

TED 051/2020

CALL FOR OPEN TENDER

FOR THE SUPPLY OF EQUIPMENT & SOFTWARE (HYPER-CONVERGED INFRASTRUCTURE)

SUMMARY OF THE TENDER

OPEN TENDER	
ECONOMIC OPERATOR	THESSALONIKI PORT AUTHORITY SA
	Main line of business: Port works
	Address: Within the Port of Thessaloniki
	PC: 54625, Thessaloniki
	Tel.: 2310593121, Fax: 2310510500
	Email: <u>secretariat@thpa.gr</u>
	Website: <u>https://www.thpa.gr</u>
Deadline for the Submission of Bids	09.09.2020
Deadline for the Submission of Requests for clarifications	02.09.2020
Awarding Criterion	The most economically advantageous bid (lowest price), provided that the technical terms of this call are met.
Information- clarifications	For the tender procedure:
	Chrissanthi Athanasiou e-mail: <u>cathanasiou@thpa.gr</u>
	Georgios Papageorgiou e-mail: gpapageorgiou@thpa.gr
	Tel.: 302310593360
	For technical issues: Christos Papadopoulos
	For technical issues: Christos Papadopoulos e-mail: <u>cpapadopoulos@thpa.gr</u>





PART A - GENERAL TERMS OF THE TENDER

1. Object of the Call

The object of the contract to be concluded is the supply of equipment and software and in particular, the HYPER-CONVERGED INFRASTRUCTURE of DELL, as analyzed in PART B of this Call, which will be installed in the Racks of the two (2) data centers of ThPA SA.

2. Delivery

The delivery time of the equipment shall not exceed 60 days from the assignment of the supply.

3. Right of Participation - Qualitative Criteria

Participation in the procedure shall be open to natural or legal persons and, in the case of associations of economic operators, their members who have a professional activity related to the object of this call.

Participants shall:

- Not be under bankruptcy, liquidation or administration;
- Not have been irrevocably convicted (the administrators for the case of limited partnerships or limited liability companies, the Chairman and the CEO for the case of SAs and the natural persons performing management duties in other cases) for:
 - a) participation in a criminal organization, pursuant to article 2 (1) of Joint Action No. 98/733/JHA of the Council of the European Union;
 - b) corruption, as it is respectively defined in Article 3 of the Council Act dated 26t h May 1997 and in Article 3, paragraph 1 of Joint Action No. 98/742/CFSP of the Council;
 - c) fraud within the meaning of article 1 of the Convention on the protection of financial interests of the European Communities;
 - d) money laundering, according to article 1 of the Council Directive 91/308/EEC of 10 June 1991 on the prevention of the use of the financial system for the purpose of money laundering;
 - e) embezzlement (Criminal Code 375);
 - f) fraud (Criminal Code 386-388);
 - g) extortion (Criminal Code 385);
 - h) forgery (Criminal Code 216-218);
 - i) perjury (Criminal Code 224);
 - j) corruption (Criminal Code 235-237);
 - k) fraudulent bankruptcy (Criminal Code 398).

Associations of economic operators, including temporary partnerships, are not required to have a specific legal form for bidding. The <u>selected</u> Consortium or Association of Suppliers may be required to have a specific legal form insofar as the inclusion of such a legal form is necessary for the proper performance of the contract.

In the case of a bid by an association of economic operators, all its members are jointly and wholly liable to the contracting entity.



4. Award Criterion

The contract will be awarded based on the most economically advantageous bid (lowest price), provided that the specifications herein are met.

5. Bid Submission way and time

Bids shall be submitted electronically by the economic operators no later than **09/09/2020**, in Greek or English, by email to <u>cathanasiou@thpa.gr</u>, also forwarding the bid to <u>gpapageorgiou@thpa.gr</u> and they shall not be dependent on any other term, condition, proviso or reservation._After the expiry of this date and time, the bid cannot be submitted. Bids submitted late will be disregarded.

After prior communication, interested parties can visit the places where the equipment will be installed, in order to be informed of the current situation.

6. Provision of Clarifications on the Call

Requests for clarifications shall be submitted to the following email addresses: <u>cathanasiou@thpa.gr</u>, <u>gpapageorgiou@thpa.gr</u>, <u>cpapadopoulos@thpa.gr</u>, no later than five (5) days before the closing date for submission of bids. Requests for clarifications submitted in any other way will not be considered. The clarifications are posted electronically on the website of ThPA SA. www.thpa.gr.

