

Hitachi Virtual Storage Platform G200, G400, G600, G800 and Hitachi Virtual Storage Platform F400, F600, F800 Release Notes

SVOS 7.0.0

DKCMAIN 83-04-02-x0/02, SVP 83-04-02-x0/00, NAS OS 13.0.4323.05, SMU 13.0.4323.05

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About this document

This document provides information about the VSP Gx00 and VSP Fx00 firmware (DKCMAIN and SVP) and NAS module firmware (NAS OS and SMU), including new features and functions and changes.

Revision	Date
RN-830402-M045-00	January 5 th , 2017

Intended audience

This document is intended for Hitachi Data Systems customers and authorized service providers who install, configure, operate, or maintain the VSP Gx00 and VSP Fx00 storage systems.

Getting help

Hitachi Data Systems Support Connect is the destination for technical support of products and solutions sold by Hitachi Data Systems. To contact technical support, log on to Hitachi Data Systems Support Connect for contact information:

https://support.hds.com/en_us/contact-us.html

About this release

This document describes the differences between the following versions:

Product	Firmware/software	New version	Previous version
SVOS	-	7.0.0	7.0.0
VSP G800	DKCMAIN	83-04-02-60/02	83-04-02-60/00
VSP F800	SVP	83-04-02-60/00	83-04-02-60/00
VSP G400, G600	DKCMAIN	83-04-02-40/02	83-04-02-40/00
VSP F400, F600	SVP	83-04-02-40/00	83-04-02-40/00
VSP G200	DKCMAIN	83-04-02-20/02	83-04-02-20/00
	SVP	83-04-02-20/00	83-04-02-20/00
NAS Module	NAS OS	13.0.4323.05	13.0.4323.05
	SMU	13.0.4323.05	13.0.4323.05

Note: An external SMU is not required but can be used to manage VSP G400, G600, G800 models with NAS modules.

Supported features and functions

DKCMAIN and SVP firmware

None

NAS OS and SMU firmware

None

Fixed problems

DKCMAIN and SVP firmware

The following table lists the bug fixes in this DKCMAIN firmware release. For additional details (for example, conditions of occurrence, severity, probability), contact your Hitachi Data Systems representative.

No.	Category	Title and symptoms
1	Dedupe and compression	No progress of processing on LDEVs If MP Processing Rate Others was high while capacity saving was used, the processing listed below that ran asynchronously with a user operation did not start, so that the processing might not make progress on some LDEVs until the processing rate declined. - Compression processing - Compression and deduplication processing - Disabling capacity saving
2	Open	Return of Illegal Request and I/O stop After the DKCMAIN firmware was updated in AIX host connection environment, if an LDEV that did not support T10PI received an I/O, the storage system returned Illegal Request and the I/O was stopped with SSB=D095 logged.
3	Dynamic Provisioning	MP is blocked in an environment with VMware or Windows 2012 connection When the EXTENDED COPY function of VMware or the Offload Data Transfer function of Windows is used, CHK2 (LA error) occurs, the threshold is exceeded, and an MP is blocked.
4	Dedupe and compression	While using the dedupe and compression function, the server goes down due to a performance issue When the dedupe and compression function is being used, Cache Write Pending (CWP) rate stays at a high rate (75%). Therefore, the performance of host I/O could degrade, and in the worst case, host applications could go down. SSB EC=01FF is logged at that timing.
5	Dedupe and compression	Data access is disabled, or Rehydration is disabled with SIM=680001 (SSB=EC=01D1,01D2) When the capacity saving function is disabled, SIM=680001 (SSB EC=01D1 or 01D2) is logged. Part of the DP-VOL data (256 KB) that is indicated by EC=01D1/01D2 becomes inaccessible due to invalid metadata. In addition, Rehydration, which is the processing of disabling the capacity saving function, fails on a DP-VOL with Deduplication and Compression set with SIM=680001 (SSB EC=01D1 or 01D2) reported.

No.	Category	Title and symptoms
6	Dedupe and compression	Operation failure on LDEV with capacity saving enabled The following occurred on an LDEV with capacity saving enabled. (1) After disabling capacity saving, Rehydrating stopped at 99%. (2) LDEV deleting stopped. (3) LDEV formatting failed. (4) Data reduction initialization failed.
7	Dedupe and compression	No progress of Rehydrating When the capacity saving setting of a DP volume was changed from Compression or Deduplication and Compression to Disable, Rehydrating remained at 0%.
8	Dedupe and compression	No decrease in garbage data in DP volume After online microcode exchange was performed while Compression or Deduplication and Compression was set on a DP volume, the amount of garbage data of the DP volume did not decrease.

