

Annex I to Corrigendum No.1

ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER - Corrigendum No.1

Contract title: Support to the fight against money laundering: Procurement of ICT equipment and software

p 1 /...

Publication reference: EUROPEAID/138568/DH/SUP/BA

Column 1-2 should be completed by the Contracting Authority

Column 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.

LOT 1: IT AND SUPPORTING EQUIPMENT

Specifications below for Lot 1 represent minimum requirements and the tenderer shall offer required specifications or better specifications.

The warranty period for all items shall be 12 months.

Commercial warranty shall be as granted by the manufacturer or for the period specified under the corresponding item.

1. Item number	2. Specification Required	3. Specification Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1.1 QTY: 2 pcs	Host servers for AMLS system Type of device Server 2U rack CPU min. installed 2 x 6 core processors, Passmark CPU Mark for each processor 9950 or higher RAM Min. 64GB (4x16GB) DDR4 Memory 2133- 2400 MHz (24 slots - 12 per processor) Disk bays 8 SFF Drive Cage Bay Hard disks Min 2 x 300GB 12G SAS 15K rpm SFF (2.5-inch) Hard Drive RAID controller Min.2GB flash based cache module 12Gb 2- ports Int SAS Controller			

	DVD	RAID 1 & 10 SATA DVD-RW			
	Network interface	LAN: 4 × 1 GbE (std.) FC: 8GB FC DUAL- PORT HBA			
	Systems management	Health monitoring and System Diagnostic (processor, monitors fans, temperature sensors, power supply sensors)			
	Ports	2 x VGA (front, rear), 1 x remote management, 4 x RJ45, min 4 X USB (2 front, 2 rear):			
	Hot-swap components Power supplies, fan modules and hard disk drives	Hot-swap components Power supplies, fan modules and hard disk drives			
	Power supply	Adequate Power Supply - 2 redundant			
	Form factor/height 2U Rack	Form factor/height 2U Rack with rackmounting kit			
	Warranty	12 months			

	Commercial warranty 3 years Operating systems supported Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware vSphere, Oracle Unbreakable Linux and VM certified			
1.2 QTY: 2 pcs	Host servers for Application to external users Type of device Server 2U rack CPU min. installed 2 x 6 core processors, Passmark CPU Mark for each processor 9950 or higher RAM Min. 64GB (4x16GB) DDR4 Memory 2133-2400 MHz (24 slots - 12 per processor) Disk bays 8 SFF Drive Cage Bay Hard disks Min 4 x 300GB 12G SAS 15K rpm SFF (2.5-inch) Hard Drive RAID controller Min. 2GB flash based cache module 12Gb 2-			

		ports Int SAS Controller RAID 1 & 10			
	DVD	SATA DVD-RW			
	Network interface	LAN: 4 × 1 GbE (std.) FC: 8GB FC DUAL- PORT HBA			
	Systems management	Health monitoring and System Diagnostic (processor, monitors fans, temperature sensors, power supply sensors)			
	Ports	2 x VGA (front, rear), 1 x remote management, 4 x RJ45, min 4 X USB (2 front, 2 rear):			
	Hot-swap components Power supplies, fan modules and hard disk drives	Hot-swap components Power supplies, fan modules and hard disk drives			
	Power supply	Adequate Power Supply - 2 redundant			
	Form factor/height 2U Rack	Form factor/height 2U Rack with rackmounting kit			

	<p>Warranty 12 months</p> <p>Commercial Warranty 3 years</p> <p>Operating systems supported Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware vSphere, Oracle Unbreakable Linux and VM certified</p>			
<p>1.3</p> <p>QTY: 2 pcs</p>	<p>Switch type 1</p> <p>Type: Managed and stackable rackmount switch</p> <p>Ports: 48x 10/100/1000 10Base-T/100Base-TX/1000Base-T, 4x SFP ports</p> <p>Routing Protocol: Static IP routing</p> <p>Stacking modul included: Yes</p> <p>Characteristics: Stacking, layer 2 switching, VLAN support, IPv6 support, Spanning Tree Protocol (STP) support, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, Access Control List (ACL) support, Quality of Service (QoS), LACP support</p> <p>Switching bandwidth: Min 176 Gbps</p> <p>MAC Addresses: Min 16K</p> <p>RAM: Min 256 MB</p> <p>Flash Memory: Min 128 MB</p> <p>Warranty: 12 months</p>			

