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Contracting Authority's Clarifications

Supply contract: **"Supply of hardware equipment with server licenses for functioning of the new System for the centralized calculation of earnings and new Budget planning information system";** Publication reference: **EuropeAid/140-758/ID/SUP/ME**

The answers to the requests for clarifications received by the potential tenderers to the following e-mail address: cfcu@mif.gov.me.

Q1	**Annex II+III: Technical Specification and Technical Offer, Page 6, it is specified: "Hyper-converged system containing following components or components with same characteristics (components are specified in table 1)". In Table 1, several components are specified, including: Node specification, Rack, Software, 2 Network Switches, UPS.**
	In the Instructions to tenderers and Annex IV: Budget breakdown, it is specified that the requested quantity for Item 1 - Hyper-converged system is 3.
	Please clarify what is the exact requested number of nodes and Hyper-converged systems. Do you request 3 Hyper-converged systems, each containing equipment specified in Table 1, or you request 1 Hyper-converged system with 3 nodes and other equipment specified in Table 1?
A1	We request 1 Hyper-converged system with 3 nodes and other equipment specified in Table 1.
	Please also refer to Corrigendum No. 1 to the Tender Dossier.
Q2	**Annex II+III, Section 1.2. General Software Specifications, Article 1.2.2: All proposed software licenses must have at least 3 years' upgrade without any additional costs.**
	Annex II+III, Section 1.4. Warranty and Product Support Services, Article 1.4.1: Warranty is as defined in Article 32 of the Special Conditions. The Supplier will be expected to provide the warranty services for all equipment. This warranty shall remain valid for a minimum of 1 year after the provisional acceptance."
	Item 1 - Hyper-converged system is consisting of Hardware and Software components. Upgrade of this system cannot and should not be done without the proper support/warranty for the whole solution, including both Hardware and Software. Therefore, please align the upgrade/warranty requirements for the whole

	solution (hardware and software) to 3 years (or 1 year) warranty and support in order to secure consistency in the tender requirements and later operation of the Hyper-converged system.
A2	The warranty shall remain valid for a minimum of 1 year after the provisional acceptance. Please also refer to Corrigendum No. 1 to the Tender Dossier.
Q3	**The most of our questions are related to the requested Technical Specifications for Item 1 - Hyper-converged system. For the non-classified systems: Hyper-converged system containing following components or components with same characteristics (components are specified in table 1):** **Full specification for Hyper-converged system is almost copy/paste of ██ ████████████████████████████ solution. The specification is fully locked to this product and only to it. It is important to stress out that ████████ is not one of the best/cost-effective HCI (Hyper-converged infrastructure) solutions on the market.** **We refer to Gartner Magic Quadrant for HCI solutions for year 2019 confirming that the trend shows rapid decline of ████████ both in Visionaries and Ability to execute axis.** **Without the intention to question why such decision was made, we strongly believe that these facts and EuropeAid regulations are sufficient to justify our request for the modification of the technical requirements in a way that enables more than one HCI vendor to participate. In case the decision is to keep the specification and favour only ████████ solution, please disregard rest of the questions and provide the proper derogation for this procedure in accordance with PRAG rules.** **If your intention is to make this procurement transparent and enable other solutions to compete, we kindly ask you to respond positively to the following questions.**
A3	Infrastructure system requirements are the result of analysis of the application system specific needs, software system architecture, analysis of servers which must run in HCI, analysis related to different ways of including data in application systems, analysis related to data exchange and requirements of confidentiality, integrity, availability, non-repudiation, provability and reliability. Future needs of the entire systems are considered as well. For the requirements defined, HCI solution is specified, as it is expected to provide optimal cost-effectiveness ratio. Many of the requirements in the technical specifications are interdependent and subject of this tender is a complete system. Therefore, the CA confirms that technical specifications will not be changed.
Q4	**"Hardware specification: Each node must include controller high-performance to connect to externally attached drives. Every controller must have more than 5 external SAS lanes, must support mixed-mode operations of RAID and HBA simultaneously, must offer encryption for data-at-rest on any drive, must support 12 Gb/s SAS and PCI 3.0"** **HCI solutions by the definition of any IT experts, analysts, architects etc. is that HCI are SW defined solutions – SW defined storage solution. Requirement to**

	connect externally attached drives are against the primary concept of HCI. Also, none of the existing HCI solutions in the world are capable of using external drives as part of the HCI solution. <u>**This feature, even not part of the HCI, can be irrelevant feature of** ▮▮▮▮▮▮ **which limits any other offering, so please remove it.**</u> **We suggest to change it with: "Encryption for data-at-rest on any drive should be supported either by hardware controller or by software solution."**
A4	Technical Specification is created in accordance with the defined requirements of the application systems that will run on this hardware, as well as in accordance with the defined server environments that should support the beneficiary's application systems. In that respect, controller characteristics are not changed.
Q5	**"Hardware specification: Must be able to sustain minimum of simultaneous 1-HDD failure in each node of a cluster and across all nodes in the cluster without data loss"** **<u>This requirement is not supported by HCI solutions other than</u>** ▮▮▮▮ <u>▮▮▮▮▮▮</u>**. We suggest to change it with: "Desired data protection level must be restored automatically without the faulty component being replaced, with subsequent failures to tolerate at least 2." This is important because, HDDs are not the only components that can fail.**
A5	Given the requirements of the application systems and compliance with the requirements for integrity, availability, and reliability, the requirement is not changed.
Q6	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: Hyper-converged solution should have a guaranteed data efficiency rating of 10:1 when managing local VM data and backups"** **<u>This requirement is purely marketing feature of</u>** ▮▮▮▮▮▮▮**. It cannot be exactly quantified because data efficiency rating varies from the type of the load and data type. Please remove this requirement.**
A6	Given the specificities of the application systems, specific business processes, ways of capturing data, specific methods of data exchange and the need for the most efficient use of memory space, the CA confirms that this is an important feature of the equipment and the requirement is not changed.
Q7	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: Offered Hyper-converge platform shall support individual VM-centric policy-based backup, recovery and DR. All necessary software like backup software, if required, shall be supplied."** **<u>This requirement is exclusive feature of</u>** ▮▮▮▮▮▮▮**. Providing that required solution, at least initially, will consist of a single cluster located in a single location, the used definition of backup is effectively a logical, local copy of a data, potentially replicated to a remote cluster of the same kind, using asynchronous replication. As by these requirements it is not stipulated that backup should be done to external medium, which not even** ▮▮▮▮▮▮▮ **supports. Please modify this requirement as follows: "Offered Hyper-converge platform shall support creation of clones, snapshots and replication within or with second cluster on primary and DR location".**

