

# Hitachi Universal Storage Platform V/VM Release Notes

## DKCMAIN version 60-08-53-00/00, SVP 60-08-44/00

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### About this document

This document provides information about the Hitachi Universal Storage Platform V/VM microcode (DKCMAIN and SVP), including new features and functions and changes.

Revision	Date
RN-600853-M311-01	May 11 <sup>th</sup> , 2015

### Intended audience

This document is intended for Hitachi Data Systems customers and authorized service providers who install, configure, operate, and maintain the Hitachi Universal Storage Platform V/VM storage system.

### Getting help

If you need technical support, contact your Hitachi Data Systems representative or authorized service provider. For contact information, log on to the Hitachi Data Systems Portal: <https://portal.hds.com>

### About this release

This document describes the differences between the following versions:

Version	DKCMAIN	SVP
New version	60-08-53-00/00	60-08-44/00
Previous version	60-08-52-00/00	60-08-42/00

## Supported features and functions

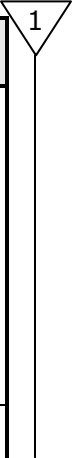
### (1) For Open and Mainframe systems

1-1	Support for new functions of Account Management Tool
Description	<p>The following functions by Account Management Tool are supported for SVP security enhancement.</p> <ul style="list-style-type: none"> <li>- Built-in account name and password changes</li> <li>- Login and logout audit log output when SVP is used by maintenance personnel</li> <li>- Account lockout threshold and duration settings</li> <li>- Audit log output at account lockout</li> </ul>
Documented	None

1-2	Support for Apache 2.2.29 (openssl 0.9.8zc) and disabling of SSLv3.0
Description	<p>1. Apache 2.2.29 (openssl 0.9.8zc) is supported. It supports Windows Vista only.</p> <p>If the Apache version earlier than 2.2.29 is applied to SVP, the following vulnerability issues are exposed.</p> <p>[Vulnerability]</p> <p>(1) Directive in mod_headers module of Apache HTTP Server may be disabled (CVE-2013-5704).</p> <p>(2) Memory leaking that may cause service interference (CVE-2014-3567)</p> <p>To address the above vulnerabilities, update Apache to 2.2.29 (openssl 0.9.8zc).</p> <p>In addition, the vulnerability of SSL V3.0 (CVE-2014-3566) can be addressed by upgrading the SVP version to 60-08-44-00/00 or higher.</p> <p>To apply the support, remove the current Apache and then install Apache 2.2.29 (openssl 0.9.8zc).</p> <p>For the detailed procedure, refer to 21 WEB STATION in Maintenance Manual.</p> <p>2. Disabling of SSLv3.0</p> <p>[Vulnerability]</p> <p>(3) SSL V3.0 (CVE-2014-3566)</p> <p>To resolve the above vulnerability, SSLv3.0 of SSL communication is disabled.</p> <p>If TLS1.0 of SSL communication is also disabled, the SSL communication may not be available. To enable TLS1.0, take the procedures described in the Storage Navigator User Guide.</p>
Documented	<p>For vulnerabilities (1) and (2): Maintenance Manual (21 WEB STATION)</p> <p>For vulnerability (3): Storage Navigator User Guide</p>

1-3	Windows Server 2012 support for Cross-OS File Exchange
Description	Windows Server 2012 is supported for Cross-OS File Exchange.
Documented	None

1-4	Support for VSP Gx00 series as external storage system
Description	<p>The following storage systems are supported to connect as external storage systems using UVM.</p> <p>Hitachi Virtual Storage Platform G600  Hitachi Virtual Storage Platform G400  Hitachi Virtual Storage Platform G200</p>
Documented	Appendix-d-I, Universal Volume Manager User Guide



**(2) For Mainframe systems**

**None**

### (3) For Open systems

3-1	Support for Command Control Interface Ver. 01-32-03/09
Description	<p>Supported functions from Ver. 01-30-03/03</p> <p>This release includes the following functions:</p> <ul style="list-style-type: none"><li>-RHEL7 is now supported.</li><li>-Oracle VM for SPARC 3.1 or later is now supported.</li><li>-HPVM for SPARC 6.3 or later is now supported.</li></ul> <p>Revisions from Ver. 01-30-03/03</p> <p>This release includes the following changes:</p> <ul style="list-style-type: none"><li>- Fixed problem where "horcctl -DI" command showed incorrect CI value.</li><li>- Fixed problem where EX_CMDRJE was occasionally reported as EX_CMDIOE on Linux.</li><li>- Support for using inqraid command for read-only volumes on Linux.</li><li>- Ended support of Solaris earlier than 9</li><li>- Ended support of AIX earlier than 5.3</li><li>- Ended support of HP-UX earlier than 11.1</li><li>- Ended support of OpenVMS for Alpha</li><li>- Ended support of Red hat Linux 9 or earlier</li><li>- Ended support of Windows NT4.0 and 2000</li></ul>
Documented	None

