TERMS OF REFERENCE (TOR) FOR SUPPLY OF HARDWARE AND SOFTWARE FOR INTERDEPARTMENTAL COMMISSION ON COUNTERING THE CORRUPTION UNDER PROSECUTOR GENERAL'S OFFICE OF UZBEKISTAN

1. **Full name of project**

   SUPPLY OF HARDWARE AND SOFTWARE FOR INTERDEPARTMENTAL COMMISSION ON COUNTERING THE CORRUPTION UNDER PROSECUTOR GENERAL'S OFFICE OF UZBEKISTAN

2. **Name of customer and beneficiary**
   Within the framework of this project UNDP in Uzbekistan as a Buyer
   Address: 4, Taras Shevchenko str., Tashkent, Uzbekistan,10029
   Phone: +998 71 1203450
   Project will be implemented on the territory of Interdepartmental commission –Prosecutor General's Office of Uzbekistan.
   Address: 66, Yakhyo Gulyamov str., Tashkent, Uzbekistan

3. **Scope and objectives of the Project**

   Through the established procedure, the project aims to purchase and equip the Interdepartmental Commission office with server designed to interchange of electronic data within the framework of a single information space allowing for disposal and operation:
   - "Monitoring" software is designed to monitor anti-corruption measures of ministries and departments also through integration information systems and databases;
   - Purpose-built data portal (mobile applications) designed for children and adults and encompassing interactive methods of anti-corruption education (gaming, educational applications) including behaviors in certain corruption situations, aimed to highlight counteraction towards corruption, keeping track of corruption risks and etc.
   - Interdepartmental Commission's separate information webpage including purpose-built program and "map" that keeping the track of corruption level of the ministry, industry, territory (terrestrial map of regions corruptness);
   - Interdepartmental commission's electronic database (E-library) of international practices in countering the corruption scope as well as the library (including electronic) of anti-corruption literature in Uzbek, Russian and English languages.

4. **Project requirements**
   4.1. **Project requirements as a whole**
   4.1.1. **Requirements to the structure and functioning of the project**

   Within the framework of this technical specification it is foreseen turnkey delivery of required software and hardware encompassing and following all the requirements for delivery, installation, mounting, configuration and documentation of the product, commissioning and start-up of computer system, training, functionality testing of the procured equipment (acceptance test), commissioning of the entire complex and check for full operationalization. In the light of this, specific requirements to the structure and operation of the system are not imposed.

   4.1.2. **Requirements for interactions with external information systems**

   The Project will bound together only with those users who enter and extract the data. Based on aforementioned, no any requirements are imposed for interactions with external information system.

   4.1.3. **Requirements to the number and competence of the staff**

   The Contractor should engage required number of specialists with enough qualification for timely launching hardware and software.

4.1.4. Key indicators

The followings are considered to be purpose indicators:

- performance - ability to perform the tasks of processing, storage, presentation and replication of data with the required speed
- safe - ability to perform required functions without quality degradation of user data service within target time
- resiliency – ability to maintain the current state under the negative impact;
- scalability – ability to upgrade and at the same time to maintain all peculiar characteristics without performance degradation, safeness and control performance;
- ability to maintain heterogenous application
- controllability - the ability to adequately respond to the control actions applied by the administrator or the management system
- adaptability – the ability to change (adjust) characteristics of functioning in accordance with running task and due to activities
- maintainability – the ability to provide user friendliness condition and administrative simplicity

4.1.5. Reliability requirements (RR)

It is envisaged the procurement of only required hardware and software as per given ToR, hence no special requirements for reliability are imposed.

4.1.6. Safety requirements.

It is envisaged the procurement of only required hardware and software as per given ToR, hence no special requirements for safety are imposed.

4.1.7. Requirements for ergonomics

The appearance of the component of the complex should fully meet the world-class design of office space. Elements of the complex should not violate the general view of the interior of the premises.

4.1.8. Requirements for transportation

Vendor takes full responsibility for equipment safety during transportation.

4.1.9. Requirements for installation site of software and hardware

As per current ToR, it is foreseen to install hardware and software at Data processing center of Prosecutor General's Office of Uzbekistan.

