



MULTICAM | VERSION 21.1.21

RELEASE NOTE

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WARNINGS

- > **Multicam 21 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 21.**
- > **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 **COD8** (for ST1800MM0129) or **NOD8** (for ST1200MM0009).**
- > **Multicam 21 uses a different TCP/UDP port range for LinX compared to Multicam 20 and earlier**
- > **Multicam 21 uses a different SNMP community string compared to Multicam 20 and earlier**
- > 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.

NEW FEATURES

IN 21.1.21

- > On XT-VIA, XS-VIA, XT-GO
 - > Support MV4X monitoring in SDI when working in ST 2110
 - > Support of multiple ancillary data streams for SLSM recorders
 - > Support of latest Seagate disk firmware C0A9 & N0A9
 - > Copy/pasting configuration lines includes Live IP settings
 - > Player black screen effects are removed from going E/E with LSM-VIA
 - > Clip UmID is protected in LSM-VIA workflows
 - > Enable clip DB synchronization in IPDirector without channel control
- > On XT-VIA, XS-VIA
 - > Support of X-SAS-HDX2 external disk array
 - > Network Copy/Push default setting (by hitting F5 key) is XNet
- > On XT-VIA
 - > New IO configurations in 1080i
 - > see LiveCeption Signature Production Servers Configuration Overview for more details

IN 21.0.24

- > On XT-VIA, XS-VIA, XT-GO
 - > Support of VIA Licensing
 - > Support of Dual PC-LAN for LSM-VIA remote workflows
 - > Support of NMOS IS-04 v1.3
 - > Support of NMOS IS-05 v1.1
 - > Updated SNMP read-only community string
 - > Support of SSH keys for secure remote system access
 - > Updated TCP/UDP ports used by LinX
- > On XT-VIA
 - > Flexible server upgrades from Spotlight/Spotbox to Multicam

IN 20.7.29

- > On XT-VIA, XS-VIA, XT-GO
 - > Support of ProRes-4K codec
 - > Hide LSM-VIA operational settings in Multicam configuration
 - > Hide MV audio senders in NMOS
 - > Live IP interface IP configuration improvement
- > On XT-VIA and XS-VIA
 - > Support of proxy encoding in Fill & Key 0-REC configurations
 - > Support of XNet-VIA with up to 42 servers
- > On XT-VIA
 - > Full support of SLSMx4 in UHD-4K
 - > New IO configurations in 1080i and 1080p
 - > see LiveCeption Signature Production Servers Configuration Overview for more details
- > On XS-VIA
 - > Support of LSM-VIA controller in XSense base configuration
- > On XT-GO
 - > New IO configurations in 1080p
 - > see LiveCeption Pure Production Servers Configuration Overview for more details

IN 20.6.35

- > On XT-VIA, XS-VIA, XT-GO
 - > In ST 2022-6, the Multiviewer inputs & outputs are exclusively available in SDI
- > On XT-VIA, XS-VIA
 - > In ST 2022-6 with 100G Enabler, the QSFP interfaces are bound to the same VLAN

IN 20.6.21

- > On XT-VIA, XS-VIA, XT-GO
 - > Export Live IP configuration while Multicam is running
 - > NMOS IS-04 Monitoring Groups
 - > New Protocol configuration tab in Live IP configuration
 - > New default assignment of live IP video streams to the SFP+ ports
- > On XT-VIA
 - > Support of SLSM4x in UHD-4K
 - > New IO configurations in UHD-4K
 - > 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 20.5.37

- > 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 21.1.21

- > With LSM-VIA, it was not possible to delete a playlist element when using split audio (MUL-27561)
- > With LSM-VIA, clips could sometimes not be found after updating its UmID through IPDirector (MUL-27512)
- > The web configuration could sometimes not be loaded (MUL-28023)
- > Log extraction could take a long time when configuring a DNS server that cannot be reached (MUL-26520)
- > In Live IP, it was possible to activate a ST 2110-40 receiver without the corresponding ST 2110-20 receiver active (MUL-27888)
- > When starting a configuration line, sometimes the Multicam start was stuck in a grey screen (MUL-28174)
- > With XNet-VIA and XNet-GO, the option code 117 was necessary in order to have access to the clip edit by network parameter (MUL-27769)
- > Protections have been added to prevent occasional signal segmentation faults generated by MainBgTask (MUL-27785, MUL-27957)

