



Firmware Release Notes

Project	Previous Release	Release	Author	Date
Multistak	NxT1	3.20	Simon Agostini	10/01/2025

Table of Contents

1	Installation.....	2
1.1	REST API Version.....	2
1.2	Bundled Robotic Code.....	2
1.3	Bundled Expansion Code.....	2
1.4	Third Party Codes.....	2
1.5	Programming instructions.....	4
2	Special Notes.....	4
3	Release Status.....	6
3.1	Changes since Release NxS1.....	6
3.1.1	Resolved Issues.....	6
3.2	Changes since Release NxR1.....	8
3.2.1	Customer change requests.....	8
3.2.2	Resolved Issues.....	9
3.2.3	Implemented Stories.....	10
3.3	Changes since Release Unknown.....	11
3.3.1	Customer change requests.....	11
3.3.2	Resolved Issues.....	11



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1 Installation

1.1 REST API Version

Version: 1.1.22

1.2 Bundled Robotic Code

Version: 2.03

1.3 Bundled Expansion Code

Version unknown

1.4 Third Party Codes

Component	Package (Version)	Open Source License Agreement
Agent++	4.6.0	Apache
base-passwd	3.5.20-r1.1	GPL
bash	4.3.27	GPL
bind - dig	9.11.10	Mozilla Public License v2
busybox	1.37.0	GPLv2
ccid	1.4.33	GPLv2.1 or later
console-tools	0.3.2-r4.1	GPL
cron	3.0pl1-r8.1	Mozilla Public License v2
dhcp	4.4.1	Mozilla Public License
dosfstools	2.11-r0.1	GPL
dropbear	2018.76	MIT
e2fsprogs	1.41.5-r1.1	GPL
eglibc	2.10-r6.2.1	LGPL
ethtool	2.6.36	GPLv2
expat	2.6.2	MIT
fbset	2.1	GPL
fping	4.2	Custom (BSD like)
gsoap	2.7.10	GPLv2
hdparm	9.15-r0.1	BSD
ifplugd	0.28	GPLv2+
iproute2	2.6.29+r0+gitr0309aa493d966f0b32a21a28d9fd156f4c41860-r0.1	GPL



Firmware Release Notes

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iputils	20071127-r1.1	GPLv2
jq	1.8.3	MIT
libdaemon	0.14	LGPL
libestr	0.1.11	LGPLv2.1+
libfastjson	0.99.9	MIT
libpcap	1.0.0-r6.1	BSD
libpcre	8.43	BSD
libusb	1.0.19	LGPL
libxml2	2.9.12	MIT
libxslt	1.1.34	MIT
lighttpd	1.4.76	BSD
linux	3.8.6	GPL
lrzsz	0.12.20-r4.1	GPL
lsscsi	0.24b1-r0.1	GPL
makedevs	none	GPL
mtd-utils	1.3.1-r0.1	GPLv2
mtx	1.3.12-r1.1	GPL
ncurses	5.4-r19.1	MIT
net-tools	1.60-r3.1	GPL
netbase	4.21-r36.1	GPL
ntfs-3g_ntfsprogs	2011.4.12	GPL
ntp	4.2.8p18	ntp
openldap	2.5.19	OpenLDAP
openssl	3.0.16	openssl
openftp	1.65	GPLv2
pciutils	3.1.2-r5.1	GPLv2
pcsc-lite	1.9.0	ISC
perl	5.8.8-r28.1	Artistic GPL
php-gd	5.0.1	MIT
php8	8.4.5	PHP
portmap	6.0-r4.1	Sun RPC, BSD
procps	3.2.7-r9.1	GPL
pugixml	1.8	MIT
python	2.7.16	PSF
qt-webkit-kiosk	1.99.10	LGPL
qt4-embedded	4.8.7	LGPLv2.1
rsyslog	8.2406.0	GPLv3
sg3-utils	1.24	GPLv2
slimframework	3.12.3	MIT
SNMP++	3.5.0	MIT-like
SQLiteCpp	2.4.0	MIT
sqlite3	3.29.0	Public Domain
tftp-hpa	5.2	BSD Revised



Firmware Release Notes

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tslib	none	LGPL
u-boot	1.14	GPL2 or later
udev	141-r21.1	GPL
unzip	6.00	Info-ZIP
zeroconf	0.9-r2.1	GPL
zip	3.0	Info-ZIP
zlib	1.3.1	zlib

1.5 Programming instructions

Use remote management interface (Maintenance, Software upgrade, Firmware) for uploading .fbi image and upgrading Library stack (expansion module will be automatically upgraded together with base module if already connected and discovered).

