



Hitachi Copy Manager for IBM[®] TPF Operations Guide

Hitachi Virtual Storage Platform G1000
Hitachi Virtual Storage Platform
Hitachi Universal Storage Platform V/VM

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Acronyms and Abbreviations



Preface

This document provides detailed descriptions of the ZFDRS commands for Hitachi Copy Manager for IBM® TPF operations with Hitachi RAID storage systems.

Please read this document carefully to understand how to use this product, and maintain a copy for reference purposes.

This preface includes the following information:

- [Intended Audience](#)
- [Product Version](#)
- [Document Revision Level](#)
- [Changes in this Revision](#)
- [Referenced Documents](#)
- [Document Conventions](#)
- [Convention for Storage Capacity Values](#)
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Intended Audience

This document is intended for system administrators, Hitachi Data Systems representatives, and Authorized Service Providers who are involved in installing, configuring, and operating the Hitachi RAID storage systems.

This document assumes the following:

- The user has a background in data processing and understands direct-access storage device (DASD) systems and their basic functions.
- The user is familiar with the Hitachi RAID storage system (for example, Virtual Storage Platform) and the User Guide for the storage system.
- The user is familiar with the Hitachi ShadowImage feature.
- The user is familiar with the Hitachi TrueCopy feature.
- The user is familiar with the Hitachi Universal Replicator feature.
- The user is familiar with the data replication requirements.
- The user is familiar with the IBM® Transaction Processing Facility operating system (TPF, z/TPF) and the IBM® host system (z/OS®, S/390®).
- The user is familiar with the IBM® TPF DASD I/O concepts and support.

Product Version

This document revision applies to Copy Manager for TPF version BF_4 or later.

Document Revision Level

Revision	Date	Description
MK-92RD131-00	July 2002	Initial release
MK-92RD131-01	Feb 2004	Revision 1, supersedes and replaces MK- MK-92RD131-00
MK-92RD131-02	Aug 2004	Revision 2, supersedes and replaces MK-92RD131-01
MK-92RD131-03	May 2007	Revision 3, supersedes and replaces MK-92RD131-02
MK-92RD131-04	May 2008	Revision 4, supersedes and replaces MK-92RD131-03
MK-92RD131-05	Apr 2009	Revision 5, supersedes and replaces MK-92RD131-04
MK-92RD131-06	Aug 2009	Revision 6, supersedes and replaces MK-92RD131-05
MK-92RD131-07	Aug 2011	Revision 7, supersedes and replaces MK-92RD131-06
MK-92RD131-08	May 2012	Revision 8, supersedes and replaces MK-92RD131-07
MK-92RD131-09	Oct 2012	Revision 9, supersedes and replaces MK-92RD131-08
MK-92RD131-10	Feb 2014	Revision 10, supersedes and replaces MK-92RD131-09
MK-92RD131-11	Apr 2014	Revision 11, supersedes and replaces MK-92RD131-10
MK-92RD131-12	August 2014	Revision 12, supersedes and replaces MK-92RD131-11

Changes in this Revision

- Updated the status filters ([ZFDRS STATUS- Display copying device status for TrueCopy](#), [ZFDRS STATUS- Display copying device status for Universal Replicator](#)).
- Removed the reverse verify option (VERifytvofflin) ([ZFDRS REVERSE - Reverse resume \(resync\) copying of devices](#)).
- Removed the split monitor options (MONitor, TIME-tttt) ([ZFDRS SPLIT - Split copying of devices](#)).
- Updated the Clip requirements ([Requirements and Restrictions](#) in [ZFDRS CLIP - Clip target volume TPF VSN](#)).

Referenced Documents

- Hitachi Copy Manager for TPF documents:
 - *Hitachi Copy Manager for IBM® TPF Administrator's Guide*, MK-92RD129
 - *Hitachi Copy Manager for IBM® TPF Messages and Codes*, MK-92RD130
- Hitachi Virtual Storage Platform G1000 documents:
 - *Product Guide*, MK-92RD8051
 - *Hitachi TrueCopy for Mainframe User Guide*, MK-92RD8018
 - *Hitachi Universal Replicator for Mainframe User Guide*, MK-92RD8022
 - *Hitachi ShadowImage for Mainframe User Guide*, MK-92RD8020
 - *Mainframe System Administrator Guide*, MK-92RD8016
- Hitachi Virtual Storage Platform documents:
 - *User and Reference Guide*, MK-90RD7042
 - *Hitachi TrueCopy for Mainframe User Guide*, MK-90RD7030
 - *Hitachi Universal Replicator for Mainframe User Guide*, MK-90RD7031
 - *Hitachi ShadowImage for Mainframe User Guide*, MK-90RD7023
 - *Storage Navigator User Guide*, MK-90RD7027
- Hitachi Universal Storage Platform V/VM documents:
 - *User and Reference Guide*, MK-96RD635
 - *Hitachi TrueCopy for IBM® z/OS® User's Guide*, MK-96RD623
 - *Hitachi ShadowImage for IBM® z/OS® User's Guide*, MK-96RD619
 - *Hitachi Universal Replicator for IBM® z/OS® User's Guide*, MK-96RD625
 - *Storage Navigator User's Guide*, MK-96RD621
- IBM® documents:
 - *TPF Database Reference*, SH31-0143-14
 - *IBM 3990 Transaction Processing Facility Support RPQs*, GA32-0134-03

Document Conventions





This document uses the following terminology conventions:

Convention	Description
Hitachi RAID storage system, storage system	Refers to all models of the supported Hitachi RAID storage systems unless otherwise noted.
TPF	Refers to all IBM® TPF operating systems (TPF, z/TPF) unless otherwise noted.

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click OK .
<i>Italic</i>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: <i>copy source-file target-file</i> Note: Angled brackets (< >) are also used to indicate variables.
monospace	Indicates text that is displayed on screen or entered by the user. Example: # pairdisplay -g oradb
< > angled brackets	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: # pairdisplay -g <group> Note: Italic is also used to indicate variables.
[] square brackets	Indicates optional values. Example: [a b] indicates that you can choose a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a b } indicates that you must choose either a or b.
vertical bar	Indicates that you have a choice between two or more options or arguments. Examples: [a b] indicates that you can choose a, b, or nothing. { a b } indicates that you must choose either a or b.
underline	Indicates the default value. Example: [<u>a</u> b]

This document uses the following icons to draw attention to information:

Icon	Meaning	Description
	Note	Calls attention to important and/or additional information.
	Tip	Provides helpful information, guidelines, or suggestions for performing tasks more effectively.
	Caution	Warns the user of adverse conditions and/or consequences (for example, disruptive operations).
	WARNING	Warns the user of severe conditions and/or consequences (for example, destructive operations).

Convention for Storage Capacity Values

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 KB	1,000 bytes
1 MB	1,000 KB or 1,000 ² bytes
1 GB	1,000 MB or 1,000 ³ bytes
1 TB	1,000 GB or 1,000 ⁴ bytes
1 PB	1,000 TB or 1,000 ⁵ bytes
1 EB	1,000 PB or 1,000 ⁶ bytes

Logical storage capacity values (for example, logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 cylinder	Mainframe: 870 KB Open-systems: <ul style="list-style-type: none">▪ OPEN-V: 960 KB▪ Other than OPEN-V: 720 KB
1 KB	1,024 bytes
1 MB	1,024 KB or 1,024 ² bytes
1 GB	1,024 MB or 1,024 ³ bytes
1 TB	1024 GB or 1,024 ⁴ bytes
1 PB	1,024 TB or 1,024 ⁵ bytes
1 EB	1,024 PB or 1,024 ⁶ bytes
1 block	512 bytes

Getting Help

If you need to call the Hitachi Data Systems Support Center, make sure to provide as much information about the problem as possible, including:

- The circumstances surrounding the error or failure.
- The exact content of any error messages displayed on the hosts.
- The exact content of any error message displayed on Storage Navigator.
- The service information messages (SIMs), including reference codes and severity levels, logged at the host and displayed by Storage Navigator.

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: <https://portal.hds.com>

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title and number, including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Data Systems.

Thank you!

Overview of Hitachi Copy Manager for IBM® TPF

The Hitachi Copy Manager for IBM® TPF software allows Transaction Processing Facility (TPF) users to control DASD copy functions on Hitachi RAID storage systems from TPF. Copy Manager for TPF provides a TPF interface that is simple to install and use. With one TPF operator entry, the TPF user can control sessions on the following Hitachi products for IBM® over the entire TPF complex: ShadowImage (local copy), TrueCopy (remote copy), or Universal Replicator (remote copy). Copy Manager for TPF provides users the ability to establish, split, delete, or resync those sessions with one entry. With no TPF control program changes, Copy Manager for TPF requires minimal effort to incorporate into a TPF complex.

This document provides detailed descriptions of the ZFDRS commands for the Hitachi Copy Manager for TPF software. For more information about Copy Manager for TPF operations, see the *Hitachi Copy Manager for TPF Administrator's Guide*. For information about the error codes and messages output by the Copy Manager for TPF software, see the *Hitachi Copy Manager for TPF Messages and Codes* document.

ZFDRS Commands for Copy Manager for TPF

This chapter provides detailed descriptions of the ZFDRS commands for the Copy Manager for TPF software.

- For more information about Copy Manager for TPF operations, see the *Hitachi Copy Manager for TPF Administrator's Guide*.
- For information about the Copy Manager for TPF messages and error codes, see the *Hitachi Copy Manager for TPF Messages and Codes* document.
- For more information about device copy, see the following IBM® documents:
 - *TPF Database Reference*
 - *IBM 3990 Transaction Processing Facility Support RPQs*

ZFDRS commands for Copy Manager for TPF:

- [ZFDRS CLIP – Clip target volume TPF VSN](#)
- [ZFDRS CONFIG – Display copy pair configuration definition table](#)
- [ZFDRS CONFIG – Initialize a set](#)
- [ZFDRS CONFIG – Maintain copy pair configuration definition table](#)
- [ZFDRS COPYMGR – Define Copy Manager system control records](#)
- [ZFDRS COPYMGR – Initialize or display the Copy Manager system control record](#)
- [ZFDRS COPYMGR DEFAULTRECID – Define Copy Manager system default record ID](#)
- [ZFDRS COPYMGR SITEOPTIONS – Define Copy Manager site options](#)
- [ZFDRS CREATEPAIR – Create pairs for a set from two database areas](#)
- [ZFDRS DBAREA – Display a database area's volume configuration definition table](#)
- [ZFDRS DBAREA – Initialize a database area's volume configuration definition table](#)
- [ZFDRS DBAREA – Maintain a database area's volume configuration definition table](#)

- ❑ [ZFDRS DBREC – Define a database area in the database area index record](#)
- ❑ [ZFDRS DBREC INIT – Initialize the database area index record](#)
- ❑ [ZFDRS DELETE – Delete copying of devices](#)
- ❑ [ZFDRS ESTABLISH – Establish copying of devices](#)
- ❑ [ZFDRS EXCREC – Define and Maintain Extended Consistency Groups in the EXCTG definition record](#)
- ❑ [ZFDRS EXCREC INIT – Initialize the EXCTG definition record](#)
- ❑ [ZFDRS EXCTGroup – Define or Remove an Extended Consistency Group](#)
- ❑ [ZFDRS JNLgroup – Display a Journal Group’s status](#)
- ❑ [ZFDRS MONITOR – Monitor TPF Copy Progress](#)
- ❑ [ZFDRS OFFREC – Define a control device in the offline volume control device definition record](#)
- ❑ [ZFDRS OFFREC INIT – Initialize the offline volume control device definition record](#)
- ❑ [ZFDRS PATH – Control HUR or TrueCopy Internal Path Definitions](#)
- ❑ [ZFDRS PRESET – Control Preset SPLIT](#)
- ❑ [ZFDRS RCUREC – Define a command device location in the remote control unit command device definition record](#)
- ❑ [ZFDRS RCUREC CDVDEF – Send a “define command device request” to a local or remote control unit](#)
- ❑ [ZFDRS RCUREC INIT – Initialize the remote control unit command device definition record](#)
- ❑ [ZFDRS RESUME \(RESYNC\) – Resume copying of devices](#)
- ❑ [ZFDRS REVERSE – Reverse resume \(resync\) copying of devices](#)
- ❑ [ZFDRS SETREC – Define a set in the set index record](#)
- ❑ [ZFDRS SETREC INIT – Initialize the set index record](#)
- ❑ [ZFDRS SPLIT – Split copying of devices](#)
- ❑ [ZFDRS STATUS – Display copying device status for ShadowImage](#)
- ❑ [ZFDRS STATUS– Display copying device status for TrueCopy](#)
- ❑ [ZFDRS STATUS– Display copying device status for Universal Replicator](#)
- ❑ [ZFDRS STATUS DUMP – Display ShadowImage, TrueCopy, or Universal Replicator status bits](#)
- ❑ [ZFDRS STATUS SYSTEM – Display TPF system copying status](#)
- ❑ [ZFDRS UTILITY CIOSC – Display a CIOSC status bits for a single volume](#)
- ❑ [ZFDRS VERIFYTVOFFLIN – Verify ShadowImage Target volumes are offline](#)
- ❑ [ZFDRS VERIFYTVOFFLIN SINGLE – Verify a single volume offline/online status](#)

ZFDRS CLIP – Clip target volume TPF VSN

The CLIP command writes an updated VSN record (cylinder 0, track 0, record 3) to the target volume in a ShadowImage set's copy pair configuration definition record. Use this command to alter the first two characters of a ShadowImage target volume TPF VSN. The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The copy pair configuration definition record being used for the set must be set up correctly.

The specified volume pair status must be split with the read/write option.

Clip is only available for ShadowImage sets.

Clip requires a TPF LCU on TPF microcode.

Contact HDS TPF Engineering for current restrictions for a TPF site's HDS storage platform and microcode level.

The VTOC will not be updated.

The pair definition in the ShadowImage set must use the source option. The nosource pair definition option is not supported.

Format

```
>>--ZFDRS -----CLIP ----- SETname-setname ----->
      +- -Local- +-
>-----VSN-vv-----OLDvsn-oo----->
      +- --ALL-----+
>-- -----<<
      +- --Dev-XXXX-----+ +- BP--+
      +- --SSSid -XXXX-+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

VSN-vv

Specifies the requested first two characters to alter the target volume's VSN to.

OLDVsn-oo

Specifies the current first two characters of the target volume's current VSN. The CLIP function verifies that the OLDVSN matches the current target volume VSN prior to altering the target volume's VSN.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single SSID is to be processed.

BP

Bypass checks that ensure the current target volume VSN matches the OLDVSN input value. Consult HDS TPF Engineering regarding the use of the BP option.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP CLIP
```

Examples

```
ZFDRS CLIP SET-SET1 VSN-TA OLDVSN-PR
ZFDRS CLIP SET-TESTSYS1 VSN-TA OLDVSN-XX BP
```

ZFDRS CONFIG – Display copy pair configuration definition table

Use this command to display the ShadowImage, Universal Replicator, or TrueCopy pair configuration. This command allows for two types of displays:

- A full configuration pair definition display.
- For TrueCopy or HUR, a full configuration path definition display.
- A subset of the configuration set display using the pair definition fields as search parameters. If more than one copy pair definition field is specified, the search uses an "AND" search for the matching parameters.

Requirements and Restrictions

The set being used must be defined correctly in the set index record.

The copy pair configuration definition records for the set must be set up correctly.

The default display entry will only display the copy pair definitions in the configuration. To display the path definition for the copy pairs, use the "PATHS" parameter.

Format

```
>>--ZFDRS -----Config Display -----SETname-setname----->
      +- -Local--+
      +- -Remote--+

      +- --ALL-----+
>--- -----<<
      +- --Dev-XXXX-----+
      +- --SSSid -XXXX-+
      +- --SSEr-YYYYYY----|
      +- --SLcu-XX-----|
      +- --SVol-XX-----|
      +- --TSSid-XX-----|
      +- --TSEr-YYYYYY----|
      +- --TLcu-XX-----|
      +- --TVol-XX-----|
      +- --CGid-XX-----|
      +- --SJnlG-XX-----|
      +- --TJnlG-XX-----|
      +- --MIRror-XX-----|
      +- --COMment-cccccc-|
      +- --SOURce-----|
      +- --NOSOURce-----|
      +- --S1portid-pp----|
      +- --S2portid-pp----|
      +- --S3portid-pp----|
```

```

+- --S4portid-pp----|
+- --S5portid-pp----|
+- --S6portid-pp----|
+- --S7portid-pp----|
+- --S8portid-pp----|
+- --T1portid-pp----|
+- --T2portid-pp----|
+- --T3portid-pp----|
+- --T4portid-pp----|
+- --T5portid-pp----|
+- --T6portid-pp----|
+- --T7portid-pp----|
+- --T8portid-pp----|
+- --HURPathid-ii---|
+- --PATHS-----|
+- --FORMAT-----|

```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record are to be displayed.

Dev-xxxx

Specifies a single device is to be displayed.

SSSid-xxxx

Specifies matching source SSIDs are to be displayed.

SSEr-yyyyyy

Specifies matching source control unit serial numbers are to be displayed.

SLcu-xx

Specifies matching source volume LCU numbers are to be displayed.

SVol-xx

Specifies matching source volume number in LCUs are to be displayed.

