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Hitachi Virtual Storage Platform G1000
Hitachi Compatible XRC User Guide

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MK-92RD8027-01

Hitachi Data Systems

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Preface

This document describes and provides instructions for using the Hitachi Compatible Replication for IBM® XRC software on a Hitachi Virtual Storage Platform G1000 (VSP G1000) storage system.

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

- ☐ Intended audience
- ☐ Product version
- ☐ Release notes
- ☐ Document revision level
- ☐ Changes in this revision
- ☐ Referenced documents
- ☐ Document conventions
- ☐ Convention for storage capacity values
- ☐ Accessing product documentation
- ☐ Getting help
- ☐ Comments

Intended audience

This document is intended for system administrators, Hitachi Data Systems representatives, and authorized service providers who install, configure, and operate the Hitachi Virtual Storage Platform G1000 storage system.

Readers of this document should be familiar with the following:

- Data processing and RAID storage systems and their basic functions.
- The Hitachi Virtual Storage Platform G1000 storage system and the *Hitachi Virtual Storage Platform G1000 Product Guide*.
- The Device Manager - Storage Navigator software for the Hitachi Virtual Storage Platform G1000, the *Hitachi Command Suite User Guide*, and the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.
- The storage systems that are connected to the Hitachi Virtual Storage Platform G1000 as external storage.

Product version

This document revision applies to Hitachi Virtual Storage Platform G1000 microcode 80-01-4*x* or later.

Release notes

The Hitachi Virtual Storage Platform G1000 Release Notes are available on the Hitachi Data Systems Portal: https://portal.hds.com. Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

Document revision level

Revision	Date	Description
MK-92RD8027-00	April 2014	Initial Release.
MK-92RD8027-01	August 2014	Supersedes and replaces MK-92RD8027-00.

Changes in this revision

- Revised the sentence about the sidefile monitor. See Sidefile monitor can be incorrect after a failure on page 2-8.

Referenced documents

Hitachi Virtual Storage Platform G1000 user documentation

- *Hitachi Command Suite User Guide*, MK-90HC172
- *Hitachi RAID800 User and Reference Guide*, MK-902RD8007
- *Hitachi Virtual Storage Platform G1000 Performance Guide*, MK-92RD8012
- *Hitachi Virtual Storage Platform G1000 Provisioning Guide for Mainframe Systems*, MK-92RD8013
- *Hitachi Virtual Storage Platform Provisioning Guide for Open Systems,* MK-92RD8014
- *Hitachi SNMP Agent User Guide*, MK-92RD8015
- *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*, MK-92RD8016
- *Hitachi TrueCopy® User Guide*, MK-92RD8019
- *Hitachi ShadowImage® User Guide*, MK-92RD8021
- *Hitachi Universal Replicator User Guide*, MK-92RD8022
- *Hitachi Universal Volume Manager User Guide*, MK-92RD8024

Document conventions

This document uses the following terminology conventions:

Convention	Description
Hitachi Virtual Storage Platform G1000, VSP G1000	Unless otherwise noted, these terms refer to all models of the Hitachi Virtual Storage Platform G1000 storage system.
FCSE	Hitachi Compatible Software for IBM® FlashCopy® SE
FCv2	Compatible FlashCopy® V2
HDP	Dynamic Provisioning
SI	ShadowImage
SIz	ShadowImage for Mainframe
TC	TrueCopy
TCz	TrueCopy for Mainframe
HTI	Thin Image
UR	Universal Replicator
URz	Universal Replicator for Mainframe

This document uses the following typographic conventions.

Convention	Description
Regular text bold	In text: keyboard key, parameter name, property name, hardware label, hardware button, hardware switch In a procedure: user interface item
Italic	Variable, emphasis, reference to document title, called-out term
`Screen text`	Command name and option, drive name, file name, folder name, directory name, code, file content, system and application output, user input
< > (angle brackets)	Variable (used when italic is not enough to identify variable)
[ ] (square brackets)	Optional value
{ } (braces)	Required or expected value
| (vertical bar)	Choice between two or more options or arguments

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

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

Convention for storage capacity values

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

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1{,}000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1{,}000^3$ bytes
1 terabyte (TB)	1,000 GB or $1{,}000^4$ bytes
1 petabyte (PB)	1,000 TB or $1{,}000^5$ bytes
1 exabyte (EB)	1,000 PB or $1{,}000^6$ bytes

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

Logical capacity unit	Value
1 block	512 bytes
1 cylinder (cyl)	Open-systems: • OPEN-V: 960 KB • Other than OPEN-V: 720 KB Mainframe: 870 KB
1 kilobyte (KB)	1,024 (2^{10}) bytes
1 megabyte (MB)	1,024 KB or $1{,}024^2$ bytes
1 gigabyte (GB)	1,024 MB or $1{,}024^3$ bytes
1 terabyte (TB)	1,024 GB or $1{,}024^4$ bytes
1 petabyte (PB)	1,024 TB or $1{,}024^5$ bytes
1 exabyte (EB)	1,024 PB or $1{,}024^6$ bytes

Accessing product documentation

The Hitachi Virtual Storage Platform G1000 user documentation is available on the Hitachi Data Systems Portal: https://portal.hds.com. Please check this site for the most current documentation, including important updates that may have been made after the release of the product.

Getting help

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

Comments

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

Thank you!

1

Overview of Hitachi Compatible Replication for IBM® XRC

This topic provides an overview of the Hitachi Compatible Replication for IBM® XRC (Compatible XRC) feature and configuration.

- ☐ Introducing Compatible XRC
- ☐ Resources available for each function
- ☐ System Configuration

Introducing Compatible XRC

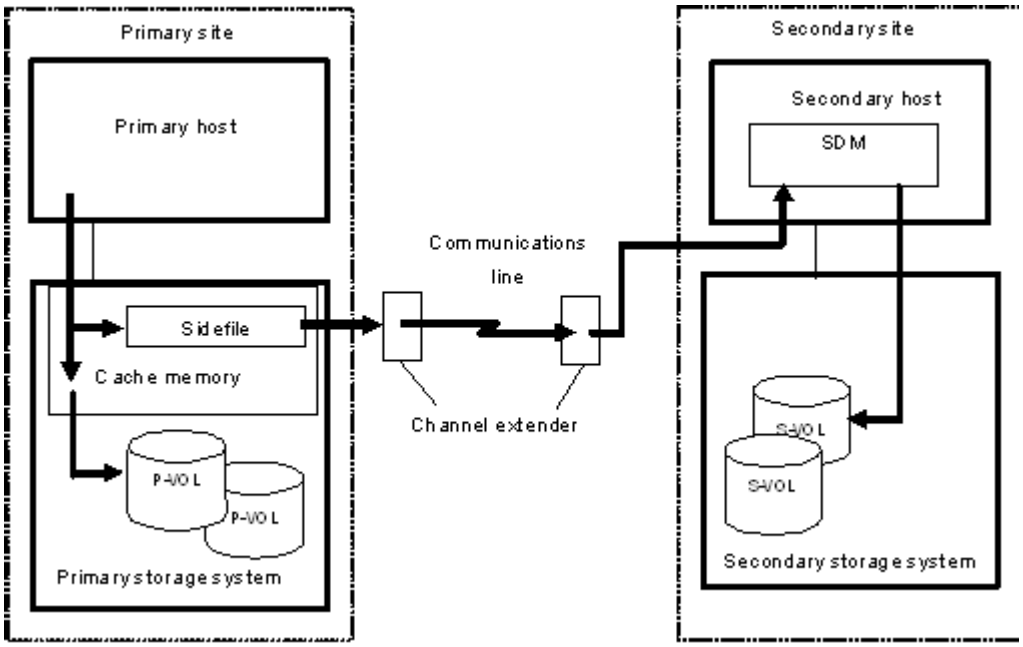
The Hitachi Compatible Replication for IBM® XRC feature (Compatible XRC) for Hitachi Virtual Storage Platform G1000 storage system provides compatibility with IBM Extended Remote Copy (XRC) asynchronous remote copy operations for data backup and recovery in the event of a disaster.

Compatible XRC, used in mainframe systems, interoperates with System Data Mover (SDM) in the Data Facility Storage Management Subsystem (DFSMS) in an XRC environment. Compatible XRC operations are similar to XRC operations, issuing Time Sharing Option (TSO) commands from the host system to logical devices on the Hitachi Virtual Storage Platform G1000 storage system.

In Compatible XRC operations, data written from the host to the primary volume in the primary Hitachi Virtual Storage Platform G1000 storage system are also written temporarily as sidefiles in the cache memory at the primary VSP G1000Hitachi Virtual Storage Platform G1000 storage system. At the secondary site, the System Data Mover (SDM) software asynchronously reads sidefiles via communication lines from the primary storage system at the primary site. SDM then writes data to the secondary volume in the secondary storage system in the same order as it was written at the primary site.

SDM manages pair definitions of the primary and secondary storage systems or pair definitions of the primary and secondary volumes.

The following figure shows an overview of Compatible XRC operations.



Sessions

In Compatible XRC operations, a group of primary volumes is processed as one session. Data is written to the secondary volumes in each session in the same order as it was written at the primary site. In the event of a failure, all volume pairs in the same session are suspended. The write operation is not

performed due to the failure. However, the write order (sequence) is maintained so that the write process can be re-initiated after recovery.

A session is further divided into internal sessions called storage control (SC) sessions for each volume. SDM reads the data written to the VSP G1000 storage system at the primary site in order of time stamp in each SC session. SDM checks the time stamp of each SC session, and determines in what order the data is written to the secondary volumes. Data is written to the secondary volumes in units of session in the same order as it was written at the primary site, not in units of SC session.

SDM manages definitions of sessions and SC sessions. They are defined for session IDs and volumes by TSO command in the storage system.

TSO commands

The following settings concerning XRC operations are defined by the Time Sharing Option (TSO) commands issued to the storage system from the host system.