2 Special Notes



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3 Release Status

3.1 Changes since Release NxS1

3.1.1 Resolved Issues

Number	Customer DDT	Description	Workaround	Root cause	Solution	Severity	Code Rev.
9590	-	Link in E-Mail Notification does not work	-	-	1. FIX\IMPROVEMENT DESCRIPTION: changed http to https 2. VERIFICATION PROCEDURE: check smtp mail href and text	Moderate	NxT1
9603	-	Cannot open LTO9 New Media Initialization Wizard	-	-	1. FIX\IMPROVEMENT DESCRIPTION: SQL Call was missing tables 2. VERIFICATION PROCEDURE: open wizard	Moderate	NxT1
9614	-	Downgrade to old not supported fw (for driveless feature) is not prevented	-	-	1. FIX\IMPROVEMENT DESCRIPTION: Logic rework, and rearrangement of checks 2. VERIFICATION PROCEDURE: Use latest code and check if downgrade is prevented when Vault Partitions are active and the old code does not support Vault Partitions	Moderate	NxT1
9616	-	Moves out of driveless partition with valid 2FA user login not possible over REST	-	-	1. FIX\IMPROVEMENT DESCRIPTION: Provide uer id for movements to backend	Moderate	NxT1



Firmware Release Notes

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					2. VERIFICATION PROCEDURE: retry error case		
9617	Ticket#7436 10	Expired Certificate in NxS1 after downgrade and new cert generation the next upgrade clears certificate	-	-	1. FIXIMPROVEMENT DESCRIPTION: check for old cert format in any case and use this during upgrade. Delete old style during this process so down and upgrade are safe 2. VERIFICATION PROCEDURE: Having a library with custom cert -> upgrade to latest code -> downgrade to old code (Reset HTTPS cert using wizard and generate new one) -> Upgrade to latest code => must pass	Moderate	NxT1



Firmware Release Notes

Project	Previous Release	Release	Author	Date
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3.2 Changes since Release NxR1

3.2.1 Customer change requests

Number	Customer DDT	Description	Workaround	Root cause	Solution	Severity	Code Rev.
5373	-	Warning events for drive failures need to be split up between HPE and other customers	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>Text changed according to requirements, already updated by Norbert</p> <p>2. VERIFICATION PROCEDURE:</p> <p>Verification currently only possible for non HPE cutomers because no HPE code available yet.</p>	Moderate	NxS1
9466	-	Add firmware version information to ticket parameters	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>Added FW Version in Log Ticket</p>	Moderate	NxS1
9535	-	LTO-10 Drive-Sled-Fan control adaption	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>Implemented 15 degree offset for LTO10 fan control</p> <p>2. VERIFICATION PROCEDURE:</p> <p>Code review because LTO10 now uses different fan control</p>	Serious	NxS1
9554	-	Add Aramid Media support (barcode label extension and density code)	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>now checking for density code 0x63 and barcode label suffix PA to identify media as LTO10 media</p> <p>2. VERIFICATION PROCEDURE:</p> <p>use LTO10 premium medium to check if it is detected properly as a LTO10 media</p>	Moderate	NxS1



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9560	Ticket#7435 71	Exclude Driveless Partition slots from Wellness Test move operations	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>The original check for not accessible slots was extended. Now we start at each corner and search around this corner until we find one accessible slot. This is done on slot-base of the unit.</p> <p>2. VERIFICATION PROCEDURE:</p> <p>Set partitions/slots as inaccessible an place types there. But also at least one tape in an accessible slot of the unit. Then start the wellness-test. The tapes from the inaccessible slots must not be moved during the test by the test.</p>	Serious	NxS1
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3.2.2 Resolved Issues

