



# **INVITATION TO TENDER**

**ECMWF/ITT/2025/389**

## **FRAMEWORK FOR PROCUREMENT OF SERVER HARDWARE AND SUPPORT SERVICES**

### **Volume II:**

### **Specification of Requirements**

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# 1. Background

## 1.1. Introduction

This Invitation to Tender (ITT) has been prepared by the European Centre for Medium-Range Weather Forecasts, (governed by its Convention and associated Protocol on Privileges and Immunities which came into force on 1 November 1975, and was amended on 6 June 2010) ("ECMWF") for the purposes of obtaining proposals from Tenderers for the procurement of server hardware and related support services.

## 1.2. ECMWF Data Centre

ECMWF has one of the largest IT data storage facilities in the world comprising its main Data Handling System, which primarily stores observational data and data generated by its High Performance Computer system, and various ancillary storage systems including network attached storage. The equipment is currently from diverse manufacturers, including but not limited to Brocade, Dell, HPE, IBM, NetApp, Spectra Logic and Western Digital.

### ECMWF's HPC Facility

ECMWF's High Performance Computing Facility is based on an Atos Sequana XH2000 based service. These are used to run large mathematical models allowing the Centre to predict the weather worldwide over periods of several weeks. Note that this ITT does not cover the provision of any equipment related to ECMWF's supercomputers.

### ECMWF's Storage Systems

ECMWF maintains a large database of weather-related information. This currently holds 1.1 exabytes of data, the bulk of it being pre-compressed and scientific in nature. This data is stored in a tiered environment controlled by the High Performance Storage System (HPSS). Most data are stored on tape media, with only 9% of the data residing on disk. HPSS is highly distributed software, making use of many servers to transfer data between disks or tape drives and users archiving or accessing the archives, via a high performance network.

Two ECMWF-written applications (MARS and ECFS) provide easy-to-use interfaces to users. MARS data represents about 80% of the volume of data stored, with ECFS represents the remaining 20%. In a typical day the archive grows by about 600 TB (this figure is expected to increase to 1PB per day).

Disk storage is connected to the servers through four Storage Area Networks (SAN) directors. ECMWF currently uses HPE DL and Dell R families of servers. In parallel, ECMWF runs disk storage for MARS and ECFS using Ceph clusters. These clusters leverage Direct Attached Storage (DAS) blocks, which are made available to the applications through the ethernet fabric. DELL R-series servers are used for this purpose.

In addition, hybrid flash/disk based online storage is provided for users' home spaces, dedicated meteorological caches and large project areas. These services use a mix of NetApp clusters and TrueNAS based systems. The TrueNAS systems are constructed from general purpose HPE/Dell servers with JBOD SAS connected disk enclosures. NAS-based storage is also utilised by a considerable number of virtualised infrastructures like vSphere, VDI and K8S clusters providing services including software development, job control, remote access, databases, object stores, web applications and charts visualisation.

### ECMWF Cloud Computing Facility

ECMWF operates two separate openstack-based, medium sized clouds (CCI) which provide cloud computing resources to members states, internal users and other large projects. In addition, it operates a number of other clusters through VMWARE and PROXMOX deployments which offer general

purpose computing and graphical environments to users. The hardware behind these services is manufactured by DELL and HPE. This ITT does cover the provisioning of hardware for the aforementioned systems.

## 2. Scope of the ITT

### 2.1. Objective

This ITT is expected to result in the setting up of a framework contract with estimated 5 to 10 suppliers, with the ultimate purpose of securing the best value for money in the provision of IT server equipment and related support services. The suppliers admitted onto the framework will be invited to compete for future purchases of similar types of equipment to those specified in Section 3. The initial framework will be for four years with the possibility of extension for a further two years. The framework awards (i.e. inclusion of suppliers onto the framework) are subject to approval by ECMWF's governing body, its Council, which meets in early December 2025, so framework contracts with selected suppliers cannot be signed before then. ECMWF may reopen the framework on a competitive basis at a later date to add additional suppliers to the framework on the same conditions.

In addition, this ITT intends to place an order for an Initial Purchase (Lot 1) comprising equipment from the supplier providing best value for money for this Lot 1, which has also been selected for the framework. The contract for this Lot 1 is anticipated to be awarded in December 2025.

Suppliers may submit Tenders for inclusion onto the framework without bidding to supply Lot 1.