- Creation and deletion of pair volumes
- Creation of utility volumes
- Display of pair status
- Display of session status
- Display of utility volume status
- Integration and withdrawal from the session
- Recovery at the secondary site
- Resuming suspended pairs
- Start and end of the session
- Suspending of pairs

For details on the TSO commands for Compatible XRC operations, see the IBM documentation for DFSMS advanced copy services(SC23-6847-00).

Note: Document numbers may change from one document release to another. In addition, the last 2 digits of the IBM document number represent the document version. For example, the document SC23-6847-00 is the version of the Advanced Copy Services document for z/OS 2.1.

Resources available for each function

The Device Manager - Storage Navigator secondary window shows all the resources in the storage system. However, the functions described in this manual are only available to the resources that are assigned to the account of users who log into Device Manager - Storage Navigator. Verify the resource group ID in the Basic Information Display dialog boxes, and then execute the operations for the resources assigned to the user account. When you use the functions, the resources for each operation must satisfy the specific conditions.

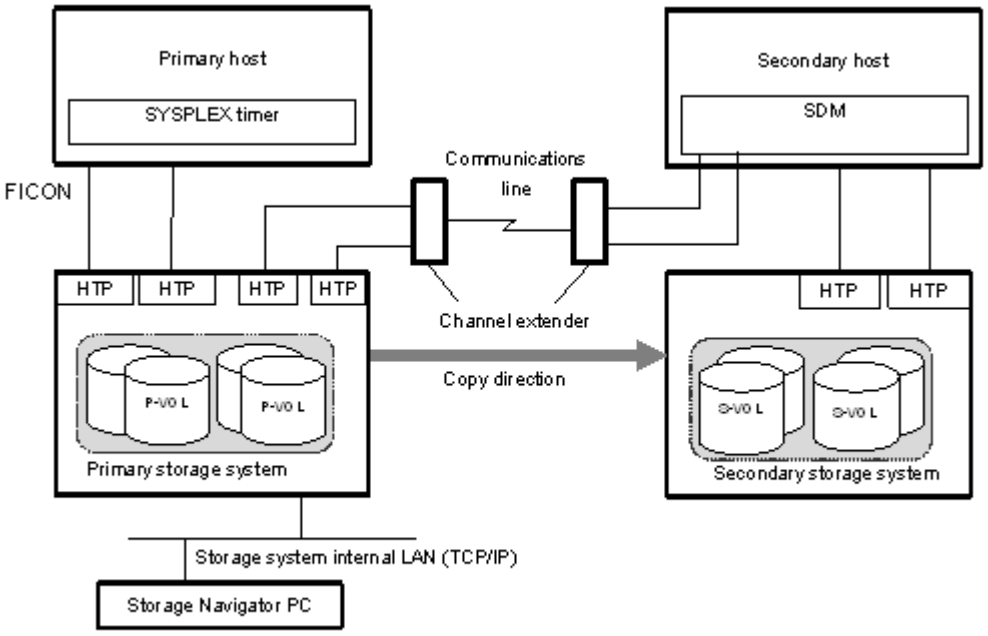
For details about user accounts, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

For details on the conditions of the resources, see the *Provisioning Guide for Open Systems* or the *Provisioning Guide for Mainframe Systems.*

System Configuration

Compatible XRC operations require hosts and storage systems at the primary and secondary sites. If operation at the secondary site is required, the secondary storage system (or systems) must be capable of supporting the XRC workload. If the system at the primary site consists of several hosts, a SYSPLEX timer is required in the primary host to provide a common time reference for the I/O time-stamping function. The secondary host requires the SDM host software for remote copy operations. The Compatible XRC feature needs to be installed in the primary storage system, and the Device Manager - Storage Navigator is required at the primary site for setting XRC options.

The following figure shows the connection configuration of channel extenders for Compatible XRC operations.



2

Requirements and restrictions

This topic provides system requirements and restrictions for using Compatible XRC.

- ☐ Set up and requirements
- ☐ Restrictions on usage

Set up and requirements

System requirements

The Compatible XRC system requirements are:

- Primary host

  If the system in the primary site consists of several hosts, a SYSPLEX timer is required in the primary host to provide a common time reference for the I/O time-stamping function.
- Secondary host

  The secondary host requires the System Data Mover (SDM) host software for remote copy operations.
- Primary Hitachi Virtual Storage Platform G1000

  The Compatible XRC software must be installed in the primary VSP G1000.

  When the controller emulation type is I-2107, the Compatible XRC software must be installed.
- Secondary Hitachi Virtual Storage Platform G1000

  The secondary storage system does not have to be the same make and model as the primary, but we recommend that you use the VSP G1000 as a secondary storage system. The installation of the Compatible XRC software is not required for the secondary storage system.
- Communication path connection
  - If a director (such as Ultranet) is used for connection, the maximum distance between the primary storage system and secondary host is 20 km.
  - If a director and repeater are used for connection, the maximum distance between the primary storage system and secondary host is 40 km.
  - If a channel extender is used for connection, no restriction is applied to the distance between the primary storage system and secondary host.

    The following channel extenders are supported.

    Brocade USD-X and 7500. Line type: ATM lines (Up to 135 Mbps), IP lines (500 Mbps).
- Device Manager - Storage Navigator

  You must have Device Manager - Storage Navigator at the primary site. The Device Manager - Storage Navigator secondary windows must be enabled for Compatible XRC. A license key for Compatible XRC must be installed in the primary array to enable the product.

For instructions on installing and using Device Manager - Storage Navigator and Compatible XRC, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

Supported XRC functions in XRC2 and XRC3

The following table lists the supported Compatible XRC features in IBM XRC functions (XRC2 and XRC3).

Feature	Description	XRC2	XRC3
DEV blocking	Sidefile threshold tuning feature for each volume.	Supported	Supported
Unplanned outage	Differential copy feature for unplanned outage achieved by the differential bit management in the storage system.	Not supported	Supported
CNT MULTI path	Alternate path retry feature for CNT USD[1] connections.	Not supported	Supported
Fix utility	Fix or Float of Utility DEV setting feature.	Not supported	Supported[2]
Suspend on Long Busy	Suspend setting feature which does not report SCP from SDM.	Not supported	Supported[3]
Write Pacing	Feature to set arbitrary Sleep Time from SDM when the amount of write data is controlled.	Not supported	Supported[4]
Multiple Reader	This function enables SDM to read the sidefile parallel using the primary session and its auxiliary sessions in the primary storage control session. It reduces data stagnation of the sidefile compared with ordinary Single Reader.	Not supported	Supported[5]
Extended Distance FICON	This function is used to reduce the handshake time to connect the channel and control unit, and then uses the extended IU Pacing protocol to maintain the long distance communication status.	Not supported	Supported

Notes:

1. CNT extender (Ultranet Storage Director).
2. Only Fix of Utility DEV is supported (Float is not supported).
3. Operates when Level 2 Suspend is set to Disabled in the option of Compatible XRC. Level 2 Suspend operation will be processed preferentially, when Level 2 Suspend is set to Enable.
4. Operates when Block Option is set to Volume Level in the option of Compatible XRC. Write Pacing will not operate when Block Option is set to Cache Level.
5. Functioning on DKC emulation type I-2107 and later.
6. Install Compatible PAV or Compatible Hyper PAV, if you use this function. See Using Compatible XRC with Compatible Hyper PAV Software on page 3-7, when you use Compatible Hyper PAV.

When the controller emulation type is I-2107, both XRC2 and XRC3 are supported.

Number of sessions for Compatible XRC and CC

The following table shows the number of supported sessions in Compatible XRC.

Unit	Number of Sessions
Per storage system	Number of CUs x 64
Per CU	64*
Per volume	1
*Primary and auxiliary sessions are assigned when Multiple Reader function is used. The number of auxiliary sessions is a parameter of NumberReaderTasks which is defined in a XRC PARMLIB data set. This parameter defines multiplicity of auxiliary sessions on a primary session. For example, the following example shows that the three auxiliary sessions are enabled and multiply on a primary session. `NumberReaderTasks *,4`	

The number of Concurrent Copy (CC) and Compatible XRC sessions for each volume depends on the combination of CC and XRC (XRC2 and XRC3). The following table shows the number of sessions for each volume.

Session Type	Device Emulation Type (3390-1, 3390-2, 3390-3, 3390-9, 3390-A, 3390-L, 3390-M)	
	Number of CC Sessions	Number of Compatible XRC Sessions
CC only	16	N/A
CC and XRC2	15	1
CC and XRC3 Single Reader	15	1
CC and XRC3 Multiple Reader	15	1 (Primary session) 0-15 (Auxiliary Sessions)

Performance considerations

Note the following important performance considerations for Compatible XRC operations:

- *Block size.* Consider the block sizes when configuring the SC sessions: do not issue too many write I/Os with large blocks to one SC session.
- *SDM tuning.* The performance of Compatible XRC is affected by the performance of SDM. You must tune SDM to achieve the desired performance. For information on SDM tuning, see the IBM document *Implementing ESS Copy Services on S/390*.

Restrictions on usage

Behavior of option settings

The behavior of options set in the Change Option window is affected by the `Do not Block` parameter of the `XADDPAIR` command of SDM. The following table shows the Compatible XRC options and the behavior of the VSP G1000 storage system of the `Do not Block` parameter of the `XADDPAIR` command of SDM.