3-2	Support for RAID Manager/LIB Ver. 01-19-03/02
Description	<p>Supported functions from Ver. 01-15-03/06</p> <p>This version has added the following functions.</p> <ul style="list-style-type: none"> <li>- Addition of the pool status to byte[14-15] of the <code>getrminfo(POOL_CONF)</code>.</li> <li>- Addition of the Capability(Role) checking to several function.</li> <li>- Added <code>EL_EPPERM</code> as return value.</li> <li>- Addition of Tier Type(High/ Low) for the external Volume to <code>getrminfo(POOL_CONF,POOL_STAT,LDEV_IO)</code>.</li> <li>- Addition of a byte for specifying Tier level for <code>getrminfo(POOL_STAT)</code>.</li> <li>- Support of PPC naming of 64 bytes</li> <li>- Support for the extended snapshot mirror <ul style="list-style-type: none"> <li>- addition <code>up_pmun</code> to the <code>pairstatinfo</code> structure.</li> <li>- addition <code>max_mu</code> to the <code>poolinfo</code> structure.</li> <li>- addition <code>"PLMD_AOUV_MF"</code> to the <code>poolinfo</code> structure.</li> </ul> </li> <li>- Addition of IO buffer counts to the <code>getrminfo(DKC_BUSYMP)</code>.</li> <li>- Addition of <code>"PoolID"</code> to the status code(0/1/7/9) for <code>getrminfo(LDEV_LIST)</code>.</li> <li>- Support for Windows2012</li> <li>- Changed minimum support version of AIX from 4.3 to 5.3</li> <li>- Changed minimum support version of HP-UX from 10.20 to 11.11</li> <li>- Changed minimum support version of Solaris from 2.5.1 to 9</li> <li>- Support for NDM(RAID800)</li> <li>- Support <code>getrminfo(VLDEV_INFO,RSG_INFO,RCU_INFO)</code></li> </ul> <p>Revisions from Ver. 01-15-03/06</p> <p>This release includes the following changes:</p> <ul style="list-style-type: none"> <li>- Corrected a problem that <code>PSTAT</code> macro was defined with <code>';</code> in <code>rmlib.h</code>.</li> <li>- Changed to an <code>fd</code> that <code>attachcmddev()</code> does not depend on the channel of <code>OVMS</code>.</li> <li>- Corrected a problem that <code>getrminfo(LUN_WWN)</code> cannot be done subsequent page.</li> <li>- Changed minimum support version of AIX from 4.3 to 5.3</li> <li>- Changed minimum support version of HP-UX from 10.20 to 11.11</li> <li>- Changed minimum support version of Solaris from 2.5.1 to 9</li> </ul>
Documented	None

## Change of contents

No	Item	Contents
1	Title	Failure of LDEV removal with SSB=D700
	Phenomena	At LDEV removal, SSB=D700 was logged
	Conditions of Occurrence	The problem occurs when all the following conditions are met. (1) An LDEV with cache residency setting is specified and then Quick Restore is performed. (2) After (1), one of the following maintenance operations is performed for LDEVs containing the above LDEV. - LDEV removal - Releasing external volume mapping - ECC group removal
	Category	Cache Residency Manager
	Affected Products/Version	DKCMAIN: All

No	Item	Contents
2	Title	CHAIN ERROR with SSB=6D01 when FMT=01 of Prefix command is run
	Phenomena	When FMT=01 of Prefix command was run from zTPF OS to RAID600, CHAIN ERROR occurred and SSB=6D01 was logged.
	Conditions of Occurrence	The problem occurs when all the following conditions are met. (1) DKC configuration with TPF setting and TPF-2017 (2) APAR#: PJ41092 is applied to zTPF OS.
	Category	TPF
	Affected Products/Version	DKCMAIN: All

No	Item	Contents
3	Title	Write I/O disabled after UR/URz pair suspended
	Phenomena	After a UR/URz pair was suspended, a write I/O to the S-VOL was disabled. (SSB=B801)
	Conditions of Occurrence	The problem may occur when all the following conditions are met.  (1) Universal Replicator and Universal Replicator for z/OS  (2) After a UR/URz pair is suspended, a write I/O is issued to the S-VOL.
	Category	Universal Replicator, Universal Replicator for z/OS
	Affected Products/Version	DKCMAIN: All