### 2.2. Important aspects of this ITT

- Tenders are welcomed from suppliers based in any country (subject to supply and support requirements), although a preference would be for suppliers based in ECMWF's Member States.
- Whilst Section 3 contains a list of manufacturers, Tenderers representing other manufacturers are welcome to respond.
- Whilst the Initial Purchase under Lot 1 comprises equipment manufactured by HPE, subsequent orders may be for other specified or non-specified branded equipment and may be for brands that are not currently used by ECMWF.
- For future purchases all suppliers on the framework will generally be invited to tender via a further competition for the respective Lot.
- Suppliers on the framework which are invited to participate in a further competition for future purchases are not obliged to tender.
- Each future further competition will have its own evaluation criteria, although the main criterion is likely to be price. Prior performance on the previous Lots awarded under the framework (e.g. timely delivery/installation, successful acceptance etc.) will also be considered when awarding the contract resulting from a future mini competition.
- All equipment shall conform to EU specifications. While it is the intention of ECMWF to use this framework contract for purchases for its Data Centre in Bologna (Italy), there may be requirements for delivery to other locations, including non-EU ones, which will be notified in the documentation issued for a future purchase. In such case, equipment shall conform to standards and specifications, depending on the location of delivery.
- Due to the nature of some of the ECMWF projects, certain future purchases may be subject to specific administrative/legal conditions and/or restrictions (e.g. eligibility to receive funding). Such conditions shall be explicitly specified in the respective Lot documentation and the respective Lot competition shall be conducted among those suppliers which are not affected by such conditions.

### 2.3. Future purchases process

During the lifetime of the framework arrangement ECMWF will make further purchases of equipment or services. Each future purchase (called “Lot”) will specify the server hardware or services required, but could differ from the initial one in type, quantities, brands, technical specifications and support requirements of requested equipment. Systems described in each future purchase may be specified to a varying degree of detail depending on the requirement to be met. Installation details and acceptance criteria will be specified for all future purchases.

Any future purchases through this framework, after the Initial Purchase, will be subject to further competitive quoting via further competitions between the suppliers who have been selected for the framework as a result of this ITT. ECMWF reserves the right to negotiate directly with one or more of those suppliers, depending on the particular requirements to be met (i.e. specific brand, urgent need etc.). The most appropriate method for any future purchase will be selected to meet deadlines whilst still adhering to ECMWF’s tendering requirements. ECMWF may negotiate with all or some of the suppliers following a quote and may use a reverse auction mechanism to select the preferred supplier of a Lot. Suppliers will not be required to use special software to participate in a reverse auction and the procedure will be as described in Annex 3.

It is anticipated that the expenditure over the first four years of the framework will be of the order of €7M. Note that whilst it is envisaged that all suppliers who have been selected for the framework agreement as a result of this ITT will have the opportunity to quote for future purchases during the lifetime of this arrangement, there is no guarantee as to the volume of purchases to be offered.

### 2.4. Evaluation Method and Selection Criteria

For inclusion on the framework, Tenders will be evaluated based on the evaluation criteria and weights shown in the table below.

Evaluation criteria	Weight
<b>Tenderer’s Credentials</b> <ul style="list-style-type: none"><li>- Financial standing and Legal organization</li><li>- Track record and references</li><li>- Partner accreditations, quality assurance processes and management systems</li></ul>	40%
<b>Quality of Proposal</b> <ul style="list-style-type: none"><li>- Compliance with technical specifications for the sample equipment</li><li>- Quality of resources proposed (dedicated account manager, other technical or professional staff)</li><li>- Logistics arrangements (delivery, installation, acceptance)</li><li>- Support/maintenance service and warranty conditions</li></ul>	40%
<b>Pricing and Payment Mechanism</b> <ul style="list-style-type: none"><li>- Prices quoted for the sample equipment</li><li>- Appropriateness of pricing mechanism proposed</li><li>- Acceptance of specific ECMWF requirements in terms of currency</li></ul>	20%

*Table 1: Evaluation Criteria*

Tenderers must achieve a mark of at least satisfactory (i.e. 60%) for each high level criterion to be invited onto the framework.

The contract(s) for the Initial Purchase (Lot 1) will be awarded to the Tenderer(s) which have passed the criteria for inclusion onto the framework and quoted the lowest price(s) for the items in Lot 1.

## 3. Specification of Requirements

### 3.1. Framework Contract

#### 3.1.1. Manufacturers and Pre-sales technical support

A description of the equipment currently used by ECMWF is provided in section 1.2, as well as in Annex 1.

It is highly desirable that potential Tenderers can provide equipment from a range of manufacturers and are capable of providing ECMWF with technical expertise and guidance in the selection of the most suitable product for future acquisitions of equipment. Tenderers are asked to indicate how they can help ECMWF in identifying and providing server hardware solutions to meet the organisation's scientific and business needs.

