DCS–M04–GDDR ADMINISTRATION GUIDE

GDDR ADMINISTRATION GUIDE

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Produced by	Phil Davies
Reviewed by	Didier Lemaitre, Renaud Colin, Xuan Hien Dao, Michael Quigley
Authorised by	Didier Lemaitre

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1. INTRODUCTION

1.1 Scope

This document details the actions and procedures required to configure and administer GDDR.

1.2 Objectives

It is the intention of this document to describe in detail the necessary procedures to define the initial GDDR operating environment, and to administer GDDR on an ongoing basis.

1.3 Intended audience

This document is intended for the Administrators of GDDR, specifically:

- *z/OS Systems Programming Staff*

1.4 References

Ref. nbr.	Reference	Title
[1]		Project Definition Report
[2]		Project High Level Technical Design
[3]		

1.5 Change history

Version	Nature of change	Date
00.00	Create Document (draft)	20-05-2005
01.01	Latest Draft – GDDR Release 1 with STARFIRE support	24-08-2005
01.02		
01.03		

1.6 Forecast changes

Version	Nature of change	Date

1.7 Abbreviations

Abbreviation	Full text
DCS	Data Center Strategy
HLTLS	High Level Test & Launch Strategy
GDDR	Geographically Dispersed Disaster Recovery
ConGroup	EMC Software Product Consistency Group
K1	GDDR K-System at the DC1 Site
K2	GDDR K-System at the DC2 Site
K3	GDDR K-System at the DC3 Site

1.8 Definitions

Terminology	Definition
Systems	The word system or systems used in this document refers to an z/OS Image and all systems tasks and applications running in it.
K-System	A controlling LPAR, for each of the GDDR sites DC1, DC2 and DC3. The K-System monitors DASD status and DASD mirroring to DC2 and DC3.
K-System Master Function	The K-System that is currently responsible for monitoring DASD status and DASD mirroring. Is also responsible for taking action when problems with DASD and DASD mirroring are detected.
Primary Site	The live site where the Production z/OS Images run. The Primary site has the primary copy of Production data. (Usually DC1)
Primary DASD Site	The same as the Primary Site. (Usually DC1)
Secondary Site	The backup site that has a synchronous copy of the Production data. (Usually DC2)
Secondary DASD Site	The same as the Secondary Site. (Usually DC2)
Tertiary Site	A backup site that has an asynchronous copy of the Production data. (Always DC3)
CA-OPS/MVS MSF	CA-OPS/MVS Multi System Facility (MSF) provides communication between multiple CA-OPS/MVS copies running on different z/OS images.
Trip	The action ConGroup takes when it detects that one or more R1 devices in a consistency group cannot propagate data to their corresponding secondary (R2) devices. During a trip, ConGroup suspends all the primary (R1) devices in the consistency group. This suspension ensures that the data flow to the secondary (R2) side is halted and the data on the remote side of the configuration is consistent.
SRDF/S	Symmetrix Remote Data Facility Synchronous mode
SRDF/A	Symmetrix Remote Data Facility Asynchronous mode

GDDR ADMINISTRATORS INTERFACE

1.9 GDDR Administrators Interface Description

The GDDR Administrators Interface is used by the z/OS Systems Programmers to Configure and Administer GDDR.

The GDDR Administrators Interface can be found via the CA-OPS/MVS Panel Option OPS (from the Primary TSO ISPF Panel).

```
CA-OPS/MVS II --- SYK2 ---  OPSVIEW Primary Options Menu  ----- Subsystem
OPSS
Option ===>


0  Parms        Set OPSVIEW and ISPF default values        User ID  - ECSLPS
1  OPSLOG       Browse OPSLOG                              Time     - 09:05
2  Editors      AOF Rules, REXX programs, SQL Tables       Version  - 04.04.04
3  Sys Cntl     Display/Modify System Resources            Service  - 0004
4  Control      Control CA-OPS/MVS II                      Pack
5  Support      Support and Bulletin Board information
6  Command      Enter JES2/MVS/IMS/VM commands directly
7  Utilities    Run CA-OPS/MVS II Utilities
A  AutoMate     AutoMate rules edit and control
I  ISPF         Use ISPF/PDF services
S  SYSVIEW/E    CA-SYSVIEW/E
T  Tutorial     Display information about OPSVIEW
U  User         User-defined applications
X  Exit         Exit OPSVIEW



          CA-OPS/MVS II Copyright (C) 1986,2000 Computer Associates
          International, Inc.


               Press END or enter X to terminate OPSVIEW

. . . . . .
```

From the Primary CA-OPS/MVS Menu, select option '**U – User-defined applications'** to display the following panel – CA-OPS/MVS User Applications:

1.9.1 CA-OPS/MVS User Applications

To invoke the GDDR Administrators Interface, select option **1 – GDDR Admin** and hit enter.

This option is only available on the GDDR K-Systems.

```
. . . . . .
 User Applications ------------------- O P S V I E W --------------------------
 Option ===>


 1  GDDR Admin       Administer Geographically Dispersed Disaster Recovery
 2  GDDR Operations  Operate Geographically Dispersed Disaster Recovery
 3  Application 3    comment
       .
       .
       .
 N  Application N    comment


 Enter END command to return to primary options.
```

Selecting option **1 – GDDR Admin** will display the following panel:

1.9.2 GDDR Administration – Primary Options Menu

The GDDR Admin **Primary Options Menu** provides the following options:

```
OPS/MVS ------------ GDDR – Admin: Primary Options Menu ------------
 OPTION  ===>

  Current Master: T103       Primary Site: DC1        Primary DASD: DC1

   Automation: ON



     Administrator Options:                                USERID   - EUROCLR
                                                             TIME     - 13:55
   1  Standard      - Standard Actions                   TERMINAL - 3278
                                                         SYSTEM   - T103
   A  Automation  - Automation On/Off                    RELEASE  - 01.00.0a
   D  Debug       - Debug Mode On/Off

   H  HMCObjects- Refresh GDDR-HMC Objects
   L  Load        - Load or Reload GDDR Parameter Members
   S  Status      - Status of GDDR Status

   X  EXIT        - Exit GDDR

 Press END to terminate GDDR
```

1.9.2.1 Field Descriptions

The GDDR Admin Primary Options Menu displays the current values for the following GDDR control variables:

1.9.2.1.1 Current Master

The Current Master is the K-System that currently owns the GDDR Master Function.

As a general rule the Master K-System is located at the opposite site from the Business Applications. For example, if the Business Applications are located in DC1, the Master K-System will be located in DC2.

1.9.2.1.2 Primary Site

The Primary Site is the current location where the Business Applications are currently running.

1.9.2.1.3 Primary DASD

The Primary DASD is the current location of the R1 DASD. Generally the Primary Site and Primary DASD sites should be equal.

1.9.2.1.4 Automation

The Automation flag displays the current state of GDDR Automation. The state can be either ON or OFF.

When the state is ON:

- GDDR Planned and Unplanned Scripts can be run

When the state is OFF:

- Planned scripts will not run
- Unplanned scripts will still run

1.9.2.2 Administrator Options

To invoke one of the following actions, enter the appropriate option on the command line and hit the enter key.

1.9.2.2.1 Standard Actions

To perform standard HMC action against one or more systems, enter **1** on the command line and hit enter. See section '**GDDR Administration – Standard Actions**' in this document for further details.

1.9.2.2.2 Automation On/Off

To toggle GDDR Automation On/Off, enter **A** on the command line and hit enter.

1.9.2.2.3 Debug Mode On/Off

To toggle GDDR Debug Mode On/Off, enter **D** on the command line and hit enter.

1.9.2.2.4 Refresh HMC Objects

To refresh the GDDR HMC Object values, enter **H** on the command line and hit enter.

1.9.2.2.5 Load or Reload GDDR Parameter Members

To load or reload GDDR Parameters, enter **L** on the command line and hit enter. See section '**GDDR Administration – Load or Reload GDDR Parameter Members**' in this document for further details.

1.9.2.2.6 Status of GDDR Scripts

To display the status of any Planned or Unplanned Scripts that have run or are running, enter **S** on the command line and hit enter. See section '**GDDR Administration – Script Status**' in this document for further details.

1.9.3 GDDR Administration – Standard Actions

The GDDR Administration **Standard Actions Menu** provides the following options:

```
OPS/MVS ---------------------- GDDR – Admin: Standard Actions ---- Row 1 to 10 of 10
OPTION  ===>

          Current Master: T103      Primary Site: DC1       Primary DASD: DC1

Select One of the Following Options:                              USERID   - EUROCLR
                                                                  TIME     - 14:11
 A=Activate     D=Deactivate     I=IPL (Stop & Load)              TERMINAL - 3278
 L=Load Clear   R=Reset Clear    S=Stop                           SYSTEM   - T103
                                                                  RELEASE  - 01.00.0a

Sel Sysname   Site   Load Address   Load Parameter
--- -------   ----   ------------   ------------------
    T101      DC1      1100         110310m1
    T104      DC1      1000         1004k1m1
    T105      DC1      1300         110320m1
    T107      DC1      1500         110330m1
    T109      DC1      2600         110340m1
    T102      DC2      2100         110310m1
    T106      DC2      1308         110320m1
    T108      DC2      1508         110330m1
    T110      DC2      2608         110340m1
    T111      DC3      5000         5004k3m1
****************************** Bottom of data ********************************
```

1.9.3.1 Field Descriptions

The GDDR Admin Standard Actions Menu displays the current values for the following GDDR control variables:

1.9.3.1.1 Current Master

The Current Master is the K-System that currently owns the GDDR Master Function.

As a general rule the Master K-System is located at the opposite site from the Business Applications. For example, if the Business Applications are located in DC1, the Master K-System will be located in DC2.

1.9.3.1.2 Primary Site

The Primary Site is the current location where the Business Applications are currently running.

1.9.3.1.3 Primary DASD

The Primary DASD is the current location of the R1 DASD. Generally the Primary Site and Primary DASD sites should be the same.

1.9.3.2 Select One of the Following Options

To select one of the following options, enter the appropriate option on the command line and hit the enter key.

1.9.3.2.1 Activate

To Activate the LPAR of the selected system, **enter A** next to the selected system and hit enter. A confirmation popup window will be displayed, confirm the request by **replying Y** and hitting enter. Cancel the request by either **replying N** and hitting enter or by hitting **PF3**.

1.9.3.2.2 Deactivate

To Deactivate the LPAR the selected system runs in, **enter D** next to the selected system and hit enter. A confirmation popup window will be displayed, confirm the request by **replying Y** and hitting enter. Cancel the request by either **replying N** and hitting enter or by hitting **PF3**.

1.9.3.2.3 IPL (Stop and Load)

This option is currently not implemented.

1.9.3.2.4 Load Clear

To Load Clear a selected system, using the displayed Load address and Load parameters, **enter L** next to the selected system and hit enter. A confirmation popup window will be displayed, confirm the request by **replying Y** and hitting enter. Cancel the request by either **replying N** and hitting enter or by hitting **PF3**.

1.9.3.2.5 Reset Clear

To Reset Clear a selected system, **enter R** next to the selected system and hit enter. A confirmation popup window will be displayed, confirm the request by **replying Y** and hitting enter. Cancel the request by either **replying N** and hitting enter or by hitting **PF3**.

1.9.3.2.6 Stop

This option is currently not implemented.

1.9.4 GDDR Administration – Reload GDDR Parameters

The GDDR **Reload GDDR Parameters Menu** provides the following options:

```
. . . . . .
OPS/MVS ---------- GDDR – Admin: Reload GDDR Parameters - Row 1 to 12 of 12
OPTION  ===>

 Current Master: T103      Primary Site: DC1       Primary DASD: DC1

 Select One of the Following Options (PF3 to Submit):          USERID   - EUROCLR
                                                                TIME     - 14:32
 S=Reload GDDR Parameters from selected member(s):             TERMINAL - 3278
 U=Remove a Selection                                          SYSTEM   - T103
                                                               RELEASE  - 01.00.0a

Sel  Member      Description                                        Status
---  ----------  -------------------------------------------------  --------
    GDDRSITE    SITE - Identify the Location of a System.
    GDDRSTAR    STAR - STAR/STARFIRE Specific Parameters.
    GDDR0BCV    BCV  - Timefinder Mirror BCV Parameters.
    GDDR0CFG    CFG  - GDDR Base Configuration Parameters.
    GDDR0CPL    CPL  - Sysplex Couple Dataset Parameters.
    GDDR0DC3    DC3  - DC3 Specific Parameters.
    GDDR0ESS    ESS  - Enterprise StopStart Specific Parameters.
    GDDR0GNS    GNS  - GNS Group Parameters.
    GDDR0HMC    HMC  - HMC Specific Parameters.
    GDDR0INI    INI  -  GDDR Base Initialisation Parameters
    GDDR0IPL    IPL   - System IPL Parameters.
    GDDR0MSF    MSF  - Relate MSF SystemId to SystemId.
    GDDR0SYS    SYS  -  Relate SystemId to MSF SystemId.
****************************** Bottom of data ******************************
```

1.9.4.1 Field Descriptions

The GDDR Admin Reload GDDR Parameters Menu displays the current values for the following GDDR control variables:

1.9.4.1.1 Current Master

The Current Master is the K-System that currently owns the GDDR Master Function.