<p>1.4</p> <p>QTY: 2 pcs</p>	<p>Switch type 2</p> <p>Type: Rack-mountable</p> <p>Ports: Min 24 x 10/100/1000 + 2 x combo Gigabit SFP + 2 x SFP</p> <p>Routing Protocol: Static IP routing</p> <p>Characteristics: Stacking (option), Flow control, layer 2 switching, VLAN support, IPv6 support, Spanning Tree Protocol (STP) support, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, Access Control List (ACL) support, Quality of Service (QoS)</p> <p>Switching capacity: min 72 Gbps</p> <p>MAC Addresses: min 16K</p> <p>RAM: Min 256 MB</p> <p>Flash Memory: Min 32 MB</p> <p>Warranty: 12 months</p>			
<p>1.5</p> <p>QTY: 1 pcs</p>	<p>Router</p> <p>Enclosure Type: Rack mountable - modular - 1U</p> <p>Connectivity Technology: Wired</p> <p>Data Link Protocol: Ethernet, Fast Ethernet, Gigabit Ethernet</p> <p>Network / Transport Protocol: IPSec, L2TPv3</p> <p>Routing Protocol: OSPF, IS-IS, BGP, DVMRP, PIM-SM, static IP routing, IGMPv3, GRE, PIM-SSM, static IPv4 routing, static IPv6 routing, policy-based routing (PBR)</p>			

	<p>Security: Advanced Security license</p> <p>Remote Management Protocol: SNMP, RMON</p> <p>Features: Firewall protection, VPN support, MPLS support, VLAN support, Syslog support, IPv6 support, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Quality of Service (QoS)</p> <p>Compliant Standards: IEEE 802.1Q, IEEE 802.3ah, IEEE 802.1ah, IEEE 802.1ag</p> <p>RAM: Min. 512 MB</p> <p>Flash Memory: Min. 256 MB</p> <p>Interfaces: Min. 6x 10/100/1000 RJ-45 ports, 1x Serial console port, 1x Serial auxiliary port, 1x USB Console Port, 1x External USB 2.0 Flash Memory Slots</p> <p>Warranty: 12 months</p>			
<p>1.6</p> <p>QTY: 65 pcs</p>	<p>Desktop computer type 1</p> <p>Type of device: Personal computer</p> <p>Operating System: Preinstalled operating system compatible with MS Active directory (64-bit)</p> <p>CPU: CPU Passmark minimum 5328</p> <p>RAM: min. 8GB 2133MHz DDR4 (2 DIMM)</p>			

	<p>Memory support: min. 16GB.</p> <p>Expansion Slots: min. 1 x PCI Express 16x, 2 x PCI Express x1</p> <p>Hard disk: min. 500GB SATA (7200 rpm)</p> <p>Optical drive: DVD-RW</p> <p>Ports: 4xUSB 2.0 (2 front), 2xUSB 3.0, 1 x serial, 1 RJ- 45, VGA, DP, 3.5mm headphone/microphone</p> <p>Graphic card: Integrated graphics</p> <p>Ethernet: Ethernet 10/100/1000</p> <p>Keyboard: USB localized BiH</p> <p>Mouse: USB optical</p> <p>Sound system: HD Audio</p> <p>Chassis: Tower or Mini tower, minimum 240 W Power supply, Physical security slot prepared for mechanical lock, Chassis intrusion switch, Energy Star</p> <p>Monitor: min. 21.5" 16:9, LED, FHD 1920x1080 Display</p> <p>Warranty: 12 months</p> <p>Commercial warranty: 3 years</p>			
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1.7. QTY: 14 pcs	Desktop computer type 2 Processor: x64 processor with 4 core, PassMark: CPU Mark 5700 (minimum) Memory: 8 GB 1333 MHz DDR3 SDRAM (minimum) Hard Disc: 500 GB SATA (minimum) Chassis: Mini Tower, slots 2 x 5.25", 2 x 3.5" or AiO Expansions: (4)USB 2.0, (2) USB 3.0, (1) full-height PCIe x 1, (1) full-height PCIe x 16 (minimum) Optical drive: SATA Super Multi DVD writer/reader Network: Ethernet10/100/1000Base T Keyboard: USB, localized BiH language keyboard required Mouse: optic, scroll, USB Monitor: 22" minimum, widescreen, LED OS: Preinstalled Operating System (standalone), install medium, user documentation. Warranty: 12 months			
1.8 QTY: 1 pcs	Work station with installed criminal intelligence software with licence Processor: x64 processor with 4 core, PassMark: CPU Mark 5700 (minimum)			