Tenderers are requested to complete the corresponding table in Volume IIIB to specify with what manufacturers they enjoy a partnership and at what official level, e.g. Dell EMC Premier Partner, Hewlett Packard Enterprise Gold Partner or IBM Premier Business Partner, etc. Tenderers are not required to specify partnership with all listed manufacturers. Equipment manufacturers are not limited to those listed and hence, Tenderers may add others to the list. The proposed manufacturers equipment must however be able to meet the levels of capacity and performance of the sample equipment specified in Annex 1.

To enable ECMWF to take advantage of future technology developments it is desirable that Tenderers can provide access for ECMWF staff to equipment of different types and from different manufacturers for evaluation, testing and benchmark purposes prior to purchase. Tenderers should confirm whether they can provide this facility, the likely location of test equipment (e.g. Tenderers premises, Supplier's premises or at ECMWF) and the typical terms and duration of access.

#### 3.1.2. Technical specifications for the sample equipment

For each item specified in Annex 1 of Volume IIIB, which a Tenderer would be interested in supplying, a detailed breakdown of components and costs for delivery, installation and/or support in the indicated place of supply should be provided. For each item, Tenderers may propose alternative equipment of an equivalent capacity and performance to the requested item. Tenderers do not have to quote for all equipment, only those where they believe to be competitively priced.

Unless differently specified, all the required equipment shall conform to all relevant EU specifications.

#### 3.1.3. Logistics arrangements

##### 3.1.3.1. General Requirements

Each future further competition will set an acceptance date by which ECMWF expects that the equipment will be accepted. This can either be by simply delivering the equipment to the specified location, in the case that no installation is required, or if it is, installation, initial setup and testing have been completed. If this has been done to the satisfaction of ECMWF, **acceptance** will be granted, and the goods can be invoiced.

Where installation is specified this includes:

- installation into a rack;
- connection to the provided power and power-up test passed successfully;
- configuration of management IP addresses;
- running manufacturer's standard validation tests to demonstrate that the equipment operates in accordance with the manufacturer's specification;
- verification of absence of errors and warnings; and
- all other requirements as specified in the Lot documentation.

The acceptance date will be based on the date of issuance of a Purchase Order for a specific Lot following a further competition. This will normally be 6 weeks from the issuance of a Purchase Order, and allows time to deliver and install the equipment at the specified location (e.g. ECMWF's Data Centre in Bologna, Italy). For goods not needing installation this may be shorter, but in all cases a date will be set in the description of the Lot competition.

Tenderers shall explain their approach to ordering and delivery of equipment and how they foresee installation and acceptance being completed.

#### *3.1.3.2. VAT Exemption*

ECMWF is an international intergovernmental organisation exempted from VAT on substantial purchases within the scope of its official activities in its host countries (United Kingdom, Italy, Germany), its other Member States and certain Co-operating States. Consequently, ECMWF in such circumstances is not liable for VAT. Further information may be found in the "VAT Guidance Note for Suppliers" document published at the ECMWF Suppliers webpage<sup>1</sup>.

#### *3.1.3.3. Deliveries to ECMWF's Data Centre in Bologna, Italy, from non-EU countries*

Tenderers should note that in case of shipments to ECMWF's Data Centre in Bologna (Italy), which originate from non-EU countries, a dedicated mandatory process must be followed for imports into Italy. This process is handled by ECMWF, however it takes time and depends on the promptness of the supplier in providing the required information and on the accuracy of the information provided. While ECMWF will provide the required assistance in terms of documentation and liaison with the Italian authorities for obtaining the customs clearance, it cannot guarantee any timeframes.

Three weeks prior to the actual shipment of the equipment, the supplier must provide the following documents to ECMWF:

- Waybill from the shipping company
- Commercial invoice with itemisation of goods and total value of goods being shipped (no VAT included)

In addition, the supplier must provide the following details in order to enable ECMWF to fill out and submit an application to the Italian Ministry of Foreign Affairs via the so-called "182 form", requesting the import of the equipment free of any customs duties:

- Total value of goods being sent
- Total weight of goods being sent
- Description of good being sent
- Number of pallets and / or boxes in the shipment
- Courier name
- How the goods are travelling (by air, by road)
- Customs entry point / city the goods are entering Italy

**IMPORTANT NOTE:** this information must match exactly the information provided in the commercial invoice.

The Italian Ministry of Foreign Affairs may need up to two weeks to authorise the paperwork; this period may increase during public holidays. ECMWF will promptly notify the supplier once approval is granted.

Tenderers are requested to describe the arrangements they have in place in terms of delivery of the various equipment they would be interested in supplying. Among others Tenderers should explain where shipments would originate from, i.e. from within or outside the EU. If it is the latter, Tenderers should describe their previous experience in handling imports to Italy with the application of special

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<sup>1</sup> [https://www.ecmwf.int/sites/default/files/medialibrary/2022-06/ECMWF\\_VAT\\_guidance\\_note\\_for\\_suppliers.pdf](https://www.ecmwf.int/sites/default/files/medialibrary/2022-06/ECMWF_VAT_guidance_note_for_suppliers.pdf)



exemptions, such as those described above, as well as how they can guarantee their ability to comply with the delivery deadlines mentioned above.