A7	Given the specificities of application systems, given the future requirements and the requirements of integrity, availability, non-repudiation, and provability, this is an important feature of the equipment and the requirement is not changed.
Q8	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: Offered Hyper-converged solution shall be supplied with licenses with remote backup to DR location for maximum numbers of VMs supported on offered solution."** **<u>This requirement is exclusive feature of</u> ▮▮▮▮▮▮▮. Providing that required solution, at least initially, will consist of a single cluster located in a single location, the used definition of backup is effectively a logical, local copy of a data, potentially replicated to a remote cluster of the same kind, using asynchronous replication. As by these requirements, it is not stipulated that backup should be done to external medium, which not even ▮▮▮▮▮▮▮ supports. Please modify this requirement as follows: "Offered Hyper-converge platform shall support creation of clones, snapshots and replication within or with second cluster on primary and DR location".**
A8	Due to the expectation that no new license costs will be accepted in future for present system, this requirement is not changed.
Q9	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: The ability to replicate Any-to-Any in a Mesh Data Centre deployment of more than 3 DC's"** **<u>This requirement is exclusive feature of</u> ▮▮▮▮▮▮▮. Providing that required solution, at least initially, will consist of a single cluster located in a single location and that in future it might extend to a DR location/cluster. Please remove this requirement.**
A9	This is a required functionality of the HCI system, and is not changed.
Q10	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: Should maintain repository for firmware and driver's recipes in the flash drive associated to management port. This is to aid rollback or patching of compromised firmware. Should also store Factory Recovery recipe preloaded to rollback to factory tested secured firmware"** **<u>This requirement is exclusive feature of</u> ▮▮▮▮▮▮▮. Please modify as follows: "Offered solution should support self-security remediation or automatic firmware upgrades."**
A10	This is a required functionality of HCI system, and is not changed.
Q11	**"SOFTWARE AND FUNCTIONALITY REQUIREMENTS: Hyper-Converged System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; it should support server power capping and historical reporting and should have support for multifactor authentication."** **<u>This requirement is exclusive feature of</u> ▮▮▮▮▮▮▮. Please modify as follows: "Remote management tool mentioned here needs to be exactly the same tool used**

	for VM-centric management. That would provide true single management of entire cluster."
A11	This is a required functionality of the HCI system, and is not changed.
Q12	**"Hardware specification: Each node must provide min 2 x Processor" RFP requirement is for an old version of CPU, would it be acceptable to offer the newest generation of CPU which will also provide 20-30% better performance, which is sufficient to also cover overhead needed for compression and deduplication, hence will not require the adding 4th node.**
A12	2x Processors per each node are required for performance and better availability in case of CPU failure, so this requirement is not changed.
Q13	**"Hardware specification: Vendor shall ensure that in-line real-time de-duplication and compression shall not put any additional load on the CPU of the node. In case de-duplication and compression is being handled by the CPU of the node / controller then vendor shall provide additional node / controller for performance optimization."** **We have addressed this with the question regarding CPU power. We have stressed out that by offering last generation CPU with stronger power there will be sufficient CPU power for all necessary overheads. Modified requirement: "Offered HCI solution must support de-duplication and compression."**
A13	In-line real-time deduplication and compression should not be an additional burden for the CPU nodes. The requirement is not changed.
Q14	**"Hardware specification: Each node must include min 5 x 960GB SSD drives" – Various HCI solutions manage storage space with different technologies/algorithms. <u>Uneven number of drives favors ▮▮▮▮▮▮▮▮▮</u>. Please consider to define the total RAW capacity required by the load: "Each node must include min of 6TB of SSD drives" this will enable other competitive solutions.**
A14	The requested specification of 5 x 960Gb is a minimum requirement (and minimum of simultaneous 1-HDD failure in each node of a cluster and across all nodes in the cluster without data loss is also defined). The bidders are allowed to propose in their offers more disks or more capacity per disk, e.g. 5 x 1,2 Tb or 6 x 1Tb. Therefore, the requirements are not changed.
Q15	**"Hardware specification: Each node must provide min 576 GB usable RAM" although most solutions on the market will function with 576GB of RAM, that is not the best i.e. optimized approach considering the number of memory controllers and channels in Intel dual CPU systems. 576GB of RAM is nor optimized nor recommended by any IT experts, not for HCI or any other type of solutions, first next optimized value for RAM is 768GB RAM. If optimized solution is of importance please modify this requirement: "Each node must provide min 576 GB usable RAM".**

A15	By analysing the needs of the beneficiary's application systems and the needs of the servers that must be supported on this HCI, the CA has established the minimum amount of memory per 1 node. The tenderers are expected to offer the optimal amount of memory for the HCI it offers, provided that it fulfils the minimum requirements set out in the technical specifications. Therefore, the requirement is not changed.