

ANNEX II + III : TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Audit and document handling software for the Audit Authority

p 1 /17

Publication reference: 14SER01/04/191

Columns 1-2 should be completed by the Contracting Authority
Columns 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the Contractor's technical offer

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

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

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

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

Unless otherwise specified, the requirements in these Technical Specifications are presented as a minimum standard which the offered goods must meet.



Beneficiary

The beneficiary of the supply (from now on Beneficiary) is Republic of Serbia Governmental Audit Office of EU Funds.

Description of existing situation

Beneficiary existing hardware operating environment is composed of:

1. Dell Power Edge R515 Rack Server (qty 1)
 - a. AMD Opteron 4334, 3.1GHz, 6 cores, 6M Cache
 - b. 16GB RAM, 2x300GB SAS 3.5" 15K, 3x450GB SAS 3.5" 15K, RAID H700 512MB, DVD
 - c. Dual 750W Hot Plug Power Supply
2. Dell Power Edge T320 Tower Server (qty 1)
 - a. Intel Pentium 1403, 2.6 GHz, 2 cores, 5M Cache
 - b. 4GB RAM, 6x1TB NL SAS 2.5", RAID H710 512MB, DVD
 - c. Dual 495W Hot Plug Power Supply
3. Rack mount UPS Dell 2700, 2700W, 230V, 3U, 4-Post Rails, with included Cable Pack (qty 1)
4. Dell 3-7M PDU Input Power Cord (Wall to 16A 1PH PDU) IEC309-16A plug to IEC320 C19 socket, 250V (Kit, qty 1)
5. Dell Power Connect 5524 Switch, 24xGbE ports, 2x10GbE uplink ports, Managed L2 Switch (qty 2)
6. Server Rack Dell 4220, 42U Rack with Doors and Side Panels, Standard Packaging, with included set of fans and shelf (qty 1)

Beneficiary software operating environment is based on Microsoft Windows Server platform (Windows Server 2008 and Windows Server 2012 Essentials) and Microsoft client operating systems (Windows 8 Pro, Windows 8.1 Pro, Windows 10 Pro). Beneficiary application operating environment is currently based on Microsoft Office platform (installed on each client computer, used for general document creation and editing, and for risk management analysis) and CaseWare IDEA software (for data analysis and sampling. Beneficiary currently owns 3 licences).

The Contractor will be solely responsible that his offer is fully compatible with Beneficiary existing hardware, software and application operating environment.

Place of Delivery

The Supplies are to be delivered to and related services are to be carried out in the Beneficiary offices located in Nemanjina 4 street, 8th floor, Belgrade, Republic of Serbia. Existing rack (Server Rack Dell 4220) will be used for hosting equipment delivered by this supply.

General requirements

All electrical equipment must be powered with 230V, 50Hz AC and must be equipped with CEE 7/4 "Schuko" Type F power plugs. All devices must be compliant with Serbian and European Union electrical safety standards and follow CE Marking Directive. Equipment must comply to IEC 60 529 standard for indoor IT equipment operating under temperature range of 10°C – 40°C, relative humidity range of 20% – 80% and IP 20 protection level, and must have RoHS certificate and comply to CE and WEEE standards.

Installation, Configuration and Start-up

Delivered hardware items must be equipped with all necessary components for installation and start-up: e.g., licenses, rack rails and hardware, cable management hardware, intra-rack cables, documentation CD, etc. The Contractor will be responsible for installation, configuration and start-up of the supplies delivered in accordance with the Technical Specifications and the directions provided by the Beneficiary. The Contractor will be responsible for integration of the supplies delivered with the existing infrastructure.

Post-Completion Documentation

The Contractor will be responsible for preparation of Technical Post-Completion Documentation describing the system implemented, which should include diagram of interconnection between various hardware and software elements, all configuration details, start-up scripts and a description of mandatory maintenance procedures to be followed by the Beneficiary during day-to-day operation. The Post-completion Documentation will be subject to the approval of the Beneficiary and the Contracting Authority.

Warranty

One year warranty after provisional acceptance in accordance with the conditions laid down in Article 32 of the General Conditions. 8 hours per day / 5 days per week phone, email and fax support with dedicated support person, with support being provided in Serbian language, must be supported. Maximum response of same working day arrival and problem resolution, if the client's request (by phone, fax or e-mail) originated before 12h, and next working day arrival and problem resolution, if the client's request originated after 12h, must be supported. All hardware items in warranty must be repaired or alternatively replaced within a maximum of 72 hours. Guarantee that genuine spare parts will be available for a period of minimum 3 years from the date of final acceptance of the equipment must be provided.