#### 3.1.4. Support, maintenance and other professional services

Tenderers are requested to specify what technical support services they can provide and what services they would expect to supply via the OEM vendor. Explain the levels of support available from both.

Most equipment will be placed under support following acceptance and the period of support is expected to start from this acceptance date. Tenderers shall explain the level of cover needed from the OEM vendor or supplier. If warranty only cover is required, this should be clearly described in the Tender response.

Where required, it is planned to purchase support for equipment for five years with the initial purchase. The expected service life of the hardware is at least 7 years at the time of purchase.

A feature of the Framework is that a Lot could be used to specify only support services for equipment. Full details of the equipment would be provided to those contracted under this Framework, including equipment types, serial numbers, duration and level of support and current support status of the equipment. This will allow ECMWF to acquire support on equipment which has reached the end of its initial support period, purchased either through this Framework or any other contract.

Equipment originally delivered to one of the ECMWF sites may be moved to any other site at a future date and it is desirable that warranty / maintenance commitments would remain the responsibility of the selected supplier following the move (the actual movement of the equipment is outside the scope). Any such requirements shall be explicitly notified in the Lot documentation issued at that time. Tenderers are requested to confirm their ability to take on such a desirable commitment and to describe their approach in successfully handling it.

#### 3.1.5. Resources allocated to the contract

ECMWF will require the Tenderer to offer a dedicated account manager responsible for the contract and for any other matters related to the service. They will be the conduit to access pre-sales support, both internally and potentially with the vendor. Tenderers are requested to explain their approach to managing the overall framework contract, if selected, as well as individual orders awarded as result of Lot competitions and how this would be implemented.

#### 3.1.6. Pricing mechanism

Tenderers must explain the mechanism that will be used to derive the prices for equipment, e.g. which discount levels the Tenderer enjoys from a manufacturer, open book pricing etc. This should be demonstrated by providing, as far as possible, prices for the sample equipment specified in Annex 1. Where offered, separate prices for delivery, installation and support for the indicated location should be provided. Tenderers must also provide the price for Warranty & Support as specified in Annex 1. All prices shall be quoted in Euro (€) and shall remain valid and fixed for the period of time indicated in the ITT documentation.

Whilst the default currency for this ITT and any future purchases (i.e. Lots) is the Euro (€), in some of the Lots ECMWF may require suppliers to provide quotes in Pound Sterling (£). Respectively, for those Lots the Contractor's invoices shall be submitted in Pound Sterling (£) and payments by ECMWF to the Contractor shall be made in Pound Sterling (£). Such a requirement shall be explicitly notified in the Lot documentation issued at that time. Tenderers are requested to confirm their willingness to be paid in Pound Sterling (£) when this is requested in a Lot, as well as explain the currency conversion mechanism they will apply to ensure that ECMWF is still obtaining good value for money.



### 3.1.7. Terms and conditions of the framework contract

The terms and conditions for this contract are provided in Volume IV of the ITT documentation. As these are for a framework, all selected suppliers will be engaged on the same terms and conditions. Tenderers are required to confirm their acceptance of the terms and conditions by checking the corresponding box in Volume IIIA.

For future Lots, selected suppliers will be engaged on either of the terms provided in Volume IV (terms for Goods or terms for Services), depending on the type of purchase. For equipment, the terms for Goods will be applicable, for support services the terms for Services will be applicable, and for equipment purchased with ancillary support services the terms for Goods will be applicable. Acceptance to this framework requires acceptance to both sets of terms.

ECMWF may require additional or alternative terms in writing in relation to specific goods and/or services, which will be notified in the documentation issued for a future purchase (Lot).

Please note that as a result of ECMWF's immunity from jurisdiction, any contract, including any sub-contract and any ensuing contract between ECMWF and a third party (e.g. maintenance/support agreements), resulting from this ITT must contain an arbitration clause which is offered by ECMWF to all contracting parties. Tenderers are requested to explicitly confirm their willingness and ability to comply with this requirement and describe their approach in ensuring that such contracts comply with the above requirement. Further information may be found at <https://www.ecmwf.int/en/about/suppliers> in the documents under "ECMWF's status: Arbitration and VAT".

Where extending existing systems previously purchased under a Lot from this Framework, it will be the option of ECMWF to offer the equipment needed for such an extension to the winner of the original Lot. This is to avoid complications of support within a single system. If the original Tenderer is judged to be unable to provide a competitive price for the extension, the equipment needed will be offered onto the Framework instead as a separate Lot. This will not prevent the winner of the original Lot from bidding for the said extension.

