MULTICAM | VERSION 20.5.37

RELEASE NOTE

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CONTENT

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WARNINGS

- **Multicam 20 is only compatible with XT-VIA, XS-VIA and XT-GO**
- **For improved stability and performance, it is strongly recommended for XT-VIA, XS-VIA and XT-GO servers currently running Multicam 16 to upgrade to Multicam 20.**
- **For servers equipped with M4X it is recommended to perform a BIOS upgrade to version MA50R938. Please get in touch with the EVS support to perform this operation.**
- **Multicam 20.4.31/XHub-VIA 1.4 or greater is required for XHub-VIA HW rev. A3, equipped with Variscite modules (SN 510000 or higher)**
- **For servers equipped with 10K9 drives, it is strongly recommended to perform a firmware upgrade to version C0D8 (for ST1800MM0129) or N0D8 (for ST1200MM0009).**
- XNet-SDTI compatibility between XT-VIA / XS-VIA servers running Multicam 20.5 and the previous generation of servers able to run Multicam 16.6 (patch 15 or higher) is maintained
- Using the XHub-VIA Live IP 100G Enabler for 100G requires a calibration of the XT's SFP interfaces. Please get in touch with EVS Support for further details
- For servers equipped with M4X it is recommended to manually upgrade the board firmware (to version M4X_02) in the Multicam Setup Hardware Check menu for support of all serial controllers. See Multicam Installation Manual for further details.
- Until version 20.3.27, working in Live IP with the XHub-VIA 100G Enabler still required the configuration of all 14 **SFP** network interfaces. Since Multicam 20.4.27, the by-default support of NATing requires a one-time IP configuration of the 2 **QSFP** network interfaces when upgrading from Multicam 20.3 (or earlier) to Multicam 20.4 (or later). Please contact your local support if you wish to upgrade to Multicam 20.4 without enabling NATing support.

NEW FEATURES

IN 20.5.37

- On XT-VIA, XS-VIA, XT-GO
  - Support of the TGE2 board (hardware revision 6.40)

IN 20.5.25

- On XT-VIA, XS-VIA, XT-GO
  - Import/export Live IP configuration from/to CSV file
  - Support of server metrics with OpenMetrics
- On XT-VIA, XS-VIA
  - Support of 24/32 mono per server channel in SDI
  - H.264 proxy streaming activation and configuration
- On XT-VIA
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Signature Production Servers Configuration Overview for more details
- On XT-GO
  - Support of Fill & Key base configuration with up to 4 Fill & Key channels
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Pure Production Servers Configuration Overview for more details

IN 20.4.31

- On XT-VIA, XS-VIA
  - Support of XHub-VIA equipped with Variscite modules

IN 20.4.27

- On XT-VIA, XS-VIA, XT-GO
  - Support of NMOS Group hint tags for natural grouping
  - Support of Vertical Alignment for clean switching in Live IP
  - Support of 4 streams 1080p in 50Hz even without XHub-VIA 100G Enabler
  - Support of HTTPS for secure communication to access the Multicam and Live IP configuration
  - Protection against Click-jacking
  - Support of IP-Edit Live to-Tape in Live IP
- On XT-VIA, XS-VIA
  - Reduced delay to live when playing distant network recorders over the XNet-VIA (500 ms)
  - Support of Fill & Key base configuration with up to 6 Fill & Key channels
  - Support of NATing on XHub-VIA 100G Enabler for better integration in Live IP setups over 100G
  - New IO configurations for Fill & Key in 1080i and 1080p
    - see LiveCeption Signature Production Servers Configuration Overview for more details

- On XT-VIA
  - Support of Recorder Ganging when playing local and network recorders live using LSM-VIA
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Signature Production Servers Configuration Overview for more details
- On XT-GO
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Pure Production Servers Configuration Overview for more details

IN 20.3.26

- On XT-VIA, XS-VIA, XT-GO
  - Dual PC-LAN

IN 20.3.21

- On XT-VIA, XS-VIA, XT-GO
  - Support of ST 2110-31
  - Live IP audio monitoring for recorders
  - Support of analog LTC with genlock PTP
  - Support of 10+2 RAID configuration
- On XT-VIA and XS-VIA
  - More configurations allowing Make-Before-Break in 1080p
  - New dedicated ffmpeg process for thumbnail creation
- On XT-VIA
  - New Super Motion configurations with a combination of multiple SLSM speeds in 1080i and 1080p
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Signature Production Servers Configuration Overview for more details
- On XT-GO
  - New IO configurations in 1080i and 1080p
    - see LiveCeption Pure Production Servers Configuration Overview for more details

IN 20.2.30

- On XT-VIA, XS-VIA, XT-GO
  - Support of Make-Before-Break switching for ST 2110-30 (audio over IP)
  - Support of MV4X Input Failover when working in ST 2022-7
  - Support of PTP Custom Offset
  - Support of NMOS as separate process for increased robustness
  - Support of scheduled activation for senders and receivers in NMOS IS-05
  - Display of MV4X input status
  - Disk firmware upgrade available for 10K9 4Kn drives

- On XT-VIA, XS-VIA
  - Support of proxy h.264 in bitrate 1, 1.5 (default) and 2 Mbps
- On XT-VIA
  - New IO Configs
    - New regular and supermotion configurations in 1080i and 1080p
- On XT-GO
  - Support of LSM-VIA controller
  - Support of Audio Swap and Audio Split
  - Support of Split Screen on LSM-GO
  - New IO Configs
    - New regular and supermotion configurations in 1080i and 1080p

IN 20.1.27

- On XT-VIA, XS-VIA, XT-GO
  - Support of DHCP for Live IP network interfaces
  - Display of input stream status for ST 2110-40 streams
  - PTP status monitoring in SNMP
  - RTP payload, packet time and NMOS & Ember+ service in Live IP configuration
  - Support of unicast when using 1 IP address per SFP interface
  - Live IP interface bandwidth monitoring on Shift+F5 monitoring
- On XT-VIA, XS-VIA
  - Support of 34 servers in XNet-VIA
  - Support of 64000 network clips in XNet-VIA
  - Optional source filtering in Live IP with XHub-VIA IP Aggregator
  - SDTI compatibility with servers running in Multicam 16.6
- On XT-VIA
  - New IO Configs
    - New supermotion configurations in 1080i, 1080p and 1080p-to-UHD-4K upscale
- On XT-GO
  - Support of serial controller protocols in Sportlight base config
  - New IO Configs
    - New regular and supermotion configurations in 1080i and 1080p

IN 20.0.13

- Improved internal clock robustness against a highly unstable PTP signal

IN 20.0.2

- On XT-VIA
  - Support of LSM-VIA controller
  - Protocol can be configured as primary controller in Dual LSM

- On XT-VIA, XS-VIA
  - Support of IPD-VIA controller
  - Support of XHub-VIA Live IP 100G Enabler for Live IP over 100G
  - Support of UHD-4K single-stream in 59.94 Hz when using XHub-VIA Live IP Aggregator
  - Support of EditRec in SDI in 720p, 1080i and 1080p
  - SDTI compatibility with servers running in Multicam 16.5
- On XT-VIA, XS-VIA, XT-GO
  - Support of Make-Before-Break switching for ST 2110-20 when bandwidth allows it
  - Support of Unicast NMOS Discovery through DNS-SD
  - One IP address per V4X SFP interface
  - Support of MV4X multiviewer IP inputs in ST 2110
  - Support of ST 2022-7 for Ancillary Data (ST 2110-40)

BUG FIXES

IN 20.5.37

- In Live IP, when extended headers were enabled on ST 2110 streams, decoding issues could occur (MUL-25667)
- With ST 2110-40, in 1080i, when there were no ancillary packets during a field, data corruption could occur because the empty packet was not decoded correctly (MUL- 25288)
- With ST 2110, some PTP system framerates were not supported by Multicam (MUL-25947)
- With NMOS IS-04, Multicam could regularly disconnect & reconnect from Cerebrum (MUL-25577)
- When using IPDirector in parallel mode, a play command sent through GPI was actually sent twice (MUL- 25878)
- When using IPDirector in parallel mode, when triggering through GPI a playlist with “unknown” set as default speed, the playlist was not played (MUL-24672)
- When using IPDirector in parallel mode, when triggering through GPI a playlist with an SLSM clip at first position and “unknown” set as default speed, the playlist was played at full speed (MUL-25894)
- When copying or restoring several clips with XFile3, the progression percentage was updated only for the first clip (MUL-25805)
- Loop clip was not played between Short In and Short Out when the play was triggered through GPI (MUL-25507)
- Protections have been added to prevent ucode freezes when playing distant content over XNet-VIA (MUL-25867, MUL-25886, MUL-25895)
- Protections have been added to avoid Segmentation fault error generated by DspUart when special characters are written in Linx / AVSP logs (MUL-25847)
- Protections have been added to avoid LSM-VIA Remote disconnections (MUL-25865)
- With LSM-VIA, sometimes clip creations could fail if IPDirector was updating the clip VarID (MUL-25798)
- Sometimes Multicam messages were displayed on the OSD but could not be acknowledged from LSM-VIA (MUL-24854)
- With the XHub-VIA 100G Enabler and NATing enabled, repetitive PTP losses could occur because of improper timeout management between PTP messages (MUL-26276, XHUBVIA-581)
- Sometimes, when backuping with XTAccess, the TGE could not respond any more, forcing a reset of the board (MUL-25971)