As a general rule the Master K-System is located at the opposite site from the Business Applications. For example, if the Business Applications are located in DC1, the Master K-System will be located in DC2.

1.9.4.1.2 Primary Site

The Primary Site is the current location where the Business Applications are currently running.

1.9.4.1.3 Primary DASD

The Primary DASD is the current location of the R1 DASD. Generally the Primary Site and Primary DASD sites should be equal.

1.9.4.2 Select One of the Following Options (PF3 to Submit)

To select one of the following options, enter the appropriate option on the command line and hit the enter key.

1.9.4.2.1 Reload GDDR Parameters from selected members(s)

To load or reload one of more selected GDDR Parameter members, **enter S** next to the selected members and hit enter. The Status field will now display **'*Select'** against the selected members. Hit **PF3** to submit a job to process the selected members.

A confirmation popup window will be displayed, confirm the request by **replying Y** and hitting enter. Cancel the request by either **replying N** and hitting enter or by hitting **PF3**.

1.9.4.2.2 Remove a Selection

To remove the **'*Select**' status from a currently selected member, **enter U** next to the member or members you wish to un-select and hit enter. The **'*Select'** status against the selected members will no longer be displayed.

1.9.5 GDDR Administration: Script Status

The GDDR Administration – Status of Planned/Unplanned Scripts panel is used to display the return codes for each step for the last run (if any) for each of the GDDR scripts listed below.

```
OPS/MVS ---------------------  GDDR - Admin: Script Status --------------------
OPTION  ===>

   Actions:      D - Display                                  USERID   - EUROCLR
                                                              TIME     - 13:45
  ========== Planned Scripts ==================              TERMINAL - 3278
  _  Planned-Action-ALLSITEn                                  SYSTEM   - T103
  _  Planned-Action-Resume-SRDF/A                             RELEASE  - 01.00.0a

  ========== Unplanned Scripts ================
  _  Unplanned-Takeover-ALLSITEn
  _  Planned-Action-Resume-J0
  _  Planned-Action-Resume-SRDF/A-No-STAR
  _  Planned-Action-ALLSITE3-DC3-Only
  _  Planned-Action-ALLSITE3-DC3-2-DC1or2

  ========== Testing DC3 Scripts ==============
  _  Planned-Action-ALLSITE3-Test-DC3
  _  Planned-Action-Resume-After-DC3-Test

  X  EXIT     - Exit GDDR

Press END to terminate GDDR
. . . . . .
```

2. GDDR PARAMETERS

2.1 GDDR.PARMLIB

GDDR.PARMLIB must be kept equal on all three GDDR K-Systems.

The following members of GDDR.PARMLIB are supported:

2.1.1 GDDR Configuration Related

- GDDR0INI

2.1.2 DASD/STAR/STARFIRE Configuration Related

- GDDRSTAR
- GDDR0BCV
- GDDR0DC3
- GDDR0CFG
- GDDR0GNS
- GDDR0HMC

2.1.3 z/OS and CA-OPS/MVS System Configuration Related

- GDDRSITE
- GDDR0CPL
- GDDR0ESS
- GDDR0IPL
- GDDR0MSF
- GDDR0SYS

2.1.4 GDDR0INI

The **GDDR0INI** member contains the definitions of the base GDDR initialisation and configuration parameters.

The **GDDR0INI** parameter member supports the following GDDR parameter statements:

2.1.4.1 Eligible.Master.K.Systems

The **Eligible.Master.K.Systems** statement defines the list of System sysnames that GDDR will use as K-Systems.

The parameter statement has the following syntax:

Eligible.Master.K.Systems=K1_sysname, K2_sysname, K3_sysname

The parameters on the **Eligible.Master.K.Systems** statement have the following values:

K1_sysname – the system to be used as the K-System at site DC1

K2_sysname – the system to be used as the K-System at site DC2

K3_sysname – the system to be used as the K-System at site DC3

At least one sysname is required on the Eligible.Master.K.Systems parameter statement.

The order of the sysnames is not important.

2.1.4.2 Eligible.MSF.K.Systems

The **Eligible.MSF.K.Systems** statement defines the list of System MSF names or SMF'ids that the GDDR K-Systems have.

The parameter statement has the following syntax:

Eligible.MSF.K.Systems=K1_MSFid, K2_MSFid, K3_MSFid

The parameters on the **Eligible.MSF.K.Systems** statement have the following values:

K1_MSFid – the MSFid of the K-System at site DC1

K2_MSFid – the MSFid of the K-System at site DC2

K3_MSFid – the MSFid of the K-System at site DC3

At least one MSFid is required on the Eligible.MSF.K.Systems parameter statement.

The order of the MSFids is not important.

2.1.4.3 DC1.K.System.Systemid

The **DC1.K.System.Systemid** statement specifies the system name of the K-System running at site DC1.

The parameter statement has the following syntax:

DC1.K.System.Systemid=K1_sysname

The parameter on the **DC1.K.System.Systemid** statement has the following value:

K1_sysname – the system name of the K-System at site DC1

The **DC1.K.System.Systemid** parameter statement must have a value.

The value used for **K1_sysname** must also appear in the list of the following parameter:

- **Eligible.Master.K.Systems**

2.1.4.4 DC2.K.System.Systemid

The **DC2.K.System.Systemid** statement specifies the system name of the K-System running at site DC2.

The parameter statement has the following syntax:

DC2.K.System.Systemid=K2_sysname

The parameter on the **DC2.K.System.Systemid** statement has the following value:

K2_sysname – the system name of the K-System at site DC2

The **DC2.K.System.Systemid** parameter statement must have a value.

The value used for **K2_sysname** must also appear in the list of the following parameter:

- **Eligible.Master.K.Systems**

2.1.4.5 DC3.K.System.Systemid

The **DC3.K.System.Systemid** statement specifies the system name of the K-System running at site DC3.

The parameter statement has the following syntax:

DC3.K.System.Systemid=K3_sysname

The parameter on the **DC3.K.System.Systemid** statement has the following value:

K3_sysname – the system name of the K-System at site DC3

The **DC3.K.System.Systemid** parameter statement must have a value.

The value used for **K3_sysname** must also appear in the list of the following parameter:

- **Eligible.Master.K.Systems**

2.1.4.6 DC1.K.System.MSFid

The **DC1.K.System.MSFid** statement specifies the MSFid (SMFid) of the K-System running at site DC1.

The parameter statement has the following syntax:

DC1.K.System.MSFid=K1_smfid

The parameter on the **DC1.K.System.MSFid** statement has the following value:

K1_smfid – the SMFid of the K-System at site DC1

The **DC1.K.System.MSFid** parameter statement must have a value.

The value used for **K1_smfid** must also appear in the list of the following parameter:

- **Eligible.MSF.K.Systems**

2.1.4.7 DC2.K.System.MSFid

The **DC2.K.System.MSFid** statement specifies the MSFid (SMFid) of the K-System running at site DC2.

The parameter statement has the following syntax:

DC2.K.System.MSFid=K2_smfid

The parameter on the **DC2.K.System.MSFid** statement has the following value:

K2_smfid – the SMFid of the K-System at site DC2

The **DC2.K.System.MSFid** parameter statement must have a value.

The value used for **K2_smfid** must also appear in the list of the following parameter:

- **Eligible.MSF.K.Systems**

2.1.4.8 DC3.K.System.MSFid

The **DC3.K.System.MSFid** statement specifies the MSFid (SMFid) of the K-System running at site DC3.

The parameter statement has the following syntax:

DC3.K.System.MSFid=K3_smfid

The parameter on the **DC3.K.System.MSFid** statement has the following value:

K3_smfid – the SMFid of the K-System at site DC3

The **DC3.K.System.MSFid** parameter statement must have a value.

The value used for **K3_smfid** must also appear in the list of the following parameter:

- **Eligible.MSF.K.Systems**

2.1.4.9 Autoswap.Group.Primary

The **Autoswap.Group.Primary** statement is a comma delimited list of up to 4 Autoswap/Consistency groups that are to be managed by GDDR.

The parameter statement has the following syntax:

Autoswap.Group.Primary=group1,group2,group3,group4

The parameters on the **Autoswap.Group.Primary** statement has values:

group1,group2,group3,group4 – a comma delimited list of up to four Autoswap/Consistency group names (maximum 8 bytes each)

The **Autoswap.Group.Primary** parameter statement must have at least one group name specified.

The value of this parameter is modified by GDDR after each Planned and Unplanned swap to always reflect the active Autoswap/Consistency group names.

2.1.4.9.1 Warning

Changing this parameter after Initial setup must be done with extreme care as it is used by GDDR to help determine which site is the current Primary DASD site.

2.1.4.10 Autoswap.Group.Secondary

The **Autoswap.Group.Secondary** statement is a comma delimited list of up to 4 Autoswap/Consistency groups that are to be managed by GDDR.

The parameter statement has the following syntax:

Autoswap.Group.Secondary=group1,group2,group3,group4

The parameters on the **Autoswap.Group.Secondary** statement has values:

group1,group2,group3,group4 – a comma delimited list of up to four Autoswap/Consistency group names (maximum 8 bytes each)

The **Autoswap.Group.Secondary** parameter statement must have at least one group name specified.

The value of this parameter is modified by GDDR after each Planned and Unplanned swap to always reflect the previous Autoswap/Consistency group names.

2.1.4.10.1 Warning

Changing this parameter after Initial setup must be done with extreme care as it is used by GDDR to help determine which site is the current Primary DASD site.

2.1.4.11 Heartbeat.Monitor.Interval

The **Heartbeat.Monitor.Interval** statement specifies the time in seconds between each heartbeat cycle of the Heartbeat monitor.

The parameter statement has the following syntax:

Heartbeat.Monitor.Interval=sss

The parameter on the **Heartbeat.Monitor.Interval** statement has the following value:

sss – time in seconds, values permitted 001 to 999

The **Heartbeat.Monitor.Interval** parameter statement must have a value specified.

2.1.4.11.1 Note

This parameter may be changed at any time. The GDDR heartbeat monitor will have to be recycled on all K-Systems for this change to take affect.

2.1.4.12 Missing.Heartbeat.Interval

The **Missing.Heartbeat.Interval** statement specifies the time in seconds that a K-System heartbeat can be late before the other K-Systems start to consider it dead.

The parameter statement has the following syntax:

Missing.Heartbeat.Interval=sss

The parameter on the **Missing.Heartbeat.Interval** statement has the following value:

sss – time in seconds, values permitted 001 to 999

The **Missing.Heartbeat.Interval** parameter statement must have a value specified.

2.1.4.12.1 Note

This parameter may be changed at any time. The GDDR heartbeat monitor will have to be recycled on all K-Systems for this change to take affect.

2.1.4.13 K.Missing.Heartbeat.Threshold

The **K.Missing.Heartbeat.Threshold** statement specifies a count, it is the number of Heartbeat.Monitor.Intervals a K-System has to have been late in updating its heartbeat before the other K-Systems will declare it dead.

The parameter statement has the following syntax:

K.Missing.Heartbeat.Threshold=sss

The parameter on the **K.Missing.Heartbeat.Threshold** statement has the following value:

sss – time in seconds, values permitted 001 to 999

The **K.Missing.Heartbeat.Threshold** parameter statement must have a value specified.

2.1.4.13.1 Note

This parameter may be changed at any time. The GDDR heartbeat monitor will have to be recycled on all K-Systems for this change to take affect.

2.1.4.14 CGRP

The **CGRP** statement specifies the initial or the current Consistency group name.

The parameter statement has the following syntax:

CGRP=EOCnSTAR

The parameter on the **CGRP** statement has the following value:

EOCnSTAR – the initial Consistency Group name; **n** can be either 1 or 2

The **CGRP** parameter statement must have a value specified.

2.1.4.14.1 Note

This parameter must only be specified when setting up the initial GDDR configuration. Once it has been defined and GDDR is managing a configuration, GDDR will maintain the global variable to always reflect the currently active Consistency Group.

At the moment GDDR only supports one active consistency group per GDDR configuration.

If multiple **CGRP** parameter statements are specified, only the first one is used.

2.1.5 GDDRSTAR

The **GDDRSTAR** member contains the definitions of STAR/STARFIRE GDDR parameters.

The **GDDRSTAR** parameter member supports the following GDDR parameter statements:

2.1.5.1 CP_STAR.DCn

The **CP_STAR.DCn** statements define the symmetrix device configuration at each possible Primary DASD site.

The parameter statement has the following syntax:

CP_STAR.DCn=gk, JA_RDFGRP, JA_Recovery_RDFGRP, R1symm_range, R2symm_start

The parameters on the **CP_STAR.DCn** statement have the following values:

DCn – is the current primary DASD site location, it can have the values **DC1**, **DC2** or **DC3**

gk – the gate keeper address

JA_RDFGRP – the JA RDFGRP

JA_Recovery_RDFGRP – the JA Recovery RDFGRP

R1symm_range – The R1 symmetrix device number range

R2symm_start – The starting R2 symmetrix device number

There must be one parameter statement for each device range to be managed by GDDR.

There should be an equal number of statements for both sites DC1 and DC2 as EMC Symmetrix DASD configurations being managed by GDDR must be symmetrical.

2.1.5.1.1 Note

GDDR supports any number of **CP_STAR.DCn** statements.

