZFS is mounted Automove=U.
 This will be changed temporary to Automove=Y.
ZFCYC006I zFS cycle prepare processing ended successfully.
```

The filled in table data set WTSCPLX2.ZFSCYCLE.TABLE has the following contents. Just excerpts are displayed.

```
# ------------------------------------------------------------ #
# Locally mounted zFS file systems at system SC70              #
# ------------------------------------------------------------ #
# Column 1: unmount bit                                        #
# Column 2: noautomove bit                                     #
# Column 3: zFS file system name                               #
# ------------------------------------------------------------ #
```

```
# ------------------------------------------------------------ #
# Original Automove status explanation for columns 1 and 2     #
# ------------------------------------------------------------ #
#   1 1     zFS file system is mounted Automove=Unmount        #
#   0 1     zFS file system is mounted Automove=Noautomove     #
#   0 0     zFS file system with any other Automove setting    #
# ------------------------------------------------------------ #

1 1 OMVS.WAS70.MLBASEA.MLNODEA.ZFS
1 1 BB17070.SBBOHFS
1 1 WASOEM.V7R0.TPCRSC70.ZFS
1 1 OMVS.SC70.TPCR340.VAR.ZFS
…
0 0 HERING.TEST.ZFS
…
0 0 WTSCPLX2.SYSPLEX.ROOT
```

Now zFS can be recycled.

```
 F OMVS,STOPPFS=ZFS
*035 BPXI078D STOP OF ZFS REQUESTED. REPLY 'Y' TO PROCEED. ANY OTHER
 REPLY WILL CANCEL THIS STOP.
 …
 R 35,Y
 IEE600I REPLY TO 035 IS;Y
 IOEZ00048I Detaching aggregate OMVS.WAS70.MLBASEA.MLNODEA.ZFS
 IOEZ00048I Detaching aggregate BB17070.SBBOHFS
 IOEZ00048I Detaching aggregate WASOEM.V7R0.TPCRSC70.ZFS
 IOEZ00048I Detaching aggregate OMVS.SC70.TPCR340.VAR.ZFS
 …
 IOEZ00050I zFS kernel: Stop command received.
 …
 IOEZ00388I Aggregate takeover being attempted for aggregate HFS.ZOSR1D
 .Z1DRE1.JAVA64V5
 …
 IOEZ00044I Aggregate HFS.ZOSR1D.Z1DRE1.JAVA64V5 attached successfully.
 IOEZ00416I Aggregate HFS.ZOSR1D.Z1DRE1.JAVA64V5 moved to system SC64
 at shutdown.
 …
 IOEZ00044I Aggregate HERING.TEST.ZFS attached successfully.
 IOEZ00416I Aggregate HERING.TEST.ZFS moved to system SC64 at shutdown.
 IOEZ00357I Successfully left group IOEZFS.
 IOEZ00387E System SC70 has left group IOEZFS, aggregate recovery in
 progress.
 IOEZ00387E System SC70 has left group IOEZFS, aggregate recovery in
 progress.
 IOEZ00387E System SC70 has left group IOEZFS, aggregate recovery in
 progress.
 IOEZ00057I zFS kernel program IOEFSKN is ending.
 …
*036 BPXF032D FILESYSTYPE ZFS TERMINATED.  REPLY 'R' WHEN READY TO
 RESTART. REPLY 'I' TO IGNORE.
 R 36,R
```

```
IEE600I REPLY TO 036 IS;R
$HASP100 ZFS      ON STCINRDR
$HASP373 ZFS      STARTED
IEF403I ZFS - STARTED - TIME=15.27.48 - ASID=0077 - SC70
IEE252I MEMBER IOEPRM70 FOUND IN SYS1.PARMLIB
IEE252I MEMBER IOEPRM00 FOUND IN SYS1.PARMLIB
IEE252I MEMBER IOEPRM00 FOUND IN SYS1.PARMLIB
IOEZ00559I zFS kernel: Initializing z/OS    zSeries File System 411
Version 01.13.00 Service Level OA39385 - HZFS3D0.
Created on Tue Jun 19 13:24:26 EDT 2012.
Address space asid x77
IOEZ00374I No IOEZPRM DD specified in ZFS proc. Parmlib search being used.
IOEZ00617I zFS is running sysplex filesys,norwshare with interface level 4
IOEZ00350I Successfully joined group IOEZFS
IOEZ00055I zFS kernel: initialization complete.
…
F AXR,ZFSCYCLE,T=0 R WTSCPLX2.ZFSCYCLE.TABLE
IOEZ00048I Detaching aggregate OMVS.WAS70.MLBASEA.MLNODEA.ZFS
ZFCYC013I File system OMVS.WAS70.MLBASEA.MLNODEA.ZFS was moved from
SC63 to SC70.
ZFCYC017I Automove attribute has been restored to Automove=U for file
system OMVS.WAS70.MLBASEA.MLNODEA.ZFS.
IOEZ00048I Detaching aggregate BB17070.SBBOHFS
ZFCYC013I File system BB17070.SBBOHFS was moved from SC65 to SC70.
ZFCYC017I Automove attribute has been restored to Automove=U for file
system BB17070.SBBOHFS.
IOEZ00048I Detaching aggregate WASOEM.V7R0.TPCRSC70.ZFS
ZFCYC013I File system WASOEM.V7R0.TPCRSC70.ZFS was moved from SC64 to
SC70.
ZFCYC017I Automove attribute has been restored to Automove=U for file
system WASOEM.V7R0.TPCRSC70.ZFS.
IOEZ00048I Detaching aggregate OMVS.SC70.TPCR340.VAR.ZFS
ZFCYC013I File system OMVS.SC70.TPCR340.VAR.ZFS was moved from SC63
to SC70.
ZFCYC017I Automove attribute has been restored to Automove=U for file
system OMVS.SC70.TPCR340.VAR.ZFS.
…
ZFCYC013I File system HERING.TEST.ZFS was moved from SC64 to SC70.
IOEZ00048I Detaching aggregate HERING.TEST.ZFS
ZFCYC020I The zFS ownership for file system HERING.TEST.ZFS has been
moved from SC64 to SC70.
…
ZFCYC013I File system WTSCPLX2.SYSPLEX.ROOT was moved from SC65 to
SC70.
ZFCYC021I zFS cycle restore processing ended successfully.
```

This example should have explained how to use the utility.