### 3.2. Initial Purchase

The items specified in

Annex 2 comprise the Initial Purchase (Lot 1). Tenderers responding to this ITT are encouraged to bid for this Lot but do not need to. Using Annex 2 of Volume IIIB, Tenderers are requested to provide a detailed quote including breakdown of components and services. Prices given will be considered as firm, fixed and valid for a period of not less than three (3) months after the Closing Date of the ITT. Delivery and installation will be to ECMWF's Data Centre in Bologna, located at Tecnopolo di Bologna, Bologna, Italy.

### 3.3. Agreements for future purchases

ECMWF shall issue a Purchase Order which shall constitute a supplement to the signed Framework Contract, along with ECMWF's Request for Proposal/Quote issued as part of the future purchase process and the accepted Proposal/Quote of the selected supplier.

## 4. Format of the Tender response

### 4.1. Presentation and Order of the Tender

The Tender response shall be presented as separate documents, which are to be uploaded to the respective question on the eProcurement Portal, as follows:

- Completed Volume IIIA (Template for Tenderers – Administrative Information);
- Completed Volume IIIB (Template for Tenderers – Response to Specification of Requirements);
- Attachments and Annexes, as requested in the Volume III documents.

Note that for any information that has been provided as part of the Tender, but not specifically requested by ECMWF, then ECMWF shall, at its sole discretion, decide whether to utilise that further information within its evaluation process.

### 4.2. Volume IIIA

Volume IIIA (Template for Tenderers – Administrative Information), which can be found under the ITT Online Questionnaire should be completed for the following information:

- Details about your organisation:  
*Information on the legal, commercial or professional status of the Tenderer, as well as contact details of the person who can be contacted by ECMWF in relation to the Tender. The Tenderer should also attach a copy of the official Company Registration Document and provide complete and accurate information on the Tenderer's shareholding structure and, if applicable, full details of its parent organisations up to and including the ultimate parent organisation.*
- Economic and financial capacity:  
Financial information on your organisation to enable us to evaluate your financial status.
- Staff resources
- Experience and references
- Additional questions:  
*This section contains a set of questions which seek either information or confirmation from the Tenderer.*
- Confirmation of agreement to Volume IV of the ITT (Terms and Conditions of Contract):  
*Tenderers must note that Volume IV of the ITT (Draft Contract) sets out the conditions of contract. As these are for a framework, all selected suppliers will be engaged on the same terms and conditions. It is mandatory that the Tenderer shall provide a response to the respective question on the form stating their acceptance of the conditions contained in the Draft Contract. Tenderers are reminded that their responses to Volume IV are part of the criteria that ECMWF will use to evaluate Tenders.*

### 4.3. Volume IIIB

Volume IIIB (Template for Tenderers – Response to Specification of Requirements) shall contain the Tenderer’s response to the requirements specified in Volume II. The document lists the requirements and provides a structure for the Tenderer’s response. This is the minimum information requested; Tenderers can provide any additional information or documents as necessary. Some of the requirements make reference to various sections in Volume II and do not provide the full description of the requirement; Tenderers are advised to formulate their response based on the description of the requirement provided in the respective section of Volume II and touch upon all the elements described or requested therein.

ECMWF seeks focused responses, rather than responses which include a significant amount of standard marketing material. If you wish to include marketing material in your proposal documentation set, it should be provided as discrete documents and limited to only marketing material which is directly relevant to the response and marked as “Marketing Material”, however ECMWF may, at its sole discretion, not evaluate any such marketing material.

## Annex 1 – Sample Pricing

For each item specified in Table 2: Sample Equipment Detailed Description, please provide a **detailed breakdown of components and costs for delivery and support to ECMWF, Via Stalingrado 84/3, Bologna.** For each item listed use the appropriate table in Annex 1 of Volume IIIB, quoting prices in Euro (€).

For each item, Tenderers may propose alternative equipment of an equivalent capacity and performance to the requested item.