2.1.5.2 JA_ACT_GK.DCn

The **JA_ACT_GK.DCn** statement defines the JA RDFGRP's being managed by GDDR.

The parameter statement has the following syntax:

JA_ACT_GK.DCn=gk, ja_rdfgrp

The parameters on the **JA_ACT_GK.DCn** statement have the following values:

DCn – is the current primary DASD site location, it can have the values **DC1** or **DC2** only
gk – the gate keeper address
JA_RDFGRP – the JA RDFGRP

There is one parameter statement for each RDFGRP on each EMC Symmetrix DASD Controller being managed by GDDR. The Symmetrix Controller can contain any combination of CKD, FBA and FBA-META devices subject to EMC's Configuration Rules and Limitations.

2.1.5.2.1 Note

GDDR supports any number of Gate Keeper and JA RDF group definition statements.

Each combination of Gate Keeper and JA RDF Group must be unique.

2.1.5.3 JA_ACT_GK.DC3

The **JA_ACT_GK.DC3** statement defines the JA RDFGRP's being managed by GDDR at site DC3 only.

The parameter statement has the following syntax:

JA_ACT_GK.DC3=gk, ja_rdfgrp, ja_recovery_rdfgrp

The parameters on the **JA_ACT_GK.DC3** statement have the following values:

DC3 – is the current primary DASD site location, it can **only be DC3**
gk – the gate keeper address
JA_RDFGRP – the JA RDFGRP
JA_Recovery_RDFGRP – the corresponding Recovery JA RDFGRP for the JA RDFGRP

There is one (1) parameter statement for each RDFGRP on each EMC Symmetrix DASD Controller being managed by GDDR. The Symmetrix Controller can contain any combination of CKD, FBA and FBA-META devices subject to EMC's Configuration Rules and Limitations.

2.1.5.3.1 Note

GDDR supports any number of Gate Keeper and JA RDF group definition statements.

Each combination of Gate Keeper and JA RDF Group must be unique.

2.1.5.4 J0_GK.DCn

The **J0_GK.DCn** statement defines the J0 RDFGRP's being managed by GDDR.

The parameter statement has the following syntax:

J0_GK.DCn=gk, j0_rdfgrp, ja_recovery_rdfgrp

The parameters on the **J0_GK.DCn** statement have the following values:

DCn – is the current primary DASD site location, it can have the values **DC1** or **DC2** only
gk – the gate keeper address
J0_RDFGRP – the J0 RDFGRP
JA_Recovery_RDFGRP – the corresponding Recovery JA RDFGRP for the J0 RDFGRP

There is one (1) parameter statement for each RDFGRP on each EMC Symmetrix DASD Controller being managed by GDDR. The Symmetrix Controller can contain any combination of CKD, FBA and FBA-META devices subject to EMC's Configuration Rules and Limitations.

2.1.5.4.1 Note

GDDR supports any number of Gate Keeper and J0 RDF group definition statements.

Each combination of Gate Keeper and J0 RDF Group must be unique.

2.1.5.5 RESUME_GK.DC3

The **RESUME_GK.DC3** statement defines the DC3 Gate keepers that GDDR can use when running DC3 related scripts.

The parameter statement has the following syntax:

RESUME_GK.DC3=gk

The parameter on the **RESUME_GK.DC3** statement has the following value:

gk – the gate keeper address

There is one (1) Gate Keeper parameter statement for each EMC Symmetrix DASD Controller at DC3 being managed by GDDR. The Symmetrix Controller can contain any combination of CKD, FBA and FBA-META devices subject to EMC's Configuration Rules and Limitations.

2.1.5.5.1 Note

GDDR supports any number of DC3 Gate Keeper definition statements, although each must be unique.

2.1.6 GDDR0BCV

The **GDDR0BCV** member contains the definitions of the BCV configuration at each site to be managed by GDDR.

The **GDDR0BCV** parameter member supports the following GDDR parameter statements.

2.1.6.1 Pre-Requisites

The following pre-requisites must be satisfied before any new BCV's are added to the GDDR BCV configuration.

1. The BCV's in the configuration being described in **GDDR0BCV** have already been ESTABLISHED.
2. BCV's can never be established at the current Primary DASD site while the Standard devices have active J0 and JA pairs due to the lack of mirror positions.

2.1.6.2 BCV.DCn.aaaa

The **BCV.DCn.aaaa** statement defines the BCV volumes associated with a particular range of standard devices at site DCn.

The parameter statement has the following syntax:

BCV.DCn.aaaa=gk, j0_rdfgrp, sym#bcv-sym#bcv, stducb

The parameters on the **BCV.DCn.aaaa** statement have the following values:

DCn – is the site location, and can have the following values, DC1 or DC2
aaaa – is the first 4 characters of the Consistency Group/Swap Group name for site DCn
gk – is the gate keeper address to be used
j0_rdfgrp – is the J0 RDFGRP to be used
sym#bcv-sym#bcv – is the symmetric device number range of the BCV's being managed
stducb – is the MVS UCB address of the first R1 of the range that the BCV range is to be associated with (this is used for Remote Consistent Splits)

There are no limits on the number of **BCV.DCn.aaaa** statements supported by GDDR.

2.1.6.3 BCV.DC3.aaaa

The **BCV.DC3.aaaa** statement defines the BCV volumes associated with a particular range of standard devices at site DC3.

The parameter statement has the following syntax:

BCV.DC3.aaaa=gk, ja_rdfgrp, sym#bcv-sym#bcv, stducb

The parameters on the **BCV.DC3.aaaa** statement have the following values:

aaaa – is the first 4 characters of the currently active Consistency Group/Swap Group name
gk – is the gate keeper address to be used
ja_rdfgrp – is the JA RDFGRP to be used
sym#bcv-sym#bcv – is the symmetric device number range of the BCV's being managed
stducb – is the MVS UCB address of the first R1 of the range that the BCV range is to be associated with (this is used for Remote Consistent Splits)

There are no limits on the number of **BCV.DC3.aaaa** statements supported by GDDR.

2.1.6.4 BCV.DC3.ONLY

The **BCV.DC3.ONLY** statement defines the BCV volumes associated with a particular range of standard devices at site DC3.

The parameter statement has the following syntax:

BCV.DC3.ONLY=gk, sym#bcv-sym#bcv

The parameters on the BCV.DC3.ONLY statement have the following values.

gk – is the gate keeper address to be used **sym#bcv-sym#bcv** – is the symmetric device number range of the BCV's being managed

2.1.6.4.1 Note

This parameter is a special case, in that it is only used when running GDDR RDR scripts to perform a Local Split at DC3 when both DC1 and DC2 are unavailable.

There are no limits on the number of **BCV.DC3.ONLY** statements supported by GDDR.

2.1.7 GDDR0DC3

The **GDDR0DC3** member contains the definitions that describe the resources available at DC3 to GDDR for purposes of recovery.

The **GDDR0DC3** parameter member supports the following GDDR parameter statements:

2.1.7.1 DC3.LPAR.ssss

The **DC3.LPAR.ssss** statement is used to tell GDDR DC3 scripts in what LPAR system ssss is to be IPL'ed into.

Used when GDDR is preparing DC3 for use in one of the following scenarios:

- Planned_Action_ALLSITE3_DC3_Only
- Planned_Action_ALLSITE3_DC3_2_DC1or2
- Planned_Action_ALLSITE3_Test_DC3

The parameter statement has the following syntax:

DC3.LPAR.ssss=lpar_name

The parameters on the **DC3.LPAR.ssss** statement have the following values:

ssss – is the z/OS system name of the system to be restarted at DC3
Lpar_name – is the lpar name in the DC3 Processor where system ssss will be restarted

There are no limits on the number of **DC3.LPAR.ssss** statements supported by GDDR.

2.1.8 GDDR0CFG

The **GDDR0CFG** member contains the definitions of GDDR configuration parameters.

The **GDDR0CFG** parameter member supports the following GDDR parameter statements:

2.1.8.1 GDDR.SKELS

This parameter is used to define the dataset name of the GDDR Skeletons dataset to GDDR.

The parameter statement has the following syntax:

GDDR.SKELS=dataset_name

The parameter on the **GDDR.SKELS** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.SKELS** parameter statement.

2.1.8.2 GDDR.SCRIPTS

This parameter is used to define the dataset name of the GDDR JCL Scripts dataset to GDDR.

The parameter statement has the following syntax:

GDDR.SCRIPTS=dataset_name

The parameter on the **GDDR.SCRIPTS** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one GDDR.SCRIPTS parameter statement.

2.1.8.3 GDDR.PARMLIB

This parameter is used to define the dataset name of the GDDR PARMLIB dataset to GDDR.

The parameter statement has the following syntax:

GDDR.PARMLIB=dataset_name

The parameter on the **GDDR.PARMLIB** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.PARMLIB** parameter statement.

2.1.8.4 GDDR.VARS

This parameter is used to define the dataset name of the GDDR Global variable dataset to GDDR.

This dataset is allocated and filled by GDDR with a copy of all GDDR OPS/MVS Global variables for backup purposes.

The parameter statement has the following syntax:

GDDR.VARS=dataset_name

The parameter on the **GDDR.VARS** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.VARS** parameter statement.

2.1.8.5 GDDR.EMCPARMS

This parameter is used to define the dataset name of the EMC Software PARMLIB dataset to GDDR.

The parameter statement has the following syntax:

GDDR.EMCPARMS=dataset_name

The parameter on the **GDDR.EMCPARMS** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.EMCPARMS** parameter statement.

2.1.8.6 GDDR.RESPAK

This parameter is used to define the dataset name of the ResourcePak Base Load library to GDDR.

If a value of LNKLST is specified, GDDR will use the Link Listed ResourcePak Base Load library.

The parameter statement has the following syntax:

GDDR.RESPAK=dataset_name

The parameter on the **GDDR.RESPAK** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.RESPAK** parameter statement.

2.1.8.7 GDDR.SRDFHC

This parameter is used to define the dataset name of the SRDF/Host Component Load library to GDDR.

If a value of LNKLST is specified, GDDR will use the Link Listed SRDF/Host Component Load library.

The parameter statement has the following syntax:

GDDR.SRDFHC=dataset_name

The parameter on the **GDDR.SRDFHC** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.SRDFHC** parameter statement.

2.1.8.8 GDDR.TFINDR

This parameter is used to define the dataset name of the Timefinder Mirror Load library to GDDR.

If a value of LNKLST is specified, GDDR will use the Link Listed Timefinder Mirror Load library.

The parameter statement has the following syntax:

GDDR.TFINDR=dataset_name

The parameter on the **GDDR.TFINDR** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **GDDR.TFINDR** parameter statement.

2.1.8.9 MSC.Groupname_Suffix

This parameter is used to define the suffix that GDDR will append to either **DC1_** or **DC2_** (depending upon the current location of the primary DASD) inorder to determine the current MSC group name being used.

The parameter statement has the following syntax:

MSC.Groupname_Suffix=group_name_suffix

The parameter on the **MSC.Groupname_Suffix** statement has the following value:

group_name_suffix – maximum of 20 characters

GDDR supports only one **MSC.Groupname_Suffix** parameter statement.

2.1.8.10 RDF.Manager_Parm_Member

This parameter is used to tell GDDR the name of the RDF manager parameter member. This member is allocated via the RDFPARM ddname in the SRDF Host Component Started procedure.

GDDR uses this parameter to copy in updated parameter statements after planned and unplanned swaps.

The parameter statement has the following syntax:

RDF.Manager_Parm_Member=member_name

The parameter on the **RDF.Manager_Parm_Member** statement has the following value:

member_name – maximum of 8 characters

GDDR supports only one **RDF.Manager_Parm_Member** parameter statement.

2.1.9 GDDR0GNS

The **GDDR0GNS** member contains the definitions for all the GNS groups to be used by GDDR as parameters on SRDF/Host Component configuration commands.

The GNS groups contain the definitions of the DASD and RDF groups that GDDR is to manage.

The **GDDR0GNS** parameter member supports the following GDDR parameter statements:

2.1.9.1 GNS.DCn.LCL.J0

The **GNS.DCn.LCL.J0** statement defines the J0 GNS groups to be used as parameters on local commands when the Primary DASD is located at site **DCn**.

Local commands are targeted at the current R1's.

The parameter statement has the following syntax:

GNS.DCn.LCL.J0=gns_group_name

The parameters on the **GNS.DCn.LCL.J0** statement have the following values:

DCn – is the current primary DASD location, either **DC1** or **DC2**
gns_group_name – a GNS group name

2.1.9.1.1 Note

The gns_group_name(s) must have already been defined using the EMCGROUP utility.

There is no limit on the number of **GNS.DCn.LCL.J0** statements supported by GDDR.

2.1.9.2 GNS.DCn.LCL.JA

The **GNS.DCn.LCL.JA** statement defines the JA GNS groups to be used as parameters on local commands when the Primary DASD is located at site **DCn**.

Local commands are targeted at the current R1's.

The parameter statement has the following syntax:

GNS.DCn.LCL.JA=gns_group_name

The parameters on the **GNS.DCn.LCL.JA** statement have the following values:

DCn – is the current primary DASD location, either **DC1** or **DC2** **gns_group_name** – a GNS group name

2.1.9.2.1 Note

The gns_group_name(s) must have already been defined using the EMCGROUP utility.