4.1.10. Requirements for installation of hardware and software

Testing of equipment - Prior to installation, all equipment must be checked for completeness, software availability and equipment's each item must undergo a "cold start" procedure, i.e. all elements and modules must be supplied with electricity including software for checking its operability.
Installation of equipment - All equipment must have accessories for installation in standard size telecommunication cabinet of 19 inches.
All equipment is mounted in telecommunication cabinets.

Telecommunication cabinets must be connected to the ground loop for digital communication systems, which is located at 10 m distance from cabinets.

4.1.11. Requirements for operation, maintenance, repair and storage of project components

The vendor should indicate at least one authorized service center of manufacturer in the territory of Uzbekistan (Tashkent city) for each supplied equipment item. Its working hours should be put in a mode of at least 5/7 and 8/24. All equipment warranty service maintenance should be carried out at operation place by service-center specialists authorized by the manufacturer. The service center must have authorization certificates from manufacturers supplied by vendor. Warranty period should cover at least 3 years for all products.

4.1.12 Requirements for patents and licenses

Procured equipment must be patented and licensed in the territory of Uzbekistan. This project should not violate copyright and other related rights of third parties by implementation of technical, software, organizational and other decisions provided by the project.

4.1.13 Standardization and unification requirements

Standard products, ready facilities and parts must be purchased within the framework of ToR that ensure compatibility and interfacing with other elements. Project equipment and its subsystems must use standard electrical interfaces, interfaces, technologies and data transfer protocols. Procured equipment should be of the same type (unified) due to optimize configuration and management processes as a whole as well as increase the reliability and interchangeability of the components used.

4.1.14 Beneficiary's (end-user) staff training

 Within the framework of ToR, vender is obliged for:
familiarize end-user with operation and maintenance of each item of procured equipment while installation;
arrange relevant trainings on appropriate use of each equipment for increase professional capacity of the staff at authorized training centers in Uzbekistan and number of participants – 2 people at each training. Duration of the session / lesson and number of days is determined by authorized training center in accordance with manufacturer's or software developer's training program.
Training language is Russian.

4.1.15 Technical parameters

As per attachment 1 to current TOR

4.1.16 Additional requirements

Supplied equipment must comply with the current trends in the information technology market, network and computer technologies, as well as comply with the current requirements for the construction of corporate-level information infrastructures.

5. Requirements for types of software used
5.1.1. Linguistic support requirements

All procured hardware and software must support English and Russian languages.

5.1.2. Requirements for software

All procured hardware and software suite must have relevant certificates and software license agreements confirming the legality of their use. Software should be delivered with license sets corresponding to the number of workspaces where they are supposed to be installed and have the latest version for the time of release by manufacturer.

The validity of licenses / keys for all software is unlimited. While the for Firewall Orchestrator screen use must be not less than 3 years.

Project software should possess following criterias:
- perform the whole mathematical support algorithms;
- provide resistance to erroneous situations including with incorrect and conflicting data; program malfunctions, failures of some computing facilities, personnel errors should be diagnosed, accompanied by messages and should not cause disruptions on project activities;
- provide automatic restart as soon as electricity is restored after power failure without issuing false signals and control actions;
- submit correct results for all combinations of input data that are valid within the framework of setting objectives;
  - have the ability for quickly configure during operation.

5.1.3. Technical requirements

The project aims turnkey delivery that ensures the delivery in terms of all requirements on shipping, installation, configuration and product registration/ documentation, implementation, testing the operability of procured equipment (acceptance testing) and launch full operation.

The offer should include a list, quantity and technical characteristics of the equipment offered. The equipment supplied must comply with the technical requirements specified in this TOR.

In addition to the warranty support of equipment, vendor must provide all necessary technical support and methodological assistance to specialists of GPO RUz.

The Contractor may offer products (a similar technical solution based on products of other manufacturers), similar or superior equipment in functionality specified in the Terms of Reference.

The proposed equipment must comply with international standards and be:
- new (not used previously);
- manufactured not earlier than 2019;
- Must be produced by world-famous manufacturers (i.e "brand-name").