	<p>Memory: 8 GB 1333 MHz DDR3 SDRAM (minimum)</p> <p>Hard Disc: 500 GB SATA (minimum)</p> <p>Chassis: Mini Tower, slots 2 x 5.25", 2 x 3.5" or AiO</p> <p>Expansions: (4)USB 2.0, (2) USB 3.0, (1) full-height PCIe x 1, (1) full-height PCIe x 16 (minimum)</p> <p>Optical drive: SATA Super Multi DVD writer/reader</p> <p>Network: Ethernet10/100/1000Base T</p> <p>Keyboard: USB, localized BiH language keyboard required</p> <p>Mouse: optic, scroll, USB</p> <p>Monitor: 22" minimum, widescreen, LED</p> <p>OS: Preinstalled Operating System (standalone), install medium, user documentation.</p> <p>SW: Installed criminal intelligence software with licence:</p> <ul style="list-style-type: none"> • Track, analyze, and investigate criminal organizations • Record data and identify patterns, connections and trends • Search subjects by name, identification, and physical description • Easily manage database retention of entities and files • Analysis of a wide range of data types with a flexible data modelling and visualization environment <p>Warranty: 12 months</p>			
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<p>1.9 QTY: 5 pcs</p>	<p>Work stations with installed Optical character recognition Software (OCR)</p> <p>Processor: x64 processor with 4 core, PassMark: CPU Mark 5700 (minimum)</p> <p>Memory: 8 GB 1333 MHz DDR3 SDRAM (minimum)</p> <p>Hard Disc: 500 GB SATA (minimum)</p> <p>Chassis: Mini Tower, slots 2 x 5.25", 2 x 3.5" or AiO</p> <p>Expansions: (4)USB 2.0, (2) USB 3.0, (1) full-height PCIe x 1, (1) full-height PCIe x 16 (minimum)</p> <p>Optical drive: SATA Super Multi DVD writer/reader</p> <p>Network: Ethernet10/100/1000Base T</p> <p>Keyboard: USB, localized BiH language keyboard required</p> <p>Mouse: optic, scroll, USB</p> <p>Monitor: 22" minimum, widescreen, LED</p> <p>OS: Preinstalled Operating System (standalone), install medium, user documentation.</p> <p>Warranty period: 12 months</p> <p>Optical character recognition Software:</p> <ul style="list-style-type: none"> - Languages Recognized : English and BiH official languages, Cyrillic and Latin - 3-D Correction - Converts Digital Documents 			
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	<ul style="list-style-type: none"> - Converts Mobile Device Images - OCRs Scanned Documents - Multi-Page Document Recognition - Integrates with MS Office <p>Applications</p> <ul style="list-style-type: none"> - PDF Password Support :yes 			
1.10 QTY: 66 pcs	Notebook type 1 Processor: x64 processor with minimum 4 core, PassMark: CPU Mark 5700 (minimum) RAM: 8 GB DDR3 (minimum) Monitor min. 17.3” HDD (Hard Disk Drive) 1 TB (minimum) I/O Ports 2 x USB 2.0, 2 x USB 3.0 (minimum) Optical driver DVD±RW DL Card Reader SD card reader Mouse optic, scroll, USB OS(Operating System): Preinstalled Operating System (standalone) Note Including cases/bags for laptop Warranty: 12 months			