IN 21.0.28

- > With LSM-VIA, when configuring GPI IN with delay, the GPI signal was ignored (MUL-27990)
- > With LSM-VIA, when moving a clip group from one server to another to empty location, sometimes the new clip group contained additional camera angles (MUL-28145)
- > Protections have been added to avoid TC jumps in case of missing PTP previous jam local offset values (MUL-28157)
- > A time tampering error message was sometimes displayed in case of temporary RTC clock reading issue (MUL-28034)
- > Linux kernel logs were sometimes not available (MUL-27977)
- > Sometimes Multicam could not start due to video codec FPGA not running (MUL-27970)
- > Protections have been added to avoid invalid configuration lines after downgrading from higher Multicam versions (MUL-27815)
- > Protections have been added to prevent rare signal segmentation faults when booting the server (MUL-27959)
- > Protections have been added to prevent RAID corruptions resulting in Multicam not being able to start (MUL-27843)
- > Protections have been added to prevent random system date jumps (MUL-27979)

IN 21.0.27

- > With IPDirector when loading a playlist on one PGM while multiple PGMs are controlled by the LSM Remote or LSM-VIA, the E/E command were applied to all LSM-controlled PGMs (MUL-27262)
- > With IPDirector, it was not possible to cue a white/black clip in a playlist if that playlist had been loaded previously by LSM-VIA (MUL-26616)
- > Using LSM-VIA with IPDirector as second controller, when triggering a playlist through GPI, the transition effects were sometimes ignored (MUL-27173, MUL-27801)
- > In 1080i and 1080p, ProRes was not allowed in IO configurations with SLSMx4 inputs (MUL-27833)
- > In UHD-8K, a vertical line could appear on the server output when playing a playlist with wipe transitions (MUL-27775)
- > With SNMP, when disconnecting a disk, its monitoring status was not updated (MUL-27792)
- > In the PC-LAN configuration, the letter "d" was not accepted in the DNS domain names (MUL-27893)
- > In UHD-4K with ST 2022-7, in case of IP buffer bandwidth saturation, packets were dropped on both network interfaces (MUL-27834)
- > Protections have been added to prevent system unresponsive errors when using XNet-VIA (MUL-27865)

IN 21.0.24

- > On servers equipped with TGE2 boards, sometimes the board could not be detected during the Mulboot due to a non-optimal connection on the H4X board (MUL-27636)
- > With LSM-VIA, sometimes clip angles were not updated after moving, pushing or copying clips groups from one location to another (MUL-27139)
- > With LSM-VIA, SLSM clips could not be loaded and played (MUL-27225)
- > On XS-VIA, the LSM-VIA parameter did not dynamically appear when activating XSense base configuration (MUL-26571)
- > With LSM-VIA, the Multireview recorder monitoring could display corrupt images in configurations with multiple SLSM "On-3G" inputs in 1080i (MUL-27296)
- > With LSM-VIA, when loading a playlist through Odetics, VDCP or DD35, LSM-VIA did not display properly the clip that is currently on-air (MUL-27645)
- > With LSM-VIA, when cueing or ejecting a playlist while another operator was browsing some content, the output channels could temporarily freeze (MUL-27697)
- > LSM-VIA and VIA MAP could occasionally disconnect from the XT server if another server with many local clips was joining or leaving the XNet network (MUL-27727)
- > With VIA MAP, when creating a clip, the clip creation progress was not available (MUL-27507)
- > When working with XHub-VIA 100G Enabler, with Ember+ BESS the QSFP IP addresses were wrongly displayed (MUL-27132)
- > With NMOS IS-04, when using Dual PC-LAN the DNS could not be reached if it was configured in a different network (MUL-27389)
- > With NMOS IS-04, sometimes the NMOS Node resource version did not match the version of the resource registered on the RDI (MUL-26899)
- > With NMOS IS-04, the resources were not exposed in NMOS Node when starting a configuration line if the Xhub-VIA IP Enabler has not been detected during the first Mulboot (MUL-27232)
- > With NMOS IS-04, the flow DID and SDID information was sometimes missing (MUL-27018)
- > With NMOS IS-04/IS-05, when updating some sender/receiver active parameters, the endpoint's version value was not incremented (MUL-26870)
- > With NMOS IS-05, sometimes the endpoint activation details "requested_time" and "mode" were missing (MUL-26890)
- > Sometimes XSquare jobs could fail because of a conflicting UDP port utilization (MUL-27216)
- > Protections have been added to prevent rare signal segmentation faults generated by DspUart (MUL-27537)
- > Protections have been added to prevent occasional signal segmentation faults generated by Mulsetup (MUL-27461, MUL-27757)
- > Protections have been added to prevent occasional signal segmentation faults generated by snmpsrv (MUL-27455)
- > Protections have been added to prevent occasional signal segmentation faults generated by MainBgTask (MUL-27462)
- > Protections have been added to prevent occasional signal segmentation faults generated by Evs.Hammer.Services.HttpServer (MUL-27447)
- > Protections have been added to prevent occasional signal segmentation faults generated by ItRTPrc (MUL-27751)
- > Protections have been added to hide occasional messages ("checkLogSize.sh") that were displayed on the VGA screen (MUL-27174)
- > Protections have been added to prevent recorder stop in case of uncontrolled disconnections of a server from the XNet-VIA network (MUL-27524)
- > With XTAccess, when restoring a clip whose name contains Kanji characters, part of the name could be truncated (MUL-27548)
- > In SNMP, the PTP GM clock ID was expressed in Little-Endian format (MUL- 27337)