IN 20.5.25

- 10K9 drives could be ejected and disconnected after reaching approximately 2 years and 6 months of operating hours (POH) (MUL-24913)
- In 1080i with frame-based codecs (AVC-I, XAVC), a freeze could occasionally occur for 3 seconds when browsing backwards distant content over XNet-VIA with frame-based preload (MUL-25283)
- In 1080i with frame-based codecs (AVC-I, XAVC), a freeze could occur on players when jogging backwards from the out point of a distant clip over XNet-VIA with frame-based preload (MUL-25404)
- In 1080i with frame-based codecs (AVC-I, XAVC), the time code returned by the “Go to Timecode” command was shifted by one field (MUL-25357)
- With the LSM Remote, when loading a playlist on Remote 2, changes to the PostRoll settings were not taken into account on Remote 3 and 4 (MUL-25238)
- With the LSM Remote, when retrimming a clip and jumping to the end of the clip, sometimes the old clip boundaries were used (MUL-24890)
- With LSM-VIA, playlist transition points were not preserved when changing effect durations (MUL-23746)
- With LSM-VIA, looping on a playlist with a single element didn’t work (MUL-21409)
- With LSM-VIA, when playing a playlist, the Play channel could occasionally go back to E/E (MUL-24344)
- With LSM-VIA, when copying a clip containing a Unicode character, the clip name was not displayed on the multiviewer (MUL-19240)
- With LSM-VIA, the Play channel could occasionally go to E/E while editing playlists (MUL-25273)
- Stability improvements have been added to prevent the Signal Aborted event generated by MainBgTask when recalling clips using LSM-VIA (MUL-24642)

- In Live IP, in 1080i, if there were no ancillary packets to transmit in the second field, no packets were transmitted, whereas ST 2110-40 standard requires an empty packet to be transmitted (MUL-24904)
- In Live IP, the auto-increment feature was not working for the subnet mask and default gateway IP addresses (MUL-23033)
- With ST 2022-7, in the Live IP configuration the secondary audio streams were sometimes not indicated as missing for badly configured audio streams (MUL-22650)
- In Live IP, the PTP GM clock ID was expressed in Little-Endian format (as opposed to Big-Endian up to Multicam 20.2) (MUL- 22219)
- The PTP transparent clock residence time, as communicated through the PTP correction field, could be wrongly applied inside the XT (MUL-25202)
- With the XHub-VIA 100G Enabler and NATing enabled, when a PTP profile not compliant with the INTEROP_AES_SMPTE profile was defined in the WebConfig, the PTP status appeared as Bad (XHUBVIA- 562, MUL-24978)
- Due to a race condition, an error could occur during a version change on the XHub-VIA, when the switch configuration was reset (MUL-25251, XHUBVIA-564)
- With Ember+BESS, if an input stream was not present, it was not indicated as “impaired” as requested by the standard (MUL-17062)
- In 1080i with NMOS IS-04, the dimensions were incorrectly exposed in the sender SDP’s (MUL-18784)
- With NMOS IS-04, when working in Dual PC-LAN, the RDI discovery through DNS-SD was not working (MUL-25260)
- In NMOS IS-04, the flow grain rate could be wrong in 1080i configurations (MUL-24800)
- With NMOS IS-05, activating or deactivating an endpoint was accepted even though the update was eventually refused by Multicam (MUL-21197)
- The server could become inaccessible through the web configuration if one or more configuration lines are invalid due to exceeding server bandwidth constraints (MUL-25275)
- In a playlist, when adjusting the audio level of a clip with AVSP, some noise could appear two clips later in the same playlist (MUL-24941)
- In the Multicam web configuration, the protocols did not appear in the GPI section (MUL-22364)
- The MV4X SFP MAC addresses were missing in the SNMP MIB (MUL-25036)
- IPD Software Player was not able to play the record trains after a Record Train Reset operation executed from the Shift+F5 monitoring screen (MUL-24945)
- With the Phantom Flex 4K hypermotion camera glitches could occur when clearing a block that was loaded at the same time (MUL-21248)
- With IPD-VIA, the connection with the XT server could occasionally get lost (MUL-24763)
- Stability improvements have been added to prevent the Signal Aborted event generated by DspUart when creating clips using DD35 protocol in 59.94Hz configurations using drop-frame (MUL-23785)
- In the Multicam maintenance menu, the labels in the PC-LAN network settings were not displayed (MUL- 24250)
- Stability improvements have been added to prevent ucode exceptions when jumping to a null sequence (MUL-25394)

IN 20.4.37

- Freezes could sometimes occur when playing distant clips over XNet-GO (MUL-25134)
- When playing a distant clip previously restored with XTAccess, getting to the end of the clip could cause some freezes on scrub back (MUL-25049)
- After a fresh installation of Multicam 20.4, the XT server did not advertise any of its NMOS resources (MUL-24942)
- In Live IP, when using multi-stream configurations (SLSM, Quad-HD), resetting the SFPs did not work (MUL-24099)
- On the XHub-VIA, it was not possible to remove an interface from a VLAN with the CLI (XHUBVIA-558)
- Browsing in a distant growing clip over XNet-VIA could sometimes fail (MUL-25088)
- With LSM-VIA in PGM/PRV, the clip post-roll was sometimes not played (MUL- 24584)
- When installing Multicam 20.4.34, the firmware upgrade of the XHub-VIA 100G Enabler could fail (XHUBVIA-563, MUL-25236)
- With Ember+BESS, updating more than 2 receivers simultaneously could sometimes fail (MUL-24931)

IN 20.4.34

- Stability improvements of the proxy encoding have been added to prevent some occurrences of System Backup Latency issues (MUL-24696)
- Assigning an IP address to the MV4X interfaces via DHCP did not work properly (MUL-24796)
- With XNet-VIA, sometimes accessing content on a distant server could fail when previously attempting to load over the network a clip from that server at the same time when it is being deleted (MUL-24790)
- With LinX, preloading a clip on PGM3 or PGM4 was not possible (MUL-24694)
- When adjusting the audio level with AVSP, the increase in output gain was limited to 3dB instead of 18dB as expected (MUL-24782)
- With LSM-VIA, a clip could sometimes be played only once while loop mode was activated (MUL- 24755)
- Freezes could sometimes occur when playing distant clip over XNet-VIA with frame-based preload (MUL- 24761)
- Protections have been added to avoid race effects that could lead to NMOS instability (MUL-24792)
- With LSM-VIA, playing a playlist with distant aux tracks did not work properly (MUL-24705, MUL-24711)
- With LinX, it could occasionally happen that a wrong clip was cued on a playout channel (MUL-24614)
- With NMOS IS-05, when staging an endpoint without activation, the update was applied immediately (MUL-24620)
- Stability improvements have been added to prevent XHub-VIA 100G Enabler exceptions when performing its configuration during Mulboot (XHUBVIA-553)
- Creating a LAG interface on the XHub-VIA with the CLI could fail (XHUBVIA-557)