The warranty for all equipment must be at least 3 years. During warranty period any kind of malfunction must be temporarily replaced for original or similar equipment within 48 hours with its further replacement for original one, provided by manufacturer within no more than 45 calendar days. During warranty period all replacements of malfunctioning equipment should be done free of charge in Tashkent.

6. Works composition and content

№	Title	Duration		Outcome
		Start	**End**	
1.	Equipment supply	as per contract terms	as per contract terms	Equipment delivered to installation site
2.	Equipment installation	as per contract terms	as per contract terms	Installed equipment
3.	Set, launch and testing	as per contract terms	as per contract terms	Operating equipment
4.	Staff training	as per contract terms	as per contract terms	Trainings are conducted at authorized training centers

7. Acceptance of work

The control and acceptance of the project is determined by the program and methodology of testing, which is part of the design documentation developed by the Contractor.

Acceptance of work must be carried out in accordance with the test program and methodology and the schedule approved by the Customer and the Contractor.

Acceptance of work is carried out by the commission, the composition and schedule of which is determined by the Customer.

8. Requirements for preparation works for launching system into operation mode

Before the supplied equipment will be put into operation, it is necessary to carry out the cleaning of temporary data, checking the readiness of equipment for launching to operation mode.

In case of problems or defects of the supplied equipment occurs, the Contractor is obliged to replace it at no cost.

9. Documentation requirements

The supplier must provide operational documentation for all procured equipment as per following categories:

• User manuals.

• Administrator manual.

• Safety manual.

• Developer's instruction (if available).

Documentation must be handed over to end-user in two forms – hard copy and electronic. Documentation should be in Russian language. It is also allowed documentation in English in case if manufacturer does not have its Russian version.

10. **Terms and conditions of supply**

The equipment should be delivered to the following address: 66, Yakhyo Gulyamov str., Tashkent, Uzbekistan

Delivery should be made within 45 (forty five) days starting from the date of signing the contract.

The supplier, at its own expense and at its own risk, takes the whole responsibility associated with the export of goods to the country of delivery.

Loss risk or damage of goods passes from the Supplier to the Customer after delivery of the goods to the buyer's warehouse.

The Supplier is obliged to notify the Customer by phone, e-mail or other means of communication regarding shipment of goods no later than 48 hours after shipment.

# ITEM	NAME	CONFIGUATION	AMOUNT	PURPOSE
1	**Virtualization server**	**Server should be compliant with the following requriements:** - Mounting case is of 19 rack, height is not more than 2U and rack mount kit should be included in a set - 2 pcs of 64 bit processors with x86-64 architecture, with at least 18 processor cores each, and a base clock frequency of at least 3.0 GHz, a cache memory of at least 24 MB should be encompassed - Not less than 384 GB RAM memory RDIMM DDR4 ECC with operational frequency not less than 2666 MHz, parity check (12 modules of 32 GB each) with the possibility of installing at least 1.5 TB - Can be installed 8 SAS hard disks of form factor 2.5", with the ability of hot replacement, SSD and NVMe support; - Installability of at least 2 SSD SATA drives - 2 SATA SSDs with a capacity of at least 32 GB each configured in RAID1 mode - At least 4 network interfaces 10GE with SFP+ connectors - Not less than 1 Fiber Channel adapter with at least 2 ports operating at a speed of at least 16 Gb / s with installed SFP modules - 1GE dedicated control interface with RJ-45 connector - A control system that allows to monitor the status of the server and its configuration, regardless of the availability of the operating system, including connecting a virtual DVD drive from an ISO image, installing and configuring the operating system in text and graphic modes - At least 2 power supply units operating in 1 + 1 mode with hot swapping - At least 2 OM3 optical cables with LC-LC connectors for connecting the FC adapter to the FC switch - Perpetual license for the Microsoft Windows Server 2019 Datacenter operating system, with the right to install at least 2 previous versions, sufficient to run an unlimited number of virtual machines with the Microsoft Windows Server operating system	1	Designed to run virtual machines using information resources.

		- A manufacturer's warranty of at least 3 years, providing software updates, consultation on adjustment, replacement of defected equipment (the warranty does not provide for the return of failed drives when replacing).		