Compatible XRC Options		Behavior of the VSP G1000 storage system	
Option	**Setting**	**"Do not Block" is Specified by SDM**	**"Do not Block" is Not Specified by SDM ("Block" is Specified)**
Do not Block (Volume Level)	Enable	The storage system does not control the amount of data to be written to the specified volume.	According to the amount of used sidefile capacity, the storage system performs the `"Sleep" - "Wait"` command retry when the threshold specified by SDM is exceeded.
	Disable*	N/A	N/A
Level 1 Sleep	Enable*	N/A	N/A
	Disable	The storage system does not perform the `"Sleep" - "Wait"` command retry.	According to the amount of used sidefile capacity, the storage system performs the `"Sleep" - "Wait"` command retry when the threshold specified by SDM is exceeded.
Level 1 SIM	Enable	The storage system does not report an SIM to the host when the usage of sidefile exceeds the sleep wait threshold.	The storage system reports an SIM to the host when the usage of sidefile exceeds the sleep wait threshold.
	Disable	The storage system does not report an SIM to the host when the usage of sidefile exceeds the sleep wait threshold.	The storage system does not report an SIM to the host when the usage of sidefile exceeds the sleep wait threshold.
Level 2 Suspend	Enable*	—	—
	Disable	Even when the amount of used sidefile capacity exceeds the level-2 threshold, level-2 suspension does not occur and the storage system does not report SCP-SCI to the host.	Even when the amount of used sidefile capacity exceeds the level-2 threshold, level-2 suspension does not occur and the storage system does not report SCP-SCI to the host.
* You cannot use this setting when the block option of XRC is set to *Volume Level*.			

The following table shows the behavior of a storage system when the block option is "Cache Level."

Compatible XRC Options		Behavior of the VSP G1000 storage system	
Option	**Setting**	**Do not Block is specified by SDM and Do not Block (Volume Level) is enabled**	**Do not Block is Not specified by SDM (Block is specified) or Do not Block (Volume Level) is disabled**
Level 1 SIM	Enable	The storage system does not report an SIM to the host when the amount of used sidefile capacity exceeds the sleep wait threshold.	If Level 1 Sleep is enabled, the storage system reports an SIM to the host when the amount of used sidefile capacity exceeds the sleep wait threshold. If Level 1 Sleep is disabled, the storage system does not report an SIM to the host when the amount of used sidefile capacity exceeds the sleep wait threshold.
	Disable		The storage system does not report an SIM to the host when the amount of used sidefile capacity exceeds the sleep wait threshold.
Level 1 Sleep	Enable	The storage system does not perform the "Sleep" - "Wait" command retry. Level 2 Suspend does not occur when the amount of used sidefile capacity exceeds the level 2 threshold. And the storage system does not report SCP-SCI to the host. [1,3]	The storage system performs the "Sleep" - "Wait" command retry when excess of the sleep wait threshold occurs. Level 2 Suspend does not occur when the amount of used sidefile capacity exceeds the level 2 threshold. And the storage system reports SCP-SCI to the host. [2] (The storage system restricts the host I/O data flow to prioritize the retention of XRC pair status when the used sidefile capacity is overloaded.)
Level 2 Suspend	Disable		
Level 1 Sleep	Disable		The storage system does not perform the "Sleep" - "Wait" command retry when excess of the sleep wait threshold occurs. Level 2 Suspend occurs when the amount of used sidefile capacity exceeds the level 2 threshold. [3] (The storage system suspends the XRC pair to prioritize the retention of host I/O performance when the used sidefile capacity is overloaded.)
Level 2 Suspend	Enable		

Compatible XRC Options		Behavior of the VSP G1000 storage system	
Option	**Setting**	**Do not Block is specified by SDM and Do not Block (Volume Level) is enabled**	**Do not Block is Not specified by SDM (Block is specified) or Do not Block (Volume Level) is disabled**
Notes: 1. When you specify the `Do not Block` in the **`Xaddpair`** command parameter, enable the `Do not Block` in the Compatible XRC option settings. 2. When you prioritize the retention of XRC pair status, set the `Level 1 Sleep` to Enable and `Level 2 Suspend` to Disable. 3. When you prioritize the retention of host I/O performance, specify the `Do not Block`, or set the `Level 1 Sleep` to Disable and `Level 2 Suspend` to Enable.			

Multiple CLPR use

If you want to use Compatible XRC and more than one cache logical partition (CLPR), we recommend that you use SC sessions in the same CLPR. Compatible XRC options can be set for each CLPR. If there are sessions in CLPR, when the sidefile usage for CLPR reaches *level-2* (if the *Level 2 Suspend* option of Compatible XRC is enabled) or *level-3*, sessions containing the maximum number of sidefiles in the cache are suspended. If you want to use Compatible XRC in CLPRs, and if you assign MP blades to LDEVs that are used as utility volumes, we recommend assigning different MP blades to each CLPR.

3390-A and 3390-M devices

To use a 3390-A or 3390-M device as Compatible XRC P-VOL or S-VOL, apply the System Data Mover (SDM) software at the secondary site with the following PTFs (program temporary fixes):

- z/OS V1R6:[PTF]UA18053: SUPPORT XRC VOLUME SIZE UP TO 65520 CYL
- z/OS V1R5:[PTF]UA18052: SUPPORT XRC VOLUME SIZE UP TO 65520 CYL
- z/OS V1R4:[PTF]UA18051: SUPPORT XRC VOLUME SIZE UP TO 65520 CYL

If this PTF has not been applied to the SDM, the 3390-A or 3390-M devices cannot be used as P-VOLs or S-VOLs in Compatible XRC operations.

Offline microcode replacement or volatile PS-ON

If one of following actions is performed while Compatible XRC is operating, the storage control (SC) session of the storage system will be automatically terminated:

- Offline microcode replacement is performed requiring a power cycle of the storage system.
- The information in the cache memory is not maintained across the power cycle. This is called a "volatile PS-ON."

When this session is terminated, the session of the SDM side of the secondary site is suspended but the following RESUME operation may fail. To avoid the RESUME failure:

- Before replacing the microcode offline, delete all Compatible XRC pairs with the XDELPAIR command before PS OFF, and then create all pairs again with the XADDPAIR command after PS ON.
- When performing volatile PS ON, delete all Compatible XRC pairs with the XDELPAIR command immediately after PS ON, and then create all pairs again with the XADDPAIR command.

Maintenance

When a maintenance operation is needed while Compatible XRC is being used, I/Os for Compatible XRC pair volumes or Compatible XRC itself should be stopped before the maintenance operation.

If a maintenance operation must be done while Compatible XRC is being used, before you start the maintenance operation, confirm that the usage of the Sidefile monitor is less than 20% of total Cache capacity by monitoring each combination of MPPK and CLPR usage. Do not perform the maintenance operation unless the Sidefile monitor usage is less than 20% of total Cache capacity.

Setting change of the MP blade assigned to LDEVs

The MP blade assigned to the LDEV that is used as a utility volume for Compatible XRC can be changed only when the XRC session is suspended and the number of the sidefiles of the target session is zero.

Sidefile monitor can be incorrect after a failure

When the XRC session is suspended due to a failure, the sidefile monitor might not display 0%, even if all sessions in CLPR are suspended. If the XRC session is removed, the display of the sidefile monitor changes to 0%.

3

Interoperability with other products and functions

This topic provides information about Compatible XRC interoperability with other products and functions.

- Volume sharing between Compatible XRC and other copy functions
- Using two Compatible XRC pairs together
- Using Compatible XRC with TrueCopy for Mainframe
- Using Compatible XRC with ShadowImage for Mainframe
- Using Compatible XRC with Compatible FlashCopy® V2
- Using Compatible XRC with Compatible Hyper PAV Software
- Configuration for the XRC Multiple Reader function
- Using Compatible XRC with other VSP G1000 software

Volume sharing between Compatible XRC and other copy functions

The VSP G1000 supports concurrent operations of Compatible XRC with other copy functions. The following table indicates whether Compatible XRC volumes can be shared with other copy functions.

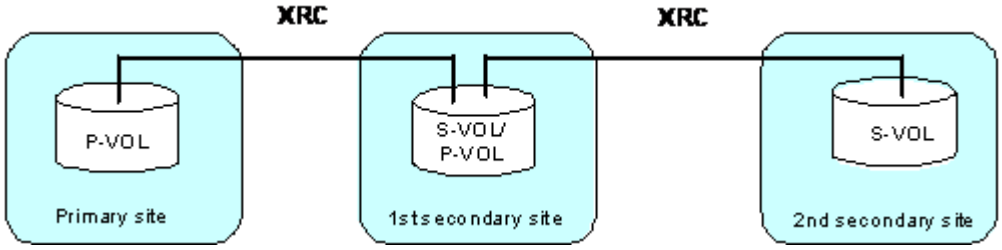
Compatible XRC volumes	Volumes of other copy functions									
	Compatible XRC P-VOL	Compatible XRC S-VOL	URz P-VOL[1]	URz S-VOL[2]	TCz P-VOL[3]	TCz S-VOL[4]	SIz P-VOL[5]	SIz S-VOL[6]	FCv2 S-VOL[7]	FCv2 T-VOL[8]
Compatible XRC P-VOL	N/A	Yes[9]	No	No	Yes	No	Yes[10]	No	Yes	No
Compatible XRC S-VOL	Yes [9]	N/A	No	No	Yes	No	Yes	No	Yes	No

Notes:

1. Primary volume of a URz pair.
2. Secondary volume of a URz pair.
3. Primary volume of a TCz pair.
4. Secondary volume of a TCz pair.
5. Primary volume of an SIz pair.
6. Secondary volume of an SIz pair.
7. Source volume of a FlashCopy pair.
8. Target volume of a FlashCopy pair.
9. A Compatible XRCS-VOL cannot be used as an Compatible XRC P-VOL within the same Compatible XRC session, but it can be used as an Compatible XRC P-VOL in another Compatible XRC session.
10. When the Compatible XRC P-VOL and the SIz are the same volume, you cannot use the Reverse Copy or Quick Restore commands of SIz.

Using two Compatible XRC pairs together

You can use two Compatible XRC pairs together to maintain three copies of data at multiple secondary sites for disaster recovery purposes. The following figure shows the configuration in which two Compatible XRC operations are performed. Data is copied from the primary site to the first secondary site using Compatible XRC, and then the same data is copied from the first secondary site to the second secondary site using Compatible XRC.