Commercial Warranty

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

Visibility

All supplies must comply with the Visibility guidelines in force within the scope of external aid contracts financed from EU general budget.

The requirements for implementing partners (Projects) – Communication and Visibility in EU financed actions (effective from 01/01/2018) is available at: https://ec.europa.eu/europeaid/sites/devco/files/communication-visibility-requirements-2018_en.pdf

Any supplies or equipment delivered under an EU-financed action must be clearly identified and must prominently feature the EU emblem and the phrase 'Provided with the financial support of the European Union' in the operational language of the EU programme and in the local language.

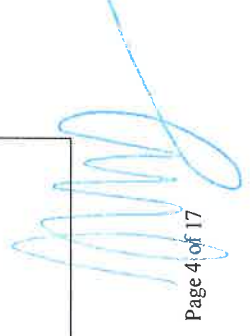
As part of the request for provisional acceptance, the Contractor must provide documentary evidence of compliance with the visibility rules.

For the purpose of visibility and clarity of labelling, all hardware shall have a solidly fixed metallic type (pure aluminium foil, vinyl lacquer coated aluminium foil, or similar) or solid plastic labels (synthetic surface coated, PVC, or similar) specially formulated for offset printing, the design of which should be submitted within 4 weeks of the signature of contract.

Self-adhesive paper or film labels are not allowed.

The Contractor shall produce a draft of layout of any visibility labels and submit it for written approval to the Contracting Authority prior to production and delivery.

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1.1	Audit and document handling software must support following functionalities / requirements: <ol style="list-style-type: none"> Electronic Notary Auditing Case Management Document Management Folder Hierarchy Management Workflow Management Review Management System logging User Management Technical Hardware Training 			
1.2	Functionalities / requirements must be fulfilled with single information system product or by using multiple but mutually integrated products in which case data exchange must be supported as min level of integration.			
1.3	Audit and document handling software must support min 15 perpetual software licenses.			
1.4	Notice: The Contractor will be solely responsible that his offer contains all necessary perpetual software licenses (on virtual machine management, server, client, database and application level) delivered and installed.			



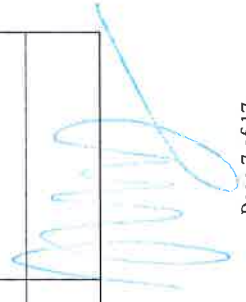
1	Electronic Notary			
1.1	Must support Notary as an Records Management Office part of the Beneficiary officially receiving, routing, dispatching, sending, keeping and maintaining all official / written communication / documentation.			
1.2	Must support tracking all input and output documents according Notary related Serbian law / regulations.			
1.3	Must support storing all information about the changes in the cases, including all timestamps for received or sent document(s).			
1.4	Must be fully compliant with Serbian legislation.			
2	Auditing			
2.1	Must support preparation and management of audit planning documents based on predefined document types and workflows.			
2.2	Must support min Random, Systematic and user-defined sampling.			
2.3	Must support basic data analysis (e.g. data filtering) and calculations (e.g. data summation).			
2.4	Must support a possibility of quality control / check (e.g. identifying data entry errors, detecting duplicates etc.)			
2.5	Must support identification of audit risks and risk assessment functionality where all identified audit risks should be saved in Risk Repository / Risk Registry (Risk Assessment must be integrated part).			
2.6	Must support execution of audits based on predefined document types and workflows.			
2.7	Must support separate repository of findings for each audit.			



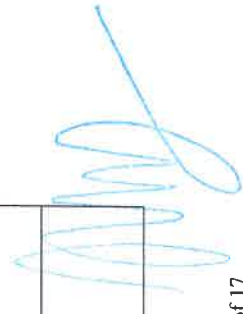
2.8	Must support preparation and management of all audit reporting documents based on predefined document types and workflows.			
3	Case Management			
3.1	Must support Case Management as a complex process that requires a combination of human tasks and electronic workflow including support for document management.			
3.2	Must support basic Case Management functionalities where case must consist of information(s), document(s), processes, analytics, business rule(s), collaboration data and other data related to the case.			
3.3	Must support case as a collection of audit communications, forms, process documents, reports and supporting documentation that will need to be managed for audit.			
3.4	Must support case processing in terms of adaptive and/or dynamic workflows to be able to accommodate ad-hoc routings and rapid audit process change.			
4	Document management			
4.1	Must support centralized document storage.			
4.2	Must support definition of document types based on predefined document metadata attributes and document templates.			