There is no limit on the number of **GNS.DCn.LCL.JA** statements supported by GDDR.

2.1.9.3 GNS.DCn.RMT.JA

The **GNS.DCn.RMT.JA** statement defines the JA GNS groups to be used as parameters on remote commands when the Primary DASD is located at site **DCn**.

Remote commands are targeted at the R2's in DC3.

The parameter statement has the following syntax:

GNS.DCn.RMT.JA=gns_group_name

The parameters on the **GNS.DCn.RMT.JA** statement have the following values:

DCn – is the current primary DASD location, either **DC1** or **DC2**
gns_group_name – a GNS group name

2.1.9.3.1 Note

The gns_group_name(s) must have already been defined using the EMCGROUP utility.

There is no limit on the number of **GNS.DCn.RMT.JA** statements supported by GDDR.

2.1.10 GDDR0HMC

The **GDDR0HMC** member contains the definitions that describe the HMC configuration at each site to GDDR.

The **GDDR0HMC** parameter member supports the following GDDR parameter statements:

2.1.10.1 HMC.DCn

The **HMC.DCn** statement defines the IP address of the HMC Located at Site **DCn**.

The parameter statement has the following syntax:

HMC.DCn=ip_address

The parameters on the **HMC.DCn** statement have the following values.

DCn – is the site location, and can have the values DC1, DC2 or DC3 **ip_address** – the IP address of the HMC at DCn that GDDR will use

Only one **HMC.DCn** parameter statement per site is permitted.

2.1.10.2 HMC.Prog.Reset_Clear

The **HMC.Prog.Reset_Clear** statement defines the program name that GDDR will use to perform LPAR Reset Clears.

The parameter statement has the following syntax:

HMC.Prog.Reset_Clear=program_name

The parameter on the **HMC.Prog.Reset_Clear** statement has the following value.

Program_name – the name of the program that GDDR will use to perform system Reset Clears. Default value is **GDDRC002**. Maximum of 8 characters. Must be specified in lower case.

Only one **HMC.Prog.Reset_Clear** statement is permitted.

2.1.10.3 HMC.Prog.Load_Clear

The **HMC.Prog.Load_Clear** statement defines the program name that GDDR will use to perform LPAR Load Clears.

The parameter statement has the following syntax:

HMC.Prog.Load_Clear=program_name

The parameter on the **HMC.Prog.Load_Clear** statement has the following value.

Program_name – the name of the program that GDDR will use to perform system Load Clears. Default value is **GDDRC003**. Maximum of 8 characters. Must be specified in lower case.

Only one **HMC.Prog.Load_Clear** statement is permitted.

2.1.10.4 HMC.Prog.Stop_Start

The **HMC.Prog.Stop_Start** statement defines the program name that GDDR will use to perform LPAR Stops/Starts.

The parameter statement has the following syntax:

HMC.Prog.Stop_Start=program_name

The parameter on the **HMC.Prog.Stop_Start** statement has the following value.

Program_name – the name of the program that GDDR will use to perform system Stops or Starts. Default value is **GDDRC004**. Maximum 8 characters. Must be specified in lower case.

Only one **HMC.Prog.Stop_Start** statement is permitted.

2.1.10.5 HMC.Prog.Activate_LPAR

The **HMC.Prog.Activate_LPAR** statement defines the program name that GDDR will use to perform LPAR Activates.

The parameter statement has the following syntax:

HMC.Prog.Activate_LPAR=program_name

The parameter on the **HMC.Prog.Activate_LPAR** statement has the following value.

program_name – the name of the program that GDDR will use to perform LPAR Activations. Default value is **GDDRC005**. Maximum 8 characters. Must be specified in lower case. Default program, **gddrc005**, is used for both LPAR Activates and Deactivates.

Only one **HMC.Prog.Activate_LPAR** statement is permitted.

2.1.10.6 HMC.Prog.Deactivate_LPAR

The **HMC.Prog.Deactivate_LPAR** statement defines the program name that GDDR will use to perform LPAR Deactivates.

The parameter statement has the following syntax:

HMC.Prog.Deactivate_LPAR=program_name

The parameter on the **HMC.Prog.Deactivate_LPAR** statement has the following value.

Program_name – the name of the program that GDDR will use to perform LPAR Deactivations. Default value is **GDDRC005**. Maximum 8 characters. Must be specified in lower case. Default program, **gddrc005**, is used for both LPAR Activates and Deactivates.

Only one **HMC.Prog.Deactivate_LPAR** statement is permitted.

2.1.11 GDDRSITE

The **GDDRSITE** member contains the SITE parameters of each system to be managed by GDDR.

The SITE parameters tell GDDR at which site a particular system is located. A system can only ever be located at one site at a time.

The **GDDRSITE** parameter member supports the following GDDR parameter statements:

2.1.11.1 SITE.ssss

Only define SITE parameters for those systems that are currently being managed or you wish to have managed by GDDR.

A SITE parameter is also required for each GDDR K-System.

The parameter statement has the following syntax:

SITE.ssss=DCn

The parameters on the SITE.ssss statement have the following values:

ssss – is the MVS system name of the system being managed by GDDR **DCn** – is the site location of the MVS system being managed, it can have one of the following values: **DC1**, **DC2** or **DC3**

There can only be one **SITE.ssss** statement with a parameter value of **DC3**, and that is the one for the **DC3** K-System.

2.1.12 GDDR0CPL

The **GDDR0CPL** member contains the Couple dataset configurations for each system/sysplex being managed by GDDR.

If GDDR is to manage the Couple datasets of a system/sysplex during Planned and Unplanned scenario's the **GDDR0CPL** member definitions describe to GDDR what Couple datasets should be used for primaries and alternates irrespective of the location of the Primary DASD.

GDDR will always ensure the Primary Couple datasets used are located wherever the Primary DASD currently resides.

The **GDDR0CPL** parameter member supports the following GDDR parameter statements:

2.1.12.1 PLX.ssss.ttt.P.DCn

The **PLX.ssss.ttt.P.DCn** statement defines the Primary Couple dataset to be used on system '**ssss**' for couple dataset type '**ttt**' when the Primary DASD is located in site '**DCn**'.

PLX.ssss.ttt.P.DCn parameters are only used during the execution of GDDR Planned scripts.

The parameter statement has the following syntax:

PLX.ssss.ttt.P.DCn=couple_dataset_name

The parameters on the **PLX.ssss.ttt.P.DCn** statement have the following values:

ssss – is the system that the definition is for

ttt – is the couple dataset type, it can have one of the following values: **SYS, ARM, CFR, LOG, SFM** or **WLM**

DCn – is the current primary DASD location where this statement will be used, it can have one of the following values: **DC1** or **DC2**

Couple_dataset_name – the name of the couple dataset, this must be catalogued on all systems in the sysplex

There must be a Primary couple dataset statement for each system in the sysplex, for each of the possible Primary DASD locations ie. **DC1** and **DC2**, and for each couple dataset type being used.

2.1.12.2 PLX.ssss.ttt.A.DCn

The **PLX.ssss.ttt.A.DCn** statement defines the Alternate Couple dataset to be used on system '**ssss**' for couple dataset type '**ttt**' when the Primary DASD is located in site '**DCn**'.

PLX.ssss.ttt.A.DCn parameters are only used during the execution of GDDR Planned scripts.

The parameter statement has the following syntax:

PLX.ssss.ttt.A.DCn=couple_dataset_name

The parameters on the **PLX.ssss.ttt.A.DCn** statement have the following values:

ssss – is the system that the definition is for

ttt – is the couple dataset type, it can have one of the following values: **SYS, ARM, CFR, LOG, SFM** or **WLM**

DCn – is the current primary DASD location where this statement will be used, it can have one of the following values: **DC1** or **DC2**

Couple_dataset_name – the name of the couple dataset, this must be catalogued on all systems in the sysplex

There must be an Alternate couple dataset statement for each system in the sysplex, for each of the possible Primary DASD locations ie. **DC1** and **DC2**, and for each couple dataset type being used.

2.1.12.3 UPLX.ssss.ttt.P.DCn

The **UPLX.ssss.ttt.P.DCn** statement defines the Primary Couple dataset to be used on system '**ssss**' for couple dataset type '**ttt**' when the Primary DASD is located in site '**DCn**'.

UPLX.ssss.ttt.P.DCn parameters are only used during the execution of GDDR Unplanned scripts.

The parameter statement has the following syntax:

UPLX.ssss.ttt.P.DCn=couple_dataset_name

The parameters on the **UPLX.ssss.ttt.P.DCn** statement have the following values:

ssss – is the system that the definition is for

ttt – is the couple dataset type, it can have one of the following values: **SYS, ARM, CFR, LOG, SFM** or **WLM**

DCn – is the current primary DASD location where this statement will be used, it can have one of the following values: **DC1** or **DC2**

Couple_dataset_name – the name of the couple dataset, this must be catalogued on all systems in the sysplex

There must be a Primary couple dataset statement for each system in the sysplex, for each of the possible Primary DASD locations ie. **DC1** and **DC2**, and for each couple dataset type being used.

2.1.12.4 UPLX.ssss.ttt.A.DCn

The **UPLX.ssss.ttt.A.DCn** statement defines the Alternate Couple dataset to be used on system '**ssss**' for couple dataset type '**ttt**' when the Primary DASD is located in site '**DCn**'.

UPLX.ssss.ttt.A.DCn parameters are only used during the execution of GDDR Unplanned scripts.

The parameter statement has the following syntax:

UPLX.ssss.ttt.A.DCn=couple_dataset_name

The parameters on the **UPLX.ssss.ttt.A.DCn** statement have the following values:

ssss – is the system that the definition is for

ttt – is the couple dataset type, it can have one of the following values: **SYS, ARM, CFR, LOG, SFM** or **WLM**

DCn – is the current primary DASD location where this statement will be used, it can have one of the following values: **DC1** or **DC2**

Couple_dataset_name – the name of the couple dataset, this must be catalogued on all systems in the sysplex

There must be an Alternate couple dataset statement for each system in the sysplex, for each of the possible Primary DASD locations ie. **DC1** and **DC2**, and for each couple dataset type being used.

2.1.13 GDDR0ESS

The **GDDR0ESS** member contains the definitions that describe the ESS configuration to GDDR.

The **GDDR0ESS** parameter member supports the following GDDR parameter statements:

2.1.13.1 CA7.XPSJCL

The **CA7.XPSJCL** statement defines the output dataset for the @CONTEXT member used by ESS.

The parameter statement has the following syntax:

CA7.XPSJCL=dataset_name

The parameter on the **CA7.XPSJCL** statement has the following value:

dataset_name – a valid PDS dataset name, maximum of 44 characters

GDDR supports only one **CA7.XPSJCL** parameter statement.

2.1.13.2 ESS.CONTEXT

The **ESS.CONTEXT** statement defines the output member name of the CONTEXT member used by ESS. ESS expects this member name to be @CONTEXT when GDDR is running in the Production environment.

For testing purposes use a value of $CONTEXT.

The parameter statement has the following syntax:

ESS.CONTEXT=member_name

The parameter on the **ESS.CONTEXT** statement has the following value:

member_name – a valid PDS member name, maximum of 8 characters

GDDR supports only one **ESS.CONTEXT** parameter statement.

2.1.14 GDDR0IPL

The **GDDR0IPL** member contains the IPL parameters of each system (at each site) to be managed by GDDR.

The **GDDR0IPL** parameter member supports the following GDDR parameter statements:

2.1.14.1 IPL.ssss.DCn

The **IPL.ssss.DCn** statement defines the IPL parameters that GDDR will use to IPL system '**ssss**' when the Primary DASD is located at site '**DCn**'.

The parameter statement has the following syntax:

IPL.ssss.DCn=load_address, load_parameters

The parameters on the **IPL.ssss.DCn** statement have the following values:

ssss – is the MVS system name of the system being managed by GDDR
DCn – is the location of the Primary DASD at the time of the IPL, it can have the values **DC1**, **DC2** or **DC3**
load_address – the MVS Load Address of system ssss
load_parameters – the Load Parameters of system ssss

A Production system can have an IPL parameter for each of **DC1**, **DC2** and **DC3**. This is because the primary DASD can reside at any of these locations.

2.1.14.1.1 Note

A Production system must have an IPL parameter for locations **DC1** and **DC2**.

A system only needs an IPL parameter for **DC3** if it will be IPL'ed from **DC3** DASD (during a **DC3** Test or in the case of a disaster).

A GDDR K-System only needs an IPL parameter for the location where it normally resides, a K-System is never IPL'ed at any other location.

There is no limit on the number of **IPL.ssss.DCn** statements supported by GDDR.

2.1.15 GDDR0MSF

The **GDDR0MSF** member contains the definitions that inform GDDR what MSF'id each of the systems that it manages has.

The **GDDR0MSF** parameter member supports the following GDDR parameter statements:

2.1.15.1 MSFID.ssss

The MSF'id is the SMF'id of the system being managed by GDDR.

The parameter statement has the following syntax:

MSFID.ssss=msfid

The parameters on the **MSFID.ssss** statement have the following values:

ssss – is the z/OS system name of the system
msfid – is the CA-OPS/MVS MSF'id of system **ssss**

There must be one, and only one entry for every system being managed by GDDR.