TSSid-xxxx

Specifies matching target volume SSIDs are to be displayed.

TSEr-YYYYYY

Specifies matching target volume control unit serial numbers are to be displayed.

TLcu-xx

Specifies matching target volume LCU numbers are to be displayed.

TVol-xx

Specifies matching target volume number in LCUs are to be displayed.

CGid-xx

Specifies matching consistency group IDs are to be displayed.

SJnlg-xx

Specifies matching Universal Replicator source journal group numbers are to be displayed. Source Journal number is only used by HUR sets.

TJnlg-xx

Specifies matching Universal Replicator target journal group numbers are to be displayed. Target Journal number is only use by HUR sets.

MIRror-xx

Specifies matching Mirror Id for the Journal groups are to be displayed. Mirror number is only used by HUR sets.

COMment-cccccc

Specifies matching comment fields are to be displayed.

SOURce

Specifies matching copy pairs with the SOURCE option are to be displayed.

NOSOURce

Specifies matching copy pairs with the NOSOURCE option are to be displayed.

S1portid-pp (S2portid - S8portid)

Specifies matching copy pairs with the source port id for source port 1 (or port 2-8) are to be displayed. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

T1portid-pp (T2portid - T8portid)

Specifies matching copy pairs with the target port id for target port 1 (or port 2-8) are to be displayed. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

HURPathid-ii

Specifies matching copy pairs with the HUR Path Id are to be displayed.

PATHs

Specifies to display the path definitions.

FORMAT

Specifies to display the matching copy pairs in the ZFDRS CONFIG (action) format. When combined with the PATHS parameter, the copy pairs path ZFDRS CONFIG (action) formats are displayed.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP CONFIG DISPLAY
```

Examples

```
ZFDRS CONFIG DISPLAY SET-SET1
ZFDRS CON DI SET-SET2 SSSID-A000
ZFDRS CON DI SET-SET3 DEV-7102
ZFDRS CON DI SET-EXAMPLE TL-3
ZFDRS CON DISPLAY SET-TRYIT TV-8 SSE-10068
ZFDRS CON DI SET-EXAMPLE COMMENT-NEWTST TSS-1359
ZFDRS CONFIG DI SET-EXAMPLE NOSOURCE SL-3 SSS-B438
ZFDRS CON DISPLAY SET-EXAMPLE TV-3
ZFDRS CONFIG DISPLAY SET-EXAMPLE SV-1F S1P-2
ZFDRS CON DISPLAY SET-EXAMPLE COMMENT-NEW1 TSS-1359
ZFDRS CON DISPLAY SET-EXAMPLE NOSOURCE SL-3 SSS-B438
ZFDRS CON DISPLAY SET-EXAMPLE TSE-778856 SJNLG-30
ZFDRS CON DISPLAY SET-EXAMPLE CGID-16
ZFDRS CON DI SET-EXAMPLE S1P-8
ZFDRS CON DI SET-EXAMPLE T2PORTID-12
ZFDRS CONFIG DISPLAY SET-EXAMPLE HURP-4
ZFDRS CON DISPLAY SET-RECOVER FORMAT
ZFDRS CON DISPLAY SET-TESTSYS1 PATHS
ZFDRS CON DISPLAY SET-TESTSYS1 PATH FORMAT
```


ZFDRS CONFIG – Initialize a set

Use this command to initialize a set's copy pair configuration definition records.

Requirements and Restrictions

The set must be defined in the set index record.

The copy pair configuration definition records must be initialized with the correct record ID.

All existing volume pairs defined for the set must be simplex or invalid status.

Format

```
>>--ZFDRS -----CONfig --- --INIT---SETname-setname---- BP ---->
+
      +- -Local--+
      +- -Remote--+

      +- PASSWORD-password ---+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters that is to be initialized.

PASSWORD-password

The INIT parameter requires a password. This password is defined during installation of Copy Manager for TPF (see the *Copy Manager for TPF Administrator's Guide*).

BP

Bypass checks that all devices in this set are in the correct state (simplex or invalid) for the requested action. Consult HDS TPF Engineering regarding the use of the BP option.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP CONFIG
```

Example

```
ZFDRS CON INIT SET-NEWSET PASSWORD-SECRET
```

ZFDRS CONFIG – Maintain copy pair configuration definition table

Use this command to maintain the ShadowImage, Universal Replicator, or TrueCopy configuration.

Requirements and Restrictions

The set being used must be defined correctly in the set index record.

The copy pair configuration definition records for the set must be set up correctly.

If changing or removing volume pair definition in a set, that volume pair must have simplex or invalid status.

All records in a set are keyed by the device number. A record in a SET may be referenced only by the device number.

The device number in a set may not be changed.

The device number in a set may only be used once.

A target definition in a set may only be used once (that is, no two source volumes may use the same target volume within a single set).

port id's cannot be x"00'.

HURPATHID cannot be x'FF'

Format

```
>>--ZFDRS -----CONfig-- --CHAnge-- ---SEtname-setname---->
      +- -Local--+          +- --ADD-----|
      +- -Remote--+        +- --REMove--|

      >-- --Dev-XXXX-- ----->
      +- --SSSid -XX-----|
      +- --SSEr-YYYYYY----|
      +- --SLcu-XX-----|
      +- --SVol-XX-----|
      +- --TSSid-XX-----|
      +- --TSEr-YYYYYY----|
      +- --TLcu-XX-----|
      +- --TVol-XX-----|
      +- --CGid-XX-----|
      +- --SJnlG-XX-----|
      +- --TJnlG-XX-----|
      +- --MIRror-XX-----|
      +- --COMment-cccccc-|
      +- --COUnt-cc-----|
      +- --LASTdev-dddd---|
```

```

+- --S1portid-pp----|
+- --S2portid-pp----|
+- --S3portid-pp----|
+- --S4portid-pp----|
+- --S5portid-pp----|
+- --S6portid-pp----|
+- --S7portid-pp----|
+- --S8portid-pp----|
+- --T1portid-pp----|
+- --T2portid-pp----|
+- --T3portid-pp----|
+- --T4portid-pp----|
+- --T5portid-pp----|
+- --T6portid-pp----|
+- --T7portid-pp----|
+- --T8portid-pp----|
+- --HURPathid-ii---| >- -- SOURce----+ -----><
                                     +- NOSOURce-+- ---BP--+

```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

CHAnge

Change an existing volume pair's definition in a set.

ADD

Add a new volume pair and its definition to a set.

REMove

REMOVE an existing volume pair in a set.

SETname-setname

Variable-length set name up to 16 characters.

Dev-xxxx

Device to add, change, or remove in the set.

SSSid

Source volume SSID (valid only for change or add operations).

SSEr

Source volume control unit serial number (valid only for change or add operations).

SLcu

Source volume LCU number (valid only for change or add operations).

SVol

Source volume number in LCU (valid only for change or add operations).

TSSid

Target volume subsystem ID (valid only for change or add operations).

TSEr

Target volume control unit serial number (TrueCopy or Universal Replicator only). When defining a ShadowImage pair, the SSER value is used (valid only for change or add operations).

TLcu

Target volume LCU number (valid only for change or add operations).

TVol

Target volume number in LCU (valid only for change or add operations).

CGid

Consistency group ID (valid only for change or add operations). Specifying this parameter will override the SETREC default value for CGID.

SJnlg

Universal Replicator source journal group number (valid only for change or add operations). Source Journal number is only used by HUR sets. Specifying this parameter will override the SETREC default value for SJNLG.

TJnlg

Universal Replicator target journal group number (valid only for change or add operations). Target Journal number is only used by HUR sets. Specifying this parameter will override the SETREC default value for TJNLG.

MIRror-xx

Mirror Id for the journal group (valid only for change or add operations). Mirror number is only used by HUR sets. Specifying this parameter will override the SETREC default value for MIRROR.

COMment

A 6-character comment field (valid only for change and add operations).

COUnt

Specifies the count of pairs to generate or change. The count field is a hexadecimal number. The default count is 1. For each new pair generated or changed, the Device number, the SVOL number and the TVOL number are incremented by one. No other data fields are changed. Count is valid for change, add, and remove operations.

LASTdev

Specifies the end of a range of pairs to generate or change. The range is from DEVICE parameter to the LASTDEV parameter. The default value for LASTDEV is the value entered in the DEVICE field. For each new pair generated or changed, the Device number, the SVOL number and the TVOL number are incremented by one. No other data fields are changed. LASTDEV is valid for change, add, and remove operations.

S1portid (S2portid - S8portid)

Specifies the source port id for source port 1 (or port 2-8). The order of the port definition can be critical to the reliability of the path usage. Contact HDS TPF engineering for help identifying the correct source port ids. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

T1portid (T2portid - T8portid)

Specifies the target port id for target port 1 (or port 2-8). The order of the port definition can be critical to the reliability of the path usage. Contact HDS TPF engineering for help identifying the correct target port ids. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

HURPathid

Specifies HUR path id for the defined paths. Also, specifies that the port id's entered are for HUR uses this HUR path id. Contact HDS TPF engineering for help identifying the correct HUR path ID.

BP

Bypass checks that ensure all devices are in the correct state (simplex or invalid) for Change or Remove operations. Consult HDS TPF Engineering regarding the use of the BP option.

SOURCE

Indicates that the source volume specified (SVOL) is the same volume as the device to which the command will be issued (DEV). ShadowImage defaults to SOURCE, and TrueCopy defaults to NOSOURCE (valid only for change or add). Specifying this parameter will override the SETREC default value for SOURCE.

NOSOURCE

Indicates that the source volume specified (SVOL) is a different volume than the device to which the command will be issued (DEV). ShadowImage defaults to SOURCE, and TrueCopy defaults to NOSOURCE (valid only for change or add). Specifying this parameter will override the SETREC default value for SOURCE.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP CONFIG
```

Examples

```
ZFDRS CONFIG CHANGE SET-SET1 DEV-7201 SSSID-A400 COMMENT-TEST01
ZFDRS R CON A SET-SET2 D-7209 SSE-11234 SSS-A400 SV-00 SL-1 TV-40 TSS-A409
TL-8 COMMENT-HD1000
ZFDRS CONFIG REMOVE SET-SET3 DEV-7208
```

The next two entries are equivalent. They both generate pairs for devices 3000 to 3007.

```
ZFDRS CON A SET-SET2 D-3000 SSE-331122 SSS-A400 SV-00 SL-1 TV-40 TSS-A409
TL-8 COMMENT-HD1000 COUNT-8
ZFDRS CON A SET-SET2 D-3000 SSE-331122 SSS-A400 SV-00 SL-1 TV-40 TSS-A409
TL-8 COMMENT-HD1000 LASTDEV-3007
```

The next two entries are equivalent. They both change the TARGET SSID of the pairs for devices 3000 to 3007.

```
ZFDRS CON C SET-SET2 D-3000 TSS-1234 COUNT-8
ZFDRS CON A SET-SET2 D-3000 TSS-1234 LASTDEV-3007
```

The next entry defines TrueCopy Path port numbers to the pairs.

```
ZFDRS CON CHA SET-TCSET1 D-A000 COU-1F S1-10 S2-11 S2-12 S4-13 T1-3 T2-4 T3-
5 T4-6
```

The next entry defines HUR Path port numbers to the pairs for HUR path id 1.

```
ZFDRS CON CHA SET-HURSET1 D-A000 COU-1F S1-10 S2-11 S2-12 S4-13 T1-3 T2-4
T3-5 T4-6 HURPATHID-1
```

ZFDRS COPYMGR – Define Copy Manager system control records

Use this command to define the location of Copy Manager’s system control records.

Requirements and Restrictions

The COPYMGR system control record FACE type, ordinal, and record ID must be defined by the customer in the Copy Manager assembler program, YHDZ (see the *Copy Manager for TPF Administrator’s Guide*).

The fixed file record to be used for the Copy Manager system control record must have the record ID that was defined in Copy Manager Assembler program, YHDZ (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator’s Guide*).

The COPYMGR system control record must be initialized before the first use of this function and before the first use of the Define Copy Manager system control record function. See ZFDRS COPYMGR INIT or the *Copy Manager for TPF Administrators Guide*.

Format

```
>>--ZFDRS ---COPYMGR ----->
      +- -SETrec-----+      +- -ADD-----+
      +- -OFFrec-----+      +- -CHAnge----+
      +- -RCUrec-----+
      +- -EXCREc-----+
      +- -DBREc-----+
      +- -DISplay-----+

>----->
      +- -FACEtype-nnnnnn---+ +- -ORDinal-xxxxxxxx---+ +- -RECID-rrrr---+
```

SETrec

The set index record.

OFFrec

The offline volume command device definition record.

RCUrec

The Remote Control Unit command device definition record.

EXCREc

The Extended Consistency Group definition record.

DBREc

The Database Area index record.

ADD

Add a new Copy Manager control record to the Copy Manager system control record.

CHAnge

Change a Copy Manager control record in the Copy Manager system control record.

DISplay

Display all the Copy Manger control records and the system default record ID.

FACEtype-*nnnnnnnn*

Beginning FACE type (without the '#' preceding) of this Copy Manager control record (valid only for change and add operations).

ORDinal-*xxxxxxxxxx*

Ordinal of this Copy Manager control record (valid only for change and add operations).

RECID-*rrrr*

The record ID of this Copy Manager control record. For a hexadecimal record ID, enter the four-character hexadecimal value (RECID-C1C1). For an upper case alphabetic record ID, enter the two-character value (RECID-AA). If omitted, the default record ID defined in the COPYMGR system control record (defined by ZFDRS COPYMGR DEFAULTRECID) will be used (Valid only for change and add operations).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP COPYMGR
```

Examples

```
ZFDRS COPYMGR SETREC ADD FACETYPE-CMRECS ORD-100 RECID-HD
ZFDRS COPYMGR OFFREC ADD FACE-CMRECS ORD-101 RECID-HD
ZFDRS COPYMGR RCUREC ADD FACE-CMRECS ORD-102 RECID-HD

ZFDRS COPYMGR EXCREC ADD FACE-CMRECS ORD-103 RECID-HD

ZFDRS COPYMGR DBREC ADD FACE-CMRECS ORD-104 RECID-HD
ZFDRS COPYMGR DISPLAY
```

ZFDRS COPYMGR – Initialize or display the Copy Manager system control record

The COPYMGR INIT command initializes the Copy Manager system control record. The COPYMGR DISPLAY command displays the Copy Manager system control record.

Requirements and Restrictions

The COPYMGR system control record FACE type, ordinal, and record ID must be defined by the customer in the Copy Manager assembler program, YHDZ (see the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the Copy Manager system control record must have the record ID that was defined in Copy Manager Assembler program, YHDZ (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

Format

```
>>--ZFDRS --- COPYMGR ----- DIsply-----><  
>>--ZFDRS --- COPYMGR ----- INIT  ----- PASSWORD-password ----- BP -----><
```

DIsply

Displays the Copy Manager system control record.

INIT

Clears the Copy Manager system control record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager for TPF.

BP

Bypass checks that ensure all devices are in the correct state (simplex or invalid) for INIT operations. Consult HDS TPF Engineering regarding the use of the BP option.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP COPYMGR
```

Examples

```
ZFDRS COPYMGR DISPLAY  
ZFDRS COPYMGR INIT PASSWORD-SECRET BP  
ZFDRS COPYMGR DI
```

ZFDRS COPYMGR DEFAULTRECID – Define Copy Manager system default record ID

Use this command to define the default record ID to be used throughout the Copy Manager processes. This record ID will be used for all record retrieval unless the default record ID overridden.

Requirements and Restrictions

The COPYMGR system control record FACE type, ordinal, and record ID must be defined by the customer in the Copy Manager assembler program, YHDZ (see the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the Copy Manager system control record must have the record ID that was defined in Copy Manager Assembler program, YHDZ (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The COPYMGR system control record must be initialized before the first use of this function (before the first use of the DEFAULTRECID Copy Manager system control record function). See ZFDRS COPYMGR INIT or the *Copy Manager for TPF Administrators Guide*.