IN 20.4.31

- In Live IP, it was not possible to activate or deactivate multi-phases streams (SLSM and UHD-4K in Square Division or 2 Sample Interleave) via the Web Config (MUL-24143)
- LSM-VIA remotes could disconnect from the XT server when renaming recorders through TSL with characters outside of the US ASCII range (MUL-24541)
- Stability improvements have been added to prevent ucode exceptions when playing clips without audio over XNet-VIA (MUL-24534)
- Stability improvements have been added to prevent ucode exceptions when performing VLAN switches to connect/disconnect different XNet-VIA networks (MUL-24254)
- Local record trains could stop recording when playing a clip that is being copied over the XNet-VIA and the available bandwidth is saturated (MUL-24289)
- Stability improvements have been made to prevent a server from occasionaly disconnecting from the XNet-VIA network (MUL-24448)
- With XNet-VIA random date jumps could occasionally occur if the XT server did not receive a valid LTC signal (MUL-24323)
- Recorder thumbnails were not refreshed in case of date jumps in the future (MUL-24542)
- Stability improvements have been added to prevent Signal Segmentation faults generated by Multicam when generating many ucode logs (MUL-24543)
- Stability improvements have been added to prevent Signal Segmentation fault generated by ItRTPrc (MUL-24218)
- With LSM-VIA, the clip creation could fail because memory leaks provoked by connecting & disconnecting servers from the XNet (MUL-24290)
- With LSM-VIA, the Playlist ID was not displayed on the Char OUT OSDs (MUL-24555)
- With LSM-VIA, when defining a distant clip as aux track, the LSM-VIA remote was freezing (MUL-24674)
- With NMOS IS-04, the list of senders could sometimes be wrong when changing the multiviewer audio monitoring settings (MUL-24426)
- With NMOS IS-04 some AMWA tests could fail when using the Sony RDI (MUL-24069)
- With NMOS IS-04, sometimes senders or receivers were not listed in the node when connecting/disconnecting the SFP interfaces shortly after starting Multicam (MUL-24235)
- With NMOS IS-04, the PTP GM clock ID was written in lowercase in the sender SDPs (MUL-18783)
- In NMOS IS-04, the PTP GM clock ID was expressed in Little-Endian format (MUL- 24699)
- With NMOS IS-04, video-only sources were exposed as sources with format type mux (MUL-22867)

- With NMOS IS-05, receiver updates could take several seconds to be applied (MUL-24668)
- With Ember+BESS, when using ST 2022-7 the receiver status was showing “primary” even if both streams were available (MUL-22953)
- With Ember+ BESS, when using ST 2022-7 the Multiviewer input receiver status was showing “lost” even if the primary or secondary streams were available (MUL-22954)
- With Ember+ BESS, the SDP information stored on the receiver was sometimes lost even without configuration changes (MUL-23219)
- With Ember+ BESS, the format value in the SDP file could sometimes be UHD-4K whereas the output was Full HD (MUL-24571)
- With Ember+ BESS, the receiver status could indicate stream present “true” and stream impaired “false” for deactivated receivers (MUL-21423)
- With ABRoll, when copying many distant clips over Gigabit to the local server, the copies could occasionally fail (MUL-22241)
- With XFile3, flattening or archiving a playlist with clips from different recording sessions could fail (MUL-23047)
- The backup of a clip with guardbands by XSquare could sometimes fail (MUL-24505)
- On XHub-VIA, the local and remote device information exposed through SNMP was wrong (XHUBVIA-513)
- On XHub-VIA, the PRS primary interface name exposed through SNMP was wrong (XHUBVIA-549)
- On XHub-VIA, the LLDP neighbor list was not updated when disconnecting a device (XHUBVIA-527)
- With XNet-VIA, when activating the Protection Switching on some interfaces of the XHub-VIA, the link status remained in "WaitForEnableAutomaticSwitching", preventing the PRS from performing properly (XHUBVIA-492)
- On XHub-VIA, it was not possible to configure an XNet-VIA uplink in LAG mode (XHUBVIA-524)

IN 20.4.27

- Stability improvements have been added to prevent the Signal Aborted event generated by MainBgTask when moving clips from one XT server to another using LSM-VIA (MUL-23785)
- On the LSM remote, the SLSM configuration page was not at the right location in the Technical Setup (MUL- 22610)
- With LSM-VIA, moving a clip could fail if that clip had been moved during the clip creation (MUL-18832)
- With LSM-VIA, in XNet(Web)Monitor the port status was indicated as “disconnected” (MUL-23876)
- With LSM-VIA, loading the last Mark Point on a clip could sometimes fail (MUL-23572)
- With the LSM Remote, when reaching the clip Short OUT and then moving the lever to the bottom, one additional field was played (MUL-22947)
- In 50Hz the audio could be delayed by 1 frame with respect to the video (MUL-24174)
- With the LSM Remote, when playing a playlist with audio split after browsing that same playlist, the audio advance/delay was not correctly applied (MUL-23067)
- In Live IP with SLSM configurations the LSM Remotes could temporarily lag when loading playlists with aux tracks (MUL-24020)
- With NMOS IS-04, the resources were still exposed even after quitting Multicam (MUL-24071)
- Audio senders for the second, third and fourth MV4X outputs were not declared in the NMOS node when monitoring the audio from the PGMs (MUL-22871)
- When copying locally a distant playlist through XNet-VIA, a clip could sometimes be replaced in the local playlist by a local - but different - clip (MUL-23875)
- In Live IP with AVC-I / XAVC codecs, audio and video could be shifted by one frame (MUL-23808)
- In IPD-VIA the recorder thumbnails could be missing for recorders 11 and 12 (MUL-24112)
- With LSM-VIA, when playing a playlist through GPI, the aux track was sometimes not played (MUL-24083)
- Stability improvements have been added to avoid some disconnections of the XHub-VIA 100G Enabler (XHUBVIA- 504)
- With VDCP, the next cued clip was played despite stopping the loop mode (MUL-20366)

IN 20.3.27

- With NMOS IS-04, when losing the connection to the primary RDI, the Node did not register to a secondary RDI (MUL-23574)
- Stability improvements have been added to prevent signal segmentation faults generated by MainBgTask (MUL-23721)
- After genlock perturbations, h.264 I-frames could be wrongly tagged as P-frames, preventing IPDirector from decoding the proxy streams (MUL-23118)
- With ABRoll, when a playlist item went into idle mode, the preload could fail, and the item would not be played (MUL-23352)

IN 20.3.26

- Color rendering issues could occur at playout in UHD with AVC-I / XAVC codecs (MUL-23238)
- When clearing all clips and playlists with LSM-VIA, the clips present in a playlist were not deleted (MUL- 23066)
- Encoding quality issues could occur in 1080i and 1080p with ProRes codec (MUL-23447)
- In Live IP with ST 2022-7, modifying an audio receiver with NMOS could activate the secondary stream of another audio receiver, the primary stream remaining disabled (MUL-23086)
- Sometimes, growing clips could not be retrimmed or deleted by IPDirector (MUL-22633)
- With VDCP, retrieving the clip database information using the VarID failed (MUL-23223)
- Decoding issues could occur when playing out a restored UHD content, previously transcoded from XAVC to DNxHR (MUL-23188)
- Reading remote content with XNet-VIA was sometimes done with a wrong priority (MUL-23525)
- Stability improvements have been added to prevent Signal Aborted events generated by MainBgTask (MUL-23563)

IN 20.3.21

- In Split Screen mode with LSM-VIA, the OSD on the Char OUT monitoring were not updated for the PGMs (MUL-22075)
- In ST 2022-7 with the XHub-VIA 100G Enabler, the monitoring status of the first external input of the MV4X was always the same as the monitoring status of the second external input (XHUBVIA-364)

- In a network with more than 31 machines, auto-make local failed for servers with a net number greater than 31 (MUL-22996)
- Programming a new route on the XHub-VIA 100G Enabler could sometimes take too long, resulting in all routes being reprogrammed (MUL-22891)
- LSM-VIA remotes could disconnect from the XT server due to duplicate playlist GUID (MUL-22316)
- In Live IP with ST 2022-7 deactivated, the server might not be locked to PTP when cabling the second interface of the master module (MUL-23152)

IN 20.2.36

- An instability in the reading of the hardware clock could sometimes lead to an unexpected date jump (MUL- 22305)
- The clips were not listed any more on the server in the VarId folder when connected via FTP (MUL-22321)
- Special characters (such as double quotes) in the name of the recorders could sometimes cause the Web Config to hang (MUL-22421)

IN 20.2.34

- Problem could occur when renaming a clip when using the XtdenDD35 protocol (MUL-22109)
- When booting up Multicam, the "Genlock OK since" date took an invalid date (MUL-22308)
- When a timeline was cued on the primary LSM remote LSM, playlists couldn't be loaded on the secondary LSM remote (MUL-22157)
- Sometimes, a clip could be stuck on the internal proxy creation level, preventing it from being loaded on a channel by IPD (MUL-22255)

- Clock updates during the XNet establishment could lead to issues with route management when using NMOS (MUL-22152)
- In Live IP, freezes could happen when updating the channel name through TSL protocol (MUL-19707)
- The record trains could stop when receiving a highly instable PTP signal (MUL-22175)
- Renaming a recorder when using TSL as Tally protocol only had an impact on the multiviewer (MUL-22475)

