

MOI - KUWAIT TV
Studio 300
LTO Library and Archive Department Upgrade

MOI invites the specialized bidders to provide their best solutions to upgrade the existing Studio-300 library system including all required components, licenses and services to the existing workflow applied in the department.

The scope that is required in this RFP is to provide the following:

- Supply install, implement and integrate a new higher capacity LTO library to the current Studio 300 news system.
- Replace existing HSM and establish redundant cluster of servers.
- Professional services is a must.
- A detailed BOQ must be provided.
- Including SLA Service.

General Terms and Conditions:

- The site survey is Mandatory.
- Bidders shall follow the below technical specifications taking in mind this RFP is an upgrade to the current existed system and do the implementation as per the requirement.
- The previous experience with such upgrade including the system installation, configuration and commissioning is a must for all bidders. And all bidders shall present a list of similar projects should be provided with the offer.
- The Bidder shall submit his bid in point by point form (Compliance List) whereby he agrees, disagrees, or wishes to modify any of the described clauses or items in the Technical Specifications.
- The Bidder shall include in his proposal a description of the proposed system. This information shall be in the form of drawings, written description of the overall system including details of the purpose, theory and method of operation of various items included, equipment lists, equipment layouts, control and indicator panel layouts, mechanical and technical performance specifications, and any other information required to enable the MOI to determine the Bidder's intent in meeting the objectives of the Technical Specifications.

- All copies of the Technical Specifications, together with system drawings and its other annexes, remain the-property of the Purchaser and must be returned to the Purchaser if requested.
- All services, Software and/or hardware needed to complete the required enhancement shall be provided by the bidder.
- All installation materials required shall be provided by the bidder.
- This is a turnkey project. Any item/work not mentioned in the tender document or BOQ but indispensable for the proper Installation/Implementation/Performance of this project, must be added to the BOQ, priced and described.
- The contractor shall arrange the grounding for equipment within the systems/ installation so that hum resulting from earth loops is eliminated. Whatsoever the arrangement used, he must not compromise the grounding procedure necessary to comply with electrical safety requirements.
- All equipment shall be clearly labeled with an identification relating to the designation of that component on the relevant functional or schematic diagrams.
- Finishes on racks, equipment, control panels, etc., shall be submitted to the Purchaser for approval in relation to color, texture and gloss.
- All cables at source & destinations will be marked with proper labeling equipment or markers, sleeved with color-coded sleeves in par with the schematic diagrams provided.

Technical Specifications:

1. LTO Library Qty-1

- LTO Library to replace existing library and re-use the content
- 4x LTO-8 FC Drives
- Minimum of 120 slots available and activated
- 120 LTO-8, capacity 12TB native BaFe MLM Media (Certified)
- 4x LTO Cleaning cartridge
- Redundant power supply
- Maximum scale up capacity: 560 slots and 42 drives.

2. HSM System Qty-1

Content Management Middleware is required to replace the existing Flashnet system with Black Pearl Archive System (Studio 300). The solution needs to manage a tape library. Archive/restore requests will be sent from an Avid PAM.

- Integration & control of a new Tape Library with 120 Slots & 4x LTO-8 Tape Drives

- Windows Cluster supporting hot failover is required to host the Content Management software
- Legacy content on Black Pearl LTFS LTO7 tapes – no migration of the content, the solution must be able to manage the existing tapes as soon as installed
- Licenses should be reused at no extra cost.
- New content should be written on LTO8 LTFS tapes. SMPTE AXF format is required for the LTFS data partition
- Direct Avid PAM integration supported
- Multi Cloud support with support for AWS, Azure, Google, Alibaba, Wasabi, Tata IZO required for future usage
- Web UI for the configuration, control and monitoring of the Archive solution.
- Native API connectors with Popular Video Transcoding Systems.
- REST API including configuration, system status, and commands.

3. Redundant Server Platform for Content Management Middleware Qty-2

Complete set includes the following:

- SFF Rackmount Server 2.3GHz 12C Xeon-G Kit
- 16GB 1Rx4 PC4-2666V-R
- 800W Redundant Power Supply Kit
- 9.5mm SATA DVD-RW Optical Drive
- 800GB x2 SATA 6G WI SFF (2.5 in) SC SSD
- Ethernet 1Gb 4-port adapter
- 16Gb 2p FC HBA
- SFP+ Transceiver 16Gbps x2
- Ethernet x2 10Gb 2-port 562SFP+ Adapter, Intel X710, No SFPs
- 10G SFP+ SR Transceiver x2
- Win Svr Std 2019 with 16 Core & 5 CAL license

4. SAN Storage with SAS Dual Controller

SAS Dual Controller SFF Storage

4.1 12x 4TB 12G SAS 10K 2.5in 512e HDD Qty-12

4.2 4x 600GB 12G SAS 15K 2.5in ENT HDD Qty-4

5. Portable LTO Drive Read/Write Qty-1

LTO Archive Appliance

A single LTO library with up to 25 active slots and two LTO drive is supported.

