VSAM TPF Dataset Rename Utility Program (VSAMTPF)

This file contains information on compiling and running the VSAM TPF data
set rename utility program (VSAMTPF) in order to assist in preparing OS/390
VSAM cluster data set components for mounting to a TPF system.

The TPF VSAM data set rename utility generates data set names for VSAM cluster
components for TPF use.

This file is intended for those persons who intend to use the VSAMTPF utility
program to assist in generating data set names for VSAM cluster components that
will be mounted to a TPF system for access by TPF VSAM support.

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1.0   PREREQUISITES

In order to properly use the TPF VSAM utility, you need to have the
following minimum software configuration on OS/390:

        o   IBM MVS/ESA Version 4.2 or later
        o   IBM MVS/ESA Cobol Compiler

1.1   DEPENDENCIES AND ASSUMPTIONS

APAR PJ26150 is required on TPF. This APAR provides support for virtual
storage access method (VSAM) data sets on TPF. The TPF system should be
at TPF PUT 10.

1.2   PREPARING FOR INSTALLATION

TPF VSAM data set name conventions

TPF VSAM support provides read only access to VSAM key sequenced data sets.
In order for the TPF VSAM support to be able to successfully navigate the index
structure of these data sets, certain information maintained in the Integated
Catalog Facility (ICF) must be available to the TPF VSAM support. This
information is provided to TPF through the data set name mounted to
TPF. The VSAMTPF utility is provided to assist the user in generating this
data set name information. This utility reads data set catalog listing
information generated by the OS/390 IDCAMS utility LISTCAT command, and
provides encoded data set name information for use in renaming the VSAM data
set for TPF use.

Each OS/390 VSAM data set name of each portion of the VSAM cluster must end
with the following:

.R <SS RBA> <High Level Block Number> .P <Key Position> L <Key Length> <.INDEX | .DATA>

SS RBA

Specifies the hexadecimal value of the sequence set RBA that is displayed
in the LISTCAT output on the MVS system, divided by the control interval (CI)
size. SS RBA is the pointer to the start of the sequence set CI blocks in the
index set. For example, an SS RBA of 1 474 560 and a CI size of 4096 would
result in X'168'.

High-Level Block Number
       Specifies the 4-digit hexadecimal value of 1 plus the value of the
high-level RBA that is displayed in a LISTCAT output on the MVS system, divided
by the CI size. The high-level RBA is the pointer to the first index block in
the highest-level index; that is, the point where all index lookups begin.
For example, a high-level RBA of 8192 and a CI size of 4096 would have a block
number of X'0003' 1+(8192/4096).

Key Position and Key Length
       Specifies the hexadecimal offset to the key in the record, counting from
0. For example, a key of 22 bytes at byte offset 33 would result in .P21L16.
These are the values specified in the KEYS parameter on the define cluster
command; they are also the RKP and KEYLEN values that are displayed in LISTCAT
on the MVS system.

INDEX | DATA
       For a KSDS, VSAM (on MVS) automatically appends the names INDEX or DATA
to the data set name during the VSAM create process to identify the index and
data spaces of the cluster.

       For a cluster with a high-level RBA of 1,474,560, CI size of 4096, and
key length of 22 bytes at offset 33 in each record, the data set name for the
index portion of the cluster would be .R1680003.P21L16.INDEX. The data portion
of the cluster would be .R1680003.P21L16.DATA.

2.0   INSTALLATION

Compiling the VSAMTPF COBOL Source Program

The VSAMTPF utility is compiled, link-edited and executed with the following
data definitions:

       Input   - IDCLIST contains the catalog information output from the
                 IDCAMS LISTCAT utility for the VSAM cluster of interest.

       Output - ALTERCC contains the generated names that can be used to
                 rename the VSAM cluster components for TPF use.

               - NEWKS contains example TPF data set mount information for
                 Prime or Mirror VSAM data set components.

The following sample JCL illustrates a method to compile, link and execute the
VSAMTPF utility source program:

```
//STEP1  EXEC  PROC=COB2UCLG,PARM='TEST,OBJECT,APOST'
//COB2.SYSIN   DD DSN=XXXXXXX.COBOL.SRC(VSAMTPF),
//             UNIT=3390,VOL=SER=VSN001,DISP=OLD
//COB2.SYSLIN  DD DSN=XXXXXXX.COBOL.OBJ(VSAMTPF),
//             UNIT=3390,VOL=SER=VSN001,DISP=(OLD,PASS)
//LKED.SYSLIN  DD DSN=XXXXXXX.COBOL.OBJ(VSAMTPF),
//             UNIT=3390,VOL=SER=VSN001,DISP=SHR
//LKED.SYSLMOD DD DSN=XXXXXXX.COBOL.LOAD(VSAMTPF),
//             UNIT=3390,VOL=SER=VSN001,DISP=SHR
//GO.IDCLIST   DD  DSN=XXXXXXX.VSAMTPF.IDCOUT,
//             UNIT=3390,VOL=SER=VSN001,DISP=SHR
```

```
        //GO.NEWKS     DD   SYSOUT=A
        //GO.ALTERCC   DD   SYSOUT=A
        //GO.SYSOUT    DD  SYSOUT=A
        /*
        //
```

Example VSAMTPF output

The following shows an example of the output generated by the VSAMTPF utility:

```
        Input:  IDCLIST =   LISTCAT information for VSAM cluster named
                           "XXXXXXX.VSAMTPFA"

        Output: ALTERCC =
                           ALTER XXXXXXX.VSAMTPFA -
                           NEWNM(R0000003.P21L16)
                           ALTER XXXXXXX.VSAMTPFA.DATA  -
                           NEWNM(R0000003.P21L16.DATA)
                           ALTER XXXXXXX.VSAMTPFA.INDEX -
                           NEWNM(R0000003.P21L16.INDEX)


        Output: NEWKS   =
                           XDAPR    R0000003.P21L16.DATA
                           XINPR    R0000003.P21L16.INDEX
```

In this example the input VSAM cluster catalog information for data set name
"XXXXXXX.VSAMTPFA" was read by the VSAMTPF utility. The utility output
indicates that the renamed cluster data set components are to end in the
following encoded string:

```
                           .R0000003.P21L16.DATA
                           .R0000003.P21L16.INDEX
```

The TPF mount information for the Primary cluster may be derived as:

```
        ZDSMG MT nnn VSAMTPFADAPR DSN-XXXXXXX.VSAMTPFA.R0000003.P21L16.DATA
        ZDSMG MT nnn VSAMTPFAINPR DSN-XXXXXXX.VSAMTPFA.R0000003.P21L16.INDEX
```

For further information please see the VSAM TPF support information described
in the "TPF V4R1 Application Programming Guide", document number SH31-0132.

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