IN 20.7.33

- > An OpenSSH critical vulnerability present on servers equipped with TGE2 or using the XHub-VIA 100G Enabler could allow arbitrary code execution with root privileges (MUL-27422)

- > While “Clip Edit by Network” was set to No, it was still possible to delete a clip on a SDTI network after a reboot (MUL-27351)
- > When restoring a clip just after deleting it, the creation percentage displayed on the VGA screen remained at 0% until restore was complete (MUL-27307)
- > Due to a race condition, when rebooting the server, the VITC could intermittently be missing (MUL-27233)
- > On servers equipped with TGE2 boards, a second reboot was sometimes necessary for the TGE2 board to be detected correctly (MUL-27115)
- > In Live IP with XHub-VIA 100G Enabler, improvements have been made to the stability of the PTP to avoid losing its locked status (MUL-27358, XHUBVIA-608)
- > Playing over XNet remote clips that are being copied but stuck at 0% (i.e. no content restored at the time of reading) could lead to a crash of the source server (MUL-27395)
- > Protections have been added to prevent Signal Segmentation faults generated by Mulboot provoked by a race condition during the Mulboot exit (MUL-27336)
- > Robustness of the XNet-VIA network in case of temporary communication issues has been improved (MUL-27041)

IN 20.7.29

- > With LSM-VIA, it was not possible to validate an error message in case the Live IP network interfaces cannot be configured through DHCP (MUL-27059)
- > With LSM-VIA, clips that were restored with XSquare could sometimes remain growing (MUL-26956)
- > With LSM-VIA, when restarting all recorders, the playout could temporarily freeze (MUL-25300)
- > With LSM-VIA, sometimes copying clips to an empty location could fail (MUL-26749)
- > With XFile3, sometimes archiving jobs could fail because of websocket write errors (MUL-26768)
- > Protections have been added to prevent websocket write errors resulting in some LSM-VIA operations failing (MUL-26715)
- > With NMOS IS-05, in F&K configurations it was not possible to update the Key endpoints (MUL-27117)
- > With NMOS IS-04, the number of audio channels of a sender did not match those of its source (MUL-26936)
- > With NMOS IS-04, ST 2022-6 streams were not tagged with RTP payload of 98 (MUL-27061)
- > In Live IP, when changing from a 0-REC configuration to a configuration with at least one PGM (or vice versa), the server was not locked to PTP (MUL-27158)
- > Sometimes, when backing up clips with XTAccess, the TGE could not respond any more, forcing a reset of the board (MUL-25971)
- > Protections have been added to prevent Signal Segmentation faults when creating clips with VarID starting with % (MUL-27156)
- > After importing a list of option codes, a reboot was required to see them appear in the option code management tab (MUL-26458)
- > In the Multicam Web configuration, when changing the interface to XiP, the Genlock could not be set to PTP (MUL-25999)
- > The VGA Viewer connection was lost when opening the Raid configuration menu from the Mulsetup (MUL-26087)
- > In the Multicam Web configuration, a newly installed license was sometimes not taken into account (MUL-25726)
- > The OpenMetrics route was not accessible if option code 99 and 100 were expired (MUL-26647)
- > Protections have been added to avoid false positive disk disconnection error message in case of network or infra misconfigurations (MUL-26929)
- > The server could sometimes lose its PTP locking state (MUL-27020, XHUBVIA-604)
- > With ABRoll, the clip references listed in the AsRunLog files could be wrong (MUL-26772)