No	Item	Contents
4	Title	I/O performance degradation at SIz pair split in TPF system environment
	Phenomena	When an SIz pair was split in TPF system environment, I/O response performance degraded.
	Conditions of Occurrence	The problem may occur when all the following conditions are met.  (1) TPF system  (2) An SIz pair is split.  (3) The SIz S-VOL is accessed.
	Category	TPF
	Affected Products/Version	DKCMAIN: All



No	Item	Contents
5	Title	User waited for 5 minutes to login to S/N
	Phenomena	Immediately after a login to Storage Navigator failed with an authentication error, if the user tried to login to Storage Navigator again, the user had to wait for 5 minutes or longer after clicking the login button.
	Conditions of Occurrence	The problem occurs when (1) A login to Storage Navigator fails with an authentication error. (2) Login to Storage Navigator is tried again immediately after (1).
	Category	Storage Navigator
	Affected Products/Version	SVP: All

No	Item	Contents
6	Title	Unable to start CCI by horcmstart.sh
	Phenomena	When horcmstart.sh command was run, Command Control Interface did not work.
	Conditions of Occurrence	The problem may occur when the following conditions (1) and (2), or (1), (3) and (4) are met. (1) Multiple alternative command devices are defined. - HORCM_CMD: Multiple command devices are described in a row. (2) No device is defined. - HORCM_DEV (device file specified) or HORCM_LDEV (LDEV# specified) is not described. (3) LDEV group reading is defined. - HORCM_LDEVG: LDEV group information reading is defined. (4) Serial numbers of LDEV groups contain any number that does not exist on command device.
	Category	Command Control Interface
	Affected Products/Version	Command Control Interface: 01-24-03/13 and higher

No	Item	Contents
7	Title	Display failure of RAID Manager Library version and RAID Manager Library hung up
	Phenomena	Phenomenon 1 whatrmver command showed a wrong RAID Manager Library version in HP-UX environment. Phenomenon 2 RAID Manager Library hanged up.
	Conditions of Occurrence	The problem occurs when the following condition is met. Phenomenon 1 whatrmver command is run in HP-UX environment. Phenomenon 2 RAID Manager Library functions are concurrently called from an application in Windows environment.
	Category	RAID Manager Library
	Affected Products/Version	RAID Manager/LIB: 01-19-03/00 and higher (Phenomenon 1) / All (Phenomenon 2)

No	Item	Contents
8	Title	Link-down at LDEV format for external VOL
	Phenomena	When LDEV format was performed for an external volume in a configuration of 16G CHA direct connection with FCAL/Fabric OFF setting, a link-down occurred. (SSB=B60B)
	Conditions of Occurrence	The problem occurs when all the following conditions are met. (1) Target port is used. (2) 16G PCB External port is connected with FCAL/Fabric OFF. (3) There is an external path. (4) LDEV format is performed for an external volume.
	Category	TrueCopy, TrueCopy for z/OS, Universal Replicator, Universal Replicator for z/OS, Universal Volume Manager
	Affected Products/Version	DKCMAIN: All

No	Item	Contents
9	Title	SSB=C1DD logged at failure suspension at TCz P-VOL
	Phenomena	When a failure suspension occurred at P-VOL of a TCz pair to which Freeze option enabled at remote path setting, SSB=C1DD might be logged.
	Conditions of Occurrence	The problem may occur when all the following conditions are met. (1) TrueCopy for z/OS (2) The Freeze option is enabled at remote path setting. (3) A TCz pair is created with the above remote path specified. (4) A failure suspension occurs at the P-VOL of the above TCz pair.
	Category	TrueCopy for z/OS
	Affected Products/Version	DKCMAIN: All

No	Item	Contents
10	Title	SSB=222B frequently logged at AT TIME suspend or pair split with CTG specified
	Phenomena	When AT TIME suspend or pair split with consistency group specified was performed for an SIz pair, SSB=222B was frequently logged.
	Conditions of Occurrence	The problem occurs when all the following conditions are met. (1) Mainframe connection (2) An I/O is issued to the SIz pair. (3) AT TIME suspend or pair split with consistency group specified is performed.
	Category	ShadowImage for z/OS
	Affected Products/Version	DKCMAIN: All