IN 20.2.32

- In SDI with h.264 proxy active, the LoRes codec could be corrupted and not readable in IPD Software Player (MUL-22130)
- With the XHub-VIA Live IP Aggregator, in 1080p it was not possible to have 2 PGM and their monitoring assigned on the same network interface (MUL-22113)
- With the XHub-VIA Live IP 100G Enabler some recorders could not connect to any input source (MUL-22186)
- When defining a GPI on a channel that is controlled by Sony BVW75 as secondary protocol, the GPI signal could be sent to other server channels (MUL-22140)
- With the LSM Remote it was not possible to connect to another server with net number 32 or higher (MUL- 21999)
- With the VGA screen it was not possible to connect to another server with net number 32 or higher (MUL- 22163)
- In MulSetup, the navigation between XiP configuration lines could be very slow (MUL-22197)

IN 20.2.30

- With NMOS IS-05, when working in ST 2022-7, payloads without duplicate transport_params were not refused (MUL-18276)
- With NMOS IS-04 when activating or deactivating ST 2022-7 in the Live IP configuration, the status was not updated in the NMOS Node (MUL-17038)
- In IPDirector, when creating a subclip or retrimming a clip in a playlist, the clip could be recued at the wrong TC (MUL-20505)
- With the Phantom Flex 4K hypermotion camera glitches could occur when clearing a block that is currently loaded (MUL-21248)
- When playing with LSM-VIA a playlist with audio muted, the audio was still played (MUL-19432)
- In Live IP, the multiviewer inputs were not supported in unicast (MUL-21017)
- In ST 2022-7 the interface_id parameter was not present for Live IP receivers (MUL-19363)
- With NMOS IS-04 some interfaces could be listed in /self even when they are not used (MUL-19156)
- With VDCP, when receiving corrupt messages, the XT server did not reply with a NACK message (MUL- 17726)
- In Live IP, a synchronization delay could occur between video and audio streams (MUL-19229)
- The automatic IP address incrementation for the Live IP interfaces “D” did not work in the Web Config (MUL-18704)
- With NMOS IS-04 the sender_id of a receiver was wrong and could not be updated (MUL-21989)
- In 1080i with frame-based codecs (AVC-I, XAVC) SLSM recorders on 3G could be stopped at Multicam start (MUL-21489)
- In 1080p, video glitches could happen when flattening a playlist containing clips created by LSM-VIA (MUL-21891)

IN 20.1.39

- The XT server could be disconnected from the XNet-VIA network after some days of running time (MUL- 21147)
- With LSM-VIA, sometimes clips could not be added to playlists when Multicam was running for several days (MUL-20966)
- LSM-VIA could become unresponsive when Multicam was running for several days (MUL-20925)
- With LSM-VIA, a resync of the Hammer services DB could be provoked by creating a clip whose IN and OUT are defined on the same TC (MUL-20580)

- In ABRoll, when dragging & dropping a list of clips in a playlist that is running in loop mode, some clips could be deleted from the playlist (MUL-21208)
- A playlist could not be flattened if it included a clip that had been restriped by LSM-VIA (MUL-21303)
- With VDCP, the RecordInit command was setting the wrong TC IN value (MUL-21177)
- With LSM-VIA, when loading a playlist on a PGM that is controlled by IPDirector sometimes transition effects were not played (MUL-20752)

IN 20.1.37

- Protections have been added to avoid loss of notifications leading to problems in restoring the XNet-VIA network in case of server loss. (MUL-20508)
- Optimizations have been included to avoid LSM-VIA performance issues in large setups (MUL-20786, MUL-20571)
- For distant record trains controlled by protocols the player status was not correct (MUL-15258)
- When using LSM-VIA with 4 operators on the same XT the insertion of clips in playlists could occasionally fail (MUL-20986
- With IPD-VIA controller active, when starting Multicam sometimes the server could not be integrated in the XNet network (MUL-19481)
- With LSM-VIA the creation of a clip could sometimes be very slow (MUL-21021)
- The recorder thumbnails were available in the IPD-VIA only after several minutes (MUL-18446)
- Sometimes Multicam messages were displayed on the OSD but could not be acknowledged from LSM-VIA (MUL-20876)

IN 20.1.32

- In ST 2022-7, after reprogramming an audio receiver with Ember+, the Stream Present status continued to indicate Lost (MUL-20512)
- In the information returned by LLDP on the XHub-VIA, the chassisID was expressed in hexadecimal (XHUBVIA-306, MUL-20629)
- In ST 2022-7, source port and destination port were interchanged in the characteristics of the secondary flow of the MV4X outputs (MUL-20551)
- In 1080i with frame-based codecs (AVC-I, XAVC), the timestamps could sometimes go back and forth in time, preventing from playing the live and reading the head of the record train (MUL-20616)
- The bandwidth monitoring of the MV4X Live IP interfaces was missing in the Shift + F5 monitoring screen (MUL-19561)
- When deleting playlist elements quickly, sometimes wrong elements could be deleted (MUL-19333)
- When retrimming a Drop Frame clip it may be flagged as Non-Drop Frame (MUL-20196)

IN 20.1.31

- The renaming of the camera label through TSL was not working if the initial label was empty (MUL-20459)
- In Live IP, the multiviewer outputs were not supported in unicast (MUL-20402)
- With NMOS IS-05, when performing a several mass updates in a short time it could happen that some receivers were temporarily switched back to the original source (MUL-20257)
- When flattening a timeline with XSquare, the rendered clip could be cut off at the end (MUL-20606)
- With LSM-VIA, mix transition effects were ignored when working with 4 operators on the same server (MUL-20509)
- With the Phantom Flex 4K hypermotion camera, the framerate at 100% speed was wrong (MUL-16254)
- The Live IP interface IP addresses were not incremented correctly (MUL-18916)

IN 20.1.29

- Tally was not working properly when using a configuration without any recorders (MUL-20339)
- Restoring a playlist from the nearline was sometimes slow (MUL-20266)
- Playing a clip while it was copied locally from a distant server could sometimes fail (MUL-20246)
- In Live IP when using the XHub-VIA IP Aggregator, the system time and date were not synchronized when starting Multicam (MUL-20130)

- On servers equipped with M4X the TC based on LTC could be delayed by 10 seconds (MUL-20346)
- With NMOS IS-04 when activating or deactivating a sender or receiver in the Live IP configuration, the status was not updated in the NMOS Node (MUL-17039)
- When running a configuration in PGM/PRV, the multiviewer audio monitoring could be wrong (MUL-20304)
- With LSM-VIA, when using audio split, the transitions were not centered and the Short IN of the inserted clip was modified (MUL-20264)
- With LSM-VIA, the FilmFX mode was not disabled when returning to live (MUL-20268)
- With NMOS IS-05, receivers could not be activated when no transport_params were specified (MUL- 14915)

IN 20.1.27

- In Live IP, the AES67 RTP packets did not have the correct DSCP tags (MUL-15950)
- In Live IP, the PTP packets did not have the correct DSCP tags (MUL-15950)
- In Live IP when using the XHub-VIA IP Aggregator, ST 2022-7 could be activated when working in ST 2022-6 or ST 2022-8 (MUL-19553)
- When working with XHub-VIA Live IP Aggregator, all senders and receivers on the same SFP had to be characterized by different source address or destination address (XHUBVIA-109)
- In Live IP with Make-Before-Break, switching quickly between sources several times, the receiver could stop receiving the video (MUL-19285)
- In Live IP, reconfiguring a receiver could impact temporarily the status of other receivers in the Web Config (MUL-19459)
- With NMOS IS-05, when performing a mass update of all receivers, sometimes the update could fail (MUL- 19765)
- When using Mix-on-one-channel with 2 PGM on the same video codec module and 334M packets encoder activated, some visual artifacts could appear on the PGM output (MUL-19219)
- The Multicam PC-LAN DNS settings (Primary, Secondary and Domain) were lost after upgrading the Multicam version (MUL-19468)
- With LSM-VIA in PGM/PRV, the aux track was not played on the PGM channel if Multicam is configured to use PRV as aux track output (MUL-18792)
- When moving a playlist item in IPDirector, the playlist was not updated in LSM-VIA (MUL-20182)
- With LSM-VIA, when defining a transition duration longer than the playlist element, the playout channel was put to idle (MUL-20035)
- With LSM-VIA, when working with 2 operators on the same server, one had to declare 2 EVS Remotes in the Multicam configuration (MUL-18313)