Format

```
>>--ZFDRS ---COPYMGR -----DEFAULTREcid ----- RECID-rrrr -----><
```

RECID-rrrr

The record ID of this Copy Manager control record. For a hexadecimal record ID, enter the four-character hexadecimal value (RECID-C1C1). For an upper case alphabetic record ID, enter the two-character value (RECID-AA).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP COPYMGR
```

Examples

```
ZFDRS COPYMGR DEFAULTRECID RECID-FA01  
ZFDRS COPYMGR DEFAULTTRE RECID-HD
```

ZFDRS COPYMGR SITEOPTIONS – Define Copy Manager site options

Use this command to define the local TPF site's default Copy Manager site options. The site options can be overridden by any Copy Manager entry that allows for a site option as an input parameter.

Requirements and Restrictions

The COPYMGR system control record FACE type, ordinal, and record ID must be defined by the customer in the Copy Manager assembler program, YHDZ (see the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the Copy Manager system control record must have the record ID that was defined in Copy Manager Assembler program, YHDZ (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The COPYMGR system control record must be initialized before the first use of this function and before the first use of the DEFAULTRECID Copy Manager system control record function. See ZFDRS COPYMGR INIT or the *Copy Manager for TPF Administrators Guide*.

Format

```
>>--ZFDRS ---COPYMGR -----SITEoptions ----->
      +- NOMONITOR--+
>-- -----><
      +- MONITOR--+ +- MONTIME-ttttt--+
      +- NOSPLITRW--+ +- NOSTOPONerr--+
>-- -----><
      +- SPLITRW--+ +- STOPONerr--+
      +- NOVERifytvofflin--+
>-- -----><
      +- VERifytvofflin--+ DATEformat-xxxxxxx
      +- NOECHOchange--+ +- NOSERRC--+
>-- -----><
      +- ECHOchange---+ +- SERRC----+
      +- NOUSEREXITON--+ +- NOCOMBine---+
>-- -----><
      +- USEREXITON----+ +- COMBine----+
      +- NOSETS_OFFline--+ +- NOSETS_SOURCE---+
>-- -----><
      +- SETS_OFFline----+ +- SETS_SOURCE----+
```

```

+- NOSETS_EXCtg---+
>-----<
+- SETS_EXCtg-----+    +- MAXCOUnt-xx -----+

```

MONITOR

Specifies that the TPF copy progress monitor will be started after an establish, split, resume, reverse or delete request. The MONTIME parameter is required when MONitor is specified.

MONTIME-tttt

Specifies the monitor interval time in seconds. The value is a decimal number. The MONitor parameter is required when the MONTIME parameter is specified.

STOPONerr

Specifies that if an error is encounter during an establish, split, resume, reverse, delete or status request, the request will stop after the first error is encountered. If this option is not specified, a request will be issued for every device in the set.

SPLITRW

Specifies that after a split request, the target volumes will be left in a read/write state. If this option is not specified, the target volumes will be read only after a split request.

VERifytvofflin

Specifies that before a Local ShadowImage Establish or Resume, Copy Manager will verify that the target volumes are offline prior to issuing the Establish or Resume request.

DATEformat-xxxxxx

Specifies the format for the input and display of dates. The acceptable date formats are MMDDYY, DDMMYY, and YYMMDD. The default value is MMDDYY.

ECHOchange

Specifies that if an add or change or remove is made to any CopyManager configuration or control record, the appropriate display of the record will automatically follow. For example, if a change is made to a siteoption, the COPYMGR record display will follow the change.

SERRC

Provides the option to replace any SERRCS within CopyManager with a console message. Also allows the option to gather a SERRC dump to help HDS TPF engineering with CopyManager problem analysis. HDS TPF engineering recommends that the TPF site set NOSERRC.

USEREXITON

Specifies that the CopyManager user exit code is activated.

COMBine

Specifies that all Universal Replicator (HUR) status display will display both the local and remote site's status. If this option is set to NO, then only the local or the remote site status is displayed.

MAXCOUnT-xx

Specifies the maximum value for the COUNT parameter in the CONFIG entries. The value entered with the MAXCOUNT parameter is a hexadecimal number. The valid range for MAXCOUNT is x'8' to x'100'.

SETS_OFFline

Specifies that during a set definition using the ZFDRS SETREC ADD entry, the OFFLINE set attribute will default to OFFLINE. This SETS site option is only used during ZFDRS SETREC ADD processing.

SETS_SOUrce

Specifies that during a set definition using the ZFDRS SETREC ADD entry, the SOURCE set attribute will default to SOURCE. This SETS site option is only used during ZFDRS SETREC ADD processing.

SETS_EXCtg

Specifies that during an Universal Replicator (HUR) set definition using the ZFDRS SETREC ADD entry, the EXCTG HUR set attribute will default to EXCTG. This SETS site option is only used during ZFDRS SETREC ADD processing for HUR sets.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP COPYMGR
```

Examples

```
ZFDRS COPYMGR SITEOPTIONS MONITOR MONTIME-19
ZFDRS COPYMGR SITEOPTIONS STOPONERR
ZFDRS COPYMGR SITEOPTIONS ECHO
ZFDRS COPYMGR SITEOPTIONS COMBINE
ZFDRS COPYMGR SITEOPTIONS NOSEERRC
ZFDRS COPYMGR SITEOPTIONS NOSTOPONERR
ZFDRS COPYMGR SITEOPTIONS DATEFORMAT-YYMMDD
ZFDRS COPYMGR SITEOPTIONS SPLITRW STOPONERR VER ECHO COMB
ZFDRS COPYMGR SITEOPTIONS SETS_OFF NOSETS_SOURCE SETS_EXC
```

ZFDRS CREATEPAIR – Create pairs for a set from two database areas

The CREATEPAIR entry will create pairs in a set using two database areas as the source and target databases. For TrueCopy or HUR sets, CREATEPAIR will define the path definitions for each pair using the two database area's source and target port ids. For HUR sets, CREATEPAIR will define the HUR path id using the HUR path id in the source database area.

Requirements and Restrictions

The set must be defined correctly in SETREC.

The source and target database areas must be defined correctly in DBREC

The source and target database area volumes must be defined correctly in their database area configuration definition records (dbname).

The source and target database areas must contain the same number of volume definitions.

During the pair creation, the set characteristics and defaults of the set's SETREC values will be used.

It is recommended to initialize the pair definition record (the set) using ZFDRS CONFIG INIT prior to using the CREATEPAIR entry.

Format

```
>>--ZFDRS -----CREATEPAIR ----- SETname=setname ----->
      +- --Local-----+
      +- --Remote-----+

>-- -----INIT-----SOURcedb-dbname -----TARgetdb-dbname->
      +- --REPlace ----+

>----->
      +---ONLinedb-dbname ---+      +---PORTSourcedb-dbname ---+

>-----<<
      +---PORTTargetbb-dbname ---+      +---BP -----+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

REPlace

Same as INIT, replace all pair definitions in the existing set with the new created pairs. The replace or INIT parameter is required.

INIT

Same as Replace, replace all pair definitions in the existing set with the new created pairs. The INIT or Replace parameter is required.

SOURcedb-dbname

The database area to be used for the source volumes in the pair definitions. The device number in the source database area will be the device number used in the pair definition. The ONLINEDB parameter will override the use of the source database area's device number. Variable-length dbname up to 16 characters. For TrueCopy or HUR sets, the database area's source port id's will be used for each created pair's source port id. For HUR set's, the database area's HUR path id will be used for each created pair's HUR path id.

TARgetdb-dbname

The database area to be used for the target volumes in the pair definitions. The device number in the target database area is not used in the pair definition. Variable-length dbname up to 16 characters. For TrueCopy or HUR sets, the database area's target port id's will be used for each created pair's target port id.

ONLinedb-dbname

Optional parameter. When specified, the device number in this database area will be the device number used in the pair definition. If this parameter is not specified, the device number from the sourcedb database area will be used. Variable-length dbname up to 16 characters.

PORTSourcedb-dbname

Optional parameter. When specified, the source path definitions in this requested DataBase area are used in place of any source path definitions in the requested SOURCEDB DataBase area. The need for this parameter would be rare and might add unnecessary complexity to the DataBase area use. Consult HDS TPF engineering if considering the use of this parameter.

PORTTargetdb-dbname

Optional parameter. When specified, the target path definitions in this requested DataBase area are used in place of any target path definitions in the requested TARGETDB DataBase area. The need for this parameter would be rare and might add unnecessary complexity to the DataBase area use. Consult HDS TPF engineering if considering the use of this parameter.

BP

Optional parameter. The Createpair entry requires a set to be initialized (ZFDRS CONFIG INIT) prior to building the new pairs for the set. The BP option allows the INIT or Replace to complete if there are existing pairs defined in the set. The INIT or Replace with BP will remove the old pair definitions in the set and then create the new pair definitions in the set.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP CREATEPAIR
```

Examples

```
ZFDRS CREATEPAIR REPLACE SET-SET1 SOURCEDB-DB01 TARGETDB-DB02
ZFDRS CREATEPAIR INIT SET-SET1 SOU-DB01 TAR-DB02 BP
ZFDRS CREATEPAIR INIT SET-HUR1 SOURCEDB-LDB01 TARGETDB-RDB02
ZFDRS CREATEPAIR INIT SET-SET1 SOURCEDB-DB01 TARGETDB-DB02 ONLINEDB-DB03
ZFDRS CREATEPAIR INIT SET-TC TESTSYS SOURCEDB-DB01 TARGETDB-DB02 ONLINEDB-DB03
PORTSOU-DB02_P2 PORTTAR-DB03_P1
```

ZFDRS DBAREA – Display a database area’s volume configuration definition table

Use this command to display the database area configuration. This command allows for two types of displays:

- A full configuration database area display.
- A subset of the configuration database area display using the volume definition fields as search parameters. If more than one volume definition field is specified, the search uses an “AND” search for the matching parameters.

Requirements and Restrictions

The database area being used must be defined correctly in the database area index record.

The default display entry will only display the volume definitions in the database area. To display the path definition for the devices, use the “PATHS” parameter.

Format

```
>>--ZFDRS -----DBArea --- Config --- Display -----DBName-dbname----->
      +- --ALL-----+
>-----><
      +- --Dev-XXXX-----+
      +- --SSId -XXXX-+
      +- --SERial-YYYYYYYYYYYYY----|
      +- --LCu-XX-----|
      +- --VOl-XX-----|
      +- --S1portid-pp----|
      +- --S2portid-pp----|
      +- --S3portid-pp----|
      +- --S4portid-pp----|
      +- --S5portid-pp----|
      +- --S6portid-pp----|
      +- --S7portid-pp----|
      +- --S8portid-pp----|
      +- --T1portid-pp----|
      +- --T2portid-pp----|
      +- --T3portid-pp----|
      +- --T4portid-pp----|
      +- --T5portid-pp----|
      +- --T6portid-pp----|
      +- --T7portid-pp----|
      +- --T8portid-pp----|
      +- --HURPathid-ii---|
      +- --PATHs-----|
```

+-- --FORMAT-----|

DBName-dbname

Variable-length database area name up to 16 characters.

ALL

Specifies that all volumes defined in the database area configuration definition record are to be displayed.

Dev-xxxx

Specifies a single device is to be displayed.

SSId-xxxx

Specifies devices with matching SSID numbers are to be displayed.

SERial-yyyyyy

Specifies devices with matching control unit serial numbers is to be displayed.

LCu-xx

Specifies devices with matching LCU numbers are to be displayed.

VOL-xx

Specifies devices with matching volume numbers are to be displayed.

S1portid-pp (S2portid - S8portid)

Specifies devices with matching source port ids for source port 1 (or port 2-8) are to be displayed.

T1portid-pp (T2portid - T8portid)

Specifies devices with matching target port id for target port 1 (or port 2-8) are to be displayed.

HURPathid-ii

Specifies devices with matching HUR Path ids are to be displayed.

PATHs

Specifies to display the path definitions.

FORMAT

Specifies to display the matching devices in the ZFDRS DBA CONFIG (action) format. When combined with the PATHs parameter, the devices path ZFDRS DBA CONFIG (action) formats are displayed.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP

ZFDRS HELP DBAREA
ZFDRS HELP DBAREA DISPLAY
```

Examples

```
ZFDRS DBAREA CONFIG DISPLAY DBN-DB01
ZFDRS DBA CONFIG DISPLAY DBN-DB02 SSID-A000
ZFDRS DBA CON DIS DBN-DB03 DEV-7102
ZFDRS DBA CON DI DBN-EXAMPLE LCU-3
ZFDRS DBA CON DI DBN-EXAMPLE S1P-12
ZFDRS DBA CON DI DBN-EXAMPLE T1P-10 PATH
ZFDRS DBA CON DI DBN-EXAMPLE HURPATHID-1
ZFDRS DBA CON DI DBN-EXAMPLE HURPATHID-1 PATH
ZFDRS DBA CON DI DBN-EXAMPLE FORMAT
ZFDRS DBA CON DI DBN-EXAMPLE FORMAT PATH
```

ZFDRS DBAREA – Initialize a database area’s volume configuration definition table

Use this command to initialize a database area’s database configuration definition record.

Requirements and Restrictions

The database name must be defined in the database area index record.

The database area configuration definition records must have the correct record ID.

Format

```
>>--ZFDRS ---DBArea -----Config --- --INIT---DBName-dbname----->

+- PASSWORD-password ---+
```

DBName-dbname

Variable-length database area name up to 16 characters that is to be initialized.

PASSWORD-password

The INIT parameter requires a password. This password is defined during installation of Copy Manager for TPF (see the *Copy Manager for TPF Administrator’s Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

- ZFDRS
- ZFDRS HELP
- ZFDRS HELP DBAREA
- ZFDRS HELP DBAREA INIT

Example

```
ZFDRS DBA CON INIT DBN-NEWSET PASSWORD-SECRET
```

ZFDRS DBAREA – Maintain a database area’s volume configuration definition table

Use this command to define or maintain the database area’s volume and path definitions.

Requirements and Restrictions

The database name being used must be defined correctly in the database area index record.

The database area configuration definition records must have the correct record id.

All volume records in a database area are keyed by the device number. A record in a database area must be referenced only by the device number.

The device number in a database area may not be changed.

The device number in a database area may only be used once.

port id’s cannot be x’00’.

HURPATHID cannot be x’FF’

TrueCopy path definitions are keyed by serial number and ssid. For TrueCopy path definitions, the PATH parameter is required. For TrueCopy path definitions, a serial number and ssid may only be used once. The serial number cannot be zero and the ssid cannot be zero.

HUR path definitions are keyed by HUR path id and serial number. For HUR path definitions, the PATH parameter is required. For HUR path definitions, a HUR Pathid and serial number may only be used once. The serial number cannot be zero.

Format

```
>>--ZFDRS -----DBArea-----CONfig---- --CHAnge-- ---DBName-dbname---->
                                     +- --ADD-----|
                                     +- --REMove--|

>-- -----Dev-XXXX----->
                                     +- --SSId -XX-----|
                                     +- --SERial-YYYYYYYYYYYYY----|
                                     +- --LCu-XX-----|
                                     +- --VOL-XX-----|
                                     +- --COUnt-cc-----|
                                     +- --LASTdev-dddd---|
                                     +- --PATHs -----|
```

```

+- --S1portid-pp----|
+- --S2portid-pp----|
+- --S3portid-pp----|
+- --S4portid-pp----|
+- --S5portid-pp----|
+- --S6portid-pp----|
+- --S7portid-pp----|
+- --S8portid-pp----|
+- --T1portid-pp----|
+- --T2portid-pp----|
+- --T3portid-pp----|
+- --T4portid-pp----|
+- --T5portid-pp----|
+- --T6portid-pp----|
+- --T7portid-pp----|
+- --T8portid-pp----|
+- --HURPathid-ii---|

```

CHAnge

Change an existing device definition in a database area.

ADD

Add a new device definition to a database area.

REMove

REMOVE a device in a database area.

DBName-dbname

Variable-length database area name up to 16 characters.

Dev-xxxx

Device to add, change, or remove in the database area.

SSId

Database volume SSID (valid only for change or add operations).

SERial

Database volume control unit serial number (valid only for change or add operations).

LCu

Database volume LCU number (valid only for change or add operations).

VO1

Database volume number in LCU (valid only for change or add operations).

PATHs

this parameter is required when defining a path (port definitions).

S1portid (S2portid - S8portid)

Specifies a source port id when this database area is used with the CREATEPAIR's SOURCE parameter. Source port 1 to Source port 8 is defined using this parameter. If this is a TrueCopy port id, the ssid and serial number must be entered. If this is an HUR port id, HURPATHID must be entered. The order of the port definition can be critical to the reliability of the path usage. Contact HDS TPF engineering for help identifying the correct source port ids. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

T1portid (T2portid - T8portid)

Specifies a target port id when this database area is used with the CREATEPAIR's TAREGT parameter. Target port 1 to Target port 8 is defined using this parameter. If this is a TrueCopy port id, the ssid and serial number must be entered. If this is an HUR port id, HURPATHID must be entered. The order of the ports can be critical to the reliability of the path usage. Contact HDS TPF engineering for help identifying the correct target port ids. See the SAID tables in [Appendix A](#) for the control unit adapter ID (SAID) values.

HURPathid

Specifies HUR path id for the defined paths. Also, specifies that the source and target port id's entered are for this HUR path id. Contact HDS TPF engineering for help identifying the correct HUR path ID.

COUnt

Specifies the count of volumes to generate or change. The count field is a hexadecimal number. The default count is 1. For each new volume generated or changed, the Device number and the VOL number are incremented by one. No other data fields are changed. Count is valid for volume change, add or remove operations. Count is not valid for PATH definitions.

LASTdev

Specifies a the end of a range of volumes to generate or change. The range is from DEVICE parameter to the LASTDEV parameter. The default value for LASTDEV is the value entered in the DEVICE field. For each new volume generated or changed, the Device number and the VOL number are incremented by one. No other data fields are changed. LASTDEV is valid for volume change, add or remove operations. LASTdev is not valid for PATH definitions.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP DBAREA
ZFDRS HELP DBAREA CHA
ZFDRS HELP DBAREA ADD
```

ZFDRS HELP DBAREA REM

Examples

```
ZFDRS DBAREA CONFIG CHANGE DBN-DB01 DEV-7201 SSID-A400
ZFDRS DBA CON ADD DBN-DB02 D-7209 SER-11234 SSI-A400 VOL-0 LCU-1
ZFDRS DBA CON REMOVE DBN-TESTIT DEV-7208
```

The next two entries are equivalent. They both generate volumes for devices 3000 to 3007.

```
ZFDRS DBA CON ADD DBN-DB02 D-3000 SER-331122 SSI-A400 VOL-00 LCU-1 COUNT-8
ZFDRS DBA CON ADD DBN-DB02 D-3000 SER-331122 SSI-A400 VOL-00 LCU-1 LASTDEV-3007
```

The next two entries are equivalent. They both change the TARGET SSID of the devices 3000 to 3007.

```
ZFDRS DBA CON C DBN-DB02 D-3000 SSI-1234 COUNT-8
ZFDRS DBA CON C DBN-DB02 D-3000 SSI-1234 LASTDEV-3007
```

The next entry defines TrueCopy Path port numbers for the devices.

```
ZFDRS DBA CON ADD DBN-TCAREA1 PATH SER-33112 SSID-1234 S1-10 S2-11 S2-11 S4-10 T1-3 T2-4 T3-3 T4-4
ZFDRS DBA CON CHA DBN-TCAREA1 PATH SER-33112 SSID-1234 S1-10 S2-11 S2-11 S4-10 T1-3 T2-4 T3-3 T4-4
ZFDRS DBA CON REM DBN-TCAREA1 PATH SER-33112 SSID-1234
```

The next entry defines HUR Path port numbers to the devices for HUR path id 1.

```
ZFDRS DBA CON ADD DBN-HURAREA1 PATH HURP-0 SER-33112 S1-10 S2-11 S2-11 S4-10 T1-3 T2-4 T3-3 T4-4 HURPATHID-1
ZFDRS DBA CON CHA DBN-HURAREA1 PATH HURP-0 SER-33112 S1-10 S2-11 S2-11 S4-10 T1-3 T2-4 T3-3 T4-4 HURPATHID-1
ZFDRS DBA CON REM DBN-HURAREA1 PATH HURP-0 SER-33112
```

ZFDRS DBREC – Define a database area in the database area index record

Use this command to define, change or remove database areas in the database area index record. This command will display all the database areas in the database area index record along with each database areas definitions.