Number	Customer DDT	Description	Workaround	Root cause	Solution	Severity	Code Rev.
8308	Ticket#7421 30; Ticket#7435 60	MST: OCP Webkit ContentResendError	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>added again time diff reload of app to prevent javascript timers to be out of sync</p> <p>2. VERIFICATION PROCEDURE:</p> <p>change datetime to the future and the past ocp will reload to get in snyc with datetime again (in webkit) qt runs already monotonic</p>	Moderate	NxS1
9272	-	system.log truncates domain name	-	-	<p>1. FIX\IMPROVEMENT DESCRIPTION:</p> <p>Host Name / Domain Name/IPv6 status address now on separate lines to allow longer entries. Was limited to 16 chars</p> <p>2. VERIFICATION PROCEDURE:</p>	Minor	NxS1



Firmware Release Notes

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					Please describe in steps what has to be done to verify the change.		
9492	-	System test fails because incompatible cartridge is selected for test	-	-	1. FIX\IMPROVEMENT DESCRIPTION: Drives greater than or equal to generation 10 only select the tapes of the same generation as drive for system test	Moderate	NxS1
9494	-	Encrypted write cannot be performed on the LTO10 drive	-	Encrypted write was not supported for LTO10 yet	1. FIX\IMPROVEMENT DESCRIPTION: Encrypted writes were not supported for LTO10 drives 2. VERIFICATION PROCEDURE: Attempt to write encrypted data to a LTO10 cartridge. The behaviour should be the same as with other generations.	Moderate	NxS1
9517	Ticket#7435 30	Driveless / Vault Partition Encryption possible (invalid config)	-	-	1. FIX\IMPROVEMENT DESCRIPTION: Filter out Driveless 2. VERIFICATION PROCEDURE: Check Partition Encryption Page	Moderate	NxS1

3.2.3 Implemented Stories

Number	Customer DDT	Description	Severity	Code Rev.
9340	-	Driveless Partition Feature for MultiStak- Backend	Serious	NxS1
9396	-	Driveless Partition Feature for MultiStak - REST	Moderate	NxS1
9397	-	Driveless Partition Feature for MultiStak - GUI	Moderate	NxS1
9398	-	Driveless Partition Feature for MultiStak – Automatic move to vault logical library - GUI	Moderate	NxS1
9540	-	Add support for FC speed >10Gbit/s	Moderate	NxS1
9541	-	Robotics improvements for MultiStak	Serious	NxS1
9542	-	Self Learning Offset for Robotics & Default Magazine Calibration Value if Flag is not detectable	Moderate	NxS1
9543	-	PKCS12 package upload	Moderate	NxS1



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9572	-	MultiStak CN language GUI	Minor	NxS1
9574	-	LTO-10 Drive Sled Fan behavior change	Moderate	NxS1

3.3 Changes since Release Unknown

3.3.1 Customer change requests

Number	Customer DDT	Description	Workaround	Root cause	Solution	Severity	Code Rev.
9480	-	Update 3rdParty due to CVEs and that no patch is necessary by default	-	-	<p>1. FIX/IMPROVEMENT DESCRIPTION:</p> <p>updated 3rd party to busybox 1.37.0 ntp 4.2p18 lighttpd 1.4.76 openldap 2.5.19 rsyslog 8.2406.0 zlib 1.3.1</p>	Moderate	NxR1

3.3.2 Resolved Issues

Number	Customer DDT	Description	Workaround	Root cause	Solution	Severity	Code Rev.
9377	Ticket#743440	CHASSIS_CALIBRATION_DATA_MISMATCH checks for two wrong parameters	-	Comparison of robotic fingerprint included BCR angle/offset which is not part of robotic identity and is changing during calibration	<p>1. FIX/IMPROVEMENT DESCRIPTION:</p> <p>Comparison fo robotic fingerprint limited to exclude last 2 bytes. This should avoid event 4089 when robotic was not changed but BCR angle and offset have changed during calibration</p> <p>2. VERIFICATION PROCEDURE:</p> <p>Please describe in steps what has to be done to verify the change.</p>	Moderate	NxR1