7. Extension, amendment, addition or cancellation of the tender

ThPA SA reserves the right to extend the time for submitting bids or to cancel the award procedure, or to decide to repeat it at any stage, without any liability, cost or penalty, following a decision by its competent body. It also reserves the right to modify the terms of the procedure with transparency.

8. Bid time of validity

Bids submitted shall be valid and binding on economic operators for a period of two (2) months following the date of submission of the bids. Any bid setting a period of validity shorter than the one provided above shall be rejected.

The validity of the bid may be prolonged in writing, if requested by ThPA SA, prior to its expiry, for a maximum period of time equal to the one specified above.

9. Language

The official languages of the proceedings are Greek and English. All details of the bids shall be either in Greek or English (if they are drafted in the language of their country of origin) and accompanied by an official translation into one of the above languages. In case of disagreement, the prevailing wording is always the translation to one of the official languages of the proceedings.

10. Proof of meeting the participation criteria

In order to demonstrate that the participants meet the relevant selection criteria of article 3 - Right of Participation- Qualitative Criteria, they shall submit, with their bid, the following participation documents:

- A Formal Statement through which the Candidate declares that he has taken note of the specific requirements and particularities of the Object of the Tender and that he unconditionally accepts the terms of the Call;
- A Formal Statement through which the Candidate declares that there are no grounds for exclusion, as set out in the relevant paragraph, for the economic operator and its authorized representatives



and that there are no grounds for believing that such impediments will occur during the period of validity of the bid and any possible extensions thereof;

• In the cases where the economic operator is a legal person, to prove its legal constitution and representation, the legal documents of constitution and legal representation shall be submitted (such as statutes, body composition of BoD, in the case of SAs etc published in the General Commercial Register, General Commercial Register certificates depending on the legal form of the participant). The above documents shall specify the lawful establishment, all relevant amendments to the statute, the person(s) legally binding the company on the date of the tender (legal representative, right of signature, etc.), any third parties authorized to represent the contractor, as well as the term of office of the person(s) and/or the members of the management body/legal representative;

The Formal Statements submitted in accordance with this call, if drawn up by Greek citizens living in Greece, shall be in the form provided for in article 8(2) of Law No. 1559/1986 and submitted by the natural persons concerned or, in the case of legal persons and depending on the legal form of the participating legal entity: a) from limited partners and managers of limited or general partnerships or b) by managers of limited liability companies or c) by the authorized representative of an SA (e.g. CEO) if the relevant competence is proved by an act of the BoD published in the General Commercial Registry, describing the relevant competence.

11. Bid content

The bid details are defined as follows:

- A) Participation documents
- B) Technical Bid
- C) Economical Bid

11.1. Participation documents

Participants shall submit the details and supporting documents described in detail in article 10 on fulfilling the participation criteria. Also, a copy of the participation guarantee shall be attached, the original of which will be sent by courier to the procurement department of ThPA SA.

11.2. Technical Bid

The technical bid shall cover all the requirements and specifications herein and in particular of PART B of this Call, by completing the relevant table, as mentioned in detail.

11.3. Economical Bid"

The economical bid shall include price per type of equipment, price per installation service and total price and shall be submitted to the electronic Subfolder "Economical Bid".

Prices shall be provided in euros, plus VAT.

The prices offered shall be stable throughout the contract and not adjusted.

In the bid, each participant shall also indicate the indicative annual maintenance cost of the systems proposed.

12. Participation guarantee

For the valid participation in the process of concluding a contract, the participants shall submit a participation guarantee amounting to eight thousand euros (\in 8,000.00).





In the case of an association of economic operators, the participation guarantees shall also include the term that shows coverage of the obligations of all economic operators involved in the association.

The participation guarantee shall be valid for at least thirty (30) days after the expiration of the time of bid validity, as specified in the documents of the contract.

ThPA SA. may, before the expiry of the bid, ask the bidder to extend the term of validity of the bid and of the participation guarantee before their expiry.

The participation guarantee is returned to the contractor upon presentation of the performance guarantee.

The participation guarantee shall be returned to the other tenderers after the award.