IN 20.6.35

- > On servers equipped with TGE2 boards, LACP link aggregation was not supported (MUL-26922)
- > In ST 2022-6 with 100G IP Enabler, the quadrants were wrongly assigned on the playout signal (MUL-26869)
- > When using EditRec with frame-based codecs (AVC-I, XAVC), the video input signal was not recorded (MUL-26808)

- > With ABRoll, the playout of the main and backup could sometimes be out of sync (MUL-26862)
- > With Xplore, the recorder monitoring could be out of sync after some time of operation (MUL-26228)
- > XT servers equipped with TGE2 boards were not compatible with some Intel SFPs (MUL-26858)
- > Protections have been added to prevent Signal Segmentation faults generated by Multicam provoked by an invalid LTC signal (MUL-26951)
- > The local recording could sometimes stop in case of sudden H4X board restarts of another server in the network (MUL-26483)
- > Buffering profiles were not properly managed on XHub-VIA ports, sometimes leading to corrupted images when the bandwidth limit was approached (WHITE-306)

IN 20.6.27

- > In ST 2022-6, with XAVC/AVC-I the playout image quality could be corrupted (MUL-26804)
- > In XAVC 300 & 480, the playout of clips restored from Matrox ingest board could be corrupted (MUL-26728)
- > With NMOS IS-04, all resources were automatically deleted and added on the Registry every 2 minutes (MUL-26811)
- > With NMOS IS-04, the audio sources channels list was empty (MUL-26171)
- > In Live IP, with the XHub-VIA 100G Enabler, the receiver updates could fail after more than 512 updates since Multicam start (MUL-26774)
- > When playing a clip, the TC user bits were not embedded in the output signal (MUL-26701)
- > Protections have been added to prevent Signal Segmentation faults generated by Mulsetup while editing a configuration line (MUL-26839)

IN 20.6.25

- > LSM-VIA could disconnect when performing playlist mass updates from IPDirector (MUL-26716)
- > A compatibility issue with the latest versions of Multicam (since 20.5.37) prevented the XT proxy from being displayed in the Multireview software (MUL-26690)
- > When using an external array, disks 17 to 24 were not numbered correctly, leading to inconsistencies on the Shift+F5 screen when drives were disconnected (MUL-26551)
- > Sometimes, the communication with the XHub-VIA 100G Enabler equipped with Variscite modules (rev. A3) could be lost (MUL-26592, XHUBVIA-593)
- > In Spotbox, the GPI could not be used to trigger playout commands on the XT server (MUL-26602)
- > With IPD-VIA Browse, it was not possible to start browsing sessions (MUL-26334)
- > On XT-GO in UHD-4K, the channel assignation in the multiviewer outputs were wrong (MUL-26681)
- > When using PTP as timecode source, signal floating point exceptions could occur in case of PTP instabilities (MUL-26504)
- > Protections have been added to prevent rare server crashes when loading clips with IPDirector (MUL-26558)
- > Protections have been added to prevent rare server crashes when preloading playlist elements on the PRV channel (MUL-26558)
- > A system backup failure could occur when starting Multicam after performing a clear video disk (MUL-24419)
- > Fill & Key could become unavailable when removing option code 97 (MUL-26684)
- > In Live IP, the XHub-VIA 100G Enabler firmware could sometimes not be installed when upgrading from an old Multicam version (MUL-26747)
- > With ABRoll, when cueing a different playlist element, the status was changing from Playing to Cued (MUL-26678)
- > Protections have been added to prevent bad output signal quality when manually changing the XHub-VIA 100G Enabler VLAN configuration (MUL-26331)

IN 20.6.21

- > Changing the default IP address of the proxy streaming interface required a restart of Multicam (MUL- 25489)