2.1.16 GDDR0SYS

The **GDDR0SYS** member contains the definitions that inform GDDR of the corresponding system names for each MSF'id that it is managing.

The **GDDR0SYS** parameter member supports the following GDDR parameter statements:

2.1.16.1 SYSNAME.msfid

The MSF'id is the SMF'id of the system being managed by GDDR.

The parameter statement has the following syntax:

SYSNAME.msfid=ssss

The parameters on the **SYSNAME.msfid** statement have the following values:

msfid – is the CA-OPS/MVS MSF'id

ssss – is the z/OS system name of the system whose MSF'id is **msfid**

There must be one , and only one entry for every system being managed by GDDR.

2.1.16.2 CONT.ssss

The **CONT.ssss** parameter statement defines the contingency system relationship to a Production system. A Production system is defined as any system that is capable of running business applications. Therefore there should be a **CONT.ssss** statement for each Production system that runs at DC1 and DC2.

The parameter statement has the following syntax:

CONT.ssss=cccc

The parameters on the **CONT.ssss** statement have the following values:

ssss – is the z/OS system name of the Production this Contingency system parameter is being defined for
cccc – is the z/OS system name of the Contingency system that is partnered with Production system **ssss**

There must be one, and only one entry for every system being managed by GDDR.

2.2 Updating GDDR.PARMLIB

2.2.1 Updating GDDR Parameters

The following section details how to update GDDR Parameters stored in CA-OPS/MVS Global variables.

2.2.1.1 Update GDDR.PARMLIB

Update the appropriate member or members in the GDDR.PARMLIB dataset.

2.2.1.2 Store GDDR Parameters into OPS/MVS

After updating the appropriate parameter(s) in the appropriate GDDR.PARMLIB members(s), from the current Master K-System use the GDDR Admin Option L to load the selected PARMLIB members you have just updated.

All GDDR PARMLIB updates are propagated to all other K-Systems.

Alternatively, you may run a manual update, to do this, run GDDRGF04 with each parameter member updated as a parameter to GDDRGF04.

For more details of running GDDRGF04 manually see the Appendix.

3. GDDR PROCEDURES

3.1 Administration Procedures

3.1.1 Setting Up a GDDR K-System for the First Time

The following actions are required to setup a GDDR K-System.

3.1.1.1 Pre-Requisites

The following pre-requisites need to be satisfied before a K-System can be setup for the first time.

1. The starting point is a fully functional and operational z/OS system that meets the requirements for running GDDR (See the **GDDR Installation Guide** for details).
2. The ResourcePak Base, Consistency group and SRDF/Host Component started tasks have been setup and started with appropriate parameters.

3.1.1.2 HMC Setup

Using the ACSADMIN userid, logon to each HMC in **DC1**, **DC2** and **DC3** and follow the instructions for Configuring for the Data Exchange API's as described in the IBM Manual zSeries Application Programming Interfaces (SB10-7030).

Specify the K-System MVS system name in lowercase characters as the community name.

The IP address is the management address of K-System being setup. Ensure that a DVIPA address is not used.

3.1.1.3 Define GDDR PARMLIB Members

Assuming there are no existing K-Systems already setup, all GDDR Parameter members need to be defined, see the section "GDDR Parameters" in this document on how to do this.

If the new K-System is to join an existing K-System Complex, the following GDDR Parameter members are required to be updated and loaded from the current Master K-System.

- **GDDR0INI**
- **GDDR0IPL**
- **GDDR0MSF**
- **GDDR0SYS**
- **GDDRSITE**

3.1.1.4 GDDR AOF Rule Set

The GDDR CA-OPS/MVS AOF Rules must be updated to add the MSF'id of the new K-System. They must then be distributed to all Production and existing K-

Systems (if any), including the new one. They must be auto-enabled and enabled.

3.1.1.5 Update CA-OPS/MVS MSF Parameters

3.1.1.5.1 BSOFT.ssss.REXX (MSFALL)

On each K-System, to the CA-OPS/MVS REXX dataset member MSFALL add an entry for the new K-System.

Address "OPSCTL" "MSF DEFINE MSFID(**ssss**)", "APPID(**ssss**) RETRY(300 120) CCI" Where "**ssss**" is the SMF'id of the new K-System

On each Production System, to the CA-OPS/MVS REXX dataset member MSFALL add an entry for the new K-System.

Address "OPSCTL" "MSF DEFINE MSFID(**ssss**)", "APPID(**ssss**) RETRY(300 120) CCI" Where "**ssss**" are the SMF'id of the new K-System

3.1.1.6 Update CA-OPS/MVS CCI Parameters

*3.1.1.6.1 BSOFT.CA90.PPOPTION(CCI**ssss**)*

On each K-System, to the CA Event Notification/CCI parameter member CCI**ssss** add the following entries for the new K-System.

NODE(…add appropriate parameters for the new K-System…) CONN,**ssss** Where "**ssss**" is the SMF'id of the new K-System

On each Production System, to the CA Event Notification/CCI parameter member CCI**ssss** add the following entries for the new K-System.

NODE(…add appropriate parameters for the new system…) CONN, **ssss** Where "**ssss**" is the SMF'id of the new K-System

3.1.2 Rename an Existing GDDR K-System

If the system name and/or SMF-id of a K-System changes, the following changes to GDDR parameters are required on all K-Systems.

Reminder: These changes are required on all K-Systems

3.1.2.1 GDDR Initialisation Parameters

3.1.2.1.1 Eligible.Master.K.Systems

Update GDDR.PARMLIB member **GDDR0INI** parameter statement **Eligible.Master.K.Systems** replacing the old system name with the new system name.

For example, replace system EOCD with system SYK3:

- EOCK,EOCR,EOCD to EOCK,EOCR,SYK3

Once member **GDDR0INI** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.1.2 Eligible.MSF.K.Systems

Update GDDR.PARMLIB member **GDDR0INI** parameter statement **Eligible.MSF.K.Systems** replacing the SMF'id (MSF'id) of the old system with the SMF'id (MSF'id) of the new system.

For example, replace system DCSD with system SYK3:

- DCSR,DCSK,DCSD to DCSR,DCSK,SYK3

Once member **GDDR0INI** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.1.3 DCn.K.System.Systemid

Update GDDR.PARMLIB member **GDDR0INI** parameter statement **DCn.K.System.Systemid** for the appropriate K-System location, replacing the old system name with the new system name.

For example, rename K3 system EOCD to system SYK3:

- EOCD to SYK3

Once member **GDDR0INI** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.1.4 DCn.K.System.MSFid

Update GDDR.PARMLIB member **GDDR0INI** parameter statement **DCn.K.System.MSFid** for the appropriate K-System location, replacing the SMF'id (MSF'id) of the old system with the SMF'id (MSF'id) of the new system.

For example, rename K3 system MSFid DCSD to MSFid SYK3:

- DCSD to SYK3

Once member **GDDR0INI** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.2 GDDR IPL Parameters

Update GDDR.PARMLIB member **GDDR0IPL** to add **IPL.ssss.DCn** statements for the new system and delete statements for the old system.

Once member **GDDR0IPL** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.3 GDDR MSF Parameters

Update GDDR.PARMLIB member **GDDR0MSF** to add **MSFID.ssss** statements for the new system and delete statements for the old system.

Once member **GDDR0MSF** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.4 GDDR Sysname Parameters

Update GDDR.PARMLIB member **GDDR0SYS** to add **SYSNAME.mmmm** statements for the new system and delete statements for the old system.

Once member **GDDR0SYS** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.5 GDDR Site Parameters

Update GDDR.PARMLIB member **GDDRSITE** to add a **SITE.ssss** statement for the new system and delete the statement for the old system.

Once member **GDDRSITE** has been updated, use GDDR Admin Option L "Load or Reload GDDR Parameter Members" from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.2.6 GDDR AOF Rule Set

The GDDR CA-OPS/MVS AOF Rules in the CA-OPS/MVS Rules dataset must be updated to reflect the MSFid of the new K-System.

These rules must be updated on all GDDR K-Systems and Production Systems managed by GDDR.

GDDR AOF Rules must be auto-enabled and enabled on all

- **Production systems being managed by GDDR**
- **GDDR K-Systems**

3.1.3 Adding a New Production System or Sysplex to GDDR

The following documents the GDDR updates required when adding a new Production System or Sysplex to the Enterprise Consistency Group, and thereby placing them under the management of GDDR.

Adding a new system to the Enterprise Consistency Group could also imply the addition of new DASD. If this is the case then once this step is complete, turn to the Section "Adding a New RDFGRP(s) to GDDR" and follow the instructions.

3.1.3.1 Pre-Requisites

The following pre-requisites need to be satisfied before a K-System can be setup for the first time.

1. The new system or systems in the new sysplex have already had their ResourcePak Base and Consistency Groups setup. They both should be using common parameter definitions already used by the other systems in the Enterprise Consistency Group.

3.1.3.2 GDDR Couple Dataset Parameters

Update GDDR.PARMLIB member **GDDR0CPL** to add the following statements for the new Production system(s):

- **PLX.ssss.ttt.P.DCn**
- **PLX.ssss.ttt.A.DCn**
- **UPLX.ssss.ttt.P.DCn**
- **UPLX.ssss.ttt.A.DCn**

Once member **GDDR0CPL** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.3.3 GDDR IPL Parameters

Update GDDR.PARMLIB member **GDDR0IPL** to add **IPL.ssss.DCn** statements for the new system(s).

- **IPL.ssss.DC1** statements are required for each new system
- **IPL.ssss.DC2** statements are required for each new system
- **IPL.ssss.DC3** statements are only required if system '**ssss**' is to be available at DC3

Once member **GDDR0IPL** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.3.4 GDDR MSF Parameters

Update GDDR.PARMLIB member **GDDR0MSF** to add **MSFID.ssss** statements for the new system(s).

Once member **GDDR0MSF** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.3.5 GDDR Site Parameters

Update GDDR.PARMLIB member **GDDRSITE** to add **SITE.ssss** statement(s) for the new system(s).

Once member **GDDRSITE** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.3.6 GDDR Sysname Parameters

Update GDDR.PARMLIB member **GDDR0SYS** to add **SYSNAME.mmmm** statements for the new system(s).

Once member **GDDR0SYS** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.3.7 GDDR AOF Rule Set

The GDDR CA-OPS/MVS AOF Rules must be distributed to the new Production system(s), auto-enabled and enabled.

3.1.3.8 Update CA-OPS/MVS MSF Parameters

3.1.3.8.1 BSOFT.ssss.REXX (MSFALL)

On each K-System, to the CA-OPS/MVS REXX dataset member MSFALL add an entry for each new Production System.

Address "OPSCTL" "MSF DEFINE MSFID(**ssss**)", "APPID(**ssss**) RETRY(300 120) CCI" Where "**ssss**" is the SMF'id of the new Production System

On each new Production System, to the CA-OPS/MVS REXX dataset member MSFALL add an entry for each K-System.

Address "OPSCTL" "MSF DEFINE MSFID(**ssss**)", "APPID(**ssss**) RETRY(300 120) CCI"

Where "**ssss**" are the SMF'ids of the each K-System

3.1.3.9 Update CA-OPS/MVS CCI Parameters

3.1.3.9.1 BSOFT.CA90.PPOPTION(CCIssss)

On each K-System, to the CA Event Notification/CCI parameter member CCI**ssss** add the following entries for the new Production system.

NODE(…add appropriate parameters for the new Production system…)

CONN,**ssss**

Where "**ssss**" is the SMF'id of the new Production System

On the new Production System, to the CA Event Notification/CCI parameter member CCI**ssss** add the following entries for each K-System.

NODE(…add appropriate parameters for the K1 system…)
NODE(…add appropriate parameters for the K2 system…)
NODE(…add appropriate parameters for the K3 system…)

CONN, **K1**
CONN, **K2**
CONN, **K3**

Where "**K1**" is the SMF'id of the DC1/SiteA K-System
Where "**K2**" is the SMF'id of the DC1/SiteA K-System
Where "**K3**" is the SMF'id of the DC1/SiteA K-System

3.1.4 Changing the Consistency Group/SWAP Group Name

The Consistency group and Swap group in a STAR/STARFIRE environment are essentially the same thing when the Consistency Group group is enabled with CAX protection.

The currently defined Consistency Group/Swap Group(s) are as follows:

1. EOC1STAR – used when the Primary DASD site is located at DC1
2. EOC2STAR – used when the Primary DASD site is located at DC2

If you change the name of the Consistency Group/Swap Group, then the following GDDR parameter changes and EMC Software parameter changes are required:

3.1.4.1 GDDR BCV Parameters

When the Consistency Group/Swap group name changes then the **GDDR BCV parameters** will require updating to reflect the new name.

Update GDDR.PARMLIB member **GDDR0BCV** to replace the existing 4 character group name string with the first 4 characters of the new Consistency group/Swap group name.