IN 20.0.17

- With LSM-VIA, the Search TC could return duplicate results (MUL-19384
- With LSM-VIA, changing the angle of a new clip to a distant angle was impossible (MUL-19343)
- With LSM-VIA, a playlist cannot be played when defining an audio advance onto an element with unknown speed (MUL-18977)
- With NMOS IS-04, after a reboot of the server, sometimes the multicast addresses of the receivers and senders were not populated at the node level (MUL-19108)
- With NMOS IS-04, after a reboot of the server, the list of all resources was sometimes empty in the NMOS node (MUL-18923)
- In Live IP, sometimes audio glitches could sometimes occur in the ST 2110-30 stream (MUL-19091)
- A Signal Aborted could be generated during Mulboot when performing a hardware check (MUL-19361)
- With NMOS IS-05 the destination port was required when changing a receiver transport_params (MUL- 15665)
- With NMOS IS-05, the senders or receivers could be in a locked state when configuring them multiple times in a short time (MUL-18823)
- After trimming a clip in a playlist and inserting this same clip again, the limits of the second clip were also trimmed (MUL-19096)
- With NMOS IS-05, receivers could not be activated when no transport_params were specified (MUL- 14915)

IN 20.0.13

- With LSM-VIA, DB synchronization issues could happen for very large setups (MUL-18921)
- With LSM-VIA, MediaInput and MediaOutput commands could fail for very large setups (MUL-18920)
- On the multiviewer the Tally could not be updated through GPI or TSL (MUL-19079)
- When working in Live IP, a protection has been added to cover the case where the PTP timeOfPreviousJam is in the future (MUL-18587)
- On servers equipped with MV4, an issue with the MV4 log rotation could cause an error during Mulboot (MUL-16486)
- The size of NMOS logs was continuously increasing (MUL-17705)
- Communication issues could occur with some serial controllers on servers equipped with M4X (MUL- 18906)
- In NMOS IS-04, when using ST 2022-7 the secondary interface binding could sometimes be wrong (MUL- 19188)
- Decoding issues could occur when playing out a restored content encoded in XAVC (MUL-18928)
- In Live IP configurations, PTP could be lost when the server was running several days with ST 2022-7 (MUL-16710)
- With NMOS IS-05, a wrong code response was sent when using a bulk command (MUL-17542)
- When using h.264, because of genlock perturbations, a desynchronization between HiRes and LoRes causing encoding issues could sometimes occur (MUL-16913, MUL-18655, MUL-17587)
- In Live IP, the output video was sometimes missing when receiving ST 2110-40 streams with several types of ancillary data packets (MUL-18994)
- In ST 2022-7, the secondary ancillary data stream was missing when switching sources (MUL-18934)
- In Live IP, memory issue could occur after unsubscribing to a stream several times, preventing any subscription to another stream (MUL-19040)
- EditRec was not supported on servers equipped with M4X (MUL-18229)

IN 20.0.7

- The server could be disconnected from the XNet network when updating simultaneously the TC IN or OUT of many clips from IPDirector (MUL-18885)
- Configuring IP receivers using Ember+ could sometimes be slow (MUL-14513)
- In 1080i and 1080p, with field-based codecs (DNxHD, ProRes) a flash could occur during mix or wipe transitions (MUL-18581)
- In ST 2022-7, the secondary receiver stream was missing when switching sources (MUL-18635)
- When using NMOS IS-05 with ST 2022-7, the duplicated stream was not updated properly (MUL-18759)
- The MJPEG proxy streaming for Multireview was not initiated for SLSM recorders (MUL-18833)

IN 20.0.4

- In 1080i and 1080p, with field-based codecs (DNxHD, ProRes) a flash could occur during mix or wipe transitions (MUL-18581)
- In NMOS IS-04, when using ST 2022-7 the multiviewer secondary interface binding was wrong (MUL- 18216)

IN 20.0.3

- In NMOS IS-04, the senders had a double CR/LF at the end of the SDP file (MUL-18307)
- In Live IP the Make-Before-Break was not used when having the Web Config open during the first Mulboot (MUL-18297)
- In NMOS IS-05, resources could not be updated due to missing transport_file section (MUL-18425)
- In Live IP, external multiviewer inputs could flicker when streams were deactivated (MUL-18348)
- In Live IP, the first multiviewer output could sometimes be black if external inputs were active (MUL- 18342)
- In IPDirector the countdown could be wrong in the playlist panel (MUL-17643)
- In NMOS/Ember+ the Grandmaster clock was not updated after changing the PTP domain (MUL-16504)

- In NMOS IS-04, for the multiviewer IP inputs the interfaces binding listed two physical interfaces (MUL- 18273)
- In Live IP when using PTP, sometimes the offset was not taken into account when calculating the TC (MUL-18259)
- With field-based codecs, video-audio sync delay of 1 field for the outputs could occur in 1080i (MUL- 18314)
- A time-out was sometimes erroneously detected, leading to a drive disconnection (MUL-18364)
- A warning was displayed twice in the VGA screen when changing the Gigabit interface (MUL-15534)
- With LSM-VIA, the transition effect was set to Cut after retrimming a playlist element (MUL-18221)
- With LSM-Connect on XT-VIA, the tablet could disconnect from the server when using Fade transitions in playlists with “White” as transition color (MUL-17761)
- In MulSetup when validating a clear record-train error message, the config line was started immediately (MUL-18397)

IN 20.0.2

- In NMOS IS-05 an error 504 could occur when updating a receiver (MUL-16215)
- In NMOS IS-05 sometimes the receiver destination address could not be updated properly (MUL-16752)
- In NMOS IS-05 the source port of a receiver was set to 0 when source address was updated (MUL-16494)
- When retrieving through NMOS IS-05 the SDP of a sender the content-type was wrong (MUL-15946)
- With ST 2022-7 active, changing the I/O config may provoke a bad SFP assignation rendering the config line invalid (MUL-15754)
- In ST 2110, when ingesting an empty ancillary data stream, its associated video stream was not available (MUL-16187)
- It could sometimes happen that the LoRes proxy of some recorders did not contain any audio (MUL-17722)
- In NMOS IS-04 the sender and receiver Active status was always false (MUL-15969)
- When stopping the recorder from the VDR panel, the recorder status was not displayed correctly on the OSD (MUL-15927)
- When updating a sender through NMOS IS-05, the sender information was sometimes not updated in the Live IP configuration page (MUL-14956)
- When updating a receiver in the Live IP configuration page, the receiver was not updated in NMOS IS-05 (MUL-16337)
- When alternating configurations between NMOS and the Live IP configuration, the NMOS commands were sometimes not applied to the sender (MUL-17107)
- In NMOS IS-05 a receiver could not be enabled when no transport_params were specified (MUL-17757)

IN 16.4.22

- With NMOS IS-05 the update of audio senders could sometimes fail (MUL-16197)
- On XT-GO, it was not possible to set 16 audios to the 8-channel configurations (MUL-17518)
- VGA viewer was not able to manage resolution lower than 1920x1080 (MUL-17606)
- When creating clips from VDCP with SDTI active, the creation date in IPDirector was wrong (MUL-17200)

IN 16.4.21

- With NMOS IS-04, some SFP mac addresses were sometimes missing in /self (MUL-17140)
- In NMOS IS-05, when using ST 2022-7 and configuring a receiver through transport_file, the source IP address of the redundant stream was not updated correctly (MUL-16701)
- Slowness could occur when using Shuttlepro to go back and forth in a record train (MUL-17177)
- Freezes could occur in 720p with AVC-Intra codec (MUL-17184)

IN 16.4.20

- With NMOS IS-04 it could happen that some node information was not exposed in /self (MUL-16717)
- With NMOS IS-04 the PTP clock name was not referenced in /sources (MUL-15146)
- With NMOS IS-05 a receiver could get blocked when programming it with an empty SDP (MUL-16945)
- Changes to the sender destination address or port in the Live IP configuration were not updated in NMOS IS-05 (MUL-16198)

IN 16.4.19

- Some keyboard models where not recognized by Multicam (MUL-16568)
- With NMOS IS-05, receivers could not be activated when no transport_params were specified (MUL- 14915)
- It could sometimes happen that the Live IP configuration was not accessible in Mulsetup (MUL-10841)
- In NMOS IS-04, the SFP interfaces were not correctly exposed for SLSM configs (MUL-16667)
- Sometimes IPDirector could not retrieve the second Gigabit address of an XT connected through SDTI network (MUL-12051)