- Connections to LTO library 2 x SFF-8644 12 Gb/s SAS ports
- Data Transfer Rate 300MB/s Native maximum
- Host Interface 6 Gb/s SAS
- WORM Capability's
- Encryption Type AES 256-bit
- Recording Technology LTO-8 Ultrium 30750
- Storage Capacity 30 TB Compressed 2.5:1

- Form Factor 5.25-inch half-height

5.1 Server Platform for Portable LTO Drive Read/Write Qty-1

- Operating System: Microsoft Windows 10, Professional Edition
- Processor: 4-Core Xeon E-Processor
- RAM: 16GB
- Managed Local Disk Cache 3.84 TB SSD
- System Disk: 480GB SSD
- LCD Monitor, Mouse and Keyboard

6. NLE Avid Media Composer Software, Perpetual License Qty-1

- Work with SD, HD, 4K, 8K, 16K, HDR, stereo 3D, IMAX, and other media ›
- Edit and finish with total color precision with the 32-bit floating point pipeline ›
- Get full color, effects, titling, and audio tools
- Share projects, media, and bins and collaborate with other editors ›
- Work with Avid NEXIS storage

6.1 PC Platform for NLE Software Suite, Minimum Specifications Qty-1

- Windows 10 Professional
- Processor: Intel core i7, i9 or Xeon 2.3 Ghz or higher
- Memory: 16 GB RAM minimum
- Graphics options: AMD Radeon Pro WX-series or W-series
- Internal hard drive: Minimum 256 GB SSD, M.2 or nVMe
- 2x 7200 rpm HDD SATA— up to 150 MB/sec read sequential (8TB drives)
- 24" monitor

6.2 I/O Box for NLE Workstation

- Capture and play back SD, HD, Ultra HD, 2K, and 4K media
- Work with Media Composer, DaVinci Resolve, Final CutPro & Adobe Premiere Pro
- 4x Sets of 4x SDI Connectors, 4x in & 4x loop
- 4x Out, 4x Repeated out, supporting up to 12Gb/s via single, Dual & Quad Link
- Supporting 2x Optical I/O Supporting 3Gb/s & 6Gb/s, 12Gb/s (modules not included)
- HDMI 2.0 I/O
- Analog video I/O—component and composite
- Balanced analog audio—4 XLR inputs, 4 XLR outputs
- AES/EBU—2 channels in, 2 channels out
- Stereo RCA input for consumer audio devices
- XLR mic input with 48V phantom power on front panel with level control
- Stereo headphone output with level control
- Monitor media ingest and output conveniently using the front-panel HD LCD display
- Select video, audio, and timecode inputs, or control decks, using front panel controls
- Connect to the latest generation computers using Thunderbolt 3 or PCIe connections

- Remotely control up to two external devices
- Redundant power supplies

7. NLE Eduis Software

Qty-1

- Superior 4K HDR workflow
- Edit media files with different resolutions — from 24x24 to 4Kx2K
- Fast, flexible user interface, including unlimited video, audio, title and graphics tracks
- Support for the latest file formats — Sony XAVC (Intra/Long GOP)/ XAVC S, Panasonic AVC-Ultra/AVC-Intra 422, AVC-Intra LT/LT 2K and Canon XF-AVC (import only), Sony RAW, Canon Cinema RAW/Cinema RAW Light, RED RAW, ProRes (Import only), DNxHD/HR (option), still image RAW
- Support for the latest color space for Log and RAW files — HLG/PQ, S-Log, Canon Log, V-Log/V-Log L, J-Log1, F-Log, Log C, D-Log, N-Log, OM-Log400 and LUT (.cube) file import
- Work natively with many different video formats, including Sony XDCAM, Panasonic P2, Ikegami GF, Canon XF and DSLR movie formats
- Fastest AVCHD editing on the market
- Multicam editing of up to 16 different sources simultaneously
- Proxy mode workflow for legacy computers
- Supports Intel Quick Sync Video for extremely fast H.264 (for Blu-ray Disc burning) and H.265 export
- Fast handling of large quantities of still image files (JPG, TGA, DPX, Cinema DNG and others)
- Primary Color correction (RGB)
- 3-Way Color correction (YUV)
- High quality slow-motion (optical flow)
- High speed and high quality stabilizer
- High performance video layouter
- Various synthetic video filters such as masks and keyers
- Direct to Blu-ray Disc and DVD timeline export
- Project import/export as EDL, AAF, FCP 7 XML (import only)
- OFX support for Magic Bullet and Sapphire plug-ins
- Support for high-resolution displays
- New video scope supporting HDR
- 60/50p timecode display