Instead of a letter of guarantee, participants may deposit the corresponding amount of money in the Treasury/Bank account of ThPA SA. A copy of the deposition receipt shall be included in the bid envelope.

13. Bid opening-evaluation

The opening of bids will take place without the presence of participants.

During the evaluation, ThPA SA may address requests to the economic operators concerned for clarifications and economic operators must provide clarifications within the time limits set.

After completion of the evaluation, participants are informed of the acceptance or rejection of their bid.

14. Contract-Amendments

After the announcement of the result of the tender, a contract is signed between ThPA SA and the contractor.

The contract may be modified during its term, without the need for a new contract procedure, only upon the mutual agreement of the parties.

15. Special terms for the performance of the contract

15.1. Performance Guarantee

For the signing of the contract, the contractor is required to submit a Performance Guarantee, the amount of which is set at a rate of up to five percent (5%) of the value of the contract, excluding VAT and the contractor shall submit it before or at the signing of the contract, with a validity of at least 3 months

The performance guarantee shall be forfeited in the event of a breach of the terms of the contract, as specifically stated in the contract.

The performance guarantee concerning the contract covers in total and without exceptions the application of all terms of the contract and any claims of ThPA SA against the contractor.

15.2. Payment terms

The payment of the supplier will be made within two (2) months from the receipt of the equipment and after its installation has been successfully completed, with the submission of the relevant invoice.

PART B - TECHNICAL-SPECIAL TERMS

Technical Specifications of the Hyper-Converged Infrastructure

The minimum acceptable composition for the servers must meet the following technical specifications.



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
1	General			
1.1	A complete Hyper-Converged Infrastructure solution shall be provided for hosting virtual machines and storing their data, i.e. to include all the hardware (e.g. nodes, switches) & software (e.g. VMWARE ESXi & VSAN software) required for its proper operation	YES		
1.2	The offered Hyper-Converged Infrastructure solution shall be installed in two (2) Computer rooms in the premises of ThPA SA, which will be Primary & Secondary (Disaster Recovery) physical sites	YES		
1.3	The operation of the solution in the two (2) Computer rooms shall provide modern replication with simultaneous storage of all data on both sites	YES		
1.4	The operation in two (2) Computer rooms shall allow the operation as a single logical array that continues to operate automatically after a failure of one (either) of the two Computer rooms	VEC		
1.5	The operation in two (2) Computer rooms shall be Active - Active, i.e. support at the same time productive virtual machines (VM) in both (2) Computer rooms with direct automatic transition of all workloads in either of the two Computer rooms in case of failure	YES		
1.6	The operation in two (2) Computer rooms shall allow high availability in VMs and in each one separately			
1.7	The operation in two (2) Computer rooms shall allow performance of specific VMs in each one separately (Computer room aware)			
1.8	The offered solution shall be offered as a single solution consisting of nodes made by their manufacturer as autonomous integrated "Appliance" units especially for the purpose of integrated service of virtual machines and storage of their data	YES		
1.9	The offered solution shall include all the equipment, firmware & Vmware ESXI, VSAN Software Defined Storage & vCenter that shall work as a turnkey appliance from its manufacturing plant.	YES		



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
1.10	The offered solution shall consist of a number of nodes (servers) per Computer Room which shall offer high availability in the system in case of failure of one of them (N + 1 availability)	, 2 < 9 J		
1.11	The offered solution shall be able to be expanded horizontally by adding additional nodes but also vertically by upgrading and/or adding existing nodes with processors, memory, network cards and storage disks.	YES		
1.12	It shall include "all-inclusive" solution management software, i.e. it shall manage the entire infrastructure (equipment and software) from one application console and cover all functions (with no additional optional management permissions required)	YES		
1.13	Integrated management shall allow the addition & productive development of new nodes by automating processes			
1.14	Integrated management of the offered solution shall include the management of the VMWARE vSphere virtual machine software			
1.15	Integrated management shall allow the overall installation of the updated versions of the software, firmware / drivers & virtual machine software in a simplified way with an image.	VEC		
1.16	Software/driver/firmware update/upgrade shall be able to be performed automatically and without interrupting the operation of the system, i.e. the virtual machines and the availability of their data			
1.17	It shall support QoS (Quality of Service) functions and per-VM-level controls	YES		
1.18	It shall support automatic data protection in storage disks with the use of SW Raid software by storing any data in at least 2 nodes.			
1.19	It shall support the addition of extra nodes of the same or compatible composition in the infrastructure	YES		
1.20	It shall include software for backing up virtual machines with the ability to restore the virtual machine to a condition in which it was at a particular time	YES		

SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
1.21	The addition of extra nodes shall be done by connecting them to the network, their automatic localization and a simple confirmation of them, via the management software	VEC		
1.22	It shall support the expansion in a large number of nodes while continuing to function as a single logical array			
2	Specifications of each node			
2.1	Number of Primary Computer Room Nodes	≥ 4		
2.2	Number of Secondary Computer Room Nodes	≥ 3		
2.3	The model and the construction company shall be mentioned. There shall be compliance with ISO 9001.			
2.4	It shall have Quality and Safety Certificates, CE	YES		
2.5	Each node shall occupy up to 2 Rack units (\leq 2U)	YES		
2.6	It shall have CPU Intel Xeon Gold 5218R 2.1G, 20Cores / 40 Threads or better	≥ 2		
2.7	It shall have a memory of 192GB per node	YES		
2.8	Maximum supported memory per node	≥ 3TB		
2.9	Total DIMM slots per node	≥ 24		
2.10	It shall have Sliding Rack Rails	YES		
2.11	It shall connect to at least 2 25GbE ports on the switches of the internal network of the HCI solution. The relevant transceivers and/or cables (\geq 3 meters) shall be included	VEC		
2.12	It shall support future addition of 10 / 25GbE ports. It shall support at least the doubling of the ports offered	YES		
2.13	It shall support multiple internal data storage disks with Hot-swap capability	≥ 12		
2.14	It shall have 2 SSDs in Hardware Mirror mode to boot the system, which shall not take up any of the above drive slots			



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
2.15	It shall have Cache SSDs with a capacity of \geq 800GB each	≥ 2		
2.16	At least 4 HDD (Hybrid storage) mechanical discs shall be offered with a total supplied raw capacity of at least 16TB			
2.17	The above disks shall be presented in the system as simple disks with HBA-Host Bus Adapter function (non-RAID)			
2.18	PCI-e slots	≥ 4		
2.19	USB ports	≥ 4		
2.20	VGA connector	≥ 1 front ≥ 1 back		
2.21	Separate Gigabit Ethernet management port	YES		
2.22	Agent-Free Monitoring	YES		
2.23	Contact with the equipment inspector via SSH, CLI, Web GUI	YES		
2.24	It shall support IPMI 2.0	YES		
2.25	Virtual Media & Virtual Console Support.	YES		
2.26	Remote configuration, backup and restore hardware configuration support	YES		
2.27	Email Alerts, SNMP Traps	YES		
2.28	Redundant hot plugs	≥ 2		
2.29	Power supply for each hot plug	≥ 1000W		
2.30	Power cables, as many as the number of hot plugs	YES		
2.31	Hot-Plug Redundant fans	YES		
2.32	It shall include all required VMware vSphere Enterprise Plus & VSAN Enterprise licensing to fully support the functions of this panel.			
3	Internal network specifications of the HCI solution			



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
3.1	The solution shall include all components (e.g. switches, transceivers, cables) required to implement an internal communication network of the HCI solution			
3.2	The internal network shall be implemented in a high availability device without a Single Point of Failure (SPOF), i.e. at least double connections for each node and double "back-end" switches for each Computer Room			
3.3	The solution shall include an automated mechanism for configuring internal network services			
3.4	The management of the overall solution shall also include the management of the internal network	YES		
3.5	The internal communication network shall be able to support at least tripling the nodes without adding additional "back-end" switches			
3.6	The internal communication network shall be implemented at each node with double connections of high range \geq 25GbE and low latency <1000 nanosec			
3.7	The internal communication network shall support throughput \geq 2 Tbps full-duplex	YES		
3.8	For the interconnection of the two Computer Rooms, 2 single-mode optical fiber lines will be provided in a patch panel. Appropriate transceivers ≥40G LR (Long Range) shall be included for each Computer Room			
3.9	The internal communication network shall be connected to the core switches with at least 4 connections in a high availability device in each Computer Room			
3.10	Appropriate LC / MMF transceivers shall be included on the part of the solution for connection to QSFP-40G-SR-BD Modules on the part of the Core Switches on each Computer Room			
4	Installation & Warranty Services			
4.1	All installation (hardware & software) and configuration services required for the full	YES		