Once member **GDDR0BCV** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.4.2 EMC.PARMLIB

The following EMC Software parameter members must be updated on all systems in the Enterprise Consistency Group:

3.1.4.2.1 EMC Consistency Group Parameters

The following parameter members need to be updated to reflect the new Consistency Group/Swap Group name(s):

- **CGRPDC1** – **SRDF_CONGROUP** = new ConGroup name
- **CGRPDC2** – **SRDF_CONGROUP** = new ConGroup name

3.1.4.2.2 EMC RDF Manager Parameters

The following parameter members need to be updated to reflect the new Consistency Group/Swap Group name(s):

- **SITEDC1** – **MSC_STARFIRE** = new ConGroup name
- **SITEDC2** – **MSC_STARFIRE** = new ConGroup name

Note: The **SRDF_CONGROUP** and **MSC_STARFIRE** parameters must have the same value at each site.

The Consistency Group started task on all systems will need to be re-cycled (stopped/started). This will necessitate a restart of STARFIRE which will pick up the changes to the RDF manager parameters.

3.1.5 Adding a New RDFGRP(s) to GDDR

The following details the procedure for adding a new RDF group or groups to GDDR.

If there is new DASD to add to the existing STAR/STARFIRE environment, it can be added in the following ways:

- By adding it to an existing RDFGRP or existing RDFGRP(s)
- By way of a new RDFGRP or new RDFGRP(s)

This section describes how to add new DASD to the existing STAR/STARFIRE environment by adding one or more new RDF groups to GDDR.

3.1.5.1 Pre-requisites

Before the new RDF Group or groups are added, the RDF groups(s) must meet the following conditions:

- The RDF groups(s) have been defined as Dynamic
- The J0 createpairs have been done and the devices are synched up
- The JA createpairs have been done and the devices are synched up

The procedure for defining dynamic RDF groups and creating device pairs can be found in the EMC SRDF/Host Component Manual.

3.1.5.2 Define New Consistency Group GNS Group(s)

Create New GNS groups using the EMCGROUP utility. See the appropriate EMC manual for the procedure and details of parameters required.

The GNS group(s) defined should adhere to the following naming convention:

EOCn_ddd_RGRP_nn_J0

Where:

n – has the value **1** or **2**, used to identify which group to use depending upon the location of the primary DASD, either **DC1** or **DC2**
ddd – has the value **CKD** or **FBA**, depending upon what type of DASD is defined in the GNS group
nn – is the new RDF group

For each new RDF group, two GNS Groups must be defined:

EOC1_ddd_RGRP_nn_J0

EOC2_ddd_RGRP_nn_J0

3.1.5.3 Add GNS Group(s) to ConGroup Parameter Members

Add the appropriate GNS Group(s) to the ConGroup parameter members for each site.

3.1.5.3.1 CGRPDC1

To Site DC1 Consistency Group parameter member CGRPDC1 add the newly defined GNS groups with the following naming convention:

EOC1_ddd_RGRP_nn_J0

These must be added after the **SRDF_CONGROUP** statement.

3.1.5.3.2 CGRPDC2

To Site DC2 Consistency Group parameter member CGRPDC2 add the newly defined GNS groups with the following naming convention:

EOC2_ddd_RGRP_nn_J0

These must be added after the **SRDF_CONGROUP** statement.

3.1.5.4 Define or Modify MSC GNS Groups

Depending on whether or not a new Controller is being added or you are just adding new RDFGRP(s) to an existing Controller(s) will determine if existing MSC GNS groups are updated or new MSC groups are defined.

3.1.5.4.1 If Adding New Controller(s)

If adding a new DASD Controller(s) then new MSC GNS groups will need to be defined.

One new group for the MSC gatekeepers **is required** and another that defines the RDFGRP(s) and their equivalent RDF Recovery group(s) to MSC.

Create New GNS groups using the **EMCGROUP utility**. See the appropriate EMC manual for the procedure and details of parameters required.

The GNS group(s) defined should adhere to the following naming convention:

EOCn_MSC_ddd_GKn – for MSC Gatekeepers

EOCn_MSC_ddd_RAGRPn – for RDF Groups

Where:

n – has the value **1** or **2**, used to identify which group to use depending upon the location of the primary DASD, either DC1 or DC2
ddd – has the value **CKD** or **FBA**, depending upon what type of DASD is defined in the GNS group
n – is a number, starting at 1

For each new Controller, two pairs of GNS Groups must be defined:

EOC1_MSC_ddd_GKn and EOC1_MSC_ddd_RAGRPn
EOC2_MSC_ddd_GKn and EOC2_MSC_ddd_RAGRPn

The following GNS groups must be defined for starting SRDF/A in MSC mode, these are the same as groups **EOCn_MSC_ddd_RAGRPn** except that they have no associated recovery RDF group in the GNS group definition:

EOC1_MSC_ddd_RAGRPn_NOSTAR
EOC2_MSC_ddd_RAGRPn_NOSTAR

These are only used in unplanned scenarios when either DC1 or DC2 is unavailable and therefore it is impossible to start SRDF/A in STAR mode.

3.1.5.4.2 Adding new RDFGRP(s) to an existing Controller(s)

If adding one or more new RDF groups to an existing Controller, existing MSC GNS groups will have to be extended to add the new RDF group(s) and add the new gatekeeper devices.

To the following GNS groups add the new RDF Group(s):

EOC1_MSC_ddd_RAGRPn
EOC2_MSC_ddd_RAGRPn

To the following MSC GNS groups add the new MSC Gatekeepers:

EOC1_MSC_ddd_GKn
EOC2_MSC_ddd_GKn

To the following GNS groups add the new RDF Group(s) for starting SRDF/A in MSC mode:

EOC1_MSC_ddd_RAGRPn_NOSTAR
EOC2_MSC_ddd_RAGRPn_NOSTAR

3.1.5.5 Add GNS Group(s) to MSC Parameter Members

Add the appropriate GNS Group(s) to the RDF Manager Parameter members for each site.

3.1.5.5.1 SITEDC1

To Site DC1 RDF Manager parameter member SITEDC1, when running MSC in STARFIRE mode, and adding a new Controller(s) add a new MSC Session for each pair of MSC GNS Groups:

MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_ddd_GKn,EOC1_MSC_ddd_RAGRPn)

These must be added to the **MSC_GROUP_NAME** definition.

3.1.5.5.2 SITEDC2

To Site DC2 RDF Manager parameter member SITEDC2, when running MSC in STARFIRE mode, and adding a new Controller(s) add a new MSC Session for each pair of MSC GNS Groups:

MSC_INCLUDE_SESSION=SCFG(EOC2_MSC_ddd_GKn,EOC2_MSC_ddd_RAGRPn)

These must be added to the MSC_GROUP_NAME definition.

3.1.5.5.3 SITEUDC1

To Site DC1 RDF Manager parameter member **SITEUDC1**, when running SRDF/A in MSC mode, and adding a new Controller(s) add a new MSC Session for each pair of MSC GNS Groups:

MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_ddd_GKn,EOC1_MSC_ddd_RAGRPn_NOSTAR

These must be added to the MSC_GROUP_NAME definition.

3.1.5.5.4 SITEUDC2

To Site DC2 RDF Manager parameter member **SITEUDC2**, when running SRDF/A in MSC mode, and adding a new Controller(s) add a new MSC Session for each pair of MSC GNS Groups:

MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_ddd_GKn,EOC1_MSC_ddd_RAGRPn_NOSTAR

These must be added to the MSC_GROUP_NAME definition.

3.1.5.6 GDDR BCV Parameters

If any of the standard devices in the RDF groups being added are to have an associated BCV, these must be defined in GDDR PARMLIB member **GDDR0BCV**.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.5.7 GDDR GNS Parameters

In the **GDDR0GNS** member of the GDDR PARMLIB add new parameter statements for the new Consistency group GNS groups being added.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.5.8 GDDR STAR Parameters

In the **GDDRSTAR** member of the GDDR PARMLIB add parameter statements for the J0 and JA gatekeepers that will be associated with the new RDF group. Also required are createpair parameter statements for all devices in the new RDF groups.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.5.9 Distribute Changed EMC Parameter Members

Distribute the changed EMC parameter members to all systems participating in the STAR/STARFIRE environment.

3.1.5.10 Activate the STAR/STARFIRE Environment

To bring the new RDF group(s) into the live STAR/STARFIRE environment, perform the following actions:

3.1.5.10.1 Stop the STAR/STARFIRE environment

Stop the STAR/STARFIRE environment by entering the MSC, PENDDROP command.

3.1.5.10.2 Restart SRDF/A and STAR/STARFIRE

Restart SRDF/A and STAR/STARFIRE using GDDR Operations **Option R1.SS (Start Running SRDF/A to DC3)**. This will rebuild and re-arm the Consistency group, rebuild and re-validate the Swap group.

Once STARFIRE has been successfully restarted, check to ensure that the devices being deleted are no longer part of the Consistency and Swap groups.

3.1.6 Adding New Devices to GDDR

The following details the procedure for adding a new RDF group or groups to GDDR.

If there is new DASD to add to the existing STAR/STARFIRE environment, it can be added in the following ways:

- By adding it to an existing RDF group or groups
- By way of a new RDF group or groups

This section describes how to add new DASD to the existing STAR/STARFIRE environment by adding devices to one or more existing RDF groups.

3.1.6.1 Create the J0 and JA Device Pairs

Add the new devices to one or more existing RDF groups by issuing the CREATEPAIR command. Details on how to use the CREATEPAIR command can be found in the EMC SRDF/Host Component Manual.

3.1.6.2 GDDR BCV Parameters

If any of the standard devices being added are to have an associated BCV, these must be defined in GDDR PARMLIB member **GDDR0BCV**.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.6.3 GDDR STAR Parameters

In the **GDDRSTAR** member of the GDDR PARMLIB add createpair parameter statements for all devices being added.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.6.4 Activate the STAR/STARFIRE Environment

To bring the new devices into the live STAR/STARFIRE environment, perform the following actions:

3.1.6.4.1 Stop the STAR/STARFIRE environment

Stop the STAR/STARFIRE environment by entering the MSC, PENDDROP command.

3.1.6.4.2 Restart SRDF/A and STAR/STARFIRE

Restart SRDF/A and STAR/STARFIRE using GDDR Operations **Option R1.SS (Start Running SRDF/A to DC3)**. This will rebuild and re-arm the Consistency group, rebuild and re-validate the Swap group.

Once STARFIRE has been successfully restarted, check to ensure that the devices being deleted are no longer part of the Consistency and Swap groups.

3.1.7 Removing an RDF Group from the Control of GDDR

The following documents the procedure for removing one or more RDF groups from the control of GDDR.

3.1.7.1 Pre-requisites

The following pre-requisites must be satisfied before an RDF group can be removed from the control of GDDR:

1. The RDF groups to be removed from the control of GDDR have been removed from any relevant MSC GNS group.
2. If the RDF groups are for J0 devices the SCFG(…) parameters referencing the RDF groups being deleted have been removed from the **CGRPDC1** and **CGRPDC2** Consistency group parameter members on all Production and K-Systems.

3.1.7.2 GDDR BCV Parameters

If any of the standard devices in the RDF groups being removed have an associated BCV, these definitions will have to be removed from GDDR PARMLIB member **GDDR0BCV**.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.7.3 GDDR GNS Parameters

From the GDDR0GNS member of the GDDR PARMLIB delete all parameter statements that reference the RDF groups being removed.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.7.4 GDDR STAR Parameters

From the **GDDRSTAR** member of the GDDR PARMLIB delete all parameter statements that reference the RDF groups being removed.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.7.5 Activate the STAR/STARFIRE Environment

To remove the unwanted RDF groups from the live STAR/STARFIRE environment, perform the following actions:

3.1.7.5.1 Stop the STAR/STARFIRE environment

Stop the STAR/STARFIRE environment by entering the MSC, PENDDROP command.

3.1.7.5.2 Restart SRDF/A and STAR/STARFIRE

Restart SRDF/A and STAR/STARFIRE using GDDR Operations **Option R1.SS (Start Running SRDF/A to DC3).** This will rebuild and re-arm the Consistency group, rebuild and re-validate the Swap group.

Once STARFIRE has been successfully restarted, check to ensure that the RDFGRP(s) being deleted are no longer part of the Consistency and Swap groups.

3.1.8 Removing Devices from the Control of GDDR

The following documents the procedure for removing one or more devices from the control of GDDR.

3.1.8.1 Pre-Requisites and Conditions

The following pre-requisites and conditions must be satisfied before removing any devices from the control of GDDR:

1. The devices to be removed from the control of GDDR have been RDF suspended and the J0/JA pairs deleted.
2. The devices to be removed from the control of GDDR are not Gatekeeper devices.

3.1.8.2 GDDR BCV Parameters

If any of the standard devices being removed have an associated BCV, these definitions will have to be removed from GDDR PARMLIB member **GDDR0BCV**.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.8.3 GDDR STAR Parameters

Delete the standard devices being removed from GDDR's control from the CREATEPAIR (CP_STAR) statement(s) in GDDR PARMLIB member **GDDRSTAR**.

Load the changed parameter member into CA-OPS/MVS using GDDR Admin Option L.

3.1.8.4 Activate the STAR/STARFIRE Environment

To remove the unwanted devices from the live STAR/STARFIRE environment, perform the following actions:

3.1.8.4.1 Stop the STAR/STARFIRE environment

Stop the STAR/STARFIRE environment by entering the MSC, PENDDROP command.