1.11 QTY: 1 pcs	Multifunctional printer Functions: Printing, Copying, Scanning, Fax Technology: Laser b/w Paper size: A4, A5, ISO B5, ISO C5, ISO C5/6, ISO C6, ISO DL Print speed: 20 ipm min Printing quality : 1200 x 1200 dpi min Two-sided printing: yes Scanner type: Flatbed, ADF, two side scanning Scanner resolution: 19200 dpi min Copy speed : 36 cpm min Copy resolution : 1200 x 600 dpi Fax speed: 33.6 kbps Fax resolution : 300 x 300 dpi min Memory : 1 GB min Connection: Hi-Speed USB 2.0 port 10/100 Base T Ethernet			
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	<p>RJ11 phone port, wireless</p> <p>OS compatibility: MS Windows 7 32bit, 64bit; MS Windows 8.1 32bit, 64bit</p> <p>Technical Support: response 24h on RS territory</p> <p>Warranty: 12 months</p> <p>Other: USB cable</p> <p>+ Black LaserJet Toner x 20 pieces</p>			
<p>1.12</p> <p>QTY:</p> <p>11 pcs</p>	<p>Laser Printer</p> <p>Mono or Colour Printer: Colour</p> <p>Technology: Laser printer</p> <p>Speed Colour: min 31ppm Colour Print</p> <p>Speed Monochrome: Up to 38ppm Mono Print</p> <p>First Page: max 12 Seconds First page</p> <p>Double Sided Printing: Automatic Double Sided Printing</p> <p>Maximum Paper Size: A4</p> <p>Printer Resolution: min 600 x 600 dpi Print</p> <p>Interface Type(s): USB & Network</p> <p>Processor: min 500MHz</p> <p>Memory: min 1GB RAM</p> <p>Paper Handling Input 1: min 250 Sheet Input Tray</p>			

	<p>Paper Handling Input 2: min 100 Sheet Multipurpose Tray</p> <p>Paper Handling Standard Output: min 150 Sheets</p> <p>Sheet Weight: 60 to 210g/Sq m</p> <p>Emulations: min PCL5/6 & Postscript 3</p> <p>Additional original full toner set Black, Cyan, Magenta, Yellow (min 7.000 pages/cartridge) (10 pcs for each printer)</p>			
<p>1.13</p> <p>QTY:</p> <p>8 pcs</p>	<p>Portable printer</p> <p>Paper type A4</p> <p>Manual duplex printing (driver support)</p> <p>Paper capacity: 20 pages min.</p>			
<p>1.14</p> <p>QTY:</p> <p>1 pcs</p>	<p>Work station with installed financial investigation software with licence</p> <p>Processor: x64 processor with 4 core, PassMark: CPU Mark 5700 (minimum)</p> <p>Memory: 8 GB 1333 MHz DDR3 SDRAM (minimum)</p> <p>Hard Disc: 500 GB SATA (minimum)</p> <p>Chassis: Mini Tower, slots 2 x 5.25", 2 x 3.5" or AiO</p> <p>Expansions: (4)USB 2.0, (2) USB 3.0, (1) full-height PCIe x 1, (1) full-height PCIe x 16 (minimum)</p> <p>Optical drive: SATA Super Multi DVD writer/reader</p>			

	<p>Network: Ethernet10/100/1000Base T</p> <p>Keyboard: USB, localized BiH language keyboard required</p> <p>Mouse: optic, scroll, USB</p> <p>Monitor: 22" minimum, widescreen, LED</p> <p>OS: Preinstalled Operating System (standalone), install medium, user documentation.</p> <p>SW: Installed financial investigation software with licence</p> <ul style="list-style-type: none"> - Identify connections, relationships, and trends via link analysis - Import data from structured data-sets - Dynamic Database Filtering - Social Network Analysis - Temporal Analysis - Use Pictures for Entity Identification - Explore Group Dynamics within a chart <p>Chart navigation including panning and zooming</p> <p>Warranty period: 12 months</p>			
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LOT 2: APPLICATION SOFTWARE

Required solution description

Description of the project

Financial Intelligence Department (hereinafter: FID) of the State Investigation and Protection Agency (hereinafter: SIPA) is the central government's financial intelligence unit in Bosnia and Herzegovina (BH), which works in accordance with binding international standards in the fight against money laundering and financing of terrorist activities.

The main task of the FID is to receive, collect, record and analyze information, data and documents, as well as investigate and forward the results of the analysis and / or investigations to relevant prosecutors and other competent authorities, both in BH and abroad, regarding crimes of money laundering and / or financing of terrorist activities. Transactions that have to be reported to the FID on the basis of the law are suspicious transactions, clients or persons, cash transactions and related cash transactions. The participants in the system are commercial banks, which account for about 87% of the financial sector, then insurance companies, investment funds, micro-credit organizations. Total there are 24 types of obliged institutions for reporting transactions.

All reported transactions of obliged persons are recorded and processed in AMLS database, which is the primary database of FID that contains all open and received subjects, as well as requirements for the verification towards database. AMLS software and databases is a critical system and highly sensitive application of huge importance for the prevention of money laundering and / or financing of terrorist activities.