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
	operation of the HCI solution shall be included so that it is ready to host virtual machines.			
4.2	All current ESXi Virtual Machines transfer services from the old infrastructure to the new infrastructure shall be included (there will be network access to the VMware hosts of the old infrastructure)	YES		
4.3	All configuration services shall be included for the solution to work in Active-Active layout between the two Computer Rooms	YES		
4.4	Installation and configuration services shall be provided by the manufacturer of the solution	YES		
4.5	Training services shall be included	YES		
4.6	Integrated support from the manufacturer for the whole solution, i.e. all the software and all the equipment of the solution (Single point of support)	YES		
4.7	The system shall be able to automatically create call home support for software & equipment in the event of a fault.	YES		
4.8	Total system warranty from the manufacturer	≥ 5 years		
4.9	Vmware vSphere licenses shall be supported & maintained	≥ 5 years		
4.10	Vmware vSan licenses shall be supported & maintained	≥ 5 years		
4.11	24x7x365 phone support by the manufacturer	YES		
4.12	On-Site Response, within 4 hours (4hr Mission Critical), by the manufacturer. On-Site Hardware repair-support shall include spare parts and labor	YES		

Backup Infrastructure Technical Specifications (Equipment and Software)

SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
5	FEATURES			
5.1	A special backup to disk system (backup appliance) shall be provided to keep all the backups.	YES		



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SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
5.2	Number of units offered.	for each computer room		
5.3	The manufacturer and model of the system offered shall be indicated.	YES		
5.4	Announcement time of the offered model.	YES		
5.5	The system offered shall be a standalone product and not result from a combination of independent hardware and software.			
5.6	ISO-9001 quality certificate for the manufacturer	YES		
5.7	The network topology shall be reported and the functionality shall be described.	YES		
6	FUNCTIONALITY			
6.1	The offered system shall have inline data deduplication technology.	YES		
6.2	It shall support source and target deduplication in conjunction with the offered backup software.	YES		
6.3	It shall support interconnectivity via FC / VTL, IP / NFS & CIFS.	YES		
6.4	The deduplication shall be global (source & target deduplicated (i.e. the data on any VTL, network share or other backup device shall be stored only once).			
6.5	The data deduplication mechanism shall be analyzed and reference shall be made to the implementation and effectiveness of the algorithms used.			
6.6	The offered system shall be compatible with all standard backup software (such as Veam, Dell EMC Networker, IBM TSM, Veritas Netbackup, etc.) and a complete list of supported software shall be provided.			
6.7	Integration of data integrity assurance mechanisms for data entered for storage into the system in real time.	YES		
	This mechanism shall support the verification of data at any time required.			
6.8	It shall have hardware data remote replication with encryption (from the system into one Computer Room and to the other) via TCP / IP protocol.			



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
6.9	Only new encrypted deduplicated blocks shall be transferred to the remote system during remote data replication	YES		
6.10	Bandwidth management support for data remote replication depending on time and day.	YES		
6.11	It shall support snapshot creation	YES		
6.12	It shall support encryption of stored data so that, even with the loss of disks, they cannot be recovered (encryption at rest).	YES		
7	TECHNICAL FEATURES			
7.1	10GBase-T interface ports	≥ 4		
7.2	10GbE SFP+ interface ports Port scalability shall be reported.	≥2		
7.3	Appropriate transceivers shall be included on the part of the solution for connection with SFP-10G-SR modules to the Core Switches on each Computer Room	YES		
7.4	Maximum scalability to working capacity	≥ 170 TB		
7.5	Offered working capacity	≥ 30 TB		
7.6	Maximum backup data recording speed in the system	≥8 TB / hour		
7.7	It shall support parallel / simultaneous backup of data.	YES		
7.8	It shall support data integrity even in dual disk parity.	YES		
7.9	The offered system shall be accompanied by the necessary central management software through a graphical user interface (GUI).	YES		
7.10	Support for complete remote system management via TCP / IP. Reference shall be made to the possibilities offered.	YES		
7.11	In case of failure, the offered system shall automatically notify the Administrator and the Contractor or manufacturer that provides the performance guarantee.	YES		
7.12	Record of historical and online statistics on the activity and performance of logical and physical devices at appropriate intervals and creation of statistical reports with the possibility of selecting the time period. To be described in detail. The manufacturer of the storage	YES		