- > With LSM-VIA, OSD were not displayed when using the Split Mix feature (MUL-25338)
- > With LSM-VIA, when switching from PGM+PRV to Multi-PGM, the second PGM was not correctly displayed on the OSD (MUL-25309)
- > Logs related to the TGE2 board were missing when performing an extract logs (MUL-26304)
- > Ucode exceptions could occur when navigating in the Gigabit debug screens (8xx) (MUL-25944)
- > The error message displayed at startup when the TGE board is not detected was not correct (MUL-26116)
- > In Live IP, time reference in NMOS IS-04 was UTC instead of using TAI (MUL-24821)
- > In Live IP, the XHub-VIA 100G Enabler could stop working when performing an extract logs (MUL-26215, XHUBVIA-586)
- > In Live IP, on the same module where the first recorder is deactivated, changing the route of the second recorder could reactivate the first one (MUL-25511)
- > In Live IP, when the source IP address filtering was active, sending an sdp file without a source-filter line did not delete the current filter (MUL-26003)
- > In Live IP, without the XHub-VIA 100G Enabler, with ST 2022-7 active in 1080p at 59.94Hz, Make-Before-Break was falsely used (MUL-23874)
- > NMOS Unicast could not be activated from the Multicam Web Config (MUL-17717)
- > With NMOS IS-04, the format type of the multiviewer sources were not updated when adding or removing the audio monitoring (MUL-24682)
- > With NMOS IS-04, on servers equipped with HS873, , some AMWA tests could fail when enabling NMOS unicast DNS registry in Dual PC LAN mode (MUL-25259)
- > With AVC-I in 1080i, sometimes the record trains could stop recording (MUL-26210)
- > Robustness of database exchanges during the establishment of the XNet network has been improved (MUL-25331)
- > Protections have been added to avoid race effects that could lead to a loss of connection with the R4X board (MUL-26310)
- > Protections have been added to avoid Segmentation fault error generated by MainBgTask when combining playlist operations on a server with many clip operations on another server of the same XNet network (MUL-26255)
- > Protections have been added to avoid Signal Aborted error generated by DspUart when special characters are written in VDCP logs (MUL-24406)
- > Uploading a COD license file from the file system using ALT+F could fail (MUL-26314)
- > CfgWeb became inaccessible when starting a previously invalid Multicam configuration line after importing a license file (MUL-26305)
- > When importing a license, it only appeared in the option code menu after starting Multicam (MUL-25914)
- > Option code 84 (Playlist advanced audio) was no longer granted by default on XT-GO (MUL-25912)
- > Epsio Paint 1.3 was no longer compatible with Multicam since release 20.2 (MUL-24671)
- > With XFile3, flattening or archiving a playlist with clips from different recording sessions could fail (MUL- 23047)

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 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)
- > When importing a license, it only appeared in the option code menu after starting Multicam (MUL-25914)
- > 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)
- > With LSM-VIA, updating clip metadata could sometimes fail when performing quickly two successive updates (MUL-26606)

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 occasionally 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)
- > 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 Varld 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 ABRoll, dragging a clip over a black channel did not remove the black screen flag (MUL-18372)

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)

KNOWN ISSUES & LIMITATIONS

ISSUES

SINCE 21.1.21

- > When changing from the web configuration the Multiviewer HD output format, the value is not updated in the VGA setup screen (Shift + F2) (MUL-27981)
- > In Live IP, UHD-4K using square division or 2SI, the first recorder is associated to 3 ancillary data streams (MUL-28192)

SINCE 21.0.24

- > With VIA License Manager, sometimes it is not possible to delete VIA Licenses (MUL-27043)
- > With Cerebrum, sometimes the serial number and HW Revision are wrongly displayed (MUL-28227)
- > When exporting a configuration line from the web configuration, a white flash may be visible temporarily (MUL-27651)

SINCE 20.7.33

- > With LSM-VIA in PGM/PRV, when controlling the Preview channel, the camera index is not displayed on the multiviewer OSD (MUL-27428)

SINCE 20.7.29

- > The LSM-VIA controller parameter may be hidden when changing the base configuration (MUL-26571)
- > When configuring a wrong DNS server address, the log extraction may take a long time (MUL-26542)