NAS OS and SMU firmware

None

Acronyms and abbreviations

3DC	three data center
AMS	Hitachi Adaptable Modular Storage
ASP	authorized service provider
BEM	back-end module (also called disk adapter)
CCI	command control interface
CL	cluster
CLI	command line interface
CM	cache memory
CRC	cyclical redundancy checking
CSV	Cluster Shared Volumes
CTG	consistency group
CU	control unit
CUDG	control unit diagnosis
DB	drive box
DF700	factory model number for Hitachi Adaptable Modular Storage 200, 500, 1000
DF800	factory model number for Hitachi Adaptable Modular Storage 2000
DF850	factory model number for Hitachi Unified Storage
DKA	disk adapter (another name for back-end director)
DKAF	DKA firmware
DKC	disk controller (refers to the entire storage system)
DKCMAIN	disk controller main (refers to the microcode/firmware)
DP	Hitachi Dynamic Provisioning
DP-VOL	Dynamic Provisioning V-VOL
DRU	Hitachi Data Retention Utility
DS	dynamic sparing
DT	Hitachi Dynamic Tiering
DW700	factory model number for Hitachi Unified Storage VM
DW800	factory model number for Hitachi Virtual Storage Platform Gx00 and Fx00
ECC	error checking and correction
ECN	engineering change notice
EQC	equipment check
FC	fibre channel
FCoE	fibre channel over ethernet
FEM	front-end module (also called channel adapter)
FMC	flash module compression (another name for the FMD DC2 drives)
FMD	flash module drive
FRS	Feature Release Schedule
GPFS	General Parallel File System
GUM	gateway for unified management (another name for the maintenance utility)
HA	high availability
HAM	Hitachi High Availability Manager

HCS	Hitachi Command Suite
HDD	hard disk drive
HDS	Hitachi Data Systems
HDP	Hitachi Dynamic Provisioning
HDT	Hitachi Dynamic Tiering
HDVM	Hitachi Device Manager
HM700	factory model number for Hitachi Unified Storage VM
HM800	factory model number for Hitachi Virtual Storage Platform Gx00 and Fx00
HMO	host mode option
HNAS	Hitachi Network-Attached Storage
HTI	Hitachi Thin Image
HUS VM	Hitachi Unified Storage VM
JNL	journal
JNLG	journal group
LBA	logical block address
LDEV	logical device
LU	logical unit
LUSE	logical unit size expansion
MCU	main control unit
MP	microprocessor
MPC	maintenance PC
MSCS	Microsoft Cluster Server
NASFW	NAS module firmware
PDEV	physical device
PS, P/S	power supply
P-VOL	primary volume
RAID600	factory model number for Hitachi Universal Storage Platform V/VM
RAID700	factory model number for Hitachi Virtual Storage Platform
RAID800	factory model number for Hitachi Virtual Storage Platform G1000, G1500, and Hitachi Virtual Storage Platform F1500
RC	reference code
RCU	remote control unit
SAS	serial-attached SCSI
SI	Hitachi ShadowImage
SIM	service information message
SMU	system management unit
SOM	system option mode
SPM	Hitachi Server Priority Manager
SSB	sense byte
SSD	solid-state drive (also called flash drive)
S-VOL	secondary volume
SVOS	Storage Virtualization Operating System
SVP	service processor
TC	Hitachi TrueCopy
TI	Hitachi Thin Image
TOV	time-out value

TS	Technical Support
UR	Hitachi Universal Replicator
UVM	Hitachi Universal Volume Manager
VM	Volume Migration
VSP	Hitachi Virtual Storage Platform
VSP F1500	Hitachi Virtual Storage Platform F1500
VSP Fx00	Hitachi Virtual Storage Platform F400, F600, F800
VSP G1000	Hitachi Virtual Storage Platform G1000
VSP G1500	Hitachi Virtual Storage Platform G1500
VSP Gx00	Hitachi Virtual Storage Platform G200, G400, G600, G800
V-VOL	virtual volume
WWN	worldwide name

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