ΟΛΘ Α.Ε. Ι Λιμένας Θεσσαλονίκης, Προβλήτας No1, 546 25 Ι www.thpa.gr M.A.E: 42807/06/B/99/30 Ι Αρ. ΓΕΜΗ: 58231 004000 Ι Έδρα: Θεσσαλονίκη



SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
	system shall provide remote monitoring and support services at least for the duration of the support offered			
7.13	The standard heat dissipation requirements (BTUs / hr) for the offered layout shall be reported	YES		
7.14	The total power requirement (in W at 220V) in standard operating condition for the offered layout shall be reported	YES		
7.15	Compliance regulations shall be mentioned	YES		
7.16	The period of offered support for work and spare parts is 5 years. Support shall be provided within business days and hours.	YES		
7.17	365x7x24 telephone and online (chat, email) support. Support shall be provided and performed by the manufacturer of the offered storage system.	YES		
8	Backup Software			
8.1	The offered software shall fully cooperate with the offered special system for backup to disk.	YES		
8.2	The necessary licenses shall be provided to protect all data on the infrastructure offered. Licensing shall be complete and all the features of the backup software shall be provided regardless of the backup policies, storage media, number of VMs	YES		
8.3	The capabilities of the software shall be described and in particular the way automated copying procedures are offered depending on the policies that the company wishes to implement.	YES		
8.4	Support for copying over the Ethernet network - data transfer shall be performed with source and target deduplication for operating systems and applications.	YES		
8.5	Reception of additional backup shall be performed at least in the following ways: Full backup Incremental backup Differential backup	YES		
8.6	Backup shall be made directly from the servers to the dedicated system for backup to disk (without the data passing through the backup or other server).	YES		



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SERIAL NUMBER	SPECIFICATION	REQUIREMENT	ANSWER	REFERENCE
8.7	NDMP standard support for protecting NAS systems.	YES		
8.8	Creation of users and groups of users with different responsibilities and rights in the management and use of backup software.	YES		
8.9	It shall include reports of any backup/restoration work performed so that they can be easily analyzed in depth	YES		
8.10	Ability to restore data to a different location or system from the one from which the backup was made.	YES		
8.11	Support of data encryption during their network transfer	YES		
8.12	VMware changed block tracking & Image backup support	YES		
8.13	Support for backup resume from the interrupted point after a backup interruption due to a problem	YES		
8.14	All possibilities of protection of the virtual environment shall be mentioned.	YES		
8.15	The source & target deduplicated data shall be stored in the special system offered for backup to disk.	YES		
8.16	The backup software shall be managed through a graphical user interface (GUI) but also from the command line.	YES		
8.17	In case of failure, the software shall automatically notify the Administrator and the contractor that provides the support.	YES		
8.18	Record of historical and online statistics on backup activity and performance.	YES		
8.19	Installation & commissioning services of the backup solution (Backup Appliance / backup SW) shall be included	YES		
8.20	The period of offered support for work and spare parts is 5 years. Support shall be provided within business days and hours.	YES		
8.21	365x7x24 telephone and online (chat, email) support. Support shall be provided and performed by the manufacturer of the offered storage system.	YES		



Participants are asked to fill in the columns "Answer" and "Reference" in the above tables.

In the "SPECIFICATION" column, the corresponding technical terms, obligations or explanations for which corresponding answers shall be given are described in detail.

If the column "REQUIREMENT" is filled in with the word "YES" or a number (which means mandatory numerical size of the specification and requires compliance) then the corresponding specification is mandatory for the candidate Contractor, considered as an inviolable term in accordance with this Call. Bids that do not meet completely inviolable terms shall be rejected as unacceptable.

For cases where there is a "YES" in the title of requirements, which is analyzed in individual characteristics, it is considered that the requirement includes all the individual characteristics and an answer shall be given for each one separately. This note does not apply when there is a separate analysis for the requirement of each special feature.