7.1 PC Platform for NLE Software Suite, Minimum Specifications

Qty-1

- OS: Windows 10 (64-bit) (version 1607 or later).
- CPU, Intel 8th generation Core 2
- Memory: 16 GB RAM minimum
- Graphics Card: Supporting higher resolution than 1024x768 32-bit. Direct3D 9.0c or later and PixelShader Model 3.0 or later is required, min 4GB video memory size
- HDD, RAID-0 is recommended for HD and above resolution editing 24" monitor

7.2 I/O Card for NLE Workstation

Qty-1

- 3G-SDI input and output with embedded 16ch audio and timecode

- HDMI output for full-resolution, real-time monitoring
 - Embedded HDMI 8ch audio output for high-quality audio monitoring
 - Video/Audio output stays perfectly in sync with editing windows for accurate editing
 - Reference input supports black burst or tri-level sync
 - RS-422 master machine-control support
- 8. A Pair of Active Speakers – Minimum 20W Qty-2**
- 9. A Pair of Headphones Qty-2**
- 10. Equipment Rack Qty-1**
Equipment rack need to be considered with minimum 42U to Accommodate all 4x Existing VTR's with MOI including the Addition of the following items:
- 11. 9" Monitor Rack Mount Type Dual LCD Qty-2**
- 2 x 9" or 4 x 5" True 8 bit LED Panel
 - 3Gb/s ready
 - 12 Bit Color Processing
 - 178 Viewing Angle Display
 - 3G SDI, RGB, YUV, Y/C, Composite, UXGA, DVI & HDMI (HDCP)
 - Display Advanced Waveform & Vector Scope simultaneously with line select
- 12. 21" Monitor Rack Mount Type For PGM Qty-1**
- 21" Rack-mountable Monitor
 - 3Gb/s ready – 1080/60P
 - 2 x Auto-detect HD-SDI, SDI with active loops (3Gb/s / 1.485Gb/s / 270Mb/s)
 - Dual HD SDI YPbPr 4:2:2 – Dual HD SDI YPbPr/RGB 4:4:4 & 2K
 - RGB, YUV, Y/C, Composite, UXGA, DVI(DHCP) & HDMI(DHCP)
- 13. 24" 4K Monitor for NLE Units Qty-2**
- 24" 4K – UHD Panel 2x 12G/3G/1.5G or 1x Quad 3G-SDI (2SI/SQ) input ports
 - 2 x 12G/3G/1.5G or 1 x Quad 3G-SDI (2SI / SQ) output ports
 - 1 x HDMI 2.0a
 - 10 bit panel color depth
 - Supports up to 4096 x 2160 resolutions
 - HDR (High Dynamic Range) capabilities
 - PQ (SMPTE ST 2084) & HLG (Hybrid Log Gamma)
 - RGB 12 bit Digital Signal Processing
 - 178 degree Viewing Angle Display
- 14. 65" 4K UHD Monitor for Multiviewer Output Qty-1**
- Professional High Grade is required. Commercial type is not accepted.
 - Minimum 3x HDMI 2.0a Input
 - Min Resolution: 3840 x 2160

- Min Contrast Ratio 1200:1
- 178 Degree Viewing Angle Display

15. Video Router Qty-1

- 16x16 Single Link 3G HD serial digital video router 1RU Size

16. Multiviewer Unit Qty-1

- 16x Input Single Head Multiviewer in 1RU
- Single frame of processing delay in genlock mode
- Accepts 16 3G (Level A)/HD/SD-SDI Inputs
- Decode and display embedded Audio
- Output Resolution up to 1920x1080P@50/59.94 Hz
- Built-in CATx Extender
- Ultimate level of layout flexibility, with unlimited signal repetition and sizing
- Sophisticated on-screen alarm displays for clear operator alerts. Supports multicolor and blinking statuses based on severity, latching and status message
- Analog audio monitoring
- Hot swappable redundant power supplies

17. Technical Furniture for Archive Room Qty-2

A Broadcast Console to fit all the equipment related to archiving operations (VTRs, NLE, monitoring, etc.) is required to provide an efficient and ergonomic workspace specifically designed with a range of modular 19" equipment pods. It has to be manufactured in high quality contemporary materials by the Manufacturer with references in delivering technical furniture for broadcast control rooms in ME region.

