

***ANNEX II + III:* TECHNICAL SPECIFICATIONS + TECHNICAL OFFER**

Contract title: Supply Contract for AIS and AES Equipment

Lot 2: The storage system and backup environment

Publication reference: EuropeAid/138-047/IH/SUP/RS

Column 1-2 should be completed by the Contracting Authority

Column 3-4 should be completed by the tenderer

Column 5 is reserved for the evaluation committee

Annex III - the Contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the Contracting Authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words “compliant” or “yes” are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

15 January 2016

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1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1.1	Storage system Qty: 1 Multi Controller designed system, with 1TB of controller based cache memory, should be upgradeable to minimum 4 controllers.			
1.2	Front End ports minimum: 8 x16Gb FC and 8 x 16 Gb FICON.			
1.3	System should have following capacity: 8x960GB SSD + 1 spare SSD in RAID5. It is allowed to offer disk drives of different capacity, as long as the number of disks and total RAW capacity stays the same. If the size of the disk is higher than 960GB it is requested to offer minimum 8 disks in RAID 5 configuration + 1 hot spare disk. If the size of the disk is lower than 960GB it is required to offer minimum 7.6TB of RAW capacity in RAID 5 configuration + 1 hot spare. 56x1.2TB 10k HDD + 2 spare HDDs in RAID6. In total 55TB usable capacity. 10TBu should be presented for IBM MF and the rest for the Open Systems.			

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1.4	Storage system should support IBM MF zOS, IBM system i and Open Systems: IBM AIX, Linux, MS Windows, VMWare, MS Hyper-V			
1.5	SW licenses to be offered: Compatible PAV, Compatible High performance FICON(z/hpf), zBoost PAV Optimizer.			
1.6	Autotiering, Snap and Clone functionality for the whole raw capacity of the system.			
1.7	Storage system should have Data at Rest Encryption functionality for the whole offered raw capacity			
1.8	Continuous local data protection for 5 TB of most critical application data. Continuous data protection should allow local data restore at any point-in-time for any committed Write operation.			
1.9	Storage system should have Web and CLI base management interface options			

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2.1	Backup disk library Qty: 1 36TB raw capacity (approx. 23TiB usable Capacity), CASlable to 171TB raw (121TiB usable)			
2.2	Licenses for VTL (Virtual Tape Library)			
2.3	Source based deduplication			
2.4	7TB source based deduplication for Enterprise application license (for direct backup of environments like: Oracle RMAN, SQL, DB2, SAP, SAP Hana)			
2.5	2 x 10GbE BaseT port on-board			
2.6	4 x 1GbE port on-board			
2.7	1 x 10GbE Dual-port Optical card			

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2.8	2 x 8GbFC Dual-port card			
3.1	Multilayer Fabric switch (SAN switch) Qty: 2 Performance and port configuration: <ul style="list-style-type: none"> - 48 Ports per chassis with 32 activated ports; - Port speed: 8-, 4-, 2- and 1-Gbps autosensing with 8 Gbps of dedicated bandwidth per port. 			

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3.2	<p>Security:</p> <ul style="list-style-type: none"> – VSAN fabric isolation; – Intelligent packet inspection at port level; – Hardware zoning by Access Control List (ACL); – FC-SP switch-to-switch authentication; – FC-SP host-to-switch authentication; – Secure FTP; <p>Management access</p>			

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3.3	Fabric SAN services: <ul style="list-style-type: none"> – Name server; – Login services; – Broadcast; Name server zoning			
3.4	Advanced services: <ul style="list-style-type: none"> – NPIV; – VSANs; – PortChannels; – NPV mode; IVR			

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3.5	Diagnostics and troubleshooting tools: <ul style="list-style-type: none"> – Fibre Channel traceroute; – Fibre Channel ping; – Fibre Channel debug; – Post-level statistics; – POST diagnostics; – Internal loopbacks; Online diagnostics			

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3.6	<p>Availability:</p> <ul style="list-style-type: none"> – Redundant, hot-swappable power supply and fan trays; – Hot-swappable SFP and SFP+ optics; – Online diagnostics; <p>Process monitoring and stateful process restart</p>			
3.7	<p>Serviceability:</p> <ul style="list-style-type: none"> – Configuration file management; – Call Home; – Port beaconing; – System LEDs; <p>SNMP traps for alert</p>			

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4.1	<p>General requirements:</p> <p>Power Supply Standard</p> <p>All electrical equipment should be powered with 230V, 50Hz AC and should be equipped with CEE 7/4 "Schuko" power plugs. All devices must be compliant with Serbian and European Union electrical safety standards and follow EEC CE Marking Directive.</p> <p>Environmental Conditions</p> <p>Equipment must comply to IEC 60 529 standard for indoor IT equipment operating under temperature range of 10°C – 40°C, relative humidity range of 20% – 80% and IP 20 protection level, and must have RoHS certificate and comply to CE, WEEE standards.</p> <p>Place of Delivery</p> <p>The Supplies are to be delivered to and services are to be carried out in the CAS Headquarters 2 (ICT Division) located in Belgrade 11070, Narodnih Heroja 63.</p>			

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	<p><i>Installation, Configuration and Start-up</i></p> <p>Delivered hardware items must be equipped with all necessary components for installation and start-up: e.g., licenses, rack rails and hardware, cable management hardware, intra-rack cables, documentation CD, etc.</p> <p>The Contractor will be responsible for installation, configuration and start-up of the supplies delivered in accordance with the Technical Specifications and the directions provided by the CAS.</p> <p>The Contractor will be responsible for integration of the supplies delivered with the existing infrastructure.</p> <p>The installation services must be performed by personnel having relevant Storage Administrator certification.</p>			

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<p>15 January 2016 c4f_annexiitechspeciitechoffer_en.doc</p>	<p><i>Post-Completion Documentation</i></p> <p>The Contractor will be responsible for preparation of Technical Post-Completion Documentation describing the system implemented. It should include diagram of interconnection between various elements, all hardware and software configuration details, start-up scripts and a description of mandatory maintenance procedures to be followed by the CAS during day-to-day operation of the equipment. The Post-completion Documentation will subject to the approval of the CAS and the Contracting Authority.</p> <p><i>Training</i></p> <p>The supplier must provide the education necessary for CAS staff to be fully trained on the usage and maintenance of all hardware and software components of the delivered solution. All training materials must be packaged for electronically delivery and accessible for on-demand requests. Training should include minimum 5 days for up to 5 persons. Training should be organized by certified professionals, at the CAS premises.</p> <p>The training system must include full documentation (localised into Serbian or English). All training materials must be controlled and updated by the Contractor as needed to reflect the production state of the delivered items.</p>			<p>Page 12 of 13</p>

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	<p>Warranty</p> <p>One year warranty after provisional acceptance in accordance with the conditions laid down in Article 32 of the General Conditions.</p>			
	<p>Commercial Warranty</p> <p>Two-year commercial warranty by the manufacturer that the supply will be free from structural defects due to substandard material or workmanship, under conditions of normal commercial use and service. Commercial warranty must remain valid for two years after standard warranty period expires in accordance with the conditions laid down in Article 32 of the Special Conditions.</p>			