SINCE 20.6.35

- > With LSM-VIA, a distant playlist element may not be playable if it has been pushed to the local server in Short mode and make local auto is active (MUL-27149)

SINCE 20.6.21

- > Starting Multicam is required for the option code list to be available via SNMP (MUL-26463)

SINCE 20.5.25

- > In XNetMonitor, the PC-LAN #1 status may be displayed as unknown (MUL-25376)
- > Changes made to a Multicam configuration in MulSetup are not reflected in the WebConfiguration (MUL- 25997)
- > With VIA MAP, it is not possible to set the Fill & Key metadata on clips (MUL-27736)

SINCE 20.3.26

- > With Dual PC-LAN, the second interface is sometimes not at all displayed or shown as "Down" in XNet(Web)Monitor (MUL-27742, MUL-27746)
- > With NMOS in Dual PC-LAN mode, when using unicast registry the connection with the DNS server may be lost if the DNS and RDI shared the same IP address (MUL-27539)

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)
- > With LSM-VIA, stopping the recorders on the XT-VIA may occasionally fail (MUL-27696)

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 Live IP with XHub-VIA Live IP 100G Enabler the source IP cannot be set to 0.0.0.0 (MUL-19408)
- > With NMOS IS-04 using unicast discovery, the XT's resources are not registered on the RDI if a secondary RDI is declared on the DNS but which cannot be reached (MUL-27852)
- > With XSquare, flatten playlist jobs can sometimes fail if the playlist contains clips that have been previously copied or moved with LSM-VIA (MUL-28008)
- > With LSM-VIA, clip creations or updates may occasionally fail if another server with many clips is disconnected from the network at the same time (MUL-28282)
- > With LSM-VIA in PGM/PRV "Always" mode, sometimes the wrong content and OSD is loaded on the preview channel (MUL-27744)
- > With LSM-VIA, when copying clips over the Gigabit network, sometimes the transfer can appear as failed while the clip is successfully transferred (MUL-27420, MUL-26810)
- > With LSM-VIA, when triggering from GPI the playout of a playlist while in edit mode, the transition effects are not played (MUL-27401)
- > 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)
- > When working with XHub-VIA 100G Enabler, when letting Multicam run for several hours, the packet OK counter may display negative values (MUL-23543)
- > With the XHub-VIA 100G Enabler, thrift API exceptions may occur when updating multiple times multicast routes (MUL-26796)

SINCE 16.2.26

- > With NMOS the grain_rate is not exposed for NMOS sources (MUL-15960)
- > When configuring the color of the split screen separation bar, the U and V indices are inverted (MUL-27037)
- > With XNet-VIA, when disconnecting manually a server from the network, sometimes that server may not reintegrate in the network afterwards (MUL-27228)

BEFORE 16.0

- > When loading SLSM and non-SLSM on two different players, the playout may be desynchronized by 1 field (MUL-28253)
- > In UHD-4K, when loading a playlist with wipe transitions, a thin white line is displayed on the right border of the output (MUL-28045)
- > When editing a configuration line in the Web Config, the changes are not taken into account if the focus is on another configuration line in Mulsetup (MUL-27748)
- > With Ember+ BESS, the sender and receiver description is not dynamically updated when changing the configuration (MUL-27189)
- > 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 multiviewer 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 21.1.21

- > With LSM-VIA, when quickly updating the playlist element speed on all playlist elements, the audio splits are sometimes reset (MUL-28071)

SINCE 21.0.24

- > Multicam 21 is not compatible with Xplore and LSM-Connect (MUL-27508)
- > Without the XHub-VIA IP Enabler, when configuring any MV4X SFP interface wrongly with the network's broadcast address, Multicam will not start (MUL-27362)
- > Adding and removing VIA Licenses from the VIA License Manager is not possible if the option codes window is open on the MulSetup screen (MUL-27495)
- > When using Dual PC-LAN (for LSM-VIA and for NMOS), both PC-LAN interfaces share the same MAC address (MUL-27733)
- > With support for Dual PC-LAN for LSM-VIA, each XT server has to be connected to the main server network through its PC-LAN #1 interface for full visibility of the whole XNet-VIA network (MUL-27695)
- > With Dual PC-LAN for LSM-VIA, XSquare and Cerebrum integration cannot be ensured for remote operators connecting to the XT through PC-LAN #2 (MUL-27721)
- > With Dual PC-LAN for LSM-VIA, Multireview is only available for operators that connect to the XT through a PC-LAN interface that is in the same network than the prox streaming (B1) interface (MUL-27722)
- > With Dual PC-LAN for LSM-VIA, IP routes towards remote XClients are only added if they are reachable at the moment of the route configuration (MUL-27723)