## Acronyms and abbreviations

3DC	three data center
ABTS	ASCII Block Terminal Services
AOU	allocation on use (another name for Dynamic Provisioning)
ASP	authorized service provider
BCM	Hitachi Business Continuity Manager
CCI	Command Control Interface
CHA	channel adapter (another name for front-end director)
CL1/2	cluster 1/2
CLI	command line interface
CLPR	cache logical partition
CM	cache memory
CMA	cache memory adapter
COW	copy on write
CPC	cache path control adapter
CPK	cache package
CRM	Cache Residency Manager
CSV	Cluster Shared Volumes
CTG	consistency group
CU	control unit
CUDG	control unit diagnosis
CVS	custom volume size (another name for Virtual LVI/LUN)
DCR	dynamic cache residency (another name for Cache Residency Manager)
DF850	Hitachi Unified Storage
DKA	disk adapter (another name for back-end director)
DKC	disk controller (also used to refer to the entire storage system)
DKU	disk unit
DP	Dynamic Provisioning
DP-VOL	Dynamic Provisioning virtual volume (V-VOL used for Dynamic Provisioning)
DPz	Dynamic Provisioning for Mainframe
DRU	Hitachi Data Retention Utility
DS	dynamic sparing
DT	Dynamic Tiering
DTz	Dynamic Tiering for Mainframe
DW700	another name for the Hitachi Unified Storage VM
ECC	error checking and correction
EQC	equipment check
ESW	express switch
FC	fibre channel, FlashCopy
FCA	fibre control adapter
FCoE	fibre channel over ethernet
FCSE	FlashCopy Space Efficient
FCU	File Conversion Utility
FCv2	FlashCopy version 2
FD	floppy disk

FDM	FICON® data migration
FMD	flash module drive
FRS	Feature Release Schedule
grp	group
HA	high availability
HAM	Hitachi High Availability Manager
HCS	Hitachi Command Suite
HDD	hard disk drive
HDEV	host device
HDS	Hitachi Data Systems
HDvM	Hitachi Device Manager
HLDE	hold-error
HM700	another name for the Hitachi Unified Storage VM
HMO	host mode option
HPAV	Hitachi Parallel Access Volume (another name for Hitachi Compatible PAV)
HPF	High Performance FICON®
HPtM	Hitachi Protection Manager
HPvM	Hitachi Provisioning Manager
HRpM	Hitachi Replication Manager
HTP	hyper transfer program (controls the FICON channel links)
HTSM	Hitachi Tiered Storage Manager
HUS	Hitachi Unified Storage
HUS VM	Hitachi Unified Storage VM
I-site	intermediate site
JNL	journal
JNLG	journal group
LDEV	logical device
LDKC	logical disk controller
Lib	Library
LRC	longitudinal redundancy check
LSI	large-scale integration, refers to an integrated circuit (IC)
L-site	local site
LU	logical unit
LUN	logical unit number
LUSE	logical unit size expansion
LVI	logical volume image
MCU	main control unit
MDKC	main storage system (contains MCUs)
MIH	missing interrupt handler
MP	microprocessor
MPB	MP blade
MSCS	Microsoft Cluster Server
MTO	mainframe-to-open
NDM	non-disruptive migration

OTM	open-to-mainframe
PAV	Parallel Access Volume
PCB	printed circuit board
PDEV	physical device
PP	program product
PPC	prioritized port control
PS	power supply
P-site	primary site
P-VOL	primary volume
RC	remote console
RCU	remote control unit
RDKC	remote storage system (contains RCUs)
RIO	remote I/O
RM	RAID Manager (another name for Command Control Interface)
RSCN	registered state-change notification
RSD	Hitachi RAID Systems Division
R-site	remote site
SAS	serial-attached SCSI
SATA	serial Advanced Technology Attachment
SCP	state change pending
SFP	small form-factor pluggable
SI	Hitachi ShadowImage
SIM	service information message
SIz	ShadowImage for Mainframe
SM	shared memory
SMPL	simplex
SN	Storage Navigator
SOM	system option mode
SPM	Hitachi Server Priority Manager
SSB	sense byte
SSD	solid-state device (another name for flash drive)
SSID	storage subsystem identifier
SSL	secure socket layer
SSW	standard switch adapter
SUS	suspended
S-VOL	secondary volume, source volume
SVP	service processor
TC	Hitachi TrueCopy
TCz	Hitachi TrueCopy for Mainframe
TI	Hitachi Thin Image
TOV	time-out value
TPF	Transaction Processing Facility
TS	Technical Support
TSE-VOL	track-space-efficient volume
T-VOL	target volume
UR	Hitachi Universal Replicator
URz	Hitachi Universal Replicator for Mainframe
USP V/VM	Hitachi Universal Storage Platform V/VM

UVM	Universal Volume Manager
VSP	Hitachi Virtual Storage Platform
VSP G1000	Hitachi Virtual Storage Platform G1000
VSP Gx00	Hitachi Virtual Storage Platform G200, G400, G600
V-VOL	virtual volume

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