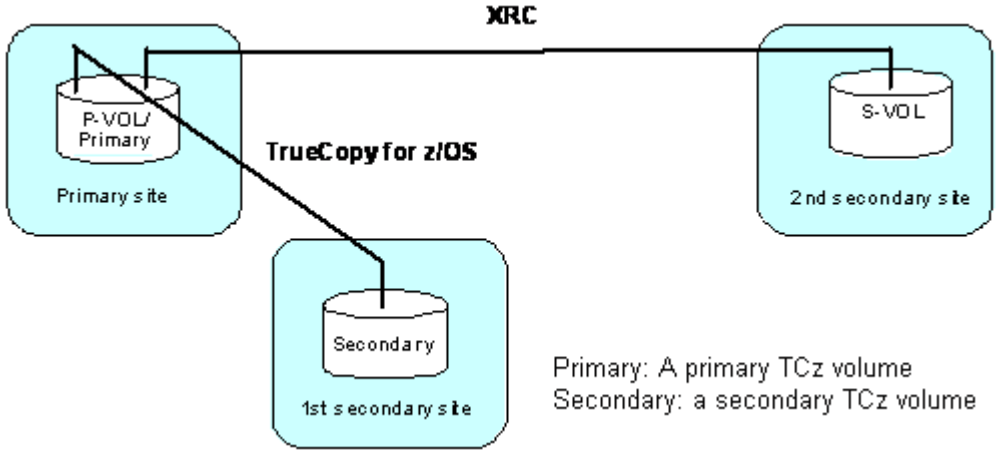


Using Compatible XRC with TrueCopy for Mainframe

The VSP G1000 supports the use of Compatible XRC with TrueCopy for Mainframe (TCz) to maintain three copies of critical data at your primary and/or secondary sites for disaster recovery purposes.

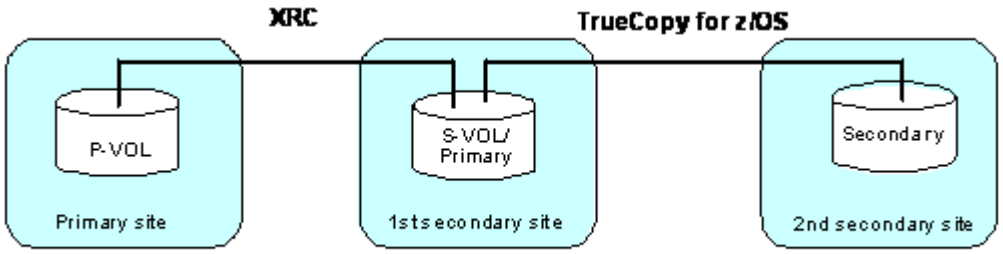
Compatible XRC P-VOL functioning as TCz primary volume

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC P-VOL and a TCz primary volume. In this configuration, data is copied from the primary site to the first secondary site using TCz.



Compatible XRC S-VOL functioning as TCz primary volume

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC S-VOL and a TCz primary volume. In this configuration, data is copied from the primary site to the first secondary site using Compatible XRC, and it is copied from the first secondary site to the second secondary site using TCz.

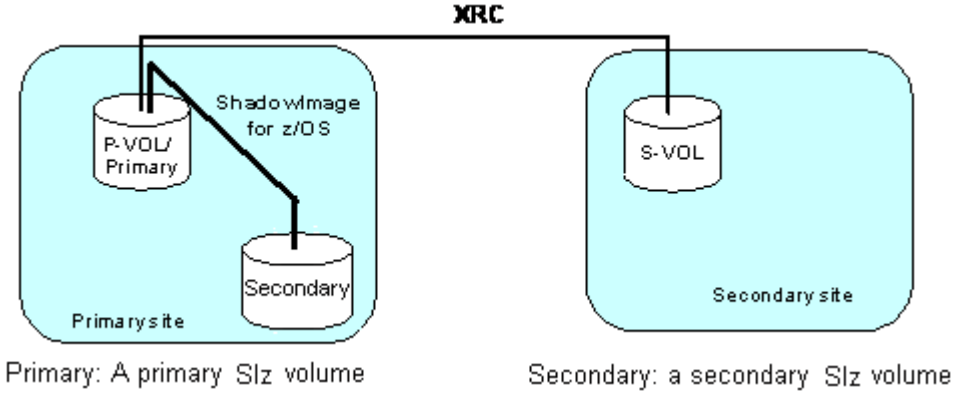


Using Compatible XRC with ShadowImage for Mainframe

The VSP G1000 supports the use of Compatible XRC with ShadowImage for Mainframe (SIz) to maintain data in the secondary site and the primary site for disaster recovery and data migration purposes.

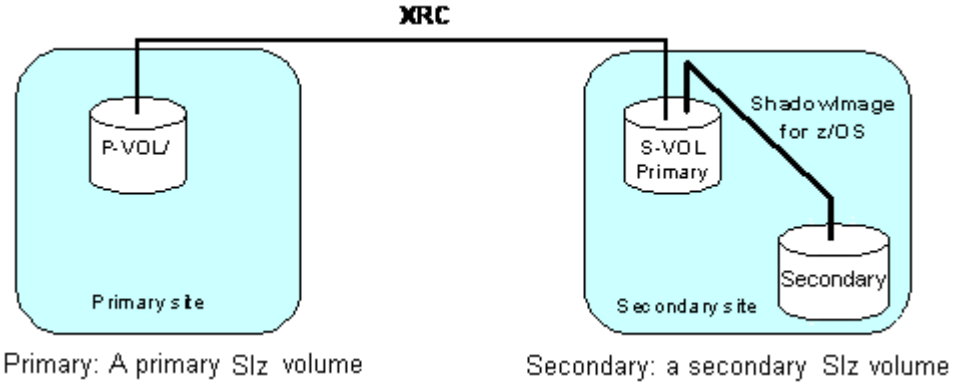
Compatible XRC P-VOL functioning as SIz S-VOL

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC P-VOL and an SIz S-VOL. In this configuration, data is copied within the primary site using SIz, and it is copied from the primary site to the secondary site using Compatible XRC.



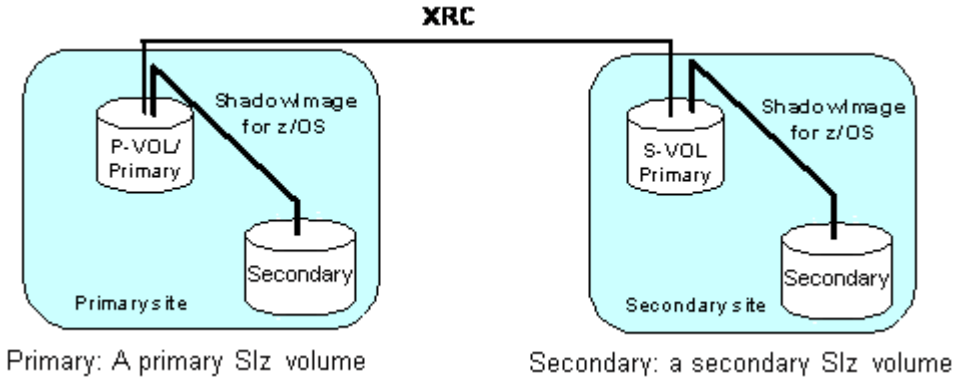
Compatible XRC S-VOL functioning as SIz primary volume

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC S-VOL (secondary volume) and an SIz primary volume. In this configuration, data is copied from the primary site to the secondary site using Compatible XRC, and then it is copied within the secondary site using SIz.



Compatible XRC P-VOL and S-VOL both functioning as SIz primary volumes

The following figure shows the configuration in which one volume is functioning as both a Compatible XRC P-VOL and an SIz primary volume (source volume) and another volume is functioning as both a Compatible XRC S-VOL (secondary volume) and an SIz primary volume In this configuration, data is copied within the primary site using SIz, and it is copied from the primary site to the secondary site using Compatible XRC. Afterward, it is copied within the secondary site using SIz.



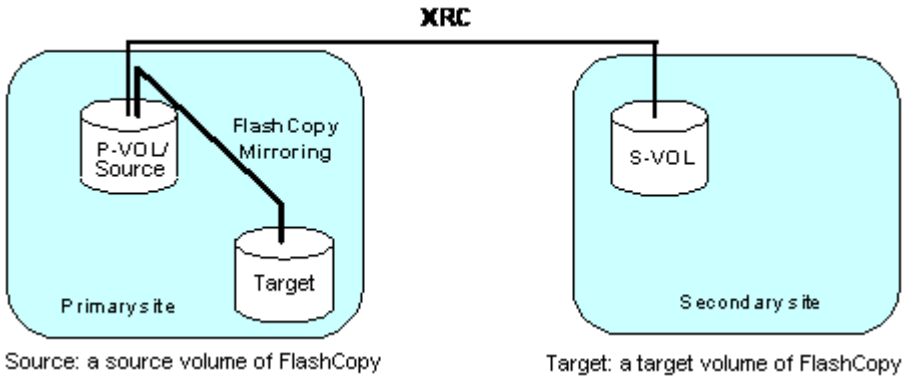
Using Compatible XRC with Compatible FlashCopy® V2

The VSP G1000 supports the use of Compatible XRC with Hitachi Compatible Mirroring for IBM® FlashCopy® V2 (Compatible FlashCopy® V2) to maintain data in the secondary site and the primary site for disaster recovery and data migration purposes.

Compatible XRC P-VOL functioning as Compatible FlashCopy® V2 S-VOL

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC P-VOL and a Compatible FlashCopy® V2 S-VOL. In this configuration, data is copied within the primary site using Compatible

FlashCopy® V2, and it is copied from the primary site to the secondary site using Compatible XRC.