Table 2: Sample Equipment Detailed Description

Item	Equipment Description (Required technical specification / configuration)		
1	<b>HPE Server</b>		
	<b>Component</b>	<b>No.</b>	<b>Description</b>
	<b>Model</b>	<b>1</b>	<b>ProLiant DL360 Gen12</b>
	<b>Hot swappable system disks</b>	<b>2</b>	<b>480GB NVMe Hot Plug Boot Optimized Storage Device</b>
	<b>Network</b>	<b>2</b>	<b>25GbE</b>
	<b>Hot-plug Redundant Power Supplies</b>	<b>2</b>	<b>800W</b>
	<b>Processor</b>	<b>2</b>	<b>Intel Xeon 6745P</b>
	<b>RAM</b>	<b>4</b>	<b>32GB RDIMM</b>
	<b>Warranty and Support</b>	<b>1</b>	<b>5 years hardware and software 24/7-4hr response.</b>
	<b>Warranty and Support extension</b>	<b>2</b>	<b>1 year additional hardware and software 24/7-4hr response, if available.</b>
	<b>Installation required</b>	<b>1</b>	<b>Yes</b>
2	<b>Dell Server</b>		
	<b>Component</b>	<b>No.</b>	<b>Description</b>
	<b>Model</b>	<b>1</b>	<b>PowerEdge R670</b>
	<b>Hot swappable system disks</b>	<b>2</b>	<b>600GB Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug</b>
	<b>Network</b>	<b>2</b>	<b>25GbE</b>
	<b>Hot-plug Redundant Power Supplies</b>	<b>2</b>	<b>800W</b>
	<b>Processor</b>	<b>2</b>	<b>Intel Xeon 6745P</b>
	<b>RAM</b>	<b>4</b>	<b>32GB RDIMM</b>
	<b>Warranty and Support</b>	<b>1</b>	<b>5 years hardware and software 24/7-4hr response.</b>
	<b>Warranty and Support extension</b>	<b>2</b>	<b>1 year additional hardware and software 24/7-4hr response, if available.</b>
	<b>Installation required</b>	<b>1</b>	<b>Yes</b>

3	Lenovo Server		
	Component	No.	Description
	Model	1	Think SR 650
	Hot swappable system disks	2	600GB Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug
	Network	2	25GbE
	Hot-plug Redundant Power Supplies	2	800W
	Processor	2	Intel Xeon 6745P
	RAM	4	32GB RDIMM
	Warranty and Support	1	5 years hardware and software 24/7-4hr response.
	Warranty and Support extension	2	1 year additional hardware and software 24/7-4hr response, if available.
	Installation required	1	Yes
4	Generic Server		
	Component	No.	Description
	Model	1	Any vendor, 1 Unit, Dual Socket
	Hot swappable system disks	2	300GB (at least) Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug
	Network	2	25GbE
	Hot-plug Redundant Power Supplies	2	800W
		2	PCI Slots available
	Processor	2	Intel Xeon 6756E or higher spec
	RAM	4	32GB RDIMM
	Warranty and Support	1	5 years hardware and software 24/7-4hr response.
	Warranty and Support extension	2	1 year additional hardware and software 24/7-4hr response, if available.
	Installation required	1	Yes
5	HPE VDI Server		
	Component	No.	Description
	Model	1	ProLiant DL385 Gen 11
	Hot swappable system disks	2	300GB (at least) Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug
	Network	1	25GbE
	Hot-plug Redundant Power Supplies	2	1800W – 2200W
	Processor	2	AMD EPYC 9334
	RAM	24	64GB RDIMM

	Graphics/Accelerator	2	NVIDIA L40S 48GB PCIe
	Warranty and Support	1	5 years hardware and software 24/7-4hr response.
	Warranty and Support extension	2	1 year additional hardware and software 24/7-4hr response, if available.
	Installation required	1	Yes
6	DELL CEPH Server		
	Component	No.	Description
	Model	1	PowerEdge R7725
	Hot swappable system disks	2	960GB Data Center NVMe Read Intensive AG Drive U2 Gen4
		2	15.36TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4
	Network	2	25GbE
		1	HBA Front H965i
		1	HBA355e Adapter
	Hot-plug Redundant Power Supplies	2	1800W – 2200W
	Processor	2	AMD EPYC 9534
	RAM	12	64GB RDIMM
	Warranty and Support	1	5 years hardware and software 24/7-4hr response.
	Warranty and Support extension	2	1 year additional hardware and software 24/7-4hr response, if available.
	Installation required	1	Yes

Please provide a **detailed breakdown of costs for third party break/fix support for servers located in the Bologna Data Centre. For each server type listed in Table 3:** List of support options for existing equipment, quote pricing in Euros (€) for 10 servers. Use the appropriate table in Annex 1 of Volume IIIB to record the pricing.

Tenderers do not have to quote against all equipment, only those where they believe to be competitively priced.