Where there is nothing filled in the "REQUIREMENT" column, unless otherwise explicitly stated or provided in any other point in the specifications that it is not a mandatory requirement, the corresponding specification is not mandatory for the supplier, but is a desirable - rated feature.

The "ANSWER" column shows the Contractor's answer in YES/NO form, regarding whether or not the corresponding specification is met by the Bid or a numerical is provided indicating the quantity of the corresponding feature in the Bid. A simple affirmation or explanation does not constitute proof of fulfillment of the specification and the competent Committee has the obligation to check and confirm the fulfillment of the requirement (especially if it is a minimum requirement).

In the "REFERENCE" column, there shall be clear reference, per cell, to other points of the Technical Bid or to an Annex thereof, which will include numbered Technical Manuals or detailed technical descriptions of the services, software or way of connection and operation or reports on installation and support methodology, etc., which, at the discretion of the candidate Contractor, document the data of the Compliance Tables. At the beginning of the Annex, a detailed table of its contents is recorded.

All the above documentation will be a separate volume of the bid, which will be numbered per page. It is highly desirable to complete the references in full, which shall be as specific as possible (e.g. Technical Manual 3, Page 4, Paragraph 4, etc.). Accordingly, in the technical manual or in the relevant report, methodological tool, technique, etc., the point that documents compliance or exceeded coverage will be underlined, along with the corresponding paragraph of the Compliance Table, in which the requested specification is recorded (e.g. Spec. 4.18). Generic details or ambiguous references may be grounds for rejection of the bid.

Participants may also offer equipment with technical features that are better than the ones mentioned above.

Installation

All equipment will be installed in the Racks of the two (2) data centers of ThPA SA. The connection of the new equipment between the two (2) data centers will be done through single-mode optical fibers, without the intervention of active network equipment. The above shall also include any other added spare part necessary for the overall and proper operation of the system (connection cables, installation kits in RACK, etc.). If they so wish, each candidate can be informed of the existing systems at ThPA SA. It shall be noted that ThPA SA. is in the process of designing a new data center at the CT. Therefore, the supplied equipment may be installed in the new data center.

In case of assignment, the contractor shall acquire and install the equipment in consultation with the Information & Communications Technology Department in days and hours that will not affect the operation of the Authority.

The installation of all the equipment, its configuration and then the training that will follow, will be done by a certified engineer/partner of the contractor, with the appropriate technical experience, in consultation with the Information & Communications Technology Department of ThPA SA.

The solution is "turnkey". The contractor will be solely responsible for the integration of the proposed equipment into the network of ThPA SA and its proper operation, according to the planning. The contractor will also be responsible for moving the virtual machines and backup operations to the new infrastructure. Also, the equipment that will be installed shall be:

• new, unused and must not derive (including its parts) from a rebuilding or any similar process



- in the original packaging and come from the official branch of the manufacturer
- declared to the original buyer and covered by an official warranty and technical support
- •the latest model in its class (certified by the manufacturer)

Finally, for any software related to the above equipment, the buyer will be the only authorized user.

Training

The contractor shall conduct at least 2 four-hour training seminars on the management of the new equipment, to at least 5 employees of the Information & Communications Technology Department of ThPA SA and to external partners, after the successful completion of the installation and within the next two weeks. The seminars will be delivered preferably day by day, so as not to disturb the operation of the Department. The training will take place at the offices of the Information & Communications Technology Department of ThPA SA.

Documentation

The contractor shall provide ThPA SA with all the operating manuals of the devices, the user licenses and the installation files of all types of software. Upon completion of the installation of the equipment and software, a complete recording of the physical connections of the installed equipment, as well as any other documentation material of the installation that may be required (serial numbers, host names, IPs, user names / passwords, etc.) shall be delivered to the Information & Communications Technology Department of ThPA SA in printed and electronic form (editable, e.g. MS OFFICE files).

Support

- The offered guarantee technical support shall be offered by the equipment manufacturer
- There shall be 24x7 telephone and electronic support from the equipment manufacturer
- The support shall cover the equipment in its entirety or individually and be at least 5 years, NBD, onsite service to the premises of ThPA SA. including spare parts and labor

MANAGING DIRECTOR-CHIEF EXECUTIVE OFFICER (CEO)

FRANCO NICOLA CUPOLO