3.1.8.4.2 Restart SRDF/A and STAR/STARFIRE

Restart SRDF/A and STAR/STARFIRE using GDDR Operations **Option R1.SS (Start Running SRDF/A to DC3)**. This will rebuild and re-arm the Consistency group, rebuild and re-validate the Swap group.

Once STARFIRE has been successfully restarted, check to ensure that the devices being deleted are no longer part of the Consistency and Swap groups.

3.1.9 Removing a System or a Sysplex from GDDR

The following documents the GDDR updates required to remove a Production System or Sysplex from the Enterprise Consistency Group.

This implies they are being removed from the management of GDDR.

3.1.9.1 Pre-Requisites

The following pre-requisites must be satisfied before removing any systems or sysplex's from the control of GDDR:

1. On the system or systems being removed, the ResourcePak Base and Consistency Group started procedures have been stopped and will no longer be used.

3.1.9.2 GDDR Couple Dataset Parameters

Update GDDR.PARMLIB member **GDDR0CPL** to delete the following statements for the system(s) being removed:

- **PLX.ssss.ttt.P.DCn**
- **PLX.ssss.ttt.A.DCn**
- **UPLX.ssss.ttt.P.DCn**
- **UPLX.ssss.ttt.A.DCn**

Once member **GDDR0CPL** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.9.3 GDDR IPL Parameters

Update GDDR.PARMLIB member **GDDR0IPL** to delete the **IPL.ssss.DCn** statements for the system(s) being removed.

Once member **GDDR0IPL** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.9.4 GDDR MSF Parameters

Update GDDR.PARMLIB member **GDDR0MSF** to delete the **MSFID.ssss** statements for the system(s) being removed.

Once member **GDDR0MSF** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.9.5 GDDR Site Parameters

Update GDDR.PARMLIB member **GDDRSITE** to delete the **SITE.ssss** statements for the system(s) being removed.

Once member **GDDRSITE** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.9.6 GDDR Sysname Parameters

Update GDDR.PARMLIB member **GDDR0SYS** to delete the **SYSNAME.mmmm** statements for the system(s) being removed.

Once member **GDDR0SYS** has been updated, use GDDR Admin **Option L "Load or Reload GDDR Parameter Members"** from the Master K-System to update the selected GDDR parameters.

The parameter update will be propagated to all other K-Systems.

3.1.9.7 GDDR AOF Rule Set

The GDDR CA-OPS/MVS AOF Rules must be disabled and deleted from the system(s) being removed.

3.1.9.8 Update CA-OPS/MVS MSF Parameters

3.1.9.8.1 BSOFT.ssss.REXX (MSFALL)

On each K-System, from the CA-OPS/MVS REXX dataset member MSFALL, delete the entries for each Production System being removed.

On each Production System being removed, from the CA-OPS/MVS REXX dataset member MSFALL, delete the entry for each K-System.

3.1.9.9 Update CA-OPS/MVS CCI Parameters

3.1.9.9.1 BSOFT.CA90.PPOPTION(CCIssss)

On each K-System, from the CA Event Notification/CCI parameter member CCI**ssss,** delete the entries for each Production system being removed.

On the each Production System being removed, from the CA Event Notification/CCI parameter member CCI**ssss,** delete the entries for each K-System.

3.2 Configuring the ESS Interface

The following section describes how GDDR is configured to use the ESS Interface.

3.2.1 ESS XPSJCL

When setting up a K-System, the following dataset used by ESS must be available on each K-System:

- PENV.UTIL.XPSJCL (or equivalent)

This dataset is usually allocated and maintained by the group responsible for ESS. However, GDDR does require update access to it, inorder to create the ESS @CONTEXT member.

GDDR is informed of the actual dataset name via the GDDR parameter:

- **CA7.XPSJCL**

This parameter is specified in **GDDR.PARMLIB** member **GDDR0ESS**.

3.2.2 ESS Context Member

GDDR generates and saves the ESS Context member in the ESS XPSJCL dataset. The expected member name used by ESS is @CONTEXT. For testing purposes this member name should be changed.

GDDR is informed of the actual member name via the GDDR parameter:

- **ESS.CONTEXT**

This parameter is specified in **GDDR.PARMLIB** member **GDDR0ESS**.

3.2.3 GDDR Security Requirements

In order for GDDR to demand jobs from CA7 via the ESS Interface, the following RACF access is required:

- Connect the following groups to RACF userid GDDR:
  - PBSCTDUP
  - PBSCTQUP
  - PBSCTRD
- Permit RACF userid GDDR READ access to Class JESJOBS profile:
  - SUBMIT.*.P*.*
- Permit RACF userid GDDR READ access to Class SU@MIT profile:
  - XPSDCSA
- Permit RACF userid GDDR READ access to Class PA@EL profile:
  - L2QPDMND

3.2.4 User Security Requirements

For a user or operator of GDDR to run a Planned Script that will interact with the ESS interface, ie. inorder to have CA7 submit jobs that will run with the GDDR userid, the following RACF access is required:

- Permit the users RACF userid (or Group) READ access to Class SU@MIT profile:
  - GDDR

Note: Ultimately, there should be a group or groups defined that describe the RACF access required for GDDR and GDDR Users and appropriate RACF TSO userids should be connected to the appropriate groups.

4. APPENDIX

4.1 EMC Recommendations

EMC have made the following recommendations regarding EMC software parameters.

4.1.1 Consistency Group

ConGroup locks expire CLOCKE times CLOCKN seconds after a ConGroup started task is stopped.

ConGroup startup should take 3-4 ticks times CLOCKN seconds.

MSC PENDDROP disables the MSC Listeners on ConGroup.

For STOP/REFRESH/DISABLE ConGroup commands MSC needs to give permission for these to run.

DSK – Distributed Synchronisation Kernel (not used in ConGroup 6.2.0)

4.1.1.1 CLOCKE

Use a minimum value of 30.

A value of 30 is currently being used.

4.1.1.2 CLOCKN

Should be at least twice the value specified for SCF.CSC.IDLEPOLL.

A value of 1000 is currently being used.

4.1.1.3 DISABLE_AT_SHUTDOWN

DISABLE_AT_SHUTDOWN should be specified as NO on all systems running ConGroup.

4.1.1.4 THREADS RECVPORT(n)

The Consistency Group listener port, specified by the RECVPORT parameter (defined in the CONFIG2 parameter member) should be changed to a value other than the default value (102) in each different Consistency Group complex.

This will prevent conflicts when different Consistency Group complexes are active against the same EMC Symmetric Controllers.

4.1.2 CSC/MSF

4.1.2.1 SCF.CSC.IDLEPOLL

Use a minimum of 3 seconds.

A value of 3 is currently being used.

4.2 EMC Software Parameters

The following section describes the EMC Software Parameters used during testing. They are detailed for example purposes only.

Always refer to the appropriate EMC manuals for guidance when changing EMC Software Parameters.

4.2.1 Consistency Group

The follow are the parameters used for Consistency Group during testing.

4.2.1.1 CGRPDC1

Consistency Group parameter member CGRPDC1 is used when the Primary DASD (R1's) are located at Site DC1.

The only differences between parameter members CGRPDC1 and CGRPDC2 are the following:

- Consistency group name on the **SRDF_CONGROUP** statement
- The name of the GNS groups on the **SCFG** statements

```
*
*  GLOBAL CONFIG STATEMENTS
*
GLOBAL=(OWNER=T103)
*
AUTO_REFRESH=YES
COUPLEDS_ALLOWED=YES
DISABLE_AT_SHUTDOWN=NO
DISABLE_ON_VERIFY_ERROR=NO
DISPLAY_CONGROUP_LISTOPT=LIST
PAGEDEV_ALLOWED=YES
REMSPLIT_INTERVAL=10
REMSPLIT_OPTION=NOESTERR
RESUME_INTERVAL=15
RESUME_OPTION=RSMALLIT
SAF_CLASS=DATASET
SAF_PROFILE=BSOFT
SEMISYNC_ALLOWED=NO
VERIFY_INTERVAL=0
USE_RDF_ECA=YES
```

```
USE_FBA_NR_ON_TO=YES
MODE=MULTI
* PLACE CAXOPTS IN GLOBAL SECTION...
CAXOPTS EOC=(AUTOCOND=NOPATHS,CFW=BYPASS,
      LOSTOWNERPOLICY ONSWAP=OPERATOR)
DEBUG=NO
*
* CONGROUP SPECIFIC PARAMETERS
*
SRDF_CONGROUP=EOC1STAR
* EB-PROD DASD
SCFG(EOC1_CKD_RGRP_07_J0)
* EF-PROD DASD
SCFG(EOC1_CKD_RGRP_17_J0)
* SSE DASD
SCFG(EOC1_CKD_RGRP_27_J0)
* CCI DASD
SCFG(EOC1_CKD_RGRP_37_J0)
* NL DASD
SCFG(EOC1_CKD_RGRP_3A_J0)
* FBA DASD
SCFG(EOC1_FBA_RGRP_27_J0)
SCFG(EOC1_FBA_RGRP_37_J0)
*
SUSPEND_FAILURE=FAIL
SUSPEND_TIMEOUT=30
SUSPEND_RETRY_TIMEOUT=0
SEMISYNC_ALLOWED=NO
CAX=(CAXOPTS=EOC)
```

4.2.1.2 CGRPDC2

Consistency Group parameter member CGRPDC2 is used when the Primary DASD (R1's) are located at Site DC2.

The only differences between parameter members CGRPDC1 and CGRPDC2 are the following:

- Consistency group name on the **SRDF_CONGROUP** statement
- The name of the GNS groups on the **SCFG** statements

```
*
*  GLOBAL CONFIG STATEMENTS
*
GLOBAL=(OWNER=T103)
*
AUTO_REFRESH=YES
COUPLEDS_ALLOWED=YES
DISABLE_AT_SHUTDOWN=NO
DISABLE_ON_VERIFY_ERROR=NO
DISPLAY_CONGROUP_LISTOPT=LIST
PAGEDEV_ALLOWED=YES
REMSPLIT_INTERVAL=10
REMSPLIT_OPTION=NOESTERR
RESUME_INTERVAL=15
RESUME_OPTION=RSMALLIT
SAF_CLASS=DATASET
SAF_PROFILE=BSOFT
SEMISYNC_ALLOWED=NO
VERIFY_INTERVAL=0
USE_RDF_ECA=YES
USE_FBA_NR_ON_TO=YES
MODE=MULTI
* PLACE CAXOPTS IN GLOBAL SECTION...
CAXOPTS EOC=(AUTOCOND=NOPATHS,CFW=BYPASS,
      LOSTOWNERPOLICY ONSWAP=OPERATOR)
DEBUG=NO
*
* CONGROUP SPECIFIC PARAMETERS
*
```

```
SRDF_CONGROUP=EOC2STAR
* EB-PROD DASD
SCFG(EOC2_CKD_RGRP_07_J0)
* EF-PROD DASD
SCFG(EOC2_CKD_RGRP_17_J0)
* SSE DASD
SCFG(EOC2_CKD_RGRP_27_J0)
* CCI DASD
SCFG(EOC2_CKD_RGRP_37_J0)
* NL DASD
SCFG(EOC2_CKD_RGRP_3A_J0)
* FBA DASD
SCFG(EOC2_FBA_RGRP_27_J0)
SCFG(EOC2_FBA_RGRP_37_J0)
*
SUSPEND_FAILURE=FAIL
SUSPEND_TIMEOUT=30
SUSPEND_RETRY_TIMEOUT=0
SEMISYNC_ALLOWED=NO
CAX=(CAXOPTS=EOC)
```

4.2.2 SRDF/Host Component

The follow are the parameters used for SRDF/Host Component during testing.

4.2.2.1 SITEDC1

SRDF/Host Component parameter member SITEDC1 is used when the Primary DASD (R1's) are located at Site DC1.

The only differences between parameter members SITEDC1 and SITEDC2 are the following:

- MSC group name on the **MSC_GROUP_NAME** statement
- Consistency group name on the **MSC_STARFIRE** statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION** statements

```
SUBSYSTEM_NAME=EMC2
COMMAND_PREFIX=>
COMMAND_DETAILS
SECURITY_QUERY=ANY
SECURITY_CONFIG=SAF
MESSAGE_PROCESSING=YES
MAX_QUERY=8192
MAX_ALIAS=400
MAX_COMMANDQ=200
SHOW_COMMAND_SEQ#=YES
OPERATOR_VERIFY=NONE
SYNCH_DIRECTION_ALLOWED=R1<>R2
SYNCH_DIRECTION_INIT=NONE
FBA_ENABLE=YES
MESSAGE_LABELS=COMMAND_SEQ
SORT_BY_COMMAND
HCLOG=ALL
SINGLE_CONCURRENT
*** STAR PROCESSING ***
ALLOW_CRPAIR_NOCOPY=STAR
VALIDATE_CRPAIR_NOCOPY_LEVEL=1
ALLOW_CG_OVERRIDE
****************************
*** MSC - SRDFA MULTI-BOX ***
```

```
**************************
MSC_GROUP_NAME=DC1_MSCG_LAB2
MSC_STARFIRE=EOC1STAR
MSC_WEIGHT_FACTOR=0
MSC_CYCLE_TARGET=15
MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_CKD_GK1,EOC1_MSC_CKD_RAGRP
1)
MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_FBA_GK1,EOC1_MSC_FBA_RAGRP1
)
MSC_VALIDATION=FAIL
MSC_GROUP_END
```

4.2.2.2 SITEDC2

SRDF/Host Component parameter member SITEDC2 is used when the Primary DASD (R1's) are located at Site DC2.