- Each 19" bay features a continuous works surface brush strip for keyboard, mic & table cables and can be equipped with one of 20 plus 19" rack mount equipment pods of varying sizes. At the rear of each bay a hinged lift up flap provides access to a metal cable tray which includes 2U rack mount sections to mount power strips. In the base of each bay there is a 3U rack mount facility for small form factor PC's & other control equipment which is accessible via front and rear removable panels.
- Each console bay shall incorporate a drop down to allow for system displays to be mounted on purpose designed monitor arms. Flat screen mounting arms are to be supplied suitable for both 75 and 100 mm Vesa mounts.
- Continuous horizontal cable management is provided in all 19" console bays and across the console for ease of wiring at installation and for future maintenance and equipment changes. In addition the console legs are hollow and feature removable access panels for ease of wiring and to provide fully concealed vertical cable management.
- Console bays and console profiles will be fabricated in solid black core 18mm MDF;
- Console end panels will be fabricated in 12 mm and 18 mm compact laminate;

- Console rear removable panels, lift up hinged cable access panels and 19" equipment pods will be fabricated in 12 mm compact laminate;
- Steel Powder Coated Cable Tray, with fabricated 19" rack mount section black powder coat.
- Each console to be 4x 19" bay width and fitted with two 4U angled desktop pods, and two monitor arms,

18. Tape Library Shelves

Set

Required are High Capacity Storage Shelves suitable for storing video tapes.

Depth of the shelves and distance between the shelves should be provided to maximize storage of video tapes (Betacam, DVCAM, VHS, etc...) per volume of space.

Preferable a sliding mobile shelves type.

mobile shelves which can content half of our existing archive which should be in main ministry building 3rd floor:

A- weather sealed against all disaster cases.

B- Mobility.

C- Lighted it.

D- To not block the operation movement of the employees.

It's Bidder Responsibility to count the number of shelves/cabinets required to accommodate all the existing tapes with a consideration of 30% extra space for additional tapes. Site visit is a must for all bidders.

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19. Indexing Software

Qty-1

Index software is required as a guide and reference to the users where each tape/media is located on the shelves. The software should support many ways to index as the media might be arranged alphabetically, by volume, by type, date, month, size, by title, by time period or by any additional keywords. The application should support English and Arabic language with ability to print a dedicated barcode label for each tape and media.

The design for Barcode Label should contains the Barcode, Media Serial Number, Location on Shelf, Arabic or English Text, Date and any additional important data.

All the existed media available at MOI Archive room should be visually checked, and indexed in the system and labeled with a barcode and this mission will be MOI Staff responsibility.

Note: a dedicated training should be given for using the index software and barcode creation and printing including a physical indexing on at least 50 tapes.

19.1 PC Platform for Index Software

Qty-1

Minimum Requirements:

- All in one PC Platform
- Operating System: Microsoft Windows 10 or 11 Pro
- 10th Generation Intel Core i9 Processor
- Storage: Up to 2TB M.2 PCIe SSD
- Memory: Min 16GB RAM
- Ports: USB-C 3.2 Gen-2, HDMI and RJ-45
- Mic and Headphone Ports
- Display, Min 23" FHD (1920 x 1080) IPS, anti-glare, 250 Nits
- Wifi
- Supported with MS Office Software
- Supported with Anti-Virus Software Valid for two Years
- Including Mouse and Keyboard

19.2 Label/Barcode Printer

Qty-1

Minimum Requirement:

- Type: Direct Thermal Printer
- Resolution: 203 dpi/8 dots per mm
- Interface: Serial/Parallel and USB Interface
- Printer Output: Monochrome
- Supports Arabic Fonts

19.3 Barcode Labels

Qty-50

Barcode Labels with suitable size fits with all type of Tapes and made from high quality material with Permanent Self Adhesive, Min 1000 Labels In Roll.

END OF SPECIFICATIONS

Bill of Quantity (BOQ)

Item	Description	Qty	Unit Price (KD)	Total Price (KD)
1	LTO Library	1		
2	HSM System	1		
3	Redundant Server Platform	2		
4	SAN Storage	1		
5	Portable LTO Drive Read/Write	1		
6	NLE Media Composer	1		
6.1	PC Platform for NLE Software Suite	1		
6.2	I/O Box for NLE Workstation	1		
7	NLE Equis Software	1		
7.1	PC Platform for NLE Software Suite	1		
7.2	I/O Card for NLE Workstation	1		
8	A Pair of Active Speakers	2		
9	A Pair of Headphones	2		
10	Equipment Rack	1		
11	9" Monitor Rack Mount Type Dual LCD	2		
12	21" Monitor Rack Mount Type For PGM	1		
13	24" 4K Monitor for NLE Units	2		
14	65" 4K UHD Monitor for Multiviewer Output	1		
15	Video Router	1		
16	Multiviewer Unit	1		
17	Technical Furniture for Archive Room	2		
18	Tape Library Shelves	Set		
19	Indexing Software	1		
19.1	PC Platform for Indexing Software	1		
19.2	Label/Barcode Printer	1		
19.3	Barcode Labels	50		
	GRAND TOTAL - KD			



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