IN 16.4.18

- When working in Live IP the time to switch input streams was slow (MUL-14356)
- With NMOS IS-05, staging of senders was not possible when setting source_ip=auto (MUL-15977)
- In XNet-VIA the server election mechanism was sometimes failing to determine the new XNet server (MUL-15928 and MUL-15772)
- Deleting a playlist could sometimes fail (MUL-14388)
- It could occasionally happen that clips were available with some delay for Gigabit file transfer (MUL- 13258)
- Sometimes LSM-Connect did not properly terminate when exiting Multicam (MUL-15733)
- Clips backup could sometimes fail for sub-clips created by IPDirector (MUL-15809)
- In 1080i, the HDR to SDR conversion applied to the multiviewer could lead distorted colors (MUL-15807)
- On XT-VIA/XS-VIA, when working in 1080p with UHD-4K player resolution, the PGM and its monitoring could be set on the same SFP interfaces (MUL-14421)
- The playout of local clips could temporarily freeze due to communication issues between the controller board and storage board (MUL-13693)

KNOWN ISSUES & LIMITATIONS

ISSUES

SINCE 20.5.37

- CfgWeb becomes inaccessible when starting a previously invalid Multicam configuration line after importing a license file (MUL-26305)
- Uploading a COD license file from the file system using ALT+F may fail (MUL-26314)
- After importing a list of option codes, a reboot is required to see them appear in the option code management tab (MUL-26458)
- When importing a license, it only appears in the option code menu after starting Multicam (MUL-25914)

SINCE 20.5.25

- In Live IP, in 1080i with frame-based codecs (AVC-I, XAVC), the embedded timecode is shifted by one frame at encoding (MUL-24234)
- Changing the default IP address of the proxy streaming interface requires a restart of Multicam (MUL- 25489)
- With LSM-VIA, when splitting a clip in a playlist, the clip is plit using a hard cut instead of a micro-mix (MUL-24818)
- In XNetMonitor, the PC-LAN #1 status is displayed as unkown (MUL-25376)
- Changes made to a Multicam configuration in MulSetup are not reflected in the WebConfiguration (MUL- 25997)

SINCE 20.4.37

- On servers equipped with HS873, with NMOS IS-04, some AMWA tests can fail when enabling NMOS unicast DNS registry in Dual PC LAN mode (MUL-25259)

SINCE 20.4.27

- Without the XHub-VIA 100G Enabler with ST 2022-7 active in 1080p at 59.94Hz, Make-Before-Break is falsely used (MUL-23874)
- The VGA Viewer connection is lost when opening the Raid configuration menu from the Mulsetup (MUL-26087)

SINCE 20.3.21

- In Live IP, unicast is not supported if the source and destination address are not in the same subnet (MUL-23001)

SINCE 20.0.17

- When editing a timeline, the remaining time information is missing on the Multiviewer output (MUL-16435)
- When using the Web Config, the digital audio input and output may not be properly mapped in the server audio matrix (MUL-19324)

SINCE 20.0.2

- In ABRoll, dragging a clip over a black channel does not remove the black screen flag (MUL-18372)
- In Live IP with XHub-VIA Live IP 100G Enabler the source IP cannot be set to 0.0.0.0 (MUL-19408)
- When working with XHub-VIA Live IP Aggregator, the multicast routes are lost if XHub-VIA is restarted during operations (XHUBVIA-5)
- Glitches can occur when switching MV IP inputs (MUL-17762)
- NMOS Unicast cannot be activated from the Multicam Web Config (MUL-17717)

- With LSM-VIA, when switching from PGM+PRV to Multi-PGM, the second PGM is not correctly displayed on the OSD (MUL-25309)
- When working with XHub-VIA 100G Enabler, when letting Multicam run for several hours, the packet OK counter may display negative values (MUL-23543)

SINCE 16.2.26

- With NMOS the grain_rate is not exposed for NMOS sources (MUL-15960)

SINCE 16.1.35

- In NMOS IS-04 the description of an SLSM receiver is wrong (MUL-16496)

BEFORE 16.0

- A configuration line cannot be started from the Web Config if an invalid configuration line is selected on the VGA screen (MUL-16966)
- SNMP can be very slow when using SNMP Walk instead of SNMP Get (MUL-15978)
- Timeline sometimes plays a frame of the black clip at the end (MUL-14566)
- The OSD on the multiviever outputs are sometimes refreshed with some delay when switching between live and playlist of clip playout (MUL-14256)
- When merging distant playlists, it is possible to build a playlist made of 1000 clips even though the number of clips is limited to 999 (MUL-8982)
- Replace Timeout occurs in IPDirector when having both GPI and swap audio used in Timeline (MUL-8972)
- Audio is distorted on XT3 with CODA75 when clip playout is stopped using the jog wheel (MUL-9841)
- ST 2022-06 output streaming can be stopped by Genlock instability (MUL-8732)
- Dump during Multicam startup when TGE card is not properly detected (MUL-8628)
- In 1080p, when SLSM recorder are configured, it can have a short latency after a fast jog (MUL-7824)
- When using an Aux Track output on PRV channel, loading a playlist on an odd PGM may impact audio of the next even PGM (MUL-6035)
- Video Delay base config requires a Remote D to be configured (MUL-739)
- Modification of a playlist using Advanced Audio Editing on a server without this feature is allowed and causes problems (MUL-554)

LIMITATIONS

SINCE 20.4.31

- With NMOS IS-05, invalid commands are rejected (error 428) whereas they were previously accepted by NMOS but eventually refused by Multicam (MUL-24702)
- With NMOS IS-05, the audio senders associated to MV outputs are available in read-only (MUL-24702)
- With NMOS IS-05, the receiver source-filter IP addresses are not available if the source filtering is not active (MUL-24702)
- On XHub-VIA, custom configurations are lost when upgrading from version 1.3 to 1.4 (XHUBVIA-547)

SINCE 20.4.27

- Importing a configuration line using the IP Aggregator into a configuration line without IP Aggregator is not supported (MUL-23303)
- In Live IP with XHub-VIA 100G Enabler, when using DHCP, Multicam will not start after downgrading to version 20.3 or earlier (MUL-24276)

SINCE 20.3.26

- With dual PC LAN, both interfaces have to be configured in separate networks (MUL-21937)

SINCE 20.3.21

- With LSM-VIA, when using split screen, a black separation line is visible (MUL-22298)
- With Odetics protocol, it is not possible to clear the full DB even with the allow_protocol_clear_all_clip json parameter activated (MUL-18514)
- When two recorders subscribe to the same multicast address, source filtering must be enabled or disabled for both recorders (i.e. not enabled for one and disabled for the other) (XHUBVIA-433)
- When ingesting a 2110-31 stream, only the data payload (3 bytes) are preserved. The 1 byte metadata are ignored and reconstructed at playout (MUL-23027)

SINCE 20.2.30

- It is not possible to inter-connect XHub-VIA v1 and XHub-VIA v2 with link aggregation (XHUBVIA-397)
- With NMOS IS-05, the scheduled activation of a receiver update may be delayed by a few seconds (MUL- 24208)
- Multicam may crash when using Epsio Paint (MUL-24671)

SINCE 20.1.37

- Multicam fails to start properly when clips are restored by the TGE while the server has not finished booting (MUL-20778)

SINCE 20.1.27

- In Live IP with XHub-VIA IP Aggregator, when configuring a receiver with a stream of a sender of the same XT server, the source IP filtering is mandatory (XHUBVIA-246)
- On XHub-VIA, creating an IP route is only supported if the VLAN is not configured in forward mode (XHUBVIA-126)
- The timeout for configuring the Live IP network interfaces through DHCP is 10 seconds (MUL-24976)
- When routing a non-audio stream to a 2110-30 receiver, its status is wrongly indicated as OK in the Live IP configuration page (MUL-22136)

SINCE 20.0.13

- When using EditRec, a synchronization issue can occur when switching from 50Hz to 59.94Hz (and vice versa) without rebooting the controller (MUL-18535)
- Glitches can occur when switching multiviewer Live IP inputs (MUL-17762)

SINCE 20.0.3

- In NMOS IS-04, audio senders and receivers are missing when using ST 2022-8 protocol (MUL-18510)
- In Live IP, patching a ST 2022-7 receiver with a non ST 2022-7 payload modifies unwillingly the source-ip of the duplicated stream (MUL-18285)
- VDCP control can be lost when IPDP control is also active on any channel (MUL-15764)