Table 3: List of support options for existing equipment

Item	Support For						
1	<div><div>DELL Server R440 comprising:<ul style="list-style-type: none"><li>2x 600GB Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug</li><li>2x Broadcom Adv. Dual 10G SFP+ Ethernet</li><li>2x QLogic QLE2694L 16Gb FC Adapter</li><li>2x Intel(R) Xeon(R) Silver 4110 CPU</li><li>2x 32GB RDIMM RAM</li><li>2x Hot-plug Redundant Power Supplies</li></ul></div><table><tr><th>Component</th><th>No.</th><th>Description</th></tr><tr><td>Extended Warranty/Support</td><td>10</td><td>1 year HW / Break/Fix Hardware support per server with NBD (Next Business Day) on-site replacement</td></tr></table></div>	Component	No.	Description	Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD (Next Business Day) on-site replacement
Component	No.	Description					
Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD (Next Business Day) on-site replacement					
2	<div><div>DELL Server R630 comprising:<ul style="list-style-type: none"><li>2x 300GB Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug</li><li>2x Broadcom Adv. Dual 10G SFP+ Ethernet</li><li>2x Emulex LightPulse LPe16002B-M6-D 2-Port 16Gb FC adapter</li><li>2x Intel(R) Xeon(R) CPU E5-2620 v4</li><li>2x 64GB RDIMM RAM</li><li>2x Hot-plug Redundant Power Supplies</li></ul></div><table><tr><th>Component</th><th>No.</th><th>Description</th></tr><tr><td>Extended Warranty/Support</td><td>10</td><td>1 year HW / Break/Fix Hardware support per server with NBD on-site replacement</td></tr></table></div>	Component	No.	Description	Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD on-site replacement
Component	No.	Description					
Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD on-site replacement					
3	<div><div>HPE Server Proliant 360 Gen10 comprising:<ul style="list-style-type: none"><li>2x 480GB 16G NVMe SSD</li><li>2x Broadcom Adv. Dual 10G SFP+ Ethernet</li><li>1x QLogic QLE2694L 16Gb FC Adapter</li><li>2x Intel(R) Xeon(R) Gold 5215 CPU @ 2.50GHz</li><li>2x 64GB RDIMM RAM</li><li>2x Hot-plug Redundant Power Supplies</li></ul></div><table><tr><th>Component</th><th>No.</th><th>Description</th></tr><tr><td>Extended Warranty/Support</td><td>10</td><td>1 year HW / Break/Fix Hardware support per server with NBD on-site replacement</td></tr></table></div>	Component	No.	Description	Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD on-site replacement
Component	No.	Description					
Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD on-site replacement					
4	<div><div>HPE Server Proliant 380 Gen10 comprising:<ul style="list-style-type: none"><li>2x 300GB Hard Drive SAS ISE 12Gbps 10k 512n 2.5in Hot-Plug</li><li>2x Broadcom Adv. Dual 10G SFP+ Ethernet</li><li>4x QLogic QLE2694L 16Gb FC Adapter</li></ul></div></div>						



	<ul style="list-style-type: none"> <li>• 2x Intel(R) Xeon(R) Gold 5215 CPU @ 2.50GHz</li> <li>• 2x 64GB RDIMM RAM</li> <li>• 2x Hot-plug Redundant Power Supplies</li> </ul>		
	Component	No.	Description
	Extended Warranty/Support	10	1 year HW / Break/Fix Hardware support per server with NBD on-site replacement

## Annex 2 – Initial Purchase (Lot 1)

Lot1 consists of two parts, 1A and 1B.

For each item specified in this Annex, which you would be able and interested in supplying, using the format in Annex 2 of Volume IIIB, please provide a **detailed breakdown of components and costs for delivery and support in Bologna**. Prices shall be quoted in Euro (€) for the quantities indicated in Annex 2 of Volume IIIB.

For each item, **Tenderers may propose alternative equipment, from same or other manufacturers, of an equivalent or better capacity and performance to the items listed in the table.**

Tenderers do not have to quote for all equipment, only those where they believe to be competitively priced. That is, Tenderers may bid for either or both of Lots 1A and 1B.

The expected delivery date for Lot 1 is 8 weeks after issue date of the Purchase Order.