4.3	Must support at least following set of document metadata attributes: - Document name - Owner - Version - Status - Status comments - Parent folder - Path / folder location , with support for users to be able to create additional document metadata attributes.			
4.4	Must support upload of document template(s) for specific (selected) document type, where document template can be created as Microsoft Office Word or Excel or equivalent template document(s).			
4.5	Must support document creation based on selected document type.			
4.6	Must support document viewing and editing.			
4.7	Must support upload of a document in most common office document types as a minimum: - (DOC, DOCX) - (XLS, XLSX) - (PDF) - (JPG, JPEG, TIFF, BMP, PNG)			
4.8	Must support check-in, check-out, document and document content and attribute versioning.			
4.9	Must support document indexing and full text searching.			
4.10	Must support printing document metadata sheet including generation and printing of special report (sheet) with all metadata attributes and their values for specific document.			
4.11	Must support printing in Portable Document Format (PDF).			

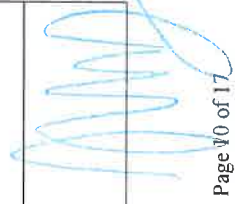


4.12	Must support that document can be edited only if it is in draft status, and once owner finalizes the document, status should be changed and editing disabled.			
4.13	Must support (multiple) electronic document signatures enabling signature verification through standard client applications (e.g. Acrobat Reader for PDF files) making it possible to view and verify signatures.			
4.14	Digital signature must be implemented according Serbian laws / regulations with standard based verification enabled, so that documents sent outside of the Beneficiary can be independently verified using standard based digital signature mechanisms.			
4.15	Must support paper (analog) document scanning with support for mass scanning using fast scanner(s), support for Optical Character Recognition (OCR) and support for multiple or independence of any scanner vendor(s).			
4.16	Must support OCR to be performed when requested to allow collecting document metadata, where OCR must support Serbian language (Cyrillic and Latin script) but also EU official languages.			
5	Folder Hierarchy Management			
5.1	Must support management of folders hierarchy.			
5.2	Must support create folder functionality.			
5.3	For each folder must support following attributes: - Title - Parent folder - Path (folder location in regard to the root folder) - Owner - Status - Status comments - Folder type			
5.4	Must support moving folder(s) where parent folder is changed and the folder is moved together with its complete successor sub-hierarchy.			



5.5	Must support archiving folder(s) where folder status, as well as statuses of all folders and documents in its full successor sub-hierarchy, is set to Archived, and where contents of archived folder(s) cannot be changed, and where archived folders must be automatically moved to predefined storage location (archive).			
5.6	Must support moving and archiving document(s) similar to moving and archiving folders.			
5.7	Must support deleting folder(s) but only if folder(s) are empty (successor sub-hierarchy does not exist).			
6	Workflow Management			
6.1	Must support simple and flexible creation and management of customized workflows which support the automation of business processes.			
6.2	Must support definition, update and deletion of workflows.			
6.3	Must support definition of workflow functionality, where workflow must have following metadata attributes: - Workflow name - Owner - Version - Default parent folder - Comments.			
6.4	Must support deletion of individual workflow task(s) and update of workflow functionality but only by user which is workflow owner.			
6.5	Must support creation of a process based on selected workflow.			
6.6	Must support graphical user interface for creation and management of workflows.			
6.7	Must support conditional flows modelling depending on user input or process data (i.e., in case that value of the contract is greater than XXXXX EUR, workflow is different).			

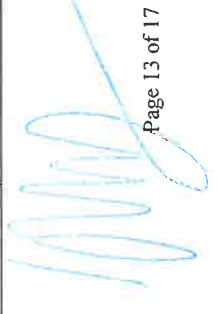
6.8	Must support that workflow(s) include list of activities that can be assigned to individual user(s) as task(s).			
6.9	Must support that all assigned tasks should be easy noticeable by and accessible to users after signing into the system.			
6.10	Must support users to sort/filter workflow tasks by time, type, assigned person, etc.			
6.11	Must support task prioritization.			
6.12	Workflow task must support following (or similar) metadata attributes: <ul style="list-style-type: none"> - Name - Description - Order - Responsible person - Estimated duration - Start date and time - End date and time - Time limits for every individual steps and/or process in each flow - Status (Waiting, Execution, Finished) - Cross-referenced document types - Comments. 			
6.13	Must support definition of deadlines for task(s), and when task remains incomplete after the appointed time, notification should automatically be forwarded to predefined users.			
6.14	Must support automatized task execution without need for additional user interaction (e.g. email notification sending, integration with other functions of the same system or with other / external systems etc.)			
6.15	Must support some of recognized business process modelling standards (e.g. BPMN, XPDL etc.).			
6.16	Must support workflow monitor functionality, where user with elevated privileges must be able to track the status of all running workflows.			



