

IBM LTO-6 Firmware Version JAX0 (FH) and JAX1 (HH) Release Announcement

April 2019

Preface

This Product Information Bulletin announces the release of IBM LTO-6 firmware updates JAX0 for full-height (FH) drives and JAX1 for half-height (HH) drives. These updates are intended, among other things, to increase overall reliability, improve tape handling, further reduce any possibility of error, and provide continued enhancements to diagnostic capabilities.

Models Affected

This firmware affects all IBM LTO-6 drives, both FH and HH.

Upgrade Considerations

All systems running code IBM LTO-6 J450/J451 can be upgraded to LTO-6 JAX0/JAX1.



CAUTION: To prevent data corruption, verify that all active backup and recovery jobs to the NEO tape library are completed prior to performing the upgrade.

Downgrades

Downgrades are not supported.

Functional Improvements (Reduce Permanent Errors)

Firmware fixes included with the JAX0 FH and JAX1 HH updates:

- **DCCs / error queue wrongly cleared on 6/2800 reporting:** Fixed problem which could cause deferred errors to be incorrectly cleared on other paths when UA 6/2800 was reported.
- **LP 14h duty cycle reporting:** Fixed problem with incorrectly reporting the duty cycle parameters in LP 14h.
- **Improve/cleanup MAC queue:** Changes and improvements made to the drive Medium Access Command queue code, to better handle error scenarios which could previously result in a drive hang.
- **Unexpected End Mark by read after rewind with multi-partition:** Fixed an FSC 6601 error on a read command with a multi-partition tape. This was caused by race condition between the host read and completing an internal BOP cache operation.
- **Timeout by reading corrupted compressed record at BOT:** Fixed a problem where reading a bad record at BOT resulted in a hang and timeout. It should have reported FSC 601D instead.
- **Set SCD "6" for FSC 7265 Invalid Density error.**

- **Close timing window on Write Attribute command:** This fixes the SCSI command response to the Write Attribute command when a cartridge is just loaded and the cartridge memory is being read and / or the cartridge memory is being initialized. During this short time period, a Write Attribute command cannot write to the cartridge memory. The drive was not responding with appropriate sense data and wrongly reporting the command completed.

Fixes That Affect Only Certain Drives

Library Drives

- **Fix six-byte value VOLSER in MR page:** Fixed a problem with incorrectly storing MAM attribute 806h, when the CM MR page has a six-byte VOLSER.
- **Fix panic on concurrent dump reads from host and lib:** Prevents a code panic when concurrent Read Buffer requests are received from two initiators.
- **LN1: Set VS=0 in both bytes 6,7 in inquiry data.**
- **Drive panic due to overlapped Mode Select Commands:** The drive and library were both doing the Mode Select with the Save bit to the same page which caused a conflict, and the drive panicked.
- **Report the correct node name for port 1 in Log Page 11h.**
- **Library generic cmd not transferring all data:** Fixed a problem where the drive was not transferring data correctly for a generic command, after the second xfer rdy IU.
- **Correct LN1 sense data after recovery login IU:** The default sense data for the library status was not correctly set prior to the library logging into the drive via ADI on a communication recovery.
- **Use correct length when getting set MAM attributes.**
- **ADI: Change order of checking xmit and rcv IRQs:** Due to a timing issue in servicing transmit versus receive interrupts on the ADI interface, the drive and library could lose communication which would necessitate an ADI interface recovery.

SAS Drives

- **SAS: Drive panic due to excessive repeating transfer failures:** In an error inject scenario, repeated dropped data frames caused the drive to run out of messages and reboot unexpectedly.

FC Drives

- **Avoid duplicate PEWZ notification:** A race condition could occur which would cause a duplicate PEWZ (programmable early warning zone) sense data to be sent.
- **FCH: improve N-Port direct attach:** Additional code improvements for N-Port attach.
- **FSC 6000 on FC reset:** Fixed an FSC 6000 error caused by a race condition when an FC reset occurred during a positioning operation.
- **SRR should read from media, not BOP cache:** Prevents a case of corrupted read data following SRRs on the host interface.
- **Set SCD F (NO_LIGHT) when no cable is attached at power-on:** There was a race condition between the POST code sequence completing and interface code checking for cable attach. In some cases where no cable was attached, the SCD F did not get set.

Downloads

Firmware update codes IBM LTO-6 JAX0 (FH) and JAX1 (HH) are available for download for supported NEO users with active software entitlement agreements. Go to the Overland-Tandberg Customer Support Portal by navigating to the Manage Products page: <http://support.overlandstorage.com/support/neo-series.htm>.