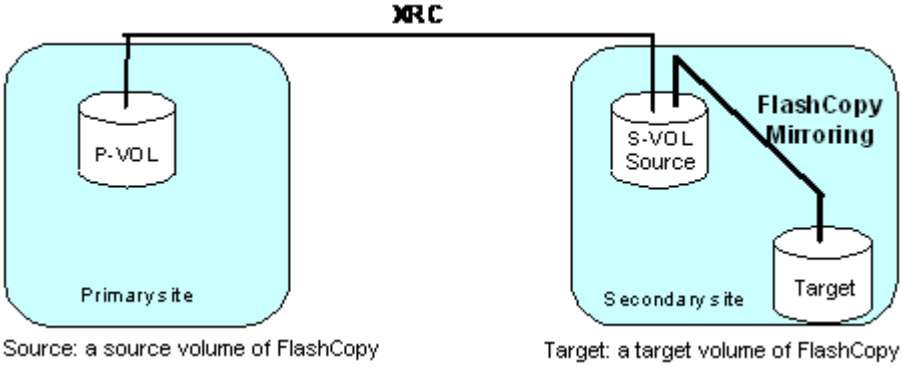


Source: a source volume of FlashCopy

Target: a target volume of FlashCopy

Compatible XRC S-VOL functioning as Compatible FlashCopy® V2 source volume

The following figure shows the configuration in which a volume is functioning as both a Compatible XRC source volume and a Compatible FlashCopy® V2 S-VOL (source volume). In this configuration, data is copied from the primary site to the secondary site using Compatible XRC, and it is copied within the secondary site using Compatible FlashCopy® V2.

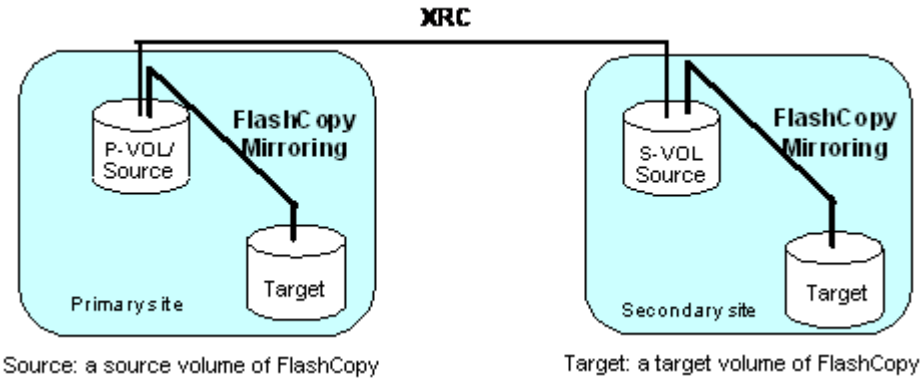


Source: a source volume of FlashCopy

Target: a target volume of FlashCopy

Compatible XRC P-VOL and S-VOL both functioning as Compatible FlashCopy® V2 source volumes

The following figure shows the configuration in which one volume is functioning as both a Compatible XRC P-VOL and a Compatible FlashCopy® V2 source volume, and another volume is functioning as both a Compatible XRC S-VOL and a Compatible FlashCopy® V2 source volume. In this configuration, data is copied within the primary site using Compatible FlashCopy® V2, and then it is copied within the secondary site using Compatible FlashCopy® V2.



Source: a source volume of FlashCopy

Target: a target volume of FlashCopy

Using Compatible XRC with Compatible Hyper PAV Software

Be careful when using Compatible Hyper PAV Software with the XRC Multiple Reader function and FICON® Data Migration.

You may be unable to use the XRC Multiple Reader function because of abnormal termination of I/O in XRC Multiple Reader when the base volume for the alias is being used as the Mapping Volume (P-VOL for FICON DM pair) in FICON® Data Migration.

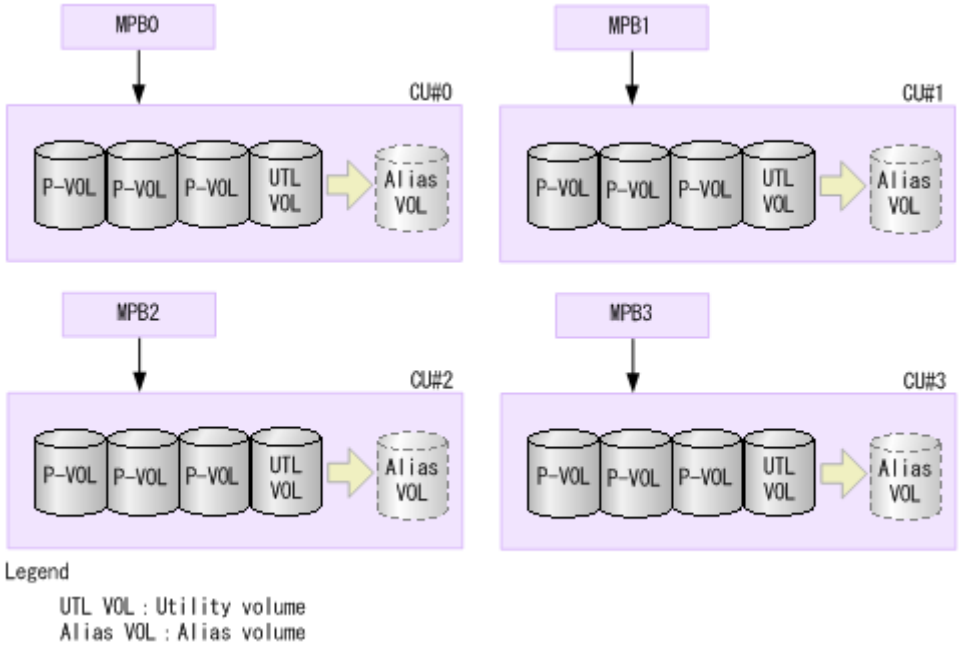
If the base volume on the Compatible PAV in Device Manager - Storage Navigator is being used this way, do not distribute aliases.

Configuration for the XRC Multiple Reader function

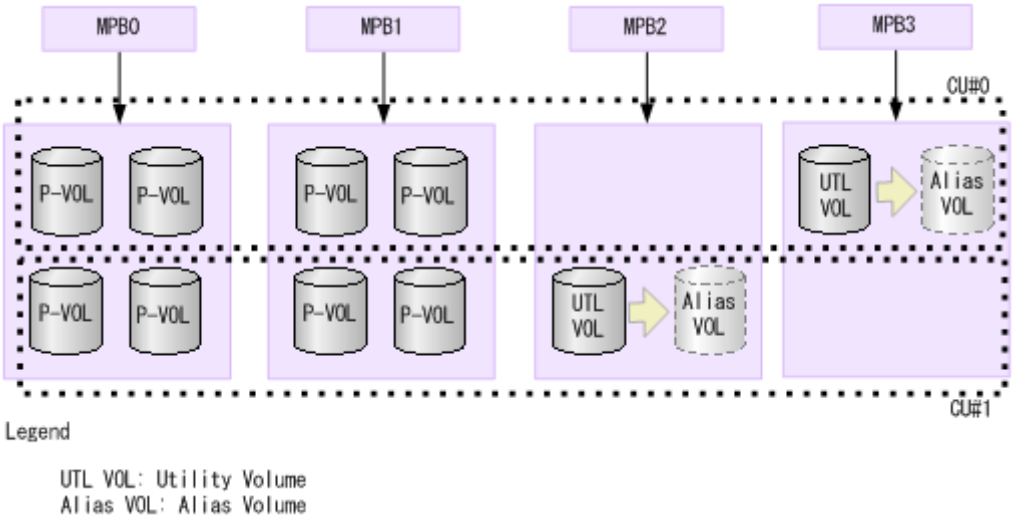
We recommend that the utility volume in a CU for the XRC session and an alias volume for Compatible Hyper PAV are owned by the same MP blade. When you use the XRC Multiple Reader function, you can configure the LDEV ownership and Compatible PAV in several different ways.

- Configure one MP blade to own all LDEVs in a CU.

  Using this configuration, you can create a record set for the data writing and process the Read Record Set with the same MP blade. This balances the worload in the VSP G1000 across the MP blades. However, if the workload is not balanced among CUs, the workload will not be balanced for each MP blade.



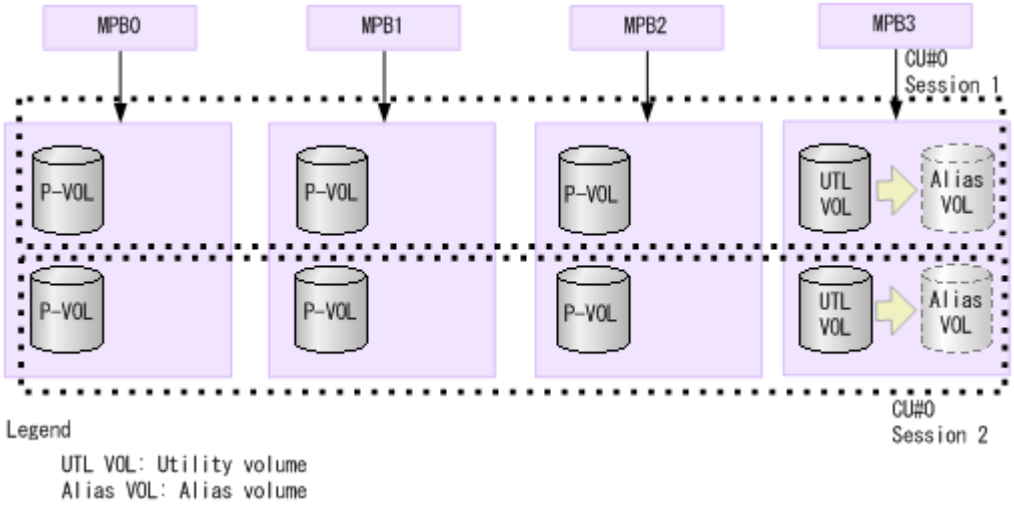
- Assigning LDEVs in a CU to multiple MP blades.
  LDEVs in a CU are assigned to multiple MP blades, and aliases assigned by Compatible PAV to the utility volume remain on one MP blade. In this configuration, the record sets are created in multiple blades, but the Read Record Set operation is performed in one blade. This configuration provides an alternative for using DKCs when you cannot configure all device ownership under one MP blade. This configuration can also reduce workload among MP blades, because the data writing operations in a CU are performed in multiple MP blades.



- Using volumes in a CU with several sessions.
  To use volumes in a CU with several sessions, define the configuration as follows:
  - Allocate all alias volumes allocated by Compatible PAV to the utility volumes in any sessions.