6.17	Must support creating notification(s) as part of the workflow design or automatically for specific user(s) who is involved in related workflow task(s).			
6.18	Must support notifying user(s) about item(s) which are overdue according to defined limits.			
6.19	Must support Notifications that include at the minimum following information: - Task name - Task description - Planned deadline.			
6.20	Must support Notifications to be displayed on dedicated screen once user logs into the system, with support for email notification based on user's settings (if user chooses to receive notifications by email).			
6.21	Must support user access rights management with support for: - definition of access restrictions (types) - management of individual and group user profiles (user roles) access rights - control access to data and system activities based on these profiles - control access to individual document level - restrict access to the single document stored in case(s)			
6.22	Must support that owner be able to assign workflow tasks to various users (audit team members), with support that these assignments are modifiable at any time during workflow execution.			
6.23	Must support that owner has access to latest updated overview of all the workflow tasks statuses, with support that owner can manage team members' assignments.			
7	Review Management			
7.1	Must support two-level review of folders and documents that supports two stages: - review level one (obligatory for all documents) - review level two or supervision (performed only after level one review).			

7.2	Must support document review to be performed by setting status of a document to predefined values.			
7.3	Must support folder review to be performed by setting status of a document to predefined values.			
7.4	Must support that when folder review is performed by setting status to predefined value(s) that they are all automatically inherited by successor sub-hierarchy folder(s) and document(s).			
7.5	Must support that child (successor sub-hierarchy) document cannot have lower required level review than parent folder (system should handle this situation automatically).			
8	System logging			
8.1	Must support automatic logging of all activities that correspond to all defined functionalities.			
8.2	Must support system log with minimum following information: - User who performed activity in the system - Time of activity performed - Type of activity or activity ID (or any way to identify activity that was done) - Old value - New value.			
8.3	Must support read only access to system log - no one must be allowed to modify logged data.			
8.4	Must support search of system log.			
9	User Management			
9.1	Must support management of user accounts with support to store and maintain a list of user accounts in a repository.			
9.2	Must support add new user, remove existing user, change / update existing user data.			

9.3	Must support creating report(s) on user activity covering all details including current open tasks and history (log) of all activities.			
9.4	Must support user access rights management with support for: <ul style="list-style-type: none"> - definition of access restrictions (types) - management of individual and group user profiles (user roles) access rights - control of access to data and system activities based on these profiles. 			
9.5	Must support secure access and user validation (e.g. via password or by other means) with support that user may change their password according to a set of defined password rules.			
10	Technical			
10.1	Must be implemented as a client-server multitier application with at least presentation, business-logic and persistence (data management) physically separated layers, and client side implemented as stand-alone application (thick client) or web application supporting latest versions of modern web browsers.			
10.2	Must be designed as 24x7 accessible information system with high availability (>99%).			
10.3	Must support maximum flexibility and adjustability to legislative amendments and changes in Beneficiary business processes.			
10.4	Must be parameterized and highly configurable without having to directly change the source code.			
10.5	Must support platform independency supporting both Windows and Linux operating systems.			
10.6	Must support RDBMS independency supporting minimum Oracle, Microsoft SQL and MySQL.			



10.7	Must support encryption mechanism for documents stored enabling only authorized access to the corresponding document content and keeping it encrypted for all the others (e.g. sys admins).			
10.8	Must support user interface in Serbian (Latin and Cyrillic) or English language with support to add new languages without additional direct interventions in source code. <i>Local language (Cyrillic and Latin) has to be supported in applications in government sector in Serbia</i>			
10.9	Must support use of single module for administration of all modules including user administration.			
10.10	Must support single-sign for all access to all modules / functionalities.			
10.11	Must support standard availability, security, usability, performance, data archiving and backup requirements.			
10.12	User interface must support: - browsing of data/information that match predefined hierarchy of folders (e.g. in tree folder based structure) - easy to use navigation with menus enabled based on user access rights - data entry forms that minimize user errors through data validation - context sensitive help - online HTML help with search/contents			
10.13	Must support following authentication methods: - Form based authentication via username & password - Integrated authentication via LDAP service (i.e. MS AD).			
10.14	Must have no limitations regarding maximum number of users with respect to licences agreement.			
10.15	Must have no limitations regarding number of folders, workflows and documents.			
10.16	Must be designed to support and successfully accommodate changes in folders, workflows and documents without direct system source code changes.			