Item	Description (Required technical specification / configuration)		
1A	<b>HPE Server</b>		
	<b>Component</b>	<b>No.</b>	<b>Description / minimum specification</b>
	<b>Model</b>	<b>36</b>	<b>ProLiant DL385 Gen 11/12 24 disk bays chassis, NVMe backplane</b>
	<b>Operating system storage</b>	<b>1</b>	<b>NS204i-u Ht Plg Boot (RAID1)</b>
	<b>Hot swappable drives</b>	<b>12</b>	<b>1.92TB NVMe RI BC U.3 PM1733a SSD</b>
	<b>Network</b>	<b>2</b>	<b>MLX MCX6314 10/25GbE 2p SFP28 OCP3 16 (with transceivers)</b>
	<b>Hot-plug Redundant Power Supplies</b>	<b>2</b>	<b>1000W</b>
	<b>Processor</b>	<b>2</b>	<b>AMD EPYC 9334</b>
	<b>RAM</b>	<b>24</b>	<b>64GB RDIMM</b>
	<b>Warranty and Support</b>	<b>1</b>	<b>5 year hardware and software 24/7-4hr response.</b>
	<b>Warranty and Support extension</b>	<b>2</b>	<b>1 year additional hardware and software 24/7-4hr response, if available.</b>
	<b>Installation required</b>	<b>1</b>	<b>Yes</b>
	<b>Acceptance</b>		<b>As per Section 3.1.3.1</b>
1B	<b>HPE Server</b>		
	<b>Component</b>	<b>No.</b>	<b>Description / minimum specification</b>
	<b>Model</b>	<b>30</b>	<b>ProLiant DL360 Gen11/12</b>
	<b>Operating system storage</b>	<b>1</b>	<b>NS204i-u Ht Plg Boot (RAID1)</b>
	<b>Network</b>	<b>1</b>	<b>MLX MCX6314 10/25GbE 2p SFP28 OCP3 16 (with transceivers)</b>
		<b>1</b>	<b>SN1610Q 32Gb 2p FC HBA (with transceivers)</b>
	<b>Hot-plug Redundant Power Supplies</b>	<b>2</b>	<b>1000W</b>

	Processor	2	Intel Xeon 6745P
	RAM	4	32GB RDIMM
	Warranty and Support	1	5 year hardware and software 24/7-4hr response.
	Warranty and Support extension	2	1 year additional hardware and software 24/7-4hr response, if available.
	Installation required	1	Yes
	Acceptance		As per Section 3.1.3.1

## Annex 3 – Reverse Auction Procedure and Terms & Conditions (where applicable)

**1. Introduction** Under this framework agreement, Lots may on a case by case basis be awarded through mini-competitions conducted via a reverse auction process. The reverse auction will be used to ensure the most competitive pricing while maintaining the required quality and compliance standards. No special software will be required; all bids will be submitted via a dedicated email address.

### 2. Reverse Auction Process

#### 2.1 Invitation to Participate

- When a mini-competition is launched, all framework suppliers eligible for that work package will receive an invitation to participate.
- The invitation will include a detailed scope of work, evaluation criteria, and the date and time of the reverse auction.

#### 2.2 Initial Bid Submission

- Suppliers must submit an initial bid, which must comply with all stated requirements, to the dedicated email address by the deadline specified in the invitation.
- The initial bid must include a breakdown of costs, where applicable.

#### 2.3 Reverse Auction Commencement

- After the initial bid deadline, a designated auction period will commence during which suppliers may submit revised bids.
- Suppliers may submit multiple revised bids during the auction period, but each new bid must be lower than their previous bid to be considered.
- Bids must be submitted via the dedicated email address with the subject line including the competition reference number and "Revised Bid."

#### 2.4 Auction Closure and Final Bids

- The reverse auction will close at the predetermined time stated in the invitation.
- The lowest valid bid at the time of closure will be considered the leading bid for price evaluation purposes.
- No further bid submissions will be accepted after the closing time.

### 3. Evaluation and Award

- The lowest bid does not automatically determine the contract award. The final decision will be based on the evaluation criteria set out in the mini-competition invitation, which may include quality, compliance, and service delivery considerations.
- The Buyer reserves the right to reject abnormally low bids where there is reason to believe the bid is unsustainable or does not meet required standards.
- The successful supplier will be notified via email and required to confirm acceptance of the contract terms within the specified timeframe.

### 4. Terms and Conditions

#### 4.1 Confidentiality and Fair Competition

- All bids submitted during the reverse auction are confidential and will only be disclosed to the evaluation panel.
- Whilst the current best price during the auction may be revealed, the identity of the supplier bidding that price will not.
- Suppliers must not engage in collusive bidding or attempt to influence the auction process.

#### **4.2 Bid Validity**

- Bids submitted during the reverse auction must remain valid for the period specified in the invitation.
- The Buyer reserves the right to request clarification or additional details about any bid before finalizing the award.

#### **4.3 Non-Compliance and Exclusion**

- Suppliers who fail to comply with the reverse auction rules, submit misleading information, or attempt to manipulate the process may be excluded from the mini-competition and future competitions under the framework.
- Late submissions, incomplete bids, or failure to adhere to the bid submission format may result in disqualification.

#### **4.4 Right to Cancel or Modify**

- The Buyer reserves the right to cancel or amend the reverse auction process at any time before an award is made.
- If technical issues arise that prevent a fair auction process, the Buyer may extend the auction period or restart the auction with prior notification to all participants.

By participating in the reverse auction, suppliers agree to these terms and conditions. Failure to comply may result in exclusion from the framework agreement.