Requirements and Restrictions

The DBREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the database area index record (DBREC) must have the same record ID as the record ID defined in the COPYMGR control record for DBREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The database area index record must be initialized (see ZFDRS DBREC INIT).

The database area index record will support up to 58 database areas.

Format

```
>>--ZFDRS ---DBREC ----->
                                     +- -ADD-----+
                                     +- -CHAnge--++
                                     +- -REMove---+
                                     +- -DISplay--++

----- DBName-nnnnnnnnnnnnnnnnn -----> FACeType-nnnnnnn -->

-----ORDinal-xxxxxxxx ----->
                                     +- MAXordinal-xxxxxxxx--++

----->
+- RECID-rrrr--+
```

ADD

Add a new database area name to the database area index record.

REMove

Remove an existing database area name from the database area index record.

CHAnge

Change the properties (location) of a database area name in the database area index record.

DIisplay

Display all the database areas defined in the database area index record.

DBName-dbname

Variable-length database area name up to 16 characters that is to be defined. Required for the Add, Change, and Remove operations; optional for display operations.

FACEtype-nnnnnnn

Beginning FACE type (without the '#' preceding) of this database area name. Valid only for the Add and Change operations.

ORDinal-xxxxxxxxx

Beginning ordinal of this database area name. Valid only for the Add and Change operations.

MAXordinal-xxxxxxxxx

The maximum ordinal allowed to be used for this database area's device definitions. If zero, then this field is not used.

RECID-rrrr

The record ID of all database area configuration definition record's for this database area name. For a hexadecimal record ID, enter the four-character hexadecimal value (RECID-C1C1). For an upper case alphabetic record ID, enter the two-character value (RECID-AA). If omitted, the default record ID defined in the database area index record (defined by ZFDRS DBREC) will be used. Valid only for the Add and Change operations.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP DBREC
```

Examples

```
ZFDRS DBREC ADD DBN-TESTDB1 FACE-TSDB2 ORD-150 RECID-HD
ZFDRS DBREC CHA DBN-TESTDB1 ORD-130
ZFDRS DBREC DISPLAY
```

ZFDRS DBREC INIT – Initialize the database area index record

The DBREC INIT command initializes the database area index record.

Requirements and Restrictions

The DBREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the database area index record (DBREC) must have the same record ID as the record ID defined in the COPYMGR control record for DBREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

Format

```
>>--ZFDRS --- DBREC ----- INIT ----- PASSWORD-password -----><
```

INIT

Clears the database area index record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager (see *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP DBREC
```

Example

```
ZFDRS DBREC INIT PASSWORD-SECRET
```

ZFDRS DELETE – Delete copying of devices

The DELETE command issues a Delete Pair command to the devices in a set's copy pair configuration definition record. Use this command to stop copy operations and delete the source/target pairing immediately (buffered I/O is not processed). The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition record being used must be set up correctly.

The specified volume pair status must be split.

If the HOPTAR option is used, the RCUREC definitions for the HUR target control unit must be correct.

Format

```
>>--ZFDRS -----DELete ----- SETname-setname ----->
      +- --Local-----+
          +- -Remote--+
              +- --ALL-----+
>----->
      +- --Dev-XXXX-----+
      +- --SSSid -XXXX--+

>-----<<
      +- BP--+ +- HOPTAR--+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single SSID is to be processed.

HOPTAR

The HOPTAR is a specialized parameter only available for Universal Replicator. This parameter is used to send a HUR delete pair command to the secondary location.

BP

Bypass checks that ensure all devices are in the correct state for the requested action. Consult HDS TPF Engineering regarding the use of the BP option.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP DELETE
```

Examples

```
ZFDRS DELETE SET-SET1  
ZFDRS DEL SET-SET2 BP  
ZFDRS DEL SET-TESTSET D-4220  
ZFDRS DEL SET-HURRUN1 SSS-1AA0 BP
```


ZFDRS ESTABLISH – Establish copying of devices

The ESTABLISH command issues an Establish Pair command to the devices in a set's copy pair configuration definition record. The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition records must be set up correctly.

The specified volume pair status must be simplex.

Format

```
>>--ZFDRS -----ESTablish-----SETname-setname----->
      +- --SLOW--|
      +- -Local---+          +- --FAST--|
      +- --Remote-----+

      +- --ALL-----+
>-- ----->
      +- --Dev-XXXX-----+ +- -TVONline---+ +- -NOCOPY---+
      +- --SSSid -XXXX-+

>-- ----->
      +- MONitor---+ +- TIME-tttt---+ +- STOPONerr---+

>-- ----->
      +- VERifytvofflin---+

>-- -----<<
      +- BP---+ +- PASSWORD-password ---+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

SLOW

Defines that the synchronization process is run slowly. This default setting minimizes the impact on the source volume performance.

FAST

Defines that the synchronization process is run quickly. This setting could impact the source volume performance. The Fast option is not available for Universal Replicator sets. Consult with Hitachi Data Systems TPF Engineering before using this parameter.

ALL

Specifies that all copy pairs defined in the set's copy pair configuration definition record(s) are to be processed.

MONitor

Specifies that the TPF copy progress monitor will be started after the pairs are successfully established. The Time parameter is required when MONitor is specified. MONITOR is an available site option. If MONITOR is not specified, the site option setting for MONITOR will be used.

TIME-tttt

Specifies the monitor interval time in seconds. The value is a decimal number. The MONitor parameter is required when the TIME parameter is specified. MONTIME is an available site option. If TIME is not specified, the site option setting for MONTIME will be used for the TIME value.

STOPONerr

Specifies that if an error is encountered during the establish pair request, the establish pair request will stop after the first error is encountered. If this option is not specified, an establish pair request will be issued for every device in the set. STOPONERR is an available site option. If STOPONERR is not specified, the site option setting for STOPONERR will be used.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies that all devices for a single SSID are to be processed.

BP

Bypass checks that ensure all devices are in the correct state for the requested action. Consult HDS TPF Engineering regarding the use of the BP option.

TVONline

This parameter causes the pair to be established without checking to see if target volume is online to any host. Extreme care must be exercised if using this parameter. Active volumes in use by a host can be overwritten if used accidentally on the incorrect volumes. The PASSWORD option is required when using TVONLINE.

VERifytvofflin

VERIFYTVOFFLIN checks to see if any of the ShadowImage targets are online prior to issuing the establish. If any ShadowImage target volume is online, an error message is sent to the TPF operator, and no establish request is sent to the control unit. VERIFYTVOFFLINE is restricted to local ShadowImage only. The VERIFYTVOFFLIN can be set as a default for all establish and resume requests using the COPYMGR SITEOPTIONS.

PASSWORD-password

The TVONLINE parameter requires a password. This password is defined during installation of Copy Manager for TPF (see the *Copy Manager for TPF Administrator's Guide*).

NOCOPY

This parameter is valid for TrueCopy only. NOCOPY causes the pair to be established without copying the data. The VSN will be copied. This can be used as a way to ensure the entire set is in the correct state to begin a copy without overwriting any of the data on the volumes except the VOLSER.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP ESTABLISH
```

Examples

```
ZFDRS ESTABLISH SET-PRODCOPY
ZFDRS EST SET-TESTCOPY NOCOPY
ZFDRS EST SET-TESTCOPY SSID-1700
ZFDRS EST SET-TESTMONDAY FAST D-7102
ZFDRS EST SET-PRODCOPY MONITOR TIME-8
ZFDRS EST SET-PRODCOPY MON TIM-17
ZFDRS EST SET-TESTCOPY STOPONERR
```

ZFDRS EXCREC – Define and Maintain Extended Consistency Groups in the EXCTG definition record

Use this command to define or change or remove an extended consistency group definition for a set. This command will also display all of the extended consistency group definitions in the EXCTG definition record.

Requirements and Restrictions

The EXCREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the EXCTG definition record (EXCREC) must have the same record ID as the record ID defined in the COPYMGR control record for EXCREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The EXCTG definition record (EXCREC) must be initialized (see ZFDRS EXCREC INIT). The EXCTG definition record supports up to 11 extended consistency groups.

Each EXCTG item is identified (keyed) by the set name and the direction. Only one EXCTG definition is allowed per set name and direction.

The set name and direction combination in EXCREC may only be used once.

Each journal item in the EXCTG definition is identified by the subordinate serial number and the journal id. The arbitration command device and the SCU id are data fields for the journal item.

The SETname must be defined in SETREC as an HUR set and the set must have pair definitions defined.

If the supervisor control unit is the HUR target, the serial number must reside in the RCUREC as a TARSER.

The supervisor Control Unit serial number must be either a source or target serial number in the set's pair definitions.

Format

```
>>--ZFDRS ---EXCREC ----->
                                     +- -ADD-----+
                                     +- -CHAnge---+
                                     +- -REMove---+
                                     +- -DISplay--+

>-- -----SETname-setname ----->
                                     +- --FORward----+
                                     +- --REVerse-----+

>---EXCTG-nn -----MIRror-nn ----- SUPverisorser-ssssssssssss ---->

>---JNLgid-nn -----SCUId-nn ----- SUBordinateser-ssssssssssss ---->

>---ARBITcd-uuvv -----<
```

ADD

Add a new EXCTG definition to the EXCTG definition record.

REMove

Remove an existing EXCTG definition from the EXCTG definition record.

CHAnge

Change the properties of an EXCTG definition in the EXCTG definition record.

DISplay

Display all the EXCTG definitions in the EXCTG definition record.

SETname-setname

Variable-length set name up to 16 characters.

FORward

Defines this EXCTG definition as a forward direction EXCTG.

REVerse

Defines this EXCTG definition as a reverse direction EXCTG.

EXCTG-nn

The EXCTG number used for this EXCTG definition.

MIRror-nn

The mirror number used for this EXCTG definition.

SUPervisorser-ssssssssssss

The EXCTG supervisor control unit serial number for this EXCTG definition.

SUBordinateser-ssssssssss

A subordinate control unit's serial number in the EXCTG definition. There may be more than one subordinate control unit.

JNLgid-nn

A journal group id for a subordinate control unit. There may be more than one Journal Group ID for a subordinate control unit.

ARBITcd-uuvv

The LCU and volume number of the arbitration command device for a subordinate control unit's journal group.

SCUid-nn

The SCU ID for a subordinate control unit's journal group.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP EXCREC
```

Examples

```
ZFDRS EXCREC ADD SET-EXCTGTEST FOR EXCTG-1 MIR-0 SUP-123465 SUB-887788 JNLG-
30 SCU-06 ARBI-1F30
ZFDRS EXCREC CHA SET-EXCTGTEST FOR SUB-232334 JNL-30 SCU-06 ARBIT-103F
ZFDRS EXCREC CHA SET-EXCTGTEST REV SUP-65541
ZFDRS EXCREC REM SET-EXCTGTEST FOR
ZFDRS EXCREC DIS
```

ZFDRS EXCREC INIT – Initialize the EXCTG definition record

The EXCREC INIT command initializes the EXCTG definition record.

Requirements and Restrictions

The EXCREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the EXCTG definition record (EXCREC) must have the same record ID as the record ID defined in the COPYMGR control record for EXCREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

Format

```
>>--ZFDRS --- EXCREC ----- INIT ----- PASSWORD-password -----><
```

INIT

Clears the EXCTG definition record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager (see *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP EXCREC
```

Example

```
ZFDRS EXCREC INIT PASSWORD=SECRET
```

ZFDRS EXCTGroup – Define or Remove an Extended Consistency Group

Use this command to send a “Define EXCTG request” or a “Remove EXCTG request” or a “Status of EXCTG Request” to a local or remote control unit. This command will result in one of the following actions:

1. A Status reply of the EXCTG from the local or remote control unit,
2. An EXCTG being defined in a local or remote control unit,
3. An EXCTG being removed in a local or remote control unit.

Requirements and Restrictions

The EXCTG must be correctly defined in the EXCREC.

The SET must be correctly defined in SETREC.

The set’s pair definitions must be correctly defined in the set’s pair definition record(s).

If the supervisor control unit is in a remote control unit, the RCUREC definitions for the supervisor control unit must be correct.

If the HOPTAR option is used, the RCUREC definitions for the HUR target control unit must be correct.

The HUR pairs must be established (defined).

If resync request is made for an EXCTG HUR set, CopyManager will verify the EXCTGROUP is defined prior to issuing the resync request. If the EXCTGROUP is not defined, CopyManager will issue a warning message.

Important: Use this command only after consulting HDS TPF Engineering.

Format

```
>>--ZFDRS -----EXCTGroup -----SETname-setname----->
+- --Remote-----+

>-- -----><
+- --Status ----+          +- -HOPTAR----+
+- --DEFine-----+
+- --REMove-----+
```


Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

DEFine

Define an EXCTG in a local or remote control unit.

STatus

Display the status of an EXCTG in a local or remote control unit.

REMove

Remove an EXCTG in a local or remote control unit.

HOPTAR

Send the EXCTG command to the HUR target control unit.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP EXCTGROUP
```

Examples

```
ZFDRS EXCTGroup SET-TESTEX1 STATUS
ZFDRS EXCTGroup SET-TESTEX1 DEFINE
ZFDRS EXCTGroup SET-TESTEX1 REMOVE
ZFDRS EXCTGroup SET-TESTEX1 STATUS HOPTAR
```

ZFDRS JNLgroup – Display a Journal Group’s status

Use this command to display the status of each HUR Journal group in a set.

Requirements and Restrictions

The SET must be correctly defined in SETREC.

The set’s pair definitions must be correctly defined in the set’s pair definition record(s).

If the HOPTAR option is used, the RCUREC definitions for the HUR target control unit must be correct.

The HUR pairs must be established (defined).

Format

```
>>--ZFDRS -----JNLgroup ----SStatus-----SETname-setname----->
      +- --Remote-----+

      >-----<
      +- -HOPTAR----+
```

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set’s SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

SStatus

Display the status of each journal group in the set.

HOPTAR

Send the Journal group status request to the HUR target control unit.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP JNLGROUP
```

Examples

```
ZFDRS JNL STATUS SET SET-HUR_EXAMPLE
ZFDRS JNL STATUS SET SET-HUR_EXAMPLE HOPTAR
```

ZFDRS MONITOR – Monitor TPF Copy Progress

The MONITOR command starts a TPF operator console monitor that displays the status of a copy's progress at defined time intervals. The MONITOR command also stops a running monitor. The command can be issued only to an entire set. Multiple SETs may be monitored concurrently.

Requirements and Restrictions

The set's copy pair configuration definition record being used must be set up correctly.

Format

```
>>--ZFDRS -----MONitor -----STArt ----- SETname-setname ----->
      +- -Local---+           +- STOp---+
      +- --Remote----+

      >-- TIME-tttt-----<<
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

STArt

Starts the copy progress monitor. The monitor interval time must be specified with this option.

STOp

Stops the copy progress monitor.

TIME-tttt

Specifies the monitor interval time in seconds. The value is a decimal number.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP MONITOR
```

Examples

The next example is a monitor interval of decimal 5 seconds.

```
ZFDRS MONITOR START SET-SET1 TIME-5
```

The next example is a monitor interval of decimal 18 seconds.

```
ZFDRS MON START SET-SET2 TIME-18
```

```
ZFDRS MON STOP SET-TESTSET
```

ZFDRS OFFREC – Define a control device in the offline volume control device definition record

Use this command to define or change or remove control devices in the offline volume control device definition record. This command will display all the control devices in the sets in the offline volume control device definition record.