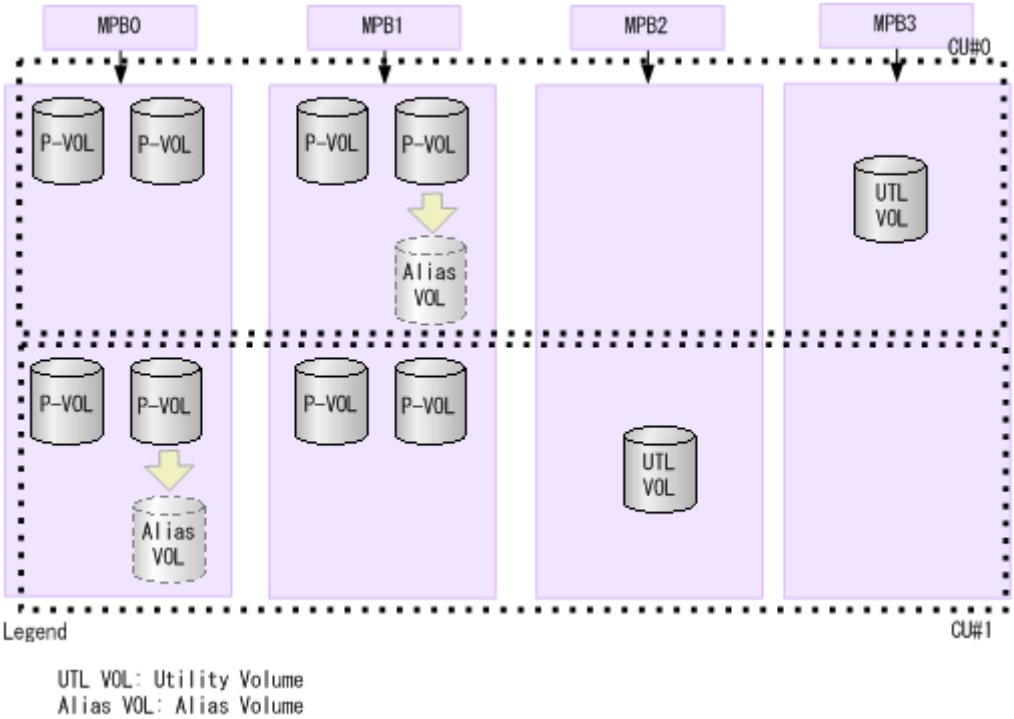
- Consolidate all utility volumes for each session into one MP blade.

  In this configuration, the record sets are created in multiple MP blades, but the Read Record Set operation is performed in one blade. The data writing operations in a CU are performed in multiple MP blades, therefore MP working ratio is averaged. However, we do not recommend this setting, because processing is not efficient compared with assigning LDEVs in a CU to multiple MP blades.



- Using the XRC Multiple reader function when the P-VOL uses PAV aliases.

  We do not recommend this setting. This setting is not efficient because both creating record set when writing data and the Read Record set processing are performed in multiple MP blades.



Using Compatible XRC with other VSP G1000 software

- You can use Compatible XRC with Compatible Software for IBM® FlashCopy® SE. For details, see the topic on interoperability with other products and functions in the *Hitachi Compatible FlashCopy® User Guide*.
- You can use Dynamic Provisioning for Mainframe or Dynamic Tiering for Mainframefor the Compatible XRC P-VOL and S-VOL.

4

Using Compatible XRC

This topic provides instructions for using the features of Compatible XRC.

- Launching Compatible XRC
- Configuring Compatible XRC
- Changing the settings in the preview list
- Deleting the settings in the preview list

Launching Compatible XRC

To open the Compatible XRC window:

1. Log on to the VSP G1000.
2. Log in to Device Manager - Storage Navigator.
   The Device Manager - Storage Navigator main window appears.
3. On the Device Manager - Storage Navigator menu bar, click **Action** > **Mainframe Connection** > **XRC**.
   The **Compatible XRC** window appears.
4. Change to Modify mode.
   For information about changing to modify mode, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

For instructions on using Device Manager - Storage Navigator, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

To complete the Compatible XRC operations, click **Close** ().

Related topics

- Compatible XRC window on page B-2

Configuring Compatible XRC

Use Compatible XRC to set the Compatible XRC options.

1. Click **Action > Mainframe Connection > XRC**. The Compatible XRC window opens.
2. Change to **Modify** mode.
   For information about changing to modify mode, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.
3. In the XRC options table, right-click the CLPRs for which you want to make option settings.
4. On the pop-up menu, select **Change Option**.
5. In the **Change Option** dialog box, set the desired Compatible XRC options.
   To apply the same Compatible XRC options to all CLPRs, select **The same setting is applied** check box, and click **OK** on the confirmation message.
6. When you have finished changing Compatible XRC options, click **OK** to save your changes and close the **Change Option** dialog box.
   The requested Compatible XRC option settings are displayed in the **Preview** list, and the requested changes are displayed in blue, bold, italics in the XRC option list.

7. Click **Apply**.
   Depending on your settings, a confirmation dialog box may appear and inform you that one or more pairs may be suspended.
8. When you have finished confirming the dialog box, click **OK**.
   A confirmation dialog box appears and asks whether you apply the settings to the storage system.
9. When you have finished confirming the dialog box, click **OK**.
   A confirmation dialog box appears and informs you that the operation is finished.
10. Click **OK**.
    The settings are reflected in the XRC option list in the **Compatible XRC** window. This completes the setting of the Compatible XRC options.

For instructions on using Device Manager - Storage Navigator, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

Related topics

- Change Option window on page B-3

Changing the settings in the preview list

Use the **XRC Option** window to change the settings of the Preview list.

1. On the **Preview** list in the **XRC Option** window, right-click the CLPR for which you want to change the option settings.
2. Click **Change** on the pop-up menu.
   The **Change Option** window appears.
3. In the **Option Change** window, change the settings of the Compatible XRC.
4. When you have finished changing the settings, click **OK**.
   The **Change Option** window closes and the new settings are reflected on the **Preview** list in the **XRC Option** window.
   This completes the changing of settings of the Preview list.

For instructions on using Device Manager - Storage Navigator, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

Related topics

- Change Option window on page B-3

Deleting the settings in the preview list

Use the **XRC Option** window to delete the settings of the Preview list.

1. On the **Preview** list in the **XRC Option** window, right-click CLPR for which you want to delete the option settings.
2. Click **Delete** in the pop-up menu.

   A confirmation dialog box appears and informs you that the settings are deleted from the **Preview** list.
3. When you have finished confirming the dialog box, click **OK**.

   The deleted CLPR disappears from the **Preview** list, and the settings displayed in blue, bold italics in the XRC option disappears.

   This completes the procedure to delete settings in the Preview List

For instructions on using Device Manager - Storage Navigator, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

Related topics

- Change Option window on page B-3

5

Troubleshooting

This topic provides troubleshooting information for Compatible XRC and instructions for calling technical support.

- Getting help
- General troubleshooting
- Console messages

Getting help

If you have difficulty with any of the procedures included in this topic, or if a procedure does not provide the answer or results you expect, please contact the Hitachi Data Systems Customer Support team. See Getting help on page ix in the Preface for information about accessing the support portal.

General troubleshooting

For troubleshooting errors encountered during the Compatible XRC operation, see the *Hitachi Command Suite Messages*.

For troubleshooting general errors of Device Manager - Storage Navigator, see the *Hitachi Command Suite User Guide* or the *Hitachi Virtual Storage Platform G1000 Mainframe System Administrator Guide*.

Console messages

The table shows how to solve the problems when the console messages appear while you are operating the Compatible XRC.

Table 5-1 Compatible XRC console messages and troubleshooting

Console message	Description
ANTX5001E *Device number**, *CMD**, F7, 0001, 0041, 0E00, Sense data, *occurred VOLSER**, - - -	When the message is indicated during a delete operation for the Compatible XRC pairs, the problem might be the delete pair operation. When the error occurs, the retained pair status information between the SDM and the VSP G1000 might differ because the SDM, which issued XDELPAIR, changes the pair status to DELETE while the pair status remains unchanged in the VSP G1000, since the session remains in it. Execute the LISTSESS command to confirm whether the session remains. If the session remains, execute the TERMSESS command to terminate the session.
ANTX5104E (RC=0901)	If you execute the XADDPAIR command within a half minute of executing the XDELPAIR command, the ANTX5104E(RC=0901) console message appears and the Compatible XRC pairs might be suspended. In this case, execute RESUME operation to the suspended pairs. When you execute XADDPAIR command, wait 5 minutes after executing XDELPAIR command.
ANTX5105E (RC=1017)	When the message is indicated during a delete operation for the Compatible XRC pairs, the problem might be the delete pair operation. When the error occurs, the retained pair status information between the SDM and the VSP G1000

Console message	Description
	might differ because the SDM, which issued XDELPAIR, changes the pair status to DELETE while the pair status remains unchanged in the VSP G1000, since the session remains in it. Execute the LISTSESS command to confirm whether the session remains. If the session remains, execute the TERMSESS command to terminate the session.
ANTX5106E LIC ERROR, REAS=00000020	This error can occur when the Compatible XRC session is suspended and the RESUME operation is performed after adding a new utility volume or migrating one with the XADDPAIR command. In this case, perform the RESUME operation again. During I/O, Compatible XRC pairs might be suspended if path failures or PK (CMPK/MPPK/CMFPK) failures occur. This can happen in z/os2.1 or later. In this case, perform the RESUME operation again after failure recovery.
ANTA5107E (RC=9014, REAS=604 or REAS=608)	If the ANTA5107E (RC=9014, REAS=604 or REAS=608) console message appears during the XADDPAIR operation, the Compatible XRC software might not be installed on the VSP G1000. If Compatible XRC is not installed, install it.
ANTA5107E (RC=352, REAS=1)	If you execute the Compatible XRC EXDDPAIR command from multiple LPARs using the same CU, the ANTA5107E (RC=352, REAS=1) console message appears and the command might fail. In this case, execute the Compatible XRC EXDDPAIR command, on multiple LPARs in another CU, or on the same LPAR in the same CU.
ANTX5123W	If the ANTX5123W console message is displayed during the RESUME operation for Compatible XRC pairs, the operation might be unsuccessful. In this case, you must perform the XDELPAIR operation to delete the pairs, and then perform the XADDPAIR operation to create the pairs again.
ANTX5124W	If the Compatible XRC pairs are deleted when a number of sidefiles of the Compatible XRC pairs remain in cache, this message appears, and a time-out error might occur. Deleting the Compatible XRC pairs must not be performed. When the time-out error occurs, the XQUERY TSO command or SCDATA operation must be performed to check that no sidefiles of the Compatible XRC pairs exist on cache before deleting the Compatible XRC pairs. Additionally, in the case of a time-out error, the pair information managed in SDM and DKC might not match. This is because the sessions remain in DKC though the pair-status in SDM where XDELPAIR was performed is deleted. Performing the LISTSESS command can check for the sessions. If you find the