SINCE 20.0.2

- With LSM-VIA in 59.94 Hz it is not possible to define 20 seconds as playlist effect duration (MUL-12606)
- In Live IP the Live IP fabric switch has to be configured to support IGMP snooping querier (MUL-19982)
- In Live IP, the Multiviewer Inputs only support Narrow sender types (MUL-25786)
- When using EditRec a Variable Play speed does not affect the playback speed (MUL-17765)
- In Live IP with XHub-VIA Live IP 100G Enabler in UHD-4K the Char OUT monitoring of the PGMs has to be deactivated due to bandwidth limitations (MUL-15574)
- On XHub-VIA Live IP Aggregator, only RS-FEC is supported on the QSFP interfaces (MUL-15931)
- Changing the PTP domain requires a restart of the XHub-VIA Live IP 100G Enabler (XHUB-31)
- Hypermotion controllers are not supported when LSM-VIA is enabled (MUL-18302)
- With LSM-VIA, when configuring GPI on RMT1, the GPI signal is applied to all channels controlled by all LSM-VIA operators (MUL-24443)

SINCE 16.3.17

- When working in ST 2022-7 and having a primary and/or secondary Char OUT monitoring stream deactivated, the SDP is still exposed in ST 2022-7 format (MUL-15532)

SINCE 16.2.30

- In NMOS IS-04 the “active” parameter is not updated when activating or deactivating a sender or receiver through NMOS IS-05 (MUL-15972)
- When playing out remote record train via XNet (XNet-VIA or SDTI) with very low bitrate video content, the audio can temporarily be interrupted (MUL-14352)
- In XiP the monitoring stream of a recorder channel cannot be ingested on a recorder channel on the same SFP interface (MUL-14469)

SINCE 16.2.26

- With NMOS IS-05, the staging of a disabled receiver is not supported (MUL-14935)

SINCE 16.2.20

- With NMOS IS-04, the multiviewer audio senders are still exposed even if Audio Monitoring is set to Rec or None in the Multicam configuration (MUL-16681)
- Without XHub-VIA Live IP 100G Enabler UHD-4K in single-stream is only supported in 50Hz (MUL-12941)

SINCE 16.1.22

- Changing Genlock source (PTP – SDI) may result in temporary Genlock instabilities (MUL-11977)
- In Live IP, when having two different PTP clocks on the C and D interfaces, and using Analog LTC as Timecode reference, the Timecode is considered Bad (MUL-22506)
- With XNet-VIA, distant record playout freezes can occur when the XT server references are not synchronized (MUL-24225)

SINCE 16.0.30

- On XT-VIA/XS-VIA, resetting the Camera assignment is not work working in video delay mode (MUL- 17027)
- On XT-VIA in UHD-8K, some unsupported multiviewer layouts are listed in the configuration (MUL-15913)

- On XT-VIA/XS-VIA, in 720p, 1080i and 1080p PTP is not supported on configurations without PGM and 4 or less record channel (MUL-14276)
- On XT-VIA/XS-VIA, in UHD-4K PTP is not supported on configurations without PGM and 2 or less record channel (MUL-14276)
- Improvement of preload may induce a slight delay when loading a distant record train (MUL-10665)
- High bandwidth channel configurations require RAID array configured in (10+1) mode (MUL-10081)
- Embedded audio channels configured to None in VGA cannot be unmuted from Web Config (MUL- 10061)
- When exporting a clip, the colons are replaced by blank spaces in their name (MUL-11854)

BEFORE 16.0

- With Odetics protocol, the SNMP controller connection status can show disconnect when receiving bursty keep-alive messages (MUL-21995)
- With TSL 5.0, the Player name cannot be updated if it contains special characters, even if UTF16 encoding is used (MUL-25249)
- When performing a Resync to TC Ref from the maintenance menu, the TC indexing of the AV content stored on disk is changed, impacting potentially LSM-VIA, IPD-VIA and LSG (MUL-21906)
- With Ember+ BESS, “Stream Impaired” field is set to false even if the stream contains uncorrectable errors (MUL-25171) (Int+Ext)
- When working with PC-LAN redundancy, both network interfaces have to be connected to different VLANs (MUL- 23803)
- In Live IP, multicast destination addresses in the range 224.0.0.0-224.0.1.255 are not blocked (MUL-23361)
- With IPEdit the undo command can sometimes fail to be taken into account by Multicam (MUL-13525)
- When retrimming a clip before the clip creation, the new boundaries are only applied to the cam loaded on a controller (MUL-22914, MUL-317)
- The results of Search TC are not displayed on the multiviewer output if the controlled channel is in PRV mode (MUL- 15862)
- The 334M packet encoding setting applies to all recorder channels of the same V4X module (MUL-22012)
- With LinX it is not possible to set limits when loading a distant record train (MUL-14147)
- The OSD on the multiviever outputs are sometimes refreshed with some delay when switching between live and playlist of clip playout (MUL-14256)
- The Live IP configuration cannot be accessed from the Truck Manager application (MUL-13155)
- In 1080i, the multiviewer timecode OSD may be irregular when working with timelines containing many elements (MUL- 12242)
- When working in Live IP, multicast addresses in the range 224.x.x. are not supported for video, audio and ancillary data (MUL-15135)
- Pushing a clip fails, if pushed to the same XT multiple times simultaneously (MUL-9291)
- When the OSD tally is set to “Char OUT + MVW” and triggered through GPI, the tally is not present on the Char OUT (MUL-8733)
- It is impossible to set an In point on a distant train when the horizontal split is activated (MUL-8053)
- With the hypermotion camera ForA_FTOne 6.50 in 4 blocks mode, the blocks 1 and 2 switch to ReadyToRecord when browsing in blocks 3 and 4 (MUL-4057)
- USB key can disappear during the install with USB key JetFlash Transcend batch A850130373 (MUL-3040)
- The HS-873 MTPC does not support the USB HID component devices (MUL-6104)
- On servers fitted with a CODA75 audio board and configured in Dual-Play, the audio of the first recorder is wrongly associated with the last PGM (MUL-3631)
- Operations in Dual LSM mode are subject to some limitations:
    - Timeline is available only on the first remote
    - Only an LSM Remote is allowed as primary controller, parallel control is supported
    - Replace function is only available on the first PGM
    - Epsio Live operation are only available on the first PGM
    - Hypermotion camera control is available only on the second remote in toggle mode
- It is not possible to create local clips during the connection phase to the XNet network (MUL-2461)
- No VITC embedded on the loop through of the recorder modules (MUL-836)
- When video disks are full and the number of inputs is reduced in configuration, recorders may not start automatically upon Multicam restart (Bug ID 89602)
- From machine A, play a clip of machine B. It is possible to delete the clip from B although the clip is on air (MUL-844)
- Cross-fade is not applied when swapping audio tracks on the Short IN of a clip in a playlist (Bug ID 83621)
- Mix on 1 channel cannot be used in combination with Epsio Live (Bug ID 35001)
- OSD disappears after deactivation of the IPDP secondary controller while there is a playlist loaded and end of playlist is reached (Bug ID 32516)