SINCE 20.7.29

- > With the XHub-VIA 100G Enabler, when changing from SDI to XiP a full server reboot is required (MUL-27725)

SINCE 20.6.35

- > Xplore is not compatible with XT servers equipped with TGE2 boards (MUL-26945)
- > Multireview is not compatible with XT servers equipped with TGE2 boards (MUL-26963)

SINCE 20.6.25

- > The Ember+ service is restarted once a week in order to avoid memory overflow resulting in some applications not working properly (MUL-26702)

SINCE 20.6.21

- > In Live IP, in 1080i with frame-based codecs (AVC-I, XAVC), the embedded timecode is shifted by one frame at encoding (MUL-24234)
- > Only TSL messages with a screen value of 0 are accepted (MUL-25938)

SINCE 20.5.25

- > After a configuration change (with an increase in the number of recorders and a change of proxy codec) applied without a clear train and followed by a power off/on while Multicam is running, record trains may be deleted when the system is restarted (MUL-25407)
- > With LSM-VIA, when splitting a clip in a playlist, the clip is split using a hard cut instead of a micro-mix (MUL-24818)

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

- > In the Multicam Web configuration, in case the file upload (keyword file, license file, CA certificate) to the server is failing, no error message is displayed (MUL-23686)
- > With XNet-VIA, when exceeding the network bandwidth capacity it may be necessary to terminate all network playouts in order to return to a steady state (MUL-26962)
- > 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)
- > When using IPDirector in parallel mode, when triggering through GPI a playlist with "unknown" set as default speed, the playlist is not played (MUL-24672)
- > With Live to Tape, the MV4X audio meter may temporarily freeze when editing a timeline (MUL-25676)
- > In 1080p at 59.94Hz the clip remaining time can be slightly wrong on the OSDs (MUL-25061)

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)
- > With NMOS IS-05, scheduled absolute activation may be applied at the wrong time when changing the system time (MUL-26886)

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)
- > When controlling multiple PGMs with Sony BVW75 the synchronized playout cannot be guaranteed (MUL-24749)
- > 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)
- > When loading a playlist from the LSM Remote after deactivating the LSM-VIA controller in Multicam while LSM-VIA is connected to the server, the OSDs of the preview channel are inconsistent (MUL-27764)
- > With LSM-VIA, when navigating to the last playlist element and activating loop mode, the playout is stopped at the end of the playlist (MUL-25855)
- > With LSM-VIA, it is not possible to define unknown speed on playlist items in all playlists except PL11 if the advanced audio editing is active in Multicam (MUL-27743)
- > With LSM-VIA, copying a clip over the network may occasionally fail (MUL-27019)
- > With LSM-VIA, when configuring GPI on RMT1, the GPI signal is applied to all channels controlled by all LSM-VIA operators (MUL-24443)
- > With LSM-VIA, when inserting multiple clips in an existing playlist with many elements, LSM-VIA does not indicate any warning when exceeding the 999 elements limit (MUL-26046)
- > With LSM-VIA, when the OSD remaining time may be inconsistent when hitting the IN key and browsing between different network camera angles (MUL-18714)
- > With LSM-VIA, when disconnecting the local server from the SDTI network, LSM-VIA sometimes disconnects from its local server (MUL-27137)
- > With LSM-VIA, when performing a playlist Sort by TC IN while browsing that playlist from a different Remote, LSM-VIA may freeze and it is not possible to load that playlist (MUL-26561)

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)
- > With NMOS IS-05, the receiver multicast_ip and source_ip are not updated when providing a transport_file with null data (MUL-24721)

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)
- > XNet-VIA requires a stable Genlock reference signal (MUL-27501)