Console message	Description
	remaining sessions, complete the sessions by the TERMSESS command. When the XADDPAIR command is performed after completing sessions, the ANTA5107E (RC=608) message appears, and the XADDPAIR command might fail to perform. You must perform the XADDPAIR command again.
ANTX8117I DELAY=(**********)	This error can occur because of data transmission delay between SDM and the channel extender. In this case, contact the manufacturer of the channel extender.
After the performing of the XQUERY command, "****" appears in RES CNT and THD NT.	This error can occur because of data transmission delay between SDM and the channel extender. In this case, contact the manufacturer of the channel extender.
Time-out error	If you resume the Compatible XRC pair when the sidefiles of the Compatible XRC pair remain on cache in the following condition, the time-out error occurs. The Compatible XRC pair must not be performed. • The XSUSPEND TSO command was performed to suspend the pair-volume. • Any failure made the pair-volume suspended. When the time-out error occurs, the XQUERY TSO command must be performed to check that no sidefiles of the Compatible XRC pairs exist on cache before resuming the Compatible XRC pairs. If you delete Compatible XRC pairs after the time-out error occurs, the session might remain on the disk controller side. Execute the LISTSESS command to confirm whether the session remains. If the session remains, execute the TERMSESS command to terminate the session.
*The device number, CMD, and occurred VOLSER are unique for your system.	

A

Controlling the amount of write data

This topic describes how to control the amount of write data the storage system performs according to the sidefile capacity.

- When the Do not Block option is enabled
- When the Do not Block option is disabled

When the Do not Block option is enabled

When the **Cache Level Do not Block** option is selected, depending on the sidefile capacity, the storage system performs one of the following three levels for controlling the amount of write data.

- Level 1: This level of control is performed when the sidefile capacity is equal to or larger than the level-1 threshold, and is smaller than the level-2 threshold.

  When Level 1 Sleep is set to **Enable**, write I/Os to volumes are put in a wait status by command retry when the sleep wait threshold (that is, level-1 threshold) is exceeded.

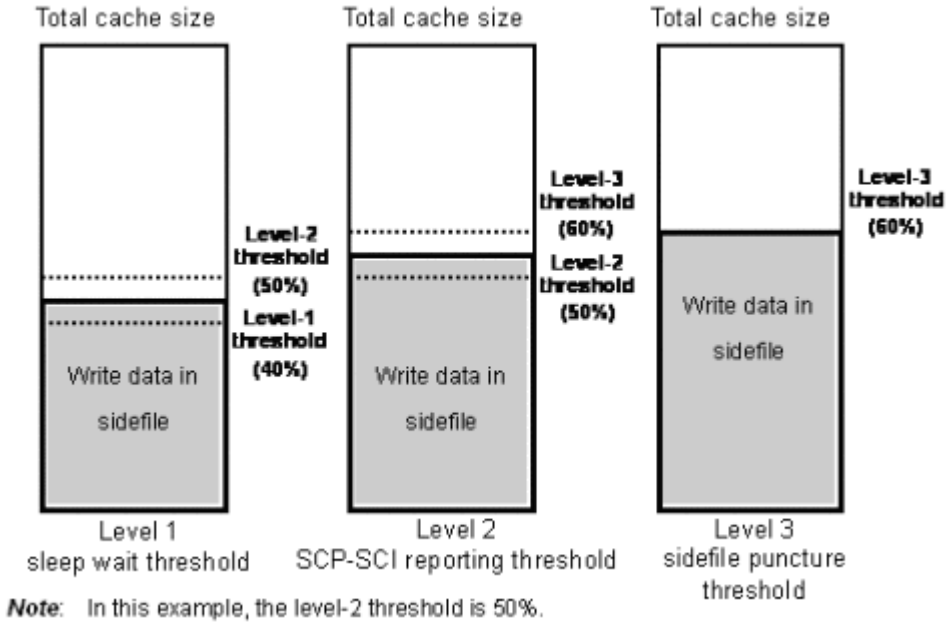
  When Level 1 Sleep is set to **Disable**, write I/Os to volumes will not be put in a wait status.
- Level 2: This level of control is performed when the sidefile capacity is equal to or larger than the level-2 threshold, and is smaller than the level-3 threshold.

  When Level 2 Suspend is set to **Disable**, write I/Os to volumes are put in a wait status by SCP-SCI reporting when the SCP-SCI reporting threshold (that is, level-2 threshold) is exceeded.

  When Level 2 Suspend is set to **Enable**, the storage system will not report SCP-SCI to hosts. Sidefile puncture will occur and the target session will be suspended. Sidefile puncture is the sidefile threshold plus 10%.
- Level 3: This level of control is performed when the sidefile capacity is equal to or larger than the level-3 threshold.

  Sidefile puncture can occur. The session for the sidefile, containing the maximum capacity in the cache in the CLPR, is suspended.

The following figure shows levels of controlling write data when the Do not Block option is set to cache level.



Note: In this example, the level-2 threshold is 50%.

When the Do not Block option is disabled

When the Do not Block option is disabled, depending on the sidefile capacity, the storage system performs one of the following four levels of control of the amount of write data.

- Level 0: This level of control is performed when the sidefile capacity is smaller than the level-1 threshold.

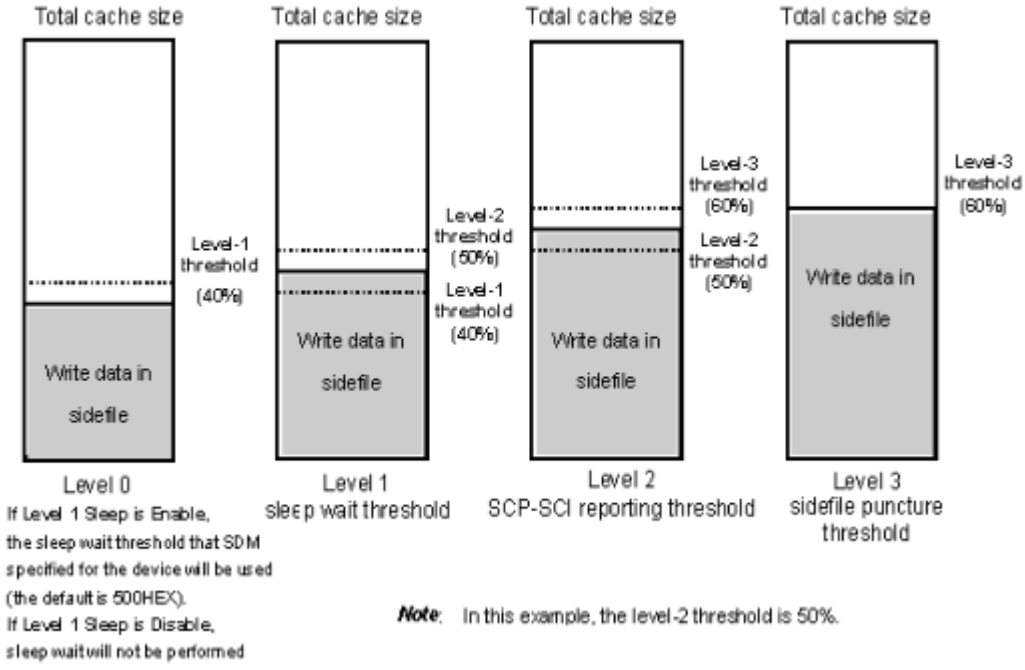
  When Level 1 Sleep is set to Enable, write I/Os to volumes are put in a wait status according to the threshold for the number of record sets for each volume. The threshold is specified by SDM; the default threshold is 0x500.When Level 1 Sleep is set to Disable, write I/Os to volumes are not put in a wait status.
- Level 1: This level of control is performed when the sidefile capacity is equal to or larger than the level-1 threshold, and is smaller than the level-2 threshold.

  Write I/Os to volumes are put in a wait status by command retry when the sleep wait threshold (that is, level-1 threshold) is exceeded.
- Level 2: This level of control is performed when the sidefile capacity is equal to or larger than the level-2 threshold, and is smaller than the level-3 threshold.

  Write I/Os to volumes are put in a wait status by SCP-SCI reporting when the SCP-SCI reporting threshold (that is, level-2 threshold) is exceeded.
- Level 3: This level of control is performed when the sidefile capacity is equal to or larger than the level-3 threshold.

  Sidefile puncture will occur.

The following figure shows levels of controlling write data when the Do not Block option is disabled.