- Some Playlist OSD information can be missing when LSM remote and IPDirector are controlling PGM channels in parallel and OSD is set to a controller different than the one loading the playlist (Bug ID 32533).
- When in the Multicam Setup page, technical OSD can be corrupted when focus is set to configuration lines for which the video standard does not correspond to the genlock of the server (Bug ID 32791).
- With Hypermotion cameras, wrong OSD color for 1 or 2 seconds when pressing LastCue button (Bug ID 14021)
- Clips are not logged in AsRunLog when the playout is interrupted (Bug ID 13241)
- "Other Angle" functionality in Playlist edit mode does not work with clips with timecode more than 24h behind the head of the record train (Bug ID 13826)
- With 3 PGM channels, the SDTI F9 connect window is not displayed when there is an IPDP TimeLine loaded on PGM1/PGM2 (Bug ID 14074)
- Push gigabit:
  - Cannot push a SDTI network clip through gigabit to a gigabit only server (Bug ID 12864)
  - When pushing on the fly before saving the clip, changes made on the clip information (name, keywords, rating) are not pushed (Bug ID 12847, 12848)
  - Gigabit push clip ID destinations start from 0 (110, 111, 112,...) while SDTI destination IDs start from 1 (111, 112,...110). (Bug ID 12811)
- Clip creation from different PGMs controlling distant trains and local trains: mark in/out point successively on the various PGM may reset in/out points (Bug ID 8176)
- Going into the Remote menu may deactivate a secondary control (Bug ID 8439)
- Using the VDR panel while in TimeLine edit mode may result in loss of audio on the PGM (Bug ID 31441)
- Sony VITC time code is not available in Sony ganged mode, only Sony LTC and Sony Timer mode
- Keyword filename is limited to 8 characters
- Retrimming clip in IP Director only affect the IP Director, not the Remote operator and vice-versa (Bug ID 6651)
- Do a sort-TC, get the list of results, loading a playlist without first pressing Live. Using the browse button will bring the user back to the browsing in the search result, not in the playlist. (Bug ID 6276)
- The Undo command in playlists does not apply to the "Make Local" command (Bug ID 5515)
- It is impossible to load a TimeLine in load playlist conditional (Bug ID 5365)
- When editing a playlist, the duration of all playlists in the playlist screen is temporarily affected (they are calculated like in cut mode) (Bug ID 5333)
- In split screen mode, audio meters only appear on PGM1, not PGM2 (Bug ID 5056)
- On the SDTI Network, if a network cable is removed from a slave XHub where no server is connected, the master XHub can temporarily disconnect the XHub slave, causing a network disruption.
- VDCP protocol cannot be set as a secondary control of a remote.
- Timeline limitations:
  - It is necessary to have minimum two PGM
  - The TimeLine features are only available to the first remote of an XT server
  - When extending a clip created from a recorder that has not been renamed, the clip name is changed to Netnumber_Netname (MUL-7156)
  - The element speed cannot be set to exactly 400% (MUL-23085)
  - The minimal speed of a Timeline is 20% (MUL-22550)
- In Playlist mode on the first PGM of the first remote if the Aux Track Parameter is set to PGM, when no aux clip is defined for the current playlist, the audio is not automatically replaced by the playlist's original audio. This is not a bug. The setting "Aux track to PGM" should only be used when an aux track is defined for the current playlist.
- In interlace mode, IN and OUT points can only be marked on even field to avoid parity violation when chaining clips. If the operator marks an IN/OUT point on an odd field, the LSM will actually mark it to the next/previous even field, and jump to this field. In progressive mode, IN and OUT points can be marked on all fields.
- When playing a playlist, Next & Skip are not accepted during transition effects, nor if the next transition is a split audio (different audio and video IN point, or different video and audio effect durations).
- When adjusting YUV parameters to define a custom color for wipe border, the corresponding color is not displayed on main output.
- Impossible to switch to another camera while searching with the jog dial. Stop jogging, switch to the new camera, then start jogging again.
- On remote record trains, it is not possible to switch to another camera in play on the same PGM: the new camera will always appear in pause.
- Playlists of Page 10 are not available from the EVS remote because they are dedicated to the other RS422 protocols.
- Resetting the "Protect Clip Pages" parameter in the setup does not reset the protect status of existing clips
- It is not possible to flag a clip for archive before it is created.
- Setup Screen (Shift+F2) : the number of local and network clips is only refreshed when entering the screen.
- Delay Screen (Shift+F7) : when working in NTSC NDF mode, the time codes in this screen are still calculated on a DF basis.
- The default display mode is VGA. When upgrading, the default mode is retained. When pressing ALT-Backspace to toggle between VGA and Video mode inside the Multicam application, this might in some cases causes the system to disconnect from the network. The only solution to reconnect is to exit the application and restart it. This problem does

not occur systematically but avoid using ALT-Backspace inside the Multicam application when possible. Using ALT-Backspace while the Multicam is running can also cause a 00:00:00:00 TC to be marked on the video field recorded at that time.

- It is not possible for a client to push a clip to another client.
- On a XT server, create a playlist and load it. If you go back to live and move to another machine the clip that was last loaded on the player, it will be impossible to reload the playlist anymore.
- When loading a clip or playlist after a network train, then marking a cue live, the cue is marked on the local trains, not on the previously loaded network train.
- Freeze on OUT point in record trains in target tracking doesn't work in PLAY VAR only. OK in normal play.
- After having done a search on the remote, the browse function always browses in the results of the clip search, it is not possible to browse in the clips of the remote anymore without pressing "live".

COMPATIBILITY

SOFTWARE

- Multicam 20.5.37 is compatible with version 1.5.15 (or newer) of the Multicam USB Creator
- Multicam 20.5 requires LinX 3.0 when working in XNet-VIA with more than 29 servers
- VGA Viewer 1.0.3 requires Multicam 15 or greater

HARDWARE

XT-VIA / XS-VIA / XT-GO

HW Edition	Multicam 12	Multicam 14	Multicam 15	Multicam 16	Multicam 20
6.xx				X	X

- Multicam 20 is only compatible with XT-VIA, XS-VIA and XT-GO
- For improved stability and performance, it is strongly recommended to upgrade XT-VIA, XS-VIA and XT-GO servers running Multicam 16 to Multicam 20.

- An SFP+ to SDI adapter can be plugged and unplugged up to 100 times without damaging the rear panel.
- Multicam 20 is compatible with XT-VIA, XS-VIA and XT-GO servers
- Servers equipped with M4X board are supported as of Multicam 16.4
- Multicam 20 requires 2GB of memory on the MTPC board
- Multicam 20 is compatible with MTPC board A3/A5 (HS-873) or greater
- Multicam 20 is compatible with servers equipped with TGE as GBE interface
- TGE board compatible with H3X(P) are NOT compatible with H4X
- MTPC rev A3/A5 (HS-873) is supported since Multicam 11.00.71
- USB keyboard is supported since Multicam 11.02
- Multicam 20.0 (and greater) is not compatible with XFile2. XFile3 should be used instead.
- TGE (1GbE or 10GbE) is supported since Multicam 12.05
- SAS drives are supported since Multicam 10.01.73
    - Only SAS drives provided by EVS are supported
    - RAID array with 10K3 drives can be completed with 10K5 or 10K6 drives for maintenance
    - RAID array with 10K5 drives can be completed with 10K6 or 10K8 drives for maintenance purposes
    - RAID array with 10K6 drives can be completed with 10K8 or 10K9 drives for maintenance purposes
    - RAID array with 10K8 drives can be completed with 10K9 drives for maintenance purposes
    - All disks in the RAID array must have the same capacity.
- 1.8TB drives are supported since Multicam 15.00
- XT4K/XS4K with XiP rear panel require a software maintenance operation to support SFP/SDI adapters (MUL-11134)
- Servers with XiP rear panel are compatible with EVS Small form-factor pluggable SFP+ to SDI adapters to support all I/O configurations when working in SDI
- Multicam 20 is not compatible with XT1, XT2, XT2+, XS 6U, XS 5U, XS 4U, XT3, XS3, XT4K, XS4K, XTnano nor XSnano chassis
- XDCAM codec is not supported since Multicam 16.
- The touch screen is not supported since Multicam 14
- Gigabit H3X is not supported since Multicam 15
- COHX base is not supported since Multicam 15
- H3X controller is not supported since Multicam 16
- CODA75 audio board is not supported since Multicam 16
- Quad-MTPC multiviewer is not supported since Multicam 16

> The Wacom Tablet is not supported for navigation purpose since Multicam 14

XNET

> XNet-SDTI network in Multicam 20.5.37 is only compatible with specific validated versions. 20.5.25 and greater, and with version 16.6.15 or greater can be used on the same network. It is not compatible with ANY OTHER lower versions, neither with any version 20.0.x.
> For mixed setups involving servers that are not compatible with Multicam 20.5 and servers running Multicam 20.5, SDTI compatibility is exceptionally supported between Multicam 16.6 and 20.5.
> XNet-VIA compatibility over mixed setups (between servers running Multicam 16.6 and 20.5) is not supported. Crossed compatibilities (16.6 with 20.0 and 16.5 with 20.5) are not supported.
> For LSM-VIA all XNet network operations require access to the remote servers through the PC-LAN
> The same multi-essence configuration must be applied on all servers inside the XNet network
> XNet-VIA is only compatible with EVS XHub-VIA
> XNet-VIA requires the latest firmware version of the H4X_4S board
> Multicam 20 is compatible with V4.01 and above of XHub3
> If you need to upgrade the XHub, please contact EVS to get the upgrade software and procedure
> If unsure, you can check the version with the following procedure for XHub3:
    - Move up the version switch
      (This does not require switching off the XHub and it maintains normal operations during the version check)
    - The branch status LEDs show the software version in a binary pattern

Branch LED #	1	2	3	4	5	6	7	8
v. 3.03		green	green	red			green	green
v. 3.04		green	green	red		green		
v. 4.00	**green**			**red**				
v. 4.01	**green**			**red**				**green**

    - To return to normal LED behavior, move down the version switch

CLIPS & PLAYLISTS

> A clear clip (clearing the video disks content) is mandatory when upgrading from any version older than Multicam 16.0

HYPERMOTION

> MULTICAM has been validated with Vision Research Phantom firmware 776b
> MULTICAM has been validated with Vision Research Flex 4K firmware 87
> NAC Hi-Motion II recommended firmware is I/F PART FW 01.08.26 or above, PROC PART : FW 02.02.10

EVS Broadcast Equipment SA

RUE DU BOIS SAINT JEAN 13, B-4102 SERAING, BELGIUM