Requirements and Restrictions

The OFFREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the offline volume control device definition record (OFFREC) must have the same record ID as the record ID defined in the COPYMGR control record for OFFREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The offline volume control device definition record (OFFREC) must be initialized (see ZFDRS OFFREC INIT). The offline volume control device definition record will support up to 80 control devices (80 control units).

All records in OFFREC are keyed by the serial number and set name. A record in OFFREC may be referenced only by the serial number and set name.

The serial number and set name combination in OFFREC may not be changed.

The serial number and set name combination in OFFREC may only be used once.

Format

```
>>--ZFDRS ---OFFREC ----- Serial-sssssssssss ---->
                                     +- -ADD-----+
                                     +- -CHAnge---+
                                     +- -REMove---+
                                     +- -DISplay--+
-----SEtname-nnnnnnnnnnnnnnnn -----> CONDev-dddd -----<<
```

ADD

Add a new control device to the offline volume control device definition record.

REMove

Remove an existing control device from the offline volume control device definition record.

CHAnge

Change the properties of a control device in the offline volume control device definition record.

DISplay

Display all the control devices in the offline volume control device definition record.

SETname-nnnnnnnnnnnnnnnnn

Variable-length set name up to 16 characters that is to be defined. Required for the Add, Change, Remove and Display operations.

SERial-ssssssssssss

Control Unit Serial Number. Required for the Add, Change and Remove operation.

CONDev-dddd

The offline control device's SDA for the specified serial number and setname. Required for the Add operation. Valid for the Change operation.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP OFFREC
```

Examples

```
ZFDRS OFFREC ADD SERIAL-556633 SET-TESTBUILD1 CONDEV-3200
ZFDRS OFFREC CHA SER-556633 SET-TESTBUILD1 CONDEV-4800
ZFDRS OFFREC REM SET-556633 SET-TESTBUILD1
ZFDRS OFFREC DISPLAY
```

ZFDRS OFFREC INIT – Initialize the offline volume control device definition record

The OFFREC INIT command initializes the offline volume control device definition record.

Requirements and Restrictions

The OFFREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the offline volume control device definition record (OFFREC) must have the same record ID as the record ID defined in the COPYMGR control record for OFFREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

Format

```
>>--ZFDRS --- OFFREC ----- INIT ----- PASSWORD-password -----  
><
```

INIT

Clears the offline volume control device definition record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager (see *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP OFFREC
```

Example

```
ZFDRS OFFREC INIT PASSWORD-SECRET
```

ZFDRS PATH – Control HUR or TrueCopy Internal Path Definitions

Use this command to send a “Define PATH request” or a “Delete PATH request” or a “Status of PATH Request” to a local control unit. This command will result in one of the following actions:

- A Status reply of the PATH from the local control unit, (see below additional information section for path status error codes).
- A PATH being defined in a local control unit,
- A PATH being deleted in a local control unit.

The command can be issued to all, some, or one device in a chosen set.



Note: PATH DEFINE may take a long time to complete. HDS TPF engineering recommends that a PATH DEFINE be done in TPF’s 1052 state.

Requirements and Restrictions

The PATHs must be correctly defined in the PAIRREC.

If an HUR set, the HUR PATHID must be correctly defined in the PAIRREC.

The SET must be correctly defined in SETREC.

If an error occurs during a PATH DEFINE or DELETE, the processing stops.

Important: Use this command only after consulting the TPF site’s system programmer and HDS TPF Engineering.

Format

```
>>--ZFDRS -----PATH -----SETname-setname----->

>-- -----ALL----->
+- --Status ----+          +- -DEvIce-dddd---+
+- --DEFine-----+          +- -SSSid-ssss----+
+- --DELete-----+
+- --ID-----+

>-- -----<<
+- --EVERYTCpath --+          +- --HOPTAR --+
```


SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the set's copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies that all devices for a single SSID are to be processed.

DEFine

Define a TrueCopy or HUR PATH definition in a local control unit.

STatus

Display the status of a TrueCopy or HUR PATH definition in a local control unit.

DElete

Delete a TrueCopy or HUR PATH definition in the local control unit.

ID

For HUR Set's only. The ID parameter request that the HUR PATH ID bitmap be displayed.

EVERYTCpath

For TC Set's only. When the EVERYTCpath parameter is entered, every path for the source serial number will be displayed. If the EVERYTCpath parameter is not entered, the path display is filtered to only display the paths that match the pair source and target serial number/ssids. This parameter's purpose is for diagnostic use.

HOPTAR

The HOPTAR is a specialized parameter only available for Universal Replicator. This parameter is used to send a HUR path command to the secondary location.

Additional Information

PATH status error codes:

00: No Path

01: Established Path (display shows ACTIVE)

02: Initialization failed

03: Timed Out (An attempt to establish this path failed)

04: No Resource available at Source Control Unit (The port of the Source Control Unit already has the maximum number of logical paths)

05: No Resource available at Target Control Unit (The port of the Target Control Unit already has the maximum number of logical paths)

06: Serial Number Mismatch (Invalid serial number of the target control unit was specified)

10: Invalid Interface ID

Not listed error code: Contact HDS TPF Engineering support.

Online help information is available for this functional message. To display the help information, enter one of the following:

ZFDRS

ZFDRS HELP

ZFDRS HELP PATH

Examples

```
ZFDRS PATH STATUS SET-TESTTC1
```

```
ZFDRS PATH DEFINE SET-TESTTC1
```

```
ZFDRS PATH DELETE SET-TESTTC1
```

```
ZFDRS PATH ID SET-TESTHU1
```

ZFDRS PRESET – Control Preset SPLIT

Use this command to define, remove, and query preset point-in-time split.

Requirements and Restrictions

The set's copy pair configuration definition records must be set up correctly.

PRESET is restricted to local ShadowImage Asynchronous and TrueCopy Asynchronous.

Asynchronous pairs must be established before entry is made (the pairs cannot be simplex).

A BP parameter is required when using PRESET DEFINE in TPF 1052 state.

The define option requires the pairs to be duplex.

Format

```
>>--ZFDRS -----PREset -----DEFine -----SETname-setname----->
      +- -Local----+          +- -CANcel---+
      +- -Remote---+          +- -SStatus---+

>---- TIME-hhmmss -----><
              +- DAte-mmddy ---+

>-----><
              +- TOV-xxxx ---+  +- ADDTOV-xxxx ---+  +- -BP---+
```

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters that is to be initialized.

TIME-hhmmss

Time for this set to split.

DAte-mmddy

Date for this set to split. If not entered, the date defaults to today.

TOV-xxxx

Timeout value in minutes. Overrides the timeout value that is calculated using the date and time. The default timeout value is calculated by subtracting the current TPF TOD (STCK) from the preset requested time and then adding 10 minutes. For example, if the TPF TOD (STCK) is 11:10:00 and the preset requested time is 11:30:00, the default TOV value will be 11:30 minus 11:10 plus 10 for a TOV of 30 minutes. See the *Copy Manager for TPF Administrator's Guide* for more information about the TOV and ADDTOV parameters. The TOV is a decimal value.

ADDTOV-xxxx

Number of minutes to be added to the time out value that was calculated using the date and time. The default timeout value is calculated by subtracting the current TPF TOD (STCK) from the preset requested time and then adding 10 minutes. Copy Manager will use the ADDTOV minute value to add to the calculated TOV instead of adding the default of 10 minute to the calculated TOV. For example, if the TPF TOD (STCK) is 11:10:00 and the preset requested time is 11:30:00, the default TOV value will be 11:30 minus 11:10 plus the ADDTOV value for a TOV of 20 minutes plus ADDTOV minutes. See the *Copy Manager for TPF Administrator's Guide* for more information about the TOV and ADDTOV parameters. The ADDTOV is a decimal value.

BP

Bypass verify that the TPF system is in 1052 state when a ZFDRS PRESET DEFINE request is entered.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP PRESET
```

Examples

```
ZFDRS PRESET DEF SET-POINTINTIME TIME-221500 DATE-102013
ZFDRS PRESET STATUS SET-POINTINTIME
ZFDRS PRESET CANCEL SET-POINTINTIME
ZFDRS PRESET DEF SET-SIPOINTINTIME TIME-230000 DATE-031314

ZFDRS PRESET DEF SET-SIPOINTINTIME TIME-230000 DATE-031314 BP

ZFDRS PRESET DEF SET-SIPOINTINTIME TIME-230000 DATE-031314 ADDTOV-3

ZFDRS PRESET DEF SET-SIPOINTINTIME TIME-230000 DATE-031314 ADDTOV-0
```

ZFDRS RCUREC – Define a command device location in the remote control unit command device definition record

Use this command to define or change or remove command devices in the Remote Control Unit command device definition record. This command will display all the command devices in the remote control unit command device definition record.

Requirements and Restrictions

The RCUREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the Remote Control Unit command device definition record (RCUREC) must have the same record ID as the record ID defined in the COPYMGR control record for RCUREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The Remote Control Unit command device definition record (RCUREC) must be initialized (see ZFDRS RCUREC INIT). The Remote Control Unit command device definition record supports up to 30 command devices (30 remote control units).

All records in RCUREC are keyed by the target serial number. A record in RCUREC may be referenced only by the target serial number.

The target serial number in RCUREC may not be changed.

The target serial number in RCUREC may only be used once.

Format

```
>>--ZFDRS ---RCUREC -----> IOSDA-xxxx --->
      +- -ADD-----+
      +- -CHAnge---+
      +- -REMove---+
      +- -DISplay--+

---TARSErial-ssssssssss -----TARSSid-iiii -- TARVol-vv ---TARLcu-ll-->
---R0SERral-ssssssssss -----R0SSid-iiii --- R0Vol-vv ----R0Lcu-ll--->
---R1SErial-ssssssssss -----R1SSid-iiii --- R1Vol-vv ----R1Lcu-ll--->
---R2SErial-ssssssssss -----R2SSid-iiii --- R2Vol-vv ----R2Lcu-ll--->
---R3SErial-ssssssssss -----R3SSid-iiii --- R3Vol-vv ----R3Lcu-ll--->
---R4SErial-ssssssssss -----R4SSid-iiii --- R4Vol-vv ----R4Lcu-ll--->
---R5SErial-ssssssssss -----R5SSid-iiii --- R5Vol-vv ----R5Lcu-ll--->
-----><

+- ---HURTAR-- -----APLID-nn--- --- -REVerseallow---- ++
```

ADD

Add a new command device to the Remote Control Unit command device definition record.

REMove

Remove an existing command device from the Remote Control Unit command device definition record.

CHAnge

Change the properties of a Command Device in the Remote Control Unit command device definition record.

DISplay

Display all the command devices in the Remote Control Unit command device definition record.

REVerseallow

Allows the RCUREC to have definitions of the reverse direction command devices. REVERSEALLOW is the default. Consult HDS TPF Engineering before using the NOREVERSEALLOW option.

IOSDA-xxxx

IOSDA is the TPF SDA of the local control unit's command device. All remote control unit I/O for the specified control unit will be sent to this defined SDA. IOSDA is required for add operations.

When IOSDA=0, CopyManager will send the remote control unit commands to each copy pair's DEVICE SDA, and then the command will be redirected to the command device. IOSDA=0 allows the TPF site to not mount the command device. Consult with HDS TPF engineering when considering the use of the IOSDA=0 option with RCUREC add or change. Consult HDS TPF engineering to verify the required microcode to support the use of IOSDA=0.

TARSerial-ssssssssssss

Target Control Unit Serial Number. Required for the Add, Change and Remove operation.

TARSSid

SSID number of the Target control unit's command device. Valid only for change or add operations.

TARLcu

LCU number of the Target control unit's command device. Valid only for change or add operations.

TARVol

Volume number of the Target control unit's command device. Valid only for change or add operations.

R0SErial

R0 (base or source) Control Unit Serial Number. Valid only for change or add operations.

R0SSid

SSID number of the R0 (base or source) control unit's command device. Valid only for change or add operations.

R0Lcu

LCU number of the R0 (base or source) control unit's command device. Valid only for change or add operations.

R0Vol

Volume number of the R0 (base or source) control unit's command device. Valid only for change or add operations.

R1SErial

R1 (first hop) Control Unit Serial Number. Valid only for change or add operations.

R1SSid

SSID number of the R1 (first hop) control unit's command device. Valid only for change or add operations.

R1Lcu

LCU number of the R1 (first hop) control unit's command device. Valid only for change or add operations.

R1Vol

Volume number of the R1 (first hop) control unit's command device. Valid only for change or add operations.

R2SErial (to R5SErial)

R2-R5 (second through fifth hop) Control Unit Serial Number. Valid only for change or add operations.

R2SSid (to R5SSid)

SSID number of the R2-R5 (second through fifth hop) control unit's command device. Valid only for change or add operations.

R2Lcu (to R5Lcu)

LCU number of the R2-R5 (second through fifth hop) control unit's command device. Valid only for change or add operations.

R2Vol (to R5Vol)

Volume number of the R2-R5 (second through fifth hop) control unit's command device. Valid only for change or add operations.

HURTAR

Defines the target control unit (TARSER) of a RCUREC command device definition as an HUR Target. HURTAR is the default. Consult HDS TPF Engineering before using the NOHURTARoption.

APLID

Defines a target control unit (TARSER) command devices application ID. The APLID default is zero.

Examples

```
ZFDRS RCUREC ADD TARSERIAL-984576 TARSSID-3400 TARVOL-01 TARLCU-1F RO SERIAL-
122334 ROSSID-2301 ROVOL-02 ROLCU-1E APLID-1 IOSDA-633F

ZFDRS RCUREC ADD TARSE-984588 TARSS-3400 TARV-01 TARL-1F ROSE-122334 ROSS-2301
ROV-02 ROL-1E R1SE-454511 R1SS-4101 R1V-00 R1L-0F APLID-1 IOSDA-0

ZFDRS RCUREC CHA TARSE-556633 ROVOL-18

ZFDRS RCUREC CHA TARSE-556633 IOSDA-307FZFDRS RCUREC CHA TARSE-556633 IOSDA-0

ZFDRS RCUREC REM TARSER-556633

ZFDRS RCUREC DISPLAY
```


ZFDRS RCUREC CDVDEF – Send a “define command device request” to a local or remote control unit

Use this command to send a “Define command device request”, “Remove command device request” or “Display status of command device request” to a local or remote control unit. This command will result in a command device status being displayed or a command device being defined or removed internally in a local or remote control unit.

Important: Consult HDS TPF Engineering before using this command. HDS TPF Engineering will identify the correct volume to be used as a command device.

Requirements and Restrictions

The RCUREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator’s Guide*).

The definitions for the remote target control unit must be defined in the RCUREC (see ZFDRS RCUREC and the *Copy Manager for TPF Administrator’s Guide*).

Format

```
>>--ZFDRS ---RCUREC ----->
                                     +- -CDVDEF-----+      +- -ONLSDA-dddd ---+
                                     +- -CDVDIS---+
                                     +- -CDVREM---+

---TARSErial-ssssssssss ----->
---R0SErial-ssssssssss ----->
---R1SErial-ssssssssss ----->
---R2SErial-ssssssssss ----->
---R3SErial-ssssssssss ----->
---R4SErial-ssssssssss ----->
---R5SErial-ssssssssss ----->
```

CDVDEF

Define a command device in a local or remote control unit.

CDVDIS

Display a command device status bits in a local or remote control unit.

CDVREM

Remove a command device in a local or remote control unit.

TARSerial-ssssssssss

Target Control Unit Serial Number. Required for CDVADD, CDVDIS and CDVREM command. This parameter is required for any R0SER to R5SER. If entered without a R0SER to R5SER, the command will act on the TARSER command device.

R0Serial

R0 (base or source) Control Unit Serial Number. If entered, the CDVDEF or CDVREM or CDVDIS will act upon the R0 control unit. This must be entered to define the R0 command device. The TARSER is required when entering this parameter.

R1Serial

R1 (First hop) Control Unit Serial Number. If entered, the CDVDEF or CDVREM or CDVDIS will act upon the R1 control unit. This must be entered to define the R1. The TARSER is required when entering this parameter.

R2SERIAL (to R5SERIAL)

R2-R5 (second through fifth hop) Control Unit Serial Number. If entered, the CDVDEF or CDVREM or CDVDIS will act upon the corresponding R2 to R5. This must be entered to define the corresponding R2 to R5 control unit command device. The TARSER is required when entering this parameter.

ONLSDA-dddd

Consult HDS TPF engineering to verify the required microcode to support the use of IOSDA=0. ONLSDA is only used if IOSDA=0. ONLSDA is the TPF SDA of an online (mounted) TPF volume from the local control unit. If IOSDA is zero, the CDVDIS, CDVDEF and CDVREM will send it's associated status, define or remove command to the volume identified by ONLSDA. Consult HDS TPF engineering when considering the use of the ONLSDA parameter.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP RCUREC
```

Examples

```
ZFDRS RCUREC CDVDEF TARSERIAL-984576
ZFDRS RCUREC CDVREM TARSERIAL-984576 R0SER-65423
ZFDRS RCUREC CDVDIS TARSERIAL-984576
ZFDRS RCUREC CDVDIS TARSERIAL-984576 R0SER-54118 ONLSDA-3500
```

ZFDRS RCUREC INIT – Initialize the remote control unit command device definition record

The RCUREC INIT command initializes the Remote Control Unit command device definition record.