The subject of the project is to upgrade of AMLS system with the module for data exchange with other institutions, upgrading of existing application for external users, new module for application for external user for data exchange and implementation of analytical software for analysis and reporting from AMLS system.

The aim of this document is to specify all the necessary deliverables, which shall include upgrades of the AMLS system, the necessary software and hardware technologies, and support services until final acceptance certificate is issued.

Project overview:

1. AMLS database system and application upgrade with implementation of ESB for data exchange with other institutions (web services to agencies and institutions). The module shall enable the exchange of information between institutions relevant to the project, courts and police organizations of BiH, institutions and agencies, that store and maintain data relevant to the AMLS. It is necessary to provide access to data from institutions and agencies, then to data from the project of data exchange of police and prosecutorial and judicial organization of BiH, data from the IDDEEA, data from tax administrations and indirect tax administration and to data from relevant agencies such as, banking agencies and other relevant institution. This implies the implementation and development of the following:

- ESB server with functionalities and features that are defined below
- Programming access to web services (WS) proxy for applications AMLS system, for those modules exchange
- Programming WS sharing with the prosecution, information exchange of files and cases pending in the prosecutor's office, data collection, Sending information upon request (for all records and systems)
- Programming WS for use data AMLS system in other police organizations, for the rights to use (for all agencies and organizations)
- Reporting to the competent institutions on statistical data from AMLS system, the Banking Agency, Ministry of Security, Court, International institutions (for all institutions)
- Redesign and reorganization of existing databases in accordance with the changes that are necessary for a better way of collecting and storing data.
- Download data from an external application system
- Changes to existing application modules

Upgrade shall also include customization due to organizational changes in the FID and interface with the I2 bridge that shall enable data access from the database AMLS system. This implies development software interface and the configuration file with the translation of data from AMLS in I2 for users of I2 Analyst's Notebook Applications. It is also necessary to upgrade the existing Oracle database in accordance with the technical specifications.

2. Upgrade of application of external users and implementation of authentication mechanism (authentication server) for proper payers of the Law on prevention of money laundering and financing of terrorism. This also shall include security

mechanisms to protect data and an electronic registration of transactions (for all proper payers). This implies the implementation and development of the following:

- The module for authentication, authorization and security application for data collection payers.
- Upgrading applications to access the reporting system to the security module
- Increase the safety level of existing applications
- Create a new module for the electronic exchange of data in external system in accordance with new security standards
- Other necessary corrections in the transcript AMLS, user admin module with a new security module

3. Development and implementation of the module for Application for external users with payers-intake documentation of transactions at the request of the FID through an external application, the taxpayer law on the Prevention of Money Laundering and Financing of Terrorism (for all proper payers).

- Module acceptance of electronic documentation of transactions, external applications
- Module documentation on reported transactions in AMLS system

4. Training and support - End-user training and transfer of know-how shall be provided to all system users. Additionally, the involvement of beneficiary staff in the processes of discussions and thinking through of system design, system building, functionality testing, and similar, has to be ensured. The trainings shall be organized as a “train the trainer” courses, where trainees shall be provided with basic training skills and all necessary knowledge for the training of future system users. Maintenance services for software and implementation of AMLS system upgrade and functionalities have to be 3 years.

Acronyms

AMLS	Anti-money laundering software
AMQP	Advanced Message Queuing Protocol
API	Application Programming Interfaces
CIFS	Common Internet File System
CSV	Comma Separated Values
EDI	Electronic Data Interchange
ESB	Enterprise Service Bus
FIX	Financial Information exchange protocol
FID	The Financial Intelligence Department (local name FOO)
FTP	File Transfer Protocol
FTPS	File Transfer Protocol
GUI	Graphical User Interface
HBA	Host Bus Adapter
HDD	Hard Disk Drive
HTML	HyperText Markup Language
HTTP	Hyper Text Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IDDEEA	Agency for Identification Documents, Registers and Data Exchange of BiH
IMAP	Internet Message Access Protocol
IPSec	Internet Protocol Security
JMS	Java Message Service
JSON	JavaScript Object Notation
LDAP	Lightweight Directory Access Protocol
MLLP	Minimal Lower Layer Protocol
OAGIS	Open Applications Group Integration Specification
ODS	Operational data store
POP	Post Office Protocol
RDF	Resource Description Framework
SDB	Security Data Block
SFTP	SSH File Transfer Protocol