The only differences between parameter members SITEDC1 and SITEDC2 are the following:

- MSC group name on the **MSC_GROUP_NAME** statement
- Consistency group name on the **MSC_STARFIRE** statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION** statements

```
SUBSYSTEM_NAME=EMC2
COMMAND_PREFIX=>
COMMAND_DETAILS
SECURITY_QUERY=ANY
SECURITY_CONFIG=SAF
MESSAGE_PROCESSING=YES
MAX_QUERY=8192
MAX_ALIAS=400
MAX_COMMANDQ=200
SHOW_COMMAND_SEQ#=YES
OPERATOR_VERIFY=NONE
SYNCH_DIRECTION_ALLOWED=R1<>R2
SYNCH_DIRECTION_INIT=NONE
FBA_ENABLE=YES
MESSAGE_LABELS=COMMAND_SEQ
SORT_BY_COMMAND
HCLOG=ALL
SINGLE_CONCURRENT
*** STAR PROCESSING ***
ALLOW_CRPAIR_NOCOPY=STAR
VALIDATE_CRPAIR_NOCOPY_LEVEL=1
ALLOW_CG_OVERRIDE
****************************
*** MSC - SRDFA MULTI-BOX ***
****************************
MSC_GROUP_NAME=DC2_MSCG_LAB2
MSC_STARFIRE=EOC2STAR
```

```
MSC_WEIGHT_FACTOR=0
MSC_CYCLE_TARGET=15
MSC_INCLUDE_SESSION=SCFG(EOC2_MSC_CKD_GK1,EOC2_MSC_CKD_RAGRP1)
MSC_INCLUDE_SESSION=SCFG(EOC2_MSC_FBA_GK1,EOC2_MSC_FBA_RAGRP1)
MSC_VALIDATION=FAIL
MSC_GROUP_END
```

4.2.2.3 SITEUDC1

SRDF/Host Component parameter member **SITEUDC1** is used when the Primary DASD (R1's) are located at Site DC1 after an Unplanned Swap.

The differences between parameter members **SITEUDCn** and **SITEDCn** are the following:

- **SITEUDCn** has no **MSC_STARFIRE**= statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION**= statements

The only differences between parameter members **SITEUDC1** and **SITEUDC2** are the following:

- MSC group name on the **MSC_GROUP_NAME** statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION** statements

```
SUBSYSTEM_NAME=EMC2
COMMAND_PREFIX=>
COMMAND_DETAILS
SECURITY_QUERY=ANY
SECURITY_CONFIG=SAF
MESSAGE_PROCESSING=YES
MAX_QUERY=8192
MAX_ALIAS=400
MAX_COMMANDQ=200
SHOW_COMMAND_SEQ#=YES
OPERATOR_VERIFY=NONE
SYNCH_DIRECTION_ALLOWED=R1<>R2
SYNCH_DIRECTION_INIT=NONE
FBA_ENABLE=YES
MESSAGE_LABELS=COMMAND_SEQ
SORT_BY_COMMAND
HCLOG=ALL
SINGLE_CONCURRENT
*** STAR PROCESSING ***
ALLOW_CRPAIR_NOCOPY=STAR
VALIDATE_CRPAIR_NOCOPY_LEVEL=1
ALLOW_CG_OVERRIDE
****************************
```

```
*** MSC - SRDFA MULTI-BOX ***
*****************************
MSC_GROUP_NAME=DC1_MSCG_LAB2
MSC_WEIGHT_FACTOR=0
MSC_CYCLE_TARGET=15
MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_CKD_GK1,
                         EOC1_MSC_CKD_RAGRP1_NOSTAR)
MSC_INCLUDE_SESSION=SCFG(EOC1_MSC_FBA_GK1,
                         EOC1_MSC_FBA_RAGRP1_NOSTAR)
MSC_VALIDATION=FAIL
MSC_GROUP_END
```

4.2.2.4 SITEUDC2

SRDF/Host Component parameter member **SITEUDC2** is used when the Primary DASD (R1's) are located at Site DC2 after an Unplanned Swap.

The differences between parameter members **SITEUDCn** and **SITEDCn** are the following:

- **SITEUDCn** has no **MSC_STARFIRE** statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION** statements

The only differences between parameter members **SITEUDC1** and **SITEUDC2** are the following:

- MSC group name on the **MSC_GROUP_NAME** statement
- The name of the GNS groups on the **MSC_INCLUDE_SESSION** statements

```
SUBSYSTEM_NAME=EMC2
COMMAND_PREFIX=>
COMMAND_DETAILS
SECURITY_QUERY=ANY
SECURITY_CONFIG=SAF
MESSAGE_PROCESSING=YES
MAX_QUERY=8192
MAX_ALIAS=400
MAX_COMMANDQ=200
SHOW_COMMAND_SEQ#=YES
OPERATOR_VERIFY=NONE
SYNCH_DIRECTION_ALLOWED=R1<>R2
SYNCH_DIRECTION_INIT=NONE
FBA_ENABLE=YES
MESSAGE_LABELS=COMMAND_SEQ
SORT_BY_COMMAND
HCLOG=ALL
SINGLE_CONCURRENT
*** STAR PROCESSING ***
ALLOW_CRPAIR_NOCOPY=STAR
VALIDATE_CRPAIR_NOCOPY_LEVEL=1
ALLOW_CG_OVERRIDE
****************************
```

```
*** MSC - SRDFA MULTI-BOX ***
*****************************
MSC_GROUP_NAME=DC2_MSCG_LAB2
MSC_WEIGHT_FACTOR=0
MSC_CYCLE_TARGET=15
MSC_INCLUDE_SESSION=SCFG(EOC2_MSC_CKD_GK1,
                         EOC2_MSC_CKD_RAGRP1_NOSTAR)
MSC_INCLUDE_SESSION=SCFG(EOC2_MSC_FBA_GK1,
                         EOC2_MSC_FBA_RAGRP1_NOSTAR)
MSC_VALIDATION=FAIL
MSC_GROUP_END
```

4.2.3 Autoswap

The follow are the parameters used for Autoswap during testing.

4.2.3.1 AUTOSWA0

The same Autoswap parameter member was used on all Production and K-Systems.

```
SET SDASOPTIONS              -
  AUTOSWAP=ALL               -
  AUTOSWAPCONDITIONS=NOPATHS  -
  ALLOWOFFLINEDEVICES        -
  BYPASSCONCURRENTCOPY       -
  BYPASSSNAPSESSIONS         -
   BYPASSSYSTEMSCOUNT        -
  CFW=BYPASS                 -
  CHANGESOURCEDEVICE=NRDY    -
  FORCE=NOLINK,LOSTSYSTEM    -
  NOPREVALIDATE              -
  NOCONGROUPSYNCHRONIZATION  -
  NOCONGROUPVERIFY           -
  SWAPCONTROL=BYGROUP        -
  PROCCNT=64                 -
  ALLOWCOUPLEDATASETS        -
  LOSTOWNERPOLICY ONSWAP=OPERATOR -
  RETAIN                     -
  CROSSSYSTEMTIMEOUT=300
SET MAXLINECOUNT 3000
SET DEFAULTLINECOUNT 3000
SET STATS
SET TR 111
```

4.3 GDDR SMF Record

GDDR cuts SMF record 254. The following sub-types are produced:

- Sub-type 0 – Used by the CAP Team to indicate when a Site switch has occurred (either Planned or Unplanned)
- Sub-type 1 – GDDR Informational Messages
- Sub-type 2 – GDDR Error Messages

4.3.1 SMF Record 254 Sub Type 0

SMF record 254 subtype 0 is produced by GDDR in the following circumstances:

- Upon a successful Site Switch, due to either a Planned or Unplanned event
- Upon a successful restart of Business Applications at Site DC3, due to either a DC3 Test or an Unplanned event

This SMF record subtype is used to inform the CAP Team's reporting that a Site switch has occurred.

After the standard SMF record header there is a 255 byte field, this will hold either of the following messages:

GDDR Successfully Swapped Sites, from DCn **to** DCn**. Reason:** swap_reason

Where:

- **DCn** – is the site location and can have values **DC1** or **DC2**.
- **swap_reason** – the reason for the swap and can have values **Planned** or **Unplanned**.

GDDR Successfully Restarted Business Workload at Site DC3. Reason: dc3_reason

Where:

- **dc3_reason** – the reason for the swap and can have values **DC3 Test** or **Unplanned**.

4.4 Running GDDRGF04 Manually

The following section describes how to run **GDDRGF04** (Load_GDDRPARM_Member) inorder to update selected GDDR parameters manually.

Having updated selected GDDR.PARMLIB members, run JCL similar to the following example, specifying the parmlib members names as parameters to GDDRGF04.

```
//*******************************************************************
//GDDRPROC JCLLIB ORDER=(GDDR.PROCLIB)
//*******************************************************************
// EXEC GDDRPROC
//PLANNED.SYSTSIN DD *
 EXECUTIL SEARCHDD(YES)
 ISPSTART PGM(OI) PARM(GDDRGF04 parmlib_member_name)
/*
//
```

4.5 Hard-Coded Dataset Names and Constants

The following documents the GDDR Elements that reference hard coded dataset names or contain hard coded constants.

4.5.1 GDDR.PANELS

The following GDDR Panels contain references to GDDR dataset GDDR.OPSEXEC:

- GDDR0P01
- OPSUSER

4.6 RDF Group Numbering Conventions

The following section describes the dynamic RDF Group Numbering Convention adopted during STAR/STARFIRE testing. It is detailed here for example purposes only.

Assumption: EMC software supports 64 RDF Groups per Controller, numbered x'00'-x'3F'.

4.6.1 RDF Triangle

The STAR/STARFIRE RDF environment consists of an RDF "Triangle" made up of three 'legs':

- An active J0 leg
- An active JA leg
- An inactive JA (recovery) leg

For the active J0 leg, the dynamic RDF groups were numbered:

- x7, where x=0,1,2,3
- xA, where x=3

For the active JA leg, the dynamic RDF groups were numbered:

- x8, where x=01,2,3
- xB, where x=3

For the inactive JA leg, the dynamic RDF groups were numbered:

- x9, where x=01,2,3
- xC, where x=3

Using the above convention, this gave the following configuration in the Euroclear test environment:

Production Workload	J0-RDFGRP	JA-RDFGRP	JA-Recovery-RDFGRP
EB	07	08	09
EF	17	18	19
SSE	27	28	29
CCI	37	38	39
NL	3A	3B	3C
FBA-1	27	28	29
FBA-2	37	38	39

4.7 GNS Group Naming Conventions

The following section describes the GNS Group Naming Convention adopted during testing. It is detailed here for example purposes only.

GDDR needs to know about two types of GNS group:

1. MSC GNS Groups
2. GNS groups used as parameters in SCFG(…) statements or commands, these are referenced in either of the following ways:
    a. In Consistency group parameter members **CGRPDC1** or **CGRPDC2**
    b. On SRDF/Host Component commands

4.7.1 MSC GNS Groups

There are two types of MSC GNS groups:

1. Used to hold MSC Gatekeepers
2. Used to hold the RDF groups that MSC will control

4.7.1.1 MSC Gatekeeper GNS Groups

The naming convention adopted for MSC Gatekeeper GNS groups is as follows:

EOC1_MSC_ddd_GKn
EOC2_MSC_ddd_GKn

Where:

- **EOC1** – groups starting with "EOC1" are used when the Primary DASD is located in DC1
- **EOC2** – groups starting with "EOC2" are used when the Primary DASD is located in DC2
- **ddd** – has the value CKD or FBA, depending upon what type of DASD is defined in the GNS group
- **n** – is a counter, starting at 1

4.7.1.2 MSC RDF Group GNS Groups

The naming convention adopted for MSC RDF Group GNS groups is as follows:

EOC1_MSC_ddd_RAGRPn
EOC2_MSC_ddd_RAGRPn

EOC1_MSC_ddd_RAGRPn_NOSTAR
EOC2_MSC_ddd_RAGRPn_NOSTAR

Where:

- **EOC1** – groups starting with "EOC1" are used when the Primary DASD is located in DC1
- **EOC2** – groups starting with "EOC2" are used when the Primary DASD is located in DC2
- **ddd** – has the value CKD or FBA, depending upon what type of DASD is defined in the GNS group
- **n** – is a counter, starting at 1
- **NOSTAR** – indicates the group is used to bring up SRDF/A in MSC mode ie. There is no recovery RDF group defined. This group is only used after an unplanned swap.

4.7.2 SCFG(…) GNS Groups

The naming convention adopted for SCFG(…) GNS groups is as follows:

EOC1_ddd_RGRP_nn_J0
EOC2_ddd_RGRP_nn_J0

Where:

- **EOC1** – groups starting with "EOC1" are used when the Primary DASD is located in DC1
- **EOC2** – groups starting with "EOC2" are used when the Primary DASD is located in DC2
- **ddd** – has the value CKD or FBA, depending upon what type of DASD is defined in the GNS group
- **nn** – is the J0 RDF group number