Requirements and Restrictions

The RCUREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the Remote Control Unit command device definition record (RCUREC) must have the same record ID as the record ID defined in the COPYMGR control record for RCUREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

Format

```
>>--ZFDRS --- RCUREC ----- INIT ----- PASSWORD-password -----><
```

INIT

Clears the Remote Control Unit command device definition record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager (see *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP RCUREC
```

Example

```
ZFDRS RCUREC INIT PASSWORD-SECRET
```

ZFDRS RESUME (RESYNC) – Resume copying of devices

The RESUME command issues a Resume Pair command to the devices in a set's copy pair configuration definition record. Use this command to resume copy operations after copying has been split. The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition records must be set up correctly.

The specified volume pair status must be split.

All preset definitions for the set must be canceled.

HUR-EXCTG defined sets must have the EXCTG defined (see ZFDRS EXCTG DEFINE entry), before a resume of the set can be issued. To bypass the verification of the EXCTG status for the resume, enter the BP option.

Format

```

                                                                 +- --SLOW--|
>>--ZFDRS -----RESume ----SETname-setname----->
      +- -Local---+ +- -RESync---+                    +- --FAST--|
      +- --Remote---+

      +- --ALL-----+
>-- -----<<
      +- --Dev-XXXX-----+ +- TVONline---+
      +- --SSSid -XXXX--+

>-- ----->
      +- MONitor---+ +- TIME-tttt---+ +- STOPONerr---+

>-- ----->
      +- VERifytvofflin---+   +-- HURREVerse---+

>-- -----<<
      +- BP---+   +- PASSWORD-password ---+

```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

MONitor

Specifies that the TPF copy progress monitor will be started after the pairs are successfully resumed. The Time parameter is required when MONitor is specified. MONITOR is an available site option. If MONITOR is not specified, the site option setting for MONITOR will be used.

TIME-tttt

Specifies the monitor interval time in seconds. The value is a decimal number. The MONitor parameter is required when the TIME parameter is specified. MONTIME is an available site option. If TIME is not specified, the site option setting for MONTIME will be used for the TIME value.

STOPONerr

Specifies that if an error is encountered during the resume pair request, the resume pair request will stop after the first error is encountered. If this option is not specified, a resume pair request will be issued for every device in the set. STOPONERR is an available site option. If STOPONERR is not specified, the site option setting for STOPONERR will be used.

SLOW

Defines that the synchronization process is run slowly. This default setting minimizes the impact on the source volume's performance.

FAST

Defines that the synchronization process is run quickly. This setting could impact the source volume's performance. The Fast option is not available for Universal Replicator sets. Consult with Hitachi Data Systems TPF Engineering before using this parameter.

ALL

Specifies that all copy pairs defined in the set copy pair configuration definition record(s) are to be processed.

SSSid-xxxx

Specifies all devices in a single SSID are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

BP

Bypass checks that ensure all devices are in the correct state for the requested action. For HUR-EXCTG sets, the BP option also bypasses the EXCTG status verification. Consult HDS TPF Engineering regarding the use of the BP option.

TVONline

This parameter will cause the pair to be established without checking to see if the target volume is online to any host. Extreme care must be exercised if using this parameter. Active volumes in use by a host can be overwritten if used accidentally on the incorrect volumes. The PASSWORD option is required when using this parameter.

VERifytvofflin

VERIFYTVOFFLIN checks to see if any of the ShadowImage targets are online prior to issuing the resume. If any ShadowImage target volume is online, an error message will be sent to the TPF operator, and no resume request will be sent to the control unit. VERIFYTVOFFLINE is restricted to local ShadowImage only. The VERIFYTVOFFLIN can be set as a default for all establish and resume requests using the COPYMGR SITEOPTIONS.

HURREVerse

The HURREVERSE is a specialized parameter only available for Universal Replicator. This parameter is used when reversing the direction of a Universal Replicator pair. The resume with the HURREV option is one of a sequence of commands required when reversing the direction of a Universal Replicator pair. See the *Copy Manager for TPF Administrator's Guide* for more details on reversing Universal Replicator pairs. Consult HDS TPF Engineering before using the HURREV parameter.

PASSWORD-password

TVONLINE parameter requires a password. This password is defined during installation of Copy Manager for TPF (see the *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP RESUME
```

Examples

```
ZFDRS RESUME SET-DAILYCOPY1
ZFDRS RES SET-SET2 SSS-1708
ZFDRS RES SET-SET3 FAST D-7102
ZFDRS RES SET-PRODCOPY MONITOR TIME-8
ZFDRS RES SET-PRODCOPY MONITOR TIME-15
ZFDRS RES SET-TESTCOPY STOPONERR
```

ZFDRS REVERSE – Reverse resume (resync) copying of devices

The REVERSE command issues a reverse resume (resync) pair command to the devices in a set's copy pair configuration definition record. Use this command to reverse resume (resync) copy operations after copying has been split. The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition records being used must be set up correctly.

Reverse is available only for TrueCopy and ShadowImage sets. See the *Copy Manager for TPF Administrator's Guide* for reversing Universal Replicator pairs.

The specified volume pair status must be split.

All preset definitions for the set must be canceled.

Format

```
>>--ZFDRS -----REVerse ----SETname-setname----->
                                     +- --SLOW--|
                                     +- --FAST--|
      +- -Local---+
      +- --Remote---+

      +- --ALL-----+
>-- ----->
      +- --Dev-XXXX-----+ +- TVONLINE---+
      +- --SSSid -XXXX-+

>-- ----->
      +- MONitor---+ +- TIME-tttt---+ +- STOPONERR---+

>-- -----<
      +- BP---+ +- PASSWORD-password ---+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

MONitor

Specifies that the TPF copy progress monitor will be started after the pairs are successfully reversed. The Time parameter is required when MONitor is specified. MONITOR is an available site option. If MONITOR is not specified, the site option setting for MONITOR will be used.

TIME-tttt

Specifies the monitor interval time in seconds. The value is a decimal number. The MONitor parameter is required when the TIME parameter is specified. MONTIME is an available site option. If TIME is not specified, the site option setting for MONTIME will be used for the TIME value.

STOPONerr

Specifies that if an error is encountered during the reverse pair request, the reverse pair request will stop after the first error is encountered. If this option is not specified, a reverse pair request will be issued for every device in the set. STOPONERR is an available site option. If STOPONERR is not specified, the site option setting for STOPONERR will be used.

SETname-setname

Variable-length set name up to 16 characters.

SLOW

Defines that the synchronization process is run slowly. This default setting minimizes the impact on the source volume's performance.

FAST

Defines that the synchronization process is run quickly. This setting could impact the source volume's performance. Consult with Hitachi Data Systems TPF Engineering before using this parameter.

ALL

Specifies that all copy pairs defined in the set copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single SSID is to be processed.

BP

Bypass checks that ensure all devices are in the correct state for the requested action. Consult HDS TPF Engineering regarding the use of the BP option.

TVONline

This parameter will cause the pair to be reversed without checking to see if target volume is online to any host. Extreme care must be exercised if using this parameter. Active volumes in use by a host can be overwritten if used accidentally on the incorrect volumes. The PASSWORD option is required when using this parameter.

PASSWORD-*password*

TVONLINE parameter requires a password. This password is defined during installation of Copy Manager for TPF (see the *Copy Manager for TPF Administrator's Guide*).

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP REVERSE
```

Examples

```
ZFDRS REVERSE
ZFDRS REV SET-SET2 SSS-1708
ZFDRS REV SET-SET3 FAST D-7102
ZFDRS REV SET-SET4 MONITOR TIME-8
ZFDRS REV SET-SET2 MONITOR TIME-15
ZFDRS REV SET-TESTBUILD STOPONERR
```

ZFDRS SETREC – Define a set in the set index record or Display the set index record

Use this command to define set definitions, change set definitions, and remove sets in the set index record. Use this command to display each set in the set index record along with each set's definition.

Requirements and Restrictions

The SETREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the set index record (SETREC) must have the same record ID as the record ID defined in the COPYMGR control record for SETREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The set index record must be initialized (see ZFDRS SETREC INIT). The set index record will support up to 40 sets (40 total sets of both local and remote sets).

If changing or removing a set definition, all existing volume pairs defined for that set must be simplex or invalid status.

All records in SETREC are keyed by the set name. A record in SETREC may be referenced only by the set name.

The set name in SETREC may not be changed.

The set name in SETREC may only be used once.

Format

```
>>--ZFDRS ---SETREC ----->
                                     +- -ADD-----+      +- -SI-----+
                                     +- -CHAnge---+      +- -TC-----+
                                     +- -REMove---+      +- -HUR-----+

----- SETname-nnnnnnnnnnnnnnnnn -----> FACetype-nnnnnnnn -->

-----ORDinal-xxxxxxxxx ----->
                                     +- RECID-rrrr---+      +- MAXordinal-xxxxxxxxx---+

-----NOASYNC -----NOOFFLINE-----NOEXCTG----->
+- ---ASYNC---+      +- --OFFLINE---+      +- --EXCGT---+

-----NOHOPcontrolunit----- NOSOURce ----->
```

```

+- ---HOPcontrolunit---+ +- ---SOURce---+ +- --TJnlg-xx -- +
-----><
+- --SJnlg-xx -- +- --CGid-xx -- +- --MIRror-xx ---+ +- --BP---+

>>--ZFDRS ---SETREC ----- --Display----- ALL ----->
                                           +- -SI-----+
                                           +- -TC-----+
                                           +- -HUR-----+

-----OPERations----->
+- ---CONFIGuration---+
+- ---DEFAULTS-----+

```

ADD

Add a new Set name to the set index record.

REMove

Remove an existing set name from the set index record.

CHAnge

Change the properties (location) of a set name from the set index record.

DISplay

Display set(s) defined in the set index record.

SI

Define the set as a ShaowImage set. SI is the default. Valid for Add, Change and Display operations.

TC

Define the set as a TrueCopy set. SI is the default. Valid for Add, Change and Display operations.

HUR

Define the set as an Universal replicator (HUR) set. SI is the default. Valid for Add, Change and Display operations.

OPERations - Valid for display only. Specifies that the SETREC display is the operations format. OPERATIONS is the default display format.

CONFIGuration - Valid for display only. Specifies that the SETREC display is the configuration format. OPERATIONS is the default display format.

DEFAULTS - Valid for display only. Specifies that the SETREC display is the defaults format. OPERATIONS is the default display format.

SETname-setname

Variable-length set name up to 16 characters that is to be defined. Required for the Add, Change, and Remove operations.

FACE-nnnnnnn

Beginning FACE type (without the '#' preceding) of this set name. Valid only for the Add or Change operations. Not valid for Display operations.

ORD-xxxxxxxxx

Beginning ordinal of this set name. Valid only for the Add or Change operations. Not valid for Display operations.

MAXordinal-xxxxxxxxx

The maximum ordinal allowed to be used for this set's copy pair definitions. If zero, then this field is not used. Valid only for the Add or Change operations. Not valid for Display operations.

RECID-rrrr

The record ID of all copy pair configuration definition record's for this set name. For a hexadecimal record ID, enter the four-character hexadecimal value (RECID-C1C1). For an upper case alphabetic record ID, enter the two-character value (RECID-AA). If omitted, the default record ID defined in the set index record (defined by ZFDRS SETREC) will be used. Valid only for the Add or Change operations. Not valid for Display operations.

NOASYNC

Indicates that this set will use Synchronous Copy for Local Replication or Remote Replication. NOASYNC is the Default. Valid only for the Add or Change operations. Not valid for Display operations.

ASYNC

Indicates that this set will use Asynchronous Copy for Local Replication or Remote Replication. NOASYNC is the default. Valid only for the Add or Change operations. Not valid for Display operations.

NOEXCTG

This option is for Universal Replicator sets only. Indicates that this set will not use EXCTG for the Universal Replicator set. Valid only for the Add or Change operations. Not valid for Display operations. SETS_EXCTG is an available site option. If EXCTG is not specified, the site option setting for SETS_EXCTG will be used for the EXCTG value.

EXCTG

This option is for Universal Replicator sets only. Indicates that this set will use EXCTG for the Universal Replicator set. Valid only for the Add or Change operations. Not valid for Display operations. SETS_EXCTG is an available site option. If EXCTG is not specified, the site option setting for SETS_EXCTG will be used for the EXCTG value.

NOOFFLINE

Indicates that volumes that are offline to TPF may not be used as a device number (SDA) in a set. Device numbers (SDAs) that are offline to TPF will show a status of Invalid. NOOFFLINE is the Default. Valid only for the Add or Change operations. Not valid for Display operations. SETS_OFF is an available site option. If OFFLINE is not specified, the site option setting for SETS_OFF will be used for the OFFLINE value.

OFFLINE

Indicates that volumes that are offline to TPF may be used as a device number in a set. NOOFFLINE is the Default. Valid only for the Add or Change operations. Not valid for Display operations. SETS_OFF is an available site option. If OFFLINE is not specified, the site option setting for SETS_OFF will be used for the OFFLINE value.

NOHOPcontrolunit

Indicates that this set may not use remote control unit controlled replication. NOHOPCONTROLUNIT is the Default. Valid only for the Add or Change operations. Not valid for Display operations.

HOPcontrolunit

Indicates that this set may use remote control unit controlled replication. NOHOPCONTROLUNIT is the Default. Valid only for the Add or Change operations. Not valid for Display operations.

CGid

Default Consistency group ID for the set. This value can be overridden by the ZFDRS CONFIG change or add entry. Valid only for SETREC change and add operations. Not valid for Display operations.

SJnlg

Default Universal Replicator source journal group number for the set. This value can be overridden by the ZFDRS CONFIG change or add entry. Valid only for SETREC change and add operations. Not valid for Display operations. Source Journal number is only used by HUR sets.

TJnlg

Default Universal Replicator target journal group number for the set. This value can be overridden by the ZFDRS CONFIG change or add entry. Valid only for SETREC change and add operations. Not valid for Display operations. Target Journal number is only used by HUR sets.

MIRror-xx

Default Mirror ID for the Journal group for the set. This value can be overridden by the ZFDRS CONFIG change or add entry. Valid only for SETREC change and add operations. Not valid for Display operations. Mirror number is only used by HUR sets.

SOURCE

Default SOURCE/NOSOURCE option for the set. Indicates that the set's source volume specified (SVOL) is the same volume as the device to which the command will be issued (DEV). NOSOURCE is the default. This value can be overridden by the ZFDRS CONFIG change or add entry (valid only for SETREC change and add operations). Valid only for the Add or Change operations. Not valid for Display operations. SETS_SOURCE is an available site option. If SOURCE is not specified, the site option setting for SETS_SOURCE will be used for the SOURCE value.

NOSOURCE

Default SOURCE/NOSOURCE option for the set. Indicates that the set's source volume specified (SVOL) is a different volume than the device to which the command will be issued (DEV). NOSOURCE is the default. This value can be overridden by the ZFDRS CONFIG change or add entry (valid only for SETREC change and add operations). Valid only for the Add or Change operations. Not valid for Display operations. SETS_SOURCE is an available site option. If SOURCE is not specified, the site option setting for SETS_SOURCE will be used for the SOURCE value.

BP

Bypass checks that ensure all volume pairs for this set name are in the correct state (simplex or invalid). Valid only for the Change or Remove operations. Consult HDS TPF Engineering before using the BP option. Either the BP or NOBP option is required for the CHAnge or REMove requests.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP SETREC
```

Examples

```
ZFDRS SETREC ADD SI SET-TESTSET FACE-TSDB2 ORD-300 RECID-HD

ZFDRS SETREC ADD HUR SET-TESTHUR FACE-TSDB2 ORD-310 RECID-HD TJ-2 SJ-3 MIR-1
ZFDRS SETREC CHA TC SET-TCSET1 FACE-TSDB2 ORD-300 BP
ZFDRS SETREC REM SET-OLDSET BP
ZFDRS SETREC DISPLAY
ZFDRS SETREC DISPLAY CONFIG
ZFDRS SETREC DISPLAY DEFAULTS
```

ZFDRS SETREC INIT – Initialize the set index record

The SETREC INIT command initializes the set index record.

Requirements and Restrictions

The SETREC must be defined in the COPYMGR control record (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

The fixed file record to be used for the set index record (SETREC) must have the same record ID as the record ID defined in the COPYMGR control record for SETREC (see ZFDRS COPYMGR and the *Copy Manager for TPF Administrator's Guide*).

If there are existing SET's defined in the set index record, all pairs in all set's must be simplex or invalid status.

Format

```
>>--ZFDRS --- SETREC ----- INIT ----- PASSWORD-password -----
><

      +- BP--+
```

INIT

Clears the set index record.

PASSWORD-*password*

The INIT parameter requires a password. This password is defined during installation of Copy Manager (see *Copy Manager for TPF Administrator's Guide*).

BP

Bypass checks that ensure all devices are in the correct state (simplex or invalid) for the requested action. Consult HDS TPF Engineering before using the BP option. Either the BP or NOBP option is required for the INIT.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP SETREC
```

Example

```
ZFDRS SETREC INIT PASSWORD=SECRET BP
```

ZFDRS SPLIT – Split copying of devices

The SPLIT command issues a Split Pair command to the devices in a set's copy pair configuration definition record. The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition records being used must be set up correctly.