10.17	Backup and recovery of data must be supported using standard media such as magnetic tapes, CD/DVD, etc.		
11	Hardware		
11.1	Enterprise Server, qty 2, 19" Rack, max 2U (2HE), min total of 16 physical cores with min total of 32 threads on min 1 or max 2 64-bit min 2GHz processors, min 128GB DDR4 ECC RAM, min hardware RAID controller with min 4MB of cache and support for min 0, 1, 5, 10, 50, and JBOD, min 10 hot swap trays for hot-plug min 2.5" drives, min 64GB boot internal storage device (for Type 1 Hypervisor installation), min 4 hot swap enterprise level hot-plug min 2.5" min 500GB NVMe or U.2 or SAS SSD (pre-configured in RAID 5 for virtual machine installation), min 6 hot swap enterprise level hot-plug min 2.5" min 1.8TB SAS 12Gbps min 10K rpm HDDs (pre-configured in RAID 5 for data storage), min 2 (two) 10GbE ports, min 2 1GbE ports, min DVD-RW, min 2 min 750W redundant / hot plug power supplies, must support out-of-band and in-band management with support for web-based administration, must support EU RoHS environmental standard, min supported server OS Microsoft Windows Server or equivalent and min one enterprise Linux distribution, must be delivered as a dual server cluster with Type 1 Hypervisor for virtual machines creation, provisioning and management installed, must be compatible with existing rack closet (Server Rack Dell 4220) and Rack UPS item 11.2 Notice: The Contractor will be solely responsible that his offer contains all necessary perpetual software licenses (on virtual machine management, server, client, database and application level) delivered and installed.		



11.2	Rack UPS, qty 1, capacity min 3000VA, rack mountable with max 2U (2HE), input voltage 230V, input frequency 50Hz, surge protection support, output voltage 230V, output frequency 50Hz, minimum 4 output connections, backup time at half load min 10 min, must support remote TCP/IP network monitoring, must support EU RoHS environmental standard, must be compatible with rack servers item 11.1, must be compatible with existing rack closet (Server Rack Dell 4220)			
12	Training			
12.1	<p>Training must be provided min according to following:</p> <ul style="list-style-type: none"> - Administration Training, duration min 5 days, for min 2 designated administrators <ul style="list-style-type: none"> a. Training must provide effective maintenance strategies and resources for administrators b. Training must provide in-depth, hands-on practical experience directly mapping day-to-day administration activities c. Training must include basic and advanced administration tasks, database maintenance, backup / archiving, recovery procedures and troubleshooting - Workflow Administration Training, duration min 5 days, for min 2 designated workflow administrators <ul style="list-style-type: none"> a. Training must successfully introduce workflow administrator to the creation, modification, implementation and administration of the workflow(s) b. Training must provide in-depth, hands-on experience crafting workflow solutions that meet business requirements - User Training, duration min 5 days, for min 15 users <ul style="list-style-type: none"> a. Training must cover all user functions needed for daily use covering most of the user functions 			

12.2	Tenderer must provide training as on-site training (delivered at Beneficiary location), after hardware and software delivery, installation, setup and customization is completed. The language of the training must be Serbian and the training documents must be in Serbian language.			
12.3	Details of proposed training methodology and courses with listed trainers qualifications must be presented in the offer.			
12.4	Tenderer will be solely responsible for provision of all training related services and resources.			
13	Warranty			
13.1	Must provide 8 hours per day / 5 days per week phone, email and fax support with dedicated support person, with support being provided in Serbian language.			
13.2	During warranty of one year the Tenderers must provide reliable maintenance and the rapid supply of equipment spare parts as well as software maintenance support.			
13.3	Offer must include the description including: <ol style="list-style-type: none"> 1. Service organisation contact data including name, address, telephone, fax, and e-mail 2. Guaranteed maximum response of same working day arrival and problem resolution, if the client's request (by phone, fax or e-mail) originated before 12h, and next working day arrival and problem resolution, if the client's request originated after 12h 3. Guarantee that all hardware items in warranty can be repaired or alternatively replaced within a maximum of 72 hours 4. Guarantee that genuine spare parts will be available for a period of minimum 3 years from the date of final acceptance of the equipment. 			