B

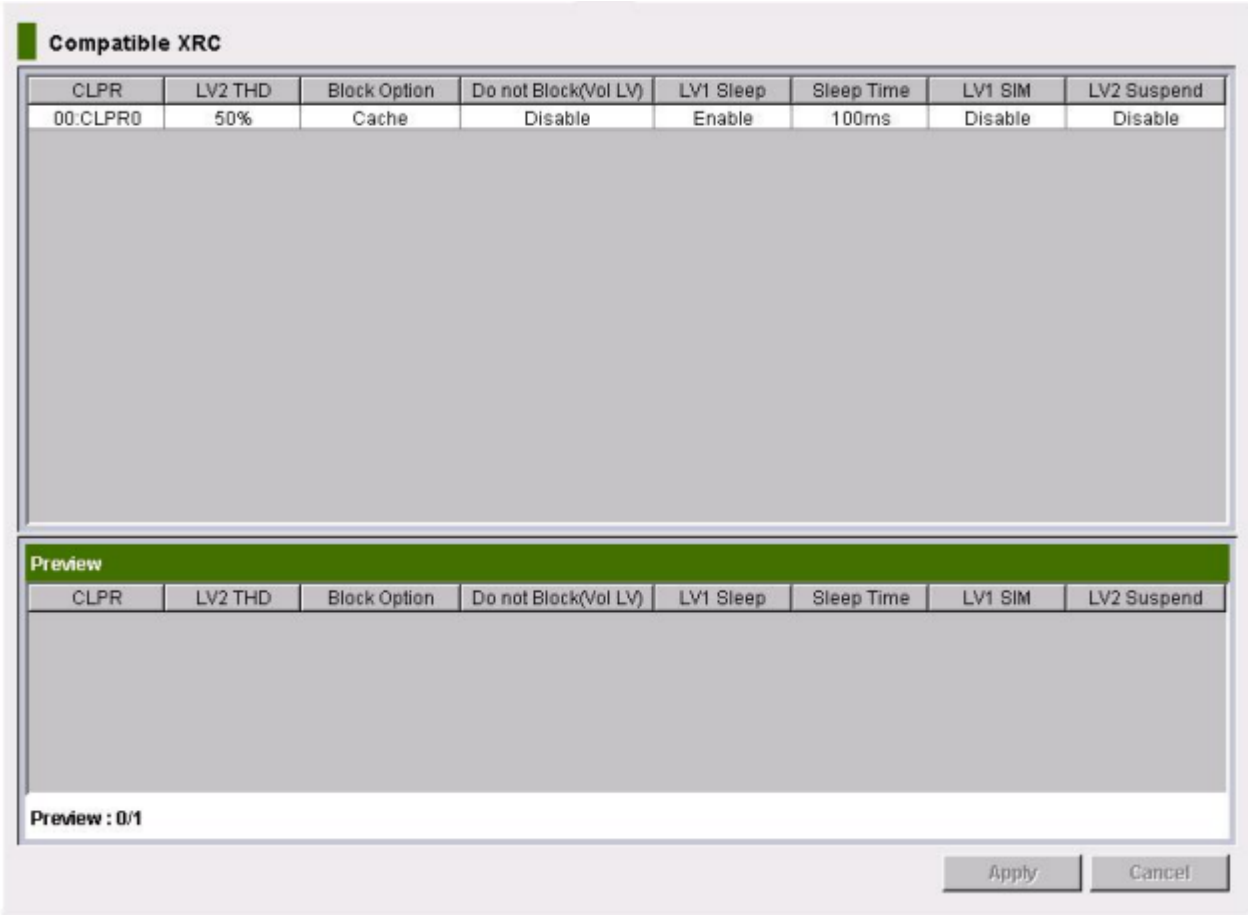
Compatible XRC GUI reference

This topic describes the Compatible XRC window and the Change Option window.

- Compatible XRC window
- Change Option window

Compatible XRC window

The following is the Compatible XRC window.



The following table shows the items in the Compatible XRC window.

Item		Description
Compatible XRC option list	CLPR	CLPR number.
	LV2 THD	Threshold shown in Level 2 Threshold in the Change Option window.
	Block Option	Setting shown in Block Option in the Change Option window.
	Do not Block (Vol LV)	Setting shown in Do not Block (Volume Level) in the Change Option window.
	LV1 Sleep	Setting shown in Level 1 Sleep in the Change Option window.
	Sleep Time	Setting shown in Sleep Time in the Change Option window.
	LV1 SIM	Setting shown in Level 1 SIM in the Change Option window.

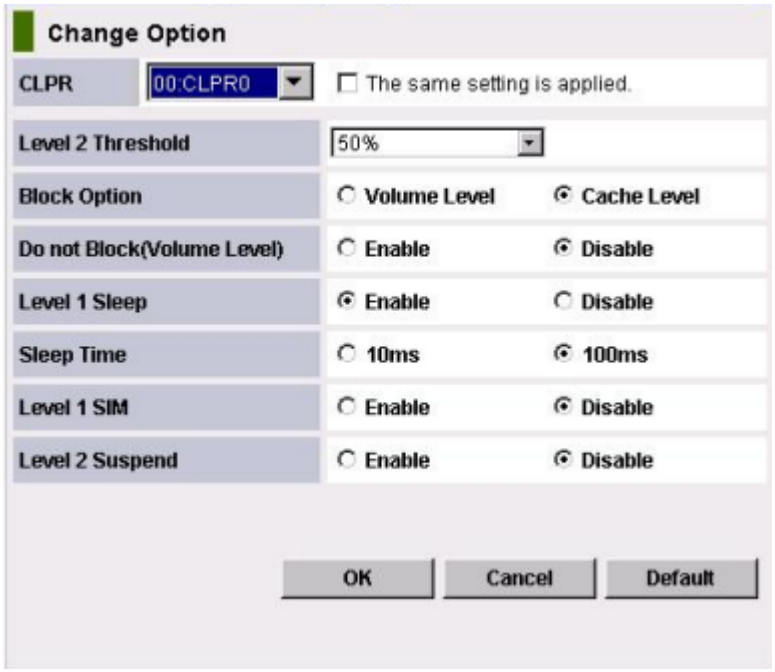
Item		Description
	LV2 Suspend	Setting shown in Level 2 Suspend in the Change Option window.
Preview list		Displays the settings in the Change Option window. The settings in this list will not be applied to the storage system until you click Apply in the XRC Option window.
Apply		Applies the settings in the Preview list to the storage system.
Cancel		Cancels the settings in the Preview list.

Related topics

- Launching Compatible XRC on page 4-2
- Deleting the settings in the preview list on page 4-3

Change Option window

The following is the Change Option window.



To open the Change Option window, right-click the desired CLPR in the Compatible XRC option list, and then select Change Option.

The following table shows the items in the Change Option window.

Item	Description
CLPR list	Select the desired CLPR.

Item	Description
The same setting is applied.	Check this box to apply the settings to all CLPRs. Clear this box to apply the settings only to the selected CLPR.
Level 2 Threshold list	Select the desired threshold (SCP-SCI reporting threshold or level 2 threshold) of the sidefiles of which the storage system performs an SCP (State Change Pending)-SCI (State Change Interrupt) reporting to the host. The level-2 threshold can be set from 30 percent to 70 percent in 10 percent increments. The default level-2 threshold setting is 50 percent. The level-2 threshold setting for SCP-SCI reporting applies to Concurrent Copy. When the level-2 threshold setting is changed, all of these functions are affected. To calculate the level-1 threshold, subtract 10 percent from the level-2 threshold, and add 10 percent to the level-2 threshold to calculate the level-3 threshold.
Block Option	Sets the IBM-compatibility mode for device blocking, which controls the amount of write data according to the sidefile capacity. • **Volume Level** - sets the IBM-compatible mode of the Device Block feature. When the "Sleep"- "Wait" command is retried, the system monitors the I/O written to the volume. When the amount of I/O write data exceeds the threshold for the number of record sets for each volume specified by SDM, the following settings are made: When Volume Level is selected, Enable is set to **Do not Block** (Volume Level), Disable for Level 1 is set to Sleep, and Disable for Level 2 three is set to Suspend. • **Cache Level** - disables the "Sleep"- "Wait" command retry according to the threshold for the number of record sets for each volume. The storage system controls the amount of three levels of write data based on the sidefile capacity. For details, see Appendix A, Controlling the amount of write data on page A-1.
Do not Block (Volume Level)	Sets whether the storage system controls the amount of write I/Os to the specified volume. • **Enable** - does not control the amount of data to be written to the specified volume. Write I/Os from hosts are not put in a wait status. When Block Option is set to Volume Level, Enable is set. For details, see Appendix A, Controlling the amount of write data on page A-1. • **Disable** - controls four levels of write data based on the sidefile capacity.
Level 1 Sleep	Sets whether the storage system retries the "Sleep"- "Wait" command when the sidefile threshold exceeds the sleep wait threshold (level-1 threshold). • **Enable** - retires the "Sleep"-"Wait" command. • **Disable** - does not retry the "Sleep"-"Wait" command. When Block Option is set to Volume Level, Disable is set.

Item	Description
Sleep Time	Sets the sleep wait time for the "Sleep"- "Wait" command retry. • 10 ms - The storage system waits 10 milliseconds. • 100 ms - The storage system waits 100 milliseconds.
Level 1 SIM	Sets whether the storage system reports SIM (Service Information Message) to the host when the sidefile threshold exceeds the sleep wait threshold (level-1 threshold). • **Enable** - reports SIM indicating that the sidefile exceeds the sleep wait threshold to the host. • **Disable** - does not report SIM to the host even when the sidefile exceeds the sleep wait threshold.
Level 2 Suspend	Sets whether the storage system reports SCP-SCI when the sidefile threshold reaches the SCP-SCI reporting threshold (level-2 threshold). • **Enable** - does not report SCP-SCI to the host. The sidefile is filled up and the target session is suspended. • **Disable** - reports SCP-SCI to the host. The host is unable to issue write I/Os until the host receives SCI after receiving SCP from the storage system. When Block Option is set to Volume Level, Disable is set.
OK	Saves the requested Compatible XRC option changes, and closes the Change Option dialog box. The requested Compatible XRC option changes are displayed in the Preview list and in blue, bold and italics in the Compatible XRC options table.
Cancel	Cancels the requested Compatible XRC option changes.
Default	Sets the Compatible XRC options to their default values.

Related topics

- Configuring Compatible XRC on page 4-2
- Changing the settings in the preview list on page 4-3

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