When using ShadowImage, the specified volume pair status must be duplex.

When using TrueCopy or Universal Replicator, the specified volume pair status must be duplex or pending duplex.

All preset definitions for the set must be canceled.

Format

```
>>--ZFDRS -----SPLit -----SETname-setname----->
      +- --Local--+
      +- -Remote--+

      +- --ALL-----+
>-- ----->
      +- --Dev-XXXX-----+
      +- --SSSid -XXXX--+

>-- -----<<
      +- HURREV--+ +- BP--+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

STOPONerr

Specifies that if an error is encountered during the split pair request, the split pair request will stop after the first error is encountered. If this option is not specified, a split pair request will be issued for every device in the set. STOPONERR is an available site option. If STOPONERR is not specified, the site option setting for STOPONERR will be used.

ALL

Specifies that all copy pairs defined in the set's copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies all devices in a single SSID are to be processed.

HURREV

The HURREV is a specialized parameter only available for Universal Replicator. This parameter is used when reversing the direction of an Universal Replicator pair. The split with the HURREV option is one of a sequence of commands required when reversing the direction of an Universal Replicator pairs. See the *Copy Manager for TPF Administrator's Guide* for more details on reversing Universal Replicator pairs. Consult HDS TPF Engineering before using the HURREV parameter.

BP

Bypass checks that ensure all devices are in the correct state for the requested action. Consult HDS TPF Engineering before using the BP option.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP SPLIT
```

Examples

```
ZFDRS SPLIT SET-TESTSET1
ZFDRS SPL SET-TESTSET2 BP
ZFDRS SPL SET-SHADOWIMAGE1 D-1000
ZFDRS SPL SET-TESTCOPY STOPONERR
```

ZFDRS STATUS – Display copying device status for ShadowImage

The ShadowImage STATUS command issues a Display Status command to the devices in a set's copy pair configuration definition record. Use this command to display the status of copy operations. The command can be issued to all, some, or one device in a chosen set.



Note: CopyManager STATUS command request the individual status of each copy pair in set's copy pair configuration definition record. For example, if a set contains 100 copy pairs, CopyManager will issue 100 status command to the control unit(s).

The ZFDRS STATUS entry request the status of each copy pair in the reverse order of the copy pairs in the set's copy pair configuration record. This allows for the ZFDRS STATUS entry to be made prior to another ZFDRS copy action entry completion. For example, a ZFDRS EST entry is made, prior to the completion of the ZFDRS EST completion, several ZFDRS STATUS entries can be made to monitor the progress of the ZFDRS EST entry.

Requirements and Restrictions

The copy pair configuration definition record being used must be set up correctly.

The set's SETREC definition must be defined as SI.

Format

```
>>--ZFDRS -----SStatus ---SETname-setname----->
      +- -Local-+
                                     +- --ALL-----|
                                     +- --Dev-xxxx-----+
                                     +- --SSSid-xxxx--+
                                     +- --DUplex-----+
                                     +- --PENDDuplex--+
                                     +- --Simplex-----+
                                     +- --SPLITOPr-----+
                                     +- --SPLITExc-----+
                                     +- --PENDSplit----+
                                     +- --RESync-----+
                                     +- --VIRtualspl--+
                                     +- --REVresync----+
                                     +- --Invalid-----+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single source SSID is to be processed.

DUPlex

Display all modules in *duplex* status.

PENDDuplex

Display all modules that are *pending duplex* status.

SImplex

Display all modules in *simplex* status.

SPLITOPr

Display all modules in *split by operation (operator)* status.

SPLITExc

Display all modules in *split by exception* status.

PENDSplit

Display all modules in *pending split* status.

RESync

Display all modules in *resynchronizing (resuming)* status.

VIRtualspl

Display all modules that are in virtual split status.

REVresync

Display all modules in *reverse resynchronizing (resuming)* status.

Invalid

Display all *invalid* modules.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP STATUS
```

Examples

```
ZFDRS STATUS SET-SET1  
ZFDRS ST SET-SET2 DEV-5400  
ZFDRS ST SET-SET3 PENDDUP
```

ZFDRS STATUS– Display copying device status for TrueCopy

The TrueCopy STATUS command issues a Display Status command to the devices in a set's copy pair configuration definition record. Use this command to display the status of copy operations. The command can be issued to all, some, or one device in a chosen set.



Note: CopyManager STATUS command request the individual status of each copy pair in set's copy pair configuration definition record. For example, if a set contains 100 copy pairs, CopyManager will issue 100 status command to the control unit(s).

The ZFDRS STATUS entry request the status of each copy pair in the reverse order of the copy pairs in the set's copy pair configuration record. This allows for the ZFDRS STATUS entry to be made prior to another ZFDRS copy action entry completion. For example, a ZFDRS EST entry is made, prior to the completion of the ZFDRS EST completion, several ZFDRS STATUS entries can be made to monitor the progress of the ZFDRS EST entry.

Requirements and Restrictions

The set's copy pair configuration definition record must be set up correctly.

The set's SETREC definition must be defined as TC.

Format

```
>>--ZFDRS -----Status ---SETname-setname----->
      +- -Remote-+                                     +- --ALL-----|
                                                    +- --Dev-xxxx----+
                                                    +- --SSSid-xxxx--+
                                                    +- --DUPlex-----+
                                                    +- --PENDDuplex--+
                                                    +- --Simplex-----+
                                                    +- --SPLITSV01----+
                                                    +- --SPLITOPr----+
                                                    +- --SPLITVPcu--+
                                                    +- --SPLITCU-----+
                                                    +- --SPLITTVSX----+
                                                    +- --SPLITTV01----+
                                                    +- --SPLITIML----+
                                                    +- --SPLITINIit---+
                                                    +- --PENDSIMP-----+
                                                    +- --PENDSplit----+
                                                    +- --SPLITPS-----+
                                                    +- --Invalid-----+
```

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single SSID is to be processed.

DUPLex

Displays all mods in *duplex* status.

PENDDuplex

Displays all mods in *pending duplex* status.

SIMplex

Displays all mods in simplex status.

SPLITSVOL

Displays all mods in split by *source volume* status.

SPLITOPr

Displays all mods in split by *operation (operator)* status.

SPLITTVPcu

Displays all mods in split by *target volume PCU* status.

SPLITCU

Displays all mods in split by *control unit PCU* status.

SPLITTVSX

Displays all mods in split by *target volume in simplex* status.

SPLITTVOL

Displays all mods in split by *target volume* status.

SPLITIML

Displays all mods in split by *CU IML* status.

SPLITINI \dagger

Displays all mods in *split during initial copy* status.

PENDSIMP

Displays all mods in *pending simplex* status.

PENDsplit

Displays all mods in *pending split* status.

SPLITPS

Displays all mods in split by *PS off* status.

Invalid

Displays all *invalid* mods.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP STATUS
```

Examples

```
ZFDRS STATUS SET-SET1  
ZFDRS STA SET-SET2 DEV-5400  
ZFDRS ST SET-SET3 PENDING
```

ZFDRS STATUS– Display copying device status for Universal Replicator

The Universal Replicator STATUS command issues a Display Status command to the devices in a set's copy pair configuration definition record. Use this command to display the status of copy operations. The command can be issued to all, some, or one device in a chosen set.



Note: CopyManager STATUS command request the individual status of each copy pair in set's copy pair configuration definition record. For example, if a set contains 100 copy pairs, CopyManager will issue 100 status command to the control unit(s).

The ZFDRS STATUS entry request the status of each copy pair in the reverse order of the copy pairs in the set's copy pair configuration record. This allows for the ZFDRS STATUS entry to be made prior to another ZFDRS copy action entry completion. For example, a ZFDRS EST entry is made, prior to the completion of the ZFDRS EST completion, several ZFDRS STATUS entries can be made to monitor the progress of the ZFDRS EST entry.

Requirements and Restrictions

The set's copy pair configuration definition record must be set up correctly.

The set's SETREC definition must be defined as HUR.

If the HOPTAR option is used, the RCUREC definitions for the HUR target control unit must be correct.

Format

```
>>--ZFDRS -----Status ---SETname-setname----->
      +- -Remote-+
                                     +- --ALL-----|
                                     +- --Dev-xxxx----+
                                     +- --SSSid-xxxx--+
                                     +- --Simplex-----+
                                     +- --PENDDuplex--+
                                     +- --DUPlex-----+
                                     +- --SPLITOPr----+
                                     +- --SPLITSV-----+
                                     +- --SPLITTVDKC--+
                                     +- --SPLITDKC----+
                                     +- --SPLITVSX----+
                                     +- --SPLITTVINT--+
                                     +- --SPLITIML----+
                                     +- --SPLITINIT----+
```



```

+- --PENDSPLIT----+
+- --PENDSIMP-----+
+- --SPLITPS-----+
+- --SPLITDIFJ----+
+- --SPLITDIFX----+
+- --SPLITDIFM----+
+- --SPLITXFOR----+
+- --SPLITJFOR----+
+- --Invalid-----+

>----->
+- HOPTAR--+      +---COMBine  --+
                  +---NOCOMBine--+

```

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the copy pair configuration definition record are to be processed.

Dev-xxxx

Specifies a single device is to be processed.

SSSid-xxxx

Specifies a single SSID is to be processed.

Simplex

Displays all mods in *simplex* status.

PENDDuplex

Displays all mods that are *pending duplex* status.

DUPLex

Displays all mods in *duplex* status.

SPLITOPr

Displays all mods in *split by operation (operator)* status.

SPLITSVol

Displays all mods in split by host suspends *source volume*.

SPLITTVDKC

Displays all mods in *split because target volume state was updated by the primary DKC* status.

SPLITDKC

Displays all mods in *split due to DKC internal state* status.

SPLITTVSX

Displays all mods in *split because target volume changed to simplex state* status.

SPLITTVINT

Displays all mods in *split due to the target volume internal state* status.

SPLITIML

Displays all mods in *split due to primary DKC power off/on* status.

SPLITINIT

Displays all mods in *split during initial copy* status.

PENDSPLIT

Displays all mods in *pending split* status.

PENDSIMP

Displays all mods in *pending simplex* status.

SPLITPS

Displays all mods in *split due to DKC PS off* status.

SPLITDIFJ

Displays all mods in *split in the case that differential data is held as JNL* status.

SPLITDIFX

Displays all mods in *split in the case that differential data can not be held as JNL due to DKC internal state* status.

SPLITDIFM

Displays all mods in *split in the case that differential data is not managed as JNL* status.

SPLITXFOR

Displays all mods in *split in the case that JNL resync can not be executed (Force all copy can not be executed)* status.

SPLITJFOR

Displays all mods in *split in the case that JNL resync can not be executed (Force all copy can be executed)* status.

Invalid

Displays all *invalid* mods.

HOPTAR

The HOPTAR is a specialized parameter only available for Universal Replicator. This parameter is used to report the status of a Universal Replicator pair at the secondary location.

COMBine/NOCOMBine

The COMBINE or NOCOMBINE parameter overrides the COPYMGR SITEOPTION COMBINE.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP STATUS
```

Examples

```
ZFDRS STATUS SET-SET1  
  
ZFDRS STATUS SET-SET1 HOPTAR  
  
ZFDRS STATUS SET-SET1 COMB  
  
ZFDRS STATUS SET-SET1 NOCOMB  
ZFDRS STA SET-SET2 DEV-5400  
ZFDRS ST SET-SET3 PENDING
```

ZFDRS STATUS DUMP – Display ShadowImage, TrueCopy, or Universal Replicator status bits

The STATUS DUMP command issues a Display Status command of a device in a set's copy pair configuration definition record. This command displays the entire internal status reply for that device in dump format. The command can only be issued to one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition record being used must be set up correctly.

The set's SETREC definition must be correctly defined as SI or TC or HUR.

The status dump display is only allowed for single device status request.

The status dump is used by HDS TPF engineering for diagnostic purposes.

Format

```
>>--ZFDRS -----Status ---SETname-setname----DUMP---Dev-xxxx--->
      +- -Local--+
      +- -Remote+>
```

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

Dev-xxxx

Specifies a single device is to be processed. This is a required parameter.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP STATUS
```

Examples

```
ZFDRS STATUS SET-SET1 DUMP D-4000  
ZFDRS ST SET-SET2 DUMP DEV-5400
```

ZFDRS STATUS SYSTEM – Display TPF system copying status

The STATUS SYSTEM command displays the last ShadowImage, TrueCopy, or Universal Replicator operation requested on the TPF system. The display includes the set acted upon and a time and date stamp.

Requirements and Restrictions

The set index record (SETREC) must be set up correctly.

Format

```
>>--ZFDRS -----SStatus -----SYSTEM----->
      +- -Local---+
      +- -Remote--+
```

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS
ZFDRS HELP
ZFDRS HELP STATUS
```

Examples

```
ZFDRS STATUS SYSTEM
ZFDRS ST SYSTEM
```

ZFDRS UTILITY CIOSC – Display a CIOSC status bits for a single volume

This entry should only be used after consulting HDS TPF engineering

Display the CIOSC macro status bits for a single

The UTILITY CIOSC is used by HDS TPF engineering for diagnostic purposes.

Requirements and Restrictions

The volume being queried must be mounted (online) to TPF.

Format

```
>>--ZFDRS -----UTILITY ---- CIOSC----->

>-- --- SDA-xxxx -----<<
```

SDA-xxxx

Specifies that SDA of the mounted volume to query.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

- ZFDRS
- ZFDRS HELP
- ZFDRS HELP UTILITY

Examples

```
ZFDRS UTILITY CIOSC SDA-3010
```

ZFDRS VERIFYTVOFFLIN – Verify ShadowImage Target volumes are offline

The VERIFYTVOFFLIN command verifies that a ShadowImage pair's target is offline. If the target is not offline, the VERIFYTVOFFLINE command will provide a display of the targets that are online. The display has multiple options to provide additional information to help in determining the host that has the target volume varied online.

The command can be issued to all, some, or one device in a chosen set.

Requirements and Restrictions

The set's copy pair configuration definition records must be set up correctly.

The set's SETREC definition must be defined as SI.

Available for Local ShadowImage sets.

Format

```
>>--ZFDRS -----VERIFYtvofflin -----SETname-setname----->
      +- -Local----+

      +- --ALL-----+
>-- -----<
      +- --Dev-XXXX-----+
      +- --SSSid -XXXX-+

>-- ----->
      +- ONLINE--+      +-- OFFLINE----+
```

Local

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as SI in the set's SETREC definition.

Remote

Optional parameter. HDS recommends the TPF site operations use of this parameter be phased out. If this parameter is used, the SET must be defined as HUR or TC in the set's SETREC definition.

SETname-setname

Variable-length set name up to 16 characters.

ALL

Specifies that all copy pairs defined in the set's copy pair configuration definition record(s) are to be processed.

Dev-xxxx

Specifies a single device is to be processed. When the DEV option is used with the online option, all path group ids for the pair's target volume will be displayed.

SSSid-xxxx

Specifies that all devices for a single SSID are to be processed.

ONLINE

Request a detailed listing of the target volumes that are online. The online option display will display the first path group id for each online volume. The display will also show the number of path group ids for that volume. The Default setting is to display a summary of the online and offline volumes. See also the DEV- option.