SINCE 16.0.30

- > On XT-VIA/XS-VIA, when importing a 1080i configuration line using 3G Level B from XT3/XS3, SLSM content is not recorded (MUL-26737)
- > 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 LinX, loading a clip may be refused after triggering a play from the VDR panel (MUL-27952)
- > In 1080i, when playing SLSM content at very slow speed, sometimes a horizontal line jitter can appear on the output (MUL-28030)
- > When flattening a playlist with audio delay, the audio transition may occur at the wrong timecode (MUL-27892)
- > In Live IP, the receiver commutation time might take up to 2 seconds for NMOS updates, resulting in grey images in case of SDN-based setups (MUL-26755)
- > When jogging through a playlist, -IN and +OUT is displayed temporarily on the multiviewer when changing playlist elements (MUL-27717)
- > When configuring the network settings during format & install, the Shift+Tab is not taken into account (MUL-27813)

- > With IPDirector, the OSDs may temporarily freeze when adding servers to the XNet which are controlled by the same IPDirector through its local XT server (MUL-27510)
- > Uploading an option file from the web configuration is not possible if the option codes window is open on the MulSetup screen (MUL-27381)
- > When editing a configuration line that is not the current active line, sometimes parameter changes appear as not properly applied (MUL-27412)
- > When defining multiple channels with the same name, the multiviewer channel assignment in the web configuration can be wrong (MUL-26261)
- > The VGA Viewer may crash when attempting to connect to a server without SNMP running (MUL-25414)
- > With the LSM Remote, accessing the configuration menu may have a significant performance impact on the server (MUL-26821)
- > When duplicating some audio tracks on one or multiple recorders, the audio gain of the last configured track is replicated on all its clones (MUL-26465)
- > On servers equipped with HS873, the format and install may fail with Multicam USB Creator 1.4 or higher (MUL-24808)
- > After ejecting a clip from a PGM using IPDirector, the PGM remains black when loading a media from the VGA screen (MUL-26280)
- > With GPI, defining Mark IN/OUT points on recorders is not possible (MUL-13121)
- > When changing some operational parameters in the Multicam configuration, a pop-up may indicate that some changes have been done by another user (MUL-19524)
- > When browsing backwards through the GPI IN channels in the Multicam VGA configuration, the last PGM is missing (MUL-26658)
- > System instabilities may occur when letting a server run in XiP configuration without valid PTP and without TC input (MUL-25458)
- > When deleting two Multicam versions from the Maintenance Menu, the currently active Multicam version is started (MUL-25950)
- > When switching off and on the LSM Remote, the playout speed may not reach 100% when not previously pulling the lever down to 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)
- > 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 multiviewer 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:
 - o 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)
 - Audio swap is not supported in timelines that are converted from playlists (MUL-27425)
- > 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 and Audio Swap 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 21.1. is compatible with version 1.5.19 (or newer) of the Multicam USB Creator
- > Multicam 21.1 requires LinX 3.1 or higher
- > Multicam 21.1 requires VGA Viewer 1.0.5 or higher

HARDWARE

XT-VIA / XS-VIA / XT-GO

HW Edition	Multicam 12	Multicam 14	Multicam 15	Multicam 16	Multicam 20	Multicam 21
6.xx				X	X	X

- > Multicam 21 is only compatible with XT-VIA, XS-VIA and XT-GO
- > An SFP+ to SDI adapter can be plugged and unplugged up to 100 times without damaging the rear panel.
- > Servers equipped with M4X board are supported as of Multicam 16.4
- > Multicam 21 is compatible with MTPC board A3/A5 (HS-873) or greater
- > Multicam 21 is not compatible with XFile2. XFile3 should be used instead.
- > SAS drives are supported since Multicam 10.01.73
 - o Only SAS drives provided by EVS are supported
 - o RAID array with 10K3 drives can be completed with 10K5 or 10K6 drives for maintenance
 - o RAID array with 10K5 drives can be completed with 10K6 or 10K8 drives for maintenance purposes
 - o RAID array with 10K6 drives can be completed with 10K8 or 10K9 drives for maintenance purposes
 - o RAID array with 10K8 drives can be completed with 10K9 drives for maintenance purposes
 - o All disks in the RAID array must have the same capacity.
- > 1.8TB drives are supported since Multicam 15.00
- > 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 21 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 network in Multicam 21.1.21 is only compatible with specific validated versions 21.1.21 and greater. It is not compatible with ANY OTHER lower versions.
- > 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 21 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



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