SMS	Short Message Service
SMTP	Simple Mail Transfer Protocol
SOAP	Simple Object Access Protocol
SPNFT	The legal framework preventing money laundering and terrorist financing
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
WS	Web Services
XACML	eXtensible Access Control Markup Language
XML	Extensible Markup Language

The existing scheme AMLS system

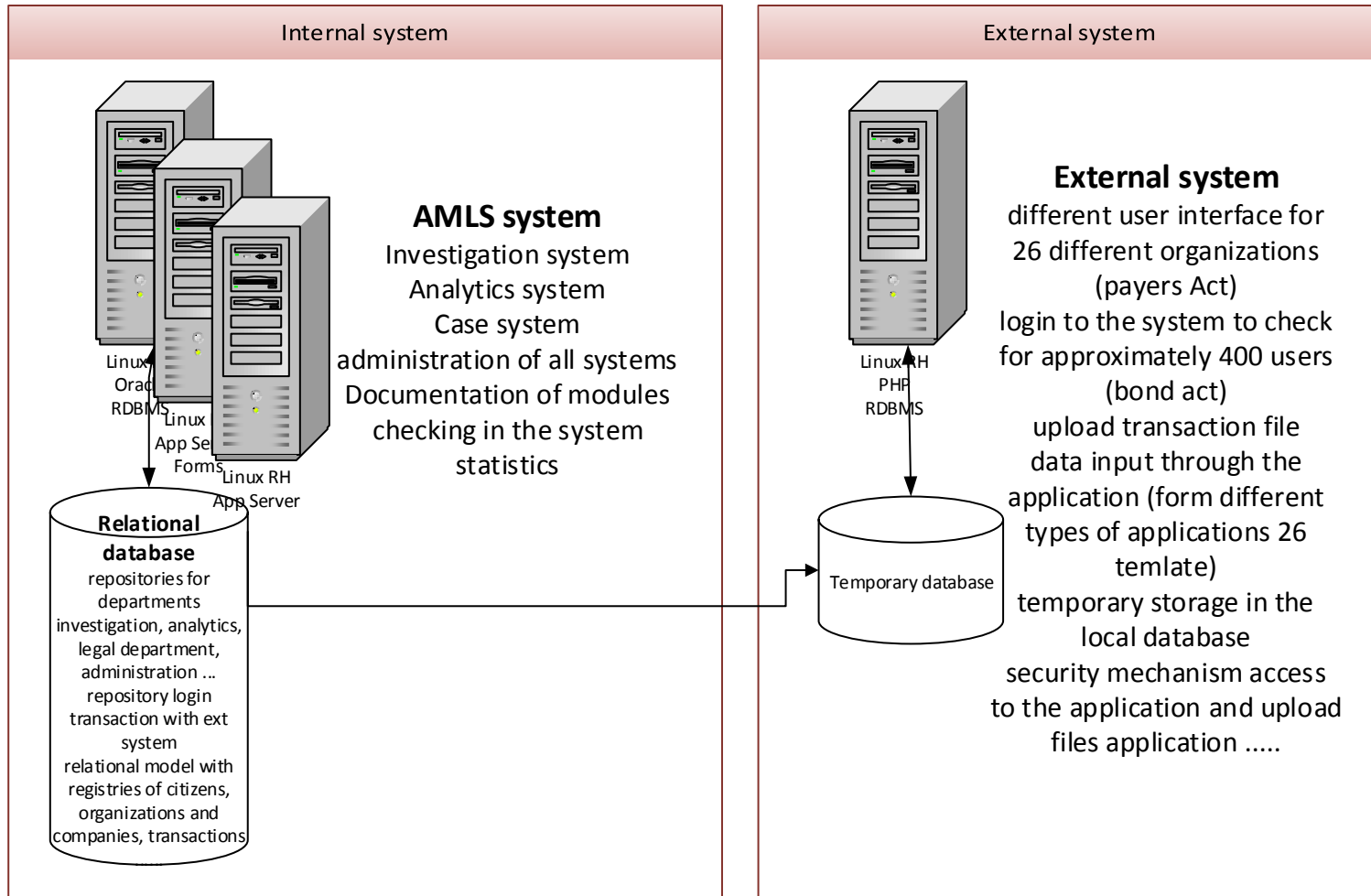