OFFLINE

Request a detailed listing of the target volumes that are offline. The Default setting is to display a summary of the online and offline volumes.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP VERIFY
```

Examples

```
ZFDRS LOCAL VERIFY SET-DAILYCOPY1  
ZFDRS L VERIFY SET-SET2 OFFLINE  
ZFDRS L VERIFY SET-SET2 ONLINE
```

ZFDRS VERIFYTVOFFLIN SINGLE – Verify a single volume offline/online status

The single VERIFYTVOFFLIN command verifies a single volume online/offline status. If the volume is online, the single VERIFYTVOFFLINE command will provide a display of the volume's path group id's.

The command is issued to any volume in a control unit.

The command does not use the CopyManager sets.

Requirements and Restrictions

At least one volume on the queried volume's control unit must be online (mounted) to TPF.

Format

```
>>--ZFDRS -----VERifytvofflin ----SINGLE----->

>-- --- IOSDA-xxxx ----- SSId-xxxx ----- SERial-xxxxxxxxxxxxx ----->

>-- --- VOL-xx ----- LCU-xx -----<<
```

IOSDA-xxxx

Specifies that SDA of the mounted volume to send the verify query command. This SDA must be mount (online) to TPF.

SERial-xxxxxxxxxxxxx

The control unit SERIAL number of the volume being queried.

SSId-xxxx

The SSID of the volume being queried.

LCU-xx

The LCU of the volume being queried.

VOL-xx

The VOL of the volume being queried.

Additional Information

Online help information is available for this functional message. To display the help information, enter one of the following:

```
ZFDRS  
ZFDRS HELP  
ZFDRS HELP VERIFY
```

Examples

```
ZFDRS VERIFY SINGLE IOSDA-6001 SER-54118 SSID-630 LCU-1 VOL-2F
```


Troubleshooting

This chapter provides troubleshooting information for Copy Manager for TPF and instructions for calling technical support.

- [Immediate Halt of ShadowImage, TrueCopy, or Universal Replicator Session](#)
- [Troubleshooting](#)
- [Calling the Support Center](#)

Immediate Halt of ShadowImage, TrueCopy, or Universal Replicator Session

To bypass normal procedures and end ShadowImage, TrueCopy, or Universal Replicator sessions:

1. If the TPF system is available: Use the Delete Pair command with **BP**:
ZFDRS DEL SET-*setname* BP or **ZFDRS DEL SET-*setname* BP**
2. If the TPF system is not available: Contact your Hitachi Data Systems representative to stop ShadowImage, TrueCopy, or Universal Replicator at the control unit SVP.

Troubleshooting

The *Copy Manager for TPF Messages and Codes* document lists the error codes output by the Copy Manager for TPF software. This document is maintained in the standard IBM® format and may be utilized by coverage and operations as a standalone document.

For troubleshooting information for copy operations, see the applicable User's Guide (for example, *Hitachi ShadowImage for Mainframe User Guide*), or contact your Hitachi Data Systems representative.

For general troubleshooting information, see the User and Reference Guide for the storage system (for example, *Hitachi Virtual Storage Platform User and Reference Guide*), or contact your Hitachi Data Systems representative.

If you need to call the Hitachi Data Systems Support Center, see [Calling the Support Center](#) for information and instructions.

[Table 3-1](#) shows the command acceptance for each TrueCopy pair status. [Table 3-2](#) shows the command acceptance for each ShadowImage pair status. [Table 3-2](#) shows the command acceptance for each Universal Replicator pair status.

Table 3-1 Command Acceptance for each TrueCopy Pair Status

Command Type	Current Volume	Simplex	Duplex-P	Duplex	Suspend
Define TCz path	P-VOL	Accept	Accept	Accept	Accept
	S-VOL	—	Accept	Accept	Accept
Remove TCz path	P-VOL	Accept	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9
	S-VOL	—	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9
Define TCz/SIz pair	P-VOL	Accept	C211/01/0F/12	C211/01/0F/12	C211/01/0F/12
	S-VOL	—	69F5/01/0E	69F5/01/0E	69F5/01/0E
Resume TCz/SIz pair	P-VOL	C21A/01/0F/11	C21A/01/0F/12	C21A/01/0F/12	Accept
	S-VOL	—	69F5/01/0E	69F5/01/0E	69F5/01/0E
Suspend single TCz/SIz pair	P-VOL	C055/01/0F/1B	Accept	Accept	C195/01/0F/19
	S-VOL	—	C0F1/01/0F/1C	Accept	C0C5/01/0F/19
Remove TCz/SIz pair	P-VOL	Accept	Accept	Accept	Accept
	S-VOL	—	Accept *	Accept *	Accept *
Sense TCz path status	P,S-VOL	Accept	Accept	Accept	Accept
Sense TCz/SIz pair status	P,S-VOL	Accept	Accept	Accept	Accept
Report all SIz paired LVIs	P,S-VOL	Accept	Accept	Accept	Accept

Else Accept: Error code / Key code / Format message / Reason code

* P-VOL status is Suspend, and S-VOL status is Simplex.

Table 3-2 Command Acceptance for each ShadowImage Pair Status

Command Type	Current Volume	Simplex	Duplex-P	Duplex	Split-P	V-Split	Suspend	Resync or Resync-Rev.
Define pair	P-VOL 2pair	Accept	2343/01/0F/E8	2343/01/0F/E8	2343/01/0F/E8	2343/01/0F/E8	2343/01/0F/E8	2343/01/0F/E8
	P-VOL 3pair	—	2332/01/0F/12	2332/01/0F/12	2332/01/0F/12	2332/01/0F/12	2332/01/0F/12	2332/01/0F/12
	S-VOL	—	23A0/01/04	23A0/01/04	23A0/01/04	23A0/01/04	23A0/01/04	23A0/01/04
	S-VOL→ Simplex	—	2337/01/0F/E8	2337/01/0F/E8	2337/01/0F/E8	2337/01/0F/E8	2337/01/0F/E8	2337/01/0F/E8
Resume pair	P-VOL	233A/01/0F/11	2310/01/0F/E8	2310/01/0F/E8	2354/01/0F/E8	Accept	Accept	2310/01/0F/E8
	S-VOL	—	2310/01/0F/E8	2310/01/0F/E8	2354/01/0F/E8	Accept	Accept	2310/01/0F/E8
Suspend single pair	P-VOL	2333/01/0F/1B	Accept	Accept	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8
	S-VOL	—	Accept	Accept	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8
Suspend multiple pair	P-VOL	2344/01/0F/1B	2310/01/0F/E8	Accept	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8
	S-VOL	—	2310/01/0F/E8	Accept	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8	2310/01/0F/E8
Remove pair	P-VOL	2333/01/0F/1B	Accept *	Accept *	Accept *	2353/01/0F/E8	Accept *	Accept *
	S-VOL	—	Accept *	Accept *	Accept *	2353/01/0F/E8	Accept *	Accept *
Sense pair status	P,S-VOL	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Else Accept: Error code / Key code / Format message / Reason code

* The data between P-VOL and S-VOL is not synchronized.

Table 3-3 Command Acceptance for each Universal Replicator Pair Status

Command Type	Current Volume	Simplex	Duplex-P	Duplex	Suspending	Suspend	SSWS	Deleting
Create a path	P-VOL	Accept	Accept	Accept	Accept	Accept	-	Accept
	S-VOL	-	Accept	Accept	Accept	Accept	Accept	Accept
Remove a path	P-VOL	Accept	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9	-	C126/01/0F/E9
	S-VOL	-	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9	C126/01/0F/E9
Create a pair	P-VOL	Accept	4612/01/0F/11	4612/01/0F/11	4612/01/0F/11	4612/01/0F/11	-	4612/01/0F/11
	S-VOL	4600/01/04	4600/01/04	4600/01/04	4600/01/04	4600/01/04	4600/01/04	4600/01/04
Suspend pair	P-VOL	4617/01/0F/15	Accept	Accept	Not Accept	Not Accept	-	Not Accept
	S-VOL	4617/01/0F/15	Accept	Accept	Not Accept	Not Accept	Not Accept	Not Accept
Suspend pair reverse	P-VOL	4617/01/0F/15	4619/01/0F/16	4619/01/0F/16	4619/01/0F/16	4619/01/0F/16	-	4619/01/0F/16
	S-VOL	4617/01/0F/15	Accept	Accept	Not Accept	Accept	Accept	Not Accept
Resume pair	P-VOL	4617/01/0F/15	Not Accept	Not Accept	Not Accept	Accept	-	Not Accept
	S-VOL	4617/01/0F/15	Not Accept	Not Accept	Not Accept	Not Accept	Not Accept	Not Accept
Remove pair	P-VOL	4617/01/0F/15	Accept	Accept	Not Accept	Accept	-	Not Accept
	S-VOL	4617/01/0F/15	Accept	Accept	Not Accept	Accept	Accept	Not Accept
Sense path status	P,S-VOL	Accept	Accept	Accept	Accept	Accept	Accept	Accept
Sense pair status	P,S-VOL	Accept	Accept	Accept	Accept	Accept	Accept	Accept
Sense all SIz pairs status	P,S-VOL	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Calling the Support Center

If you need to call the Hitachi Data Systems Support Center, make sure to provide as much information about the problem as possible, including:

- The circumstances surrounding the error or failure.
- The exact content of any error messages displayed on the host systems.
- The exact content of any error messages displayed by Storage Navigator.
- The service information messages (SIMs), including reference codes and severity levels, logged at the host and displayed by Storage Navigator.

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: <https://portal.hds.com>



Control Unit Adapter ID (SAID) Tables

This appendix provides the control unit adapter ID (SAID) tables to be used when defining port ids in the PAIRRECs or the DBAREARECs. HDS recommends that HDS TPF engineering be consulted prior to using these tables.

Table A-1 SAID values for PATH LINK (CL1)

Packg local	Port	SAID	Packg local	Port	SAID	Packg local	Port	SAID	Packg local	Port	SAID
1PC (Basic)	CL1-A	X'0000'	1PJ (Add4)	CL1-J	X'0008'	1PA (DKA Basic)	CL9-A	X'0080'	1PG (DKA Add2)	CL9-J	X'0088'
	CL3-A	X'0020'		CL3-J	X'0028'		CLB-A	X'00A0'		CLB-J	X'00A8'
	CL5-A	X'0040'		CL5-J	X'0048'		CLD-A	X'00C0'		CLD-J	X'00C8'
	CL7-A	X'0060'		CL7-J	X'0068'		CLF-A	X'00E0'		CLF-J	X'00E8'
	CL1-B	X'0001'		CL1-K	X'0009'		CL9-B	X'0081'		CL9-K	X'0089'
	CL3-B	X'0021'		CL3-K	X'0029'		CLB-B	X'00A1'		CLB-K	X'00A9'
	CL5-B	X'0041'		CL5-K	X'0049'		CLD-B	X'00C1'		CLD-K	X'00C9'
	CL7-B	X'0061'		CL7-K	X'0069'		CLF-B	X'00E1'		CLF-K	X'00E9'
1PD (Add1)	CL1-C	X'0002'	1PK (Add5)	CL1-L	X'000A'	1PB (DKA Add1)	CL9-C	X'0082'	1PH (DKA Add3)	CL9-L	X'008A'
	CL3-C	X'0022'		CL3-L	X'002A'		CLB-C	X'00A2'		CLB-L	X'00AA'
	CL5-C	X'0042'		CL5-L	X'004A'		CLD-C	X'00C2'		CLD-L	X'00CA'
	CL7-C	X'0062'		CL7-L	X'006A'		CLF-C	X'00E2'		CLF-L	X'00EA'
	CL1-D	X'0003'		CL1-M	X'000B'		CL9-D	X'0083'		CL9-M	X'008B'
	CL3-D	X'0023'		CL3-M	X'002B'		CLB-D	X'00A3'		CLB-M	X'00AB'
	CL5-D	X'0043'		CL5-M	X'004B'		CLD-D	X'00C3'		CLD-M	X'00CB'
	CL7-D	X'0063'		CL7-M	X'006B'		CLF-D	X'00E3'		CLF-M	X'00EB'
1PE (Add2)	CL1-E	X'0004'	1PL (Add6)	CL1-N	X'000C'	-	-	-	-	-	-
	CL3-E	X'0024'		CL3-N	X'002C'	-	-	-	-	-	-
	CL5-E	X'0044'		CL5-N	X'004C'	-	-	-	-	-	-
	CL7-E	X'0064'		CL7-N	X'006C'	-	-	-	-	-	-
	CL1-F	X'0005'		CL1-P	X'000D'	-	-	-	-	-	-
	CL3-F	X'0025'		CL3-P	X'002D'	-	-	-	-	-	-
	CL5-F	X'0045'		CL5-P	X'004D'	-	-	-	-	-	-
	CL7-F	X'0065'		CL7-P	X'006D'	-	-	-	-	-	-
1PF (Add3)	CL1-G	X'0006'	1PM (Add7)	CL1-Q	X'000E'	-	-	-	-	-	-
	CL3-G	X'0026'		CL3-Q	X'002E'	-	-	-	-	-	-
	CL5-G	X'0046'		CL5-Q	X'004E'	-	-	-	-	-	-
	CL7-G	X'0066'		CL7-Q	X'006E'	-	-	-	-	-	-
	CL1-H	X'0007'		CL1-R	X'000F'	-	-	-	-	-	-
	CL3-H	X'0027'		CL3-R	X'002F'	-	-	-	-	-	-
	CL5-H	X'0047'		CL5-R	X'004F'	-	-	-	-	-	-
	CL7-H	X'0067'		CL7-R	X'006F'	-	-	-	-	-	-

Table A-2 SAID values for PATH LINK (CL2)

Packg local	Port	SAID	Packg local	Port	SAID	Packg local	Port	SAID	Packg local	Port	SAID
2PC (Basic)	CL2-A	X'0010'	2PJ (Add4)	CL2-J	X'0018'	2PA (DKA Basic)	CLA-A	X'0090'	2PG (DKA Add2)	CLA-J	X'0098'
	CL4-A	X'0030'		CL4-J	X'0038'		CLC-A	X'00B0'		CLC-J	X'00B8'
	CL6-A	X'0050'		CL6-J	X'0058'		CLE-A	X'00D0'		CLE-J	X'00D8'
	CL8-A	X'0070'		CL8-J	X'0078'		CLG-A	X'00F0'		CLG-J	X'00F8'
	CL2-B	X'0011'		CL2-K	X'0019'		CLA-B	X'0091'		CLA-K	X'0099'
	CL4-B	X'0031'		CL4-K	X'0039'		CLC-B	X'00B1'		CLC-K	X'00B9'
	CL6-B	X'0051'		CL6-K	X'0059'		CLE-B	X'00D1'		CLE-K	X'00D9'
	CL8-B	X'0071'		CL8-K	X'0079'		CLG-B	X'00F1'		CLG-K	X'00F9'
2PD (Add1)	CL2-C	X'0012'	2PK (Add5)	CL2-L	X'001A'	2PB (DKA Add1)	CLA-C	X'0092'	2PH (DKA Add3)	CLA-L	X'009A'
	CL4-C	X'0032'		CL4-L	X'003A'		CLC-C	X'00B2'		CLC-L	X'00BA'
	CL6-C	X'0052'		CL6-L	X'005A'		CLE-C	X'00D2'		CLE-L	X'00DA'
	CL8-C	X'0072'		CL8-L	X'007A'		CLG-C	X'00F2'		CLG-L	X'00FA'
	CL2-D	X'0013'		CL2-M	X'001B'		CLA-D	X'0093'		CLA-M	X'009B'
	CL4-D	X'0033'		CL4-M	X'003B'		CLC-D	X'00B3'		CLC-M	X'00BB'
	CL6-D	X'0053'		CL6-M	X'005B'		CLE-D	X'00D3'		CLE-M	X'00DB'
	CL8-D	X'0073'		CL8-M	X'007B'		CLG-D	X'00F3'		CLG-M	X'00FB'
2PE (Add2)	CL2-E	X'0014'	2PL (Add6)	CL2-N	X'001C'	-	-	-	-	-	
	CL4-E	X'0034'		CL4-N	X'003C'	-	-	-	-	-	
	CL6-E	X'0054'		CL6-N	X'005C'	-	-	-	-	-	
	CL8-E	X'0074'		CL8-N	X'007C'	-	-	-	-	-	
	CL2-F	X'0015'		CL2-P	X'001D'	-	-	-	-	-	
	CL4-F	X'0035'		CL4-P	X'003D'	-	-	-	-	-	
	CL6-F	X'0055'		CL6-P	X'005D'	-	-	-	-	-	
	CL8-F	X'0075'		CL8-P	X'007D'	-	-	-	-	-	
2PF (Add3)	CL2-G	X'0016'	2PM (Add7)	CL2-Q	X'001E'	-	-	-	-	-	
	CL4-G	X'0036'		CL4-Q	X'003E'	-	-	-	-	-	
	CL6-G	X'0056'		CL6-Q	X'005E'	-	-	-	-	-	
	CL8-G	X'0076'		CL8-Q	X'007E'	-	-	-	-	-	
	CL2-H	X'0017'		CL2-R	X'001F'	-	-	-	-	-	
	CL4-H	X'0037'		CL4-R	X'003F'	-	-	-	-	-	
	CL6-H	X'0057'		CL6-R	X'005F'	-	-	-	-	-	
	CL8-H	X'0077'		CL8-R	X'007F'	-	-	-	-	-	



Acronyms and Abbreviations

DASD	direct-access storage device
DEV	device
HDS	Hitachi Data Systems
HUR	Hitachi Universal Replicator for IBM® z/OS®
LCU	logical control unit
LDEV	logical device
LVI	logical volume image
M-VOL	main volume (for TrueCopy for IBM® z/OS®)
NSC	Hitachi TagmaStore Network Storage Controller
P-VOL	primary volume (for Universal Replicator for IBM® z/OS®)
RCU	remote control unit (for TrueCopy for IBM® z/OS®)
R-VOL	remote volume (for TrueCopy for IBM® z/OS®)
SDA	symbolic device address
SIM	service information message
SIz	Hitachi ShadowImage for IBM® z/OS®
SLCU	source logical control unit
SSER	source serial number
SSID	storage system identification
S-VOL	source volume (for ShadowImage for IBM® z/OS®) secondary volume (for Universal Replicator for IBM® z/OS®)
TCz	Hitachi TrueCopy for IBM® z/OS®
TLCU	target logical control unit
TOD	time of day
TOV	timeout value
TPF	Transaction Processing Facility
TSER	target serial number
T-VOL	target volume (for ShadowImage for IBM® z/OS®)
URz	Hitachi Universal Replicator for IBM® z/OS®
USP V	Hitachi Universal Storage Platform V
USP VM	Hitachi Universal Storage Platform VM

VOLSER	volume serial number
VSN	volume serial number
VSP	Hitachi Virtual Storage Platform
VSP G1000	Hitachi Virtual Storage Platform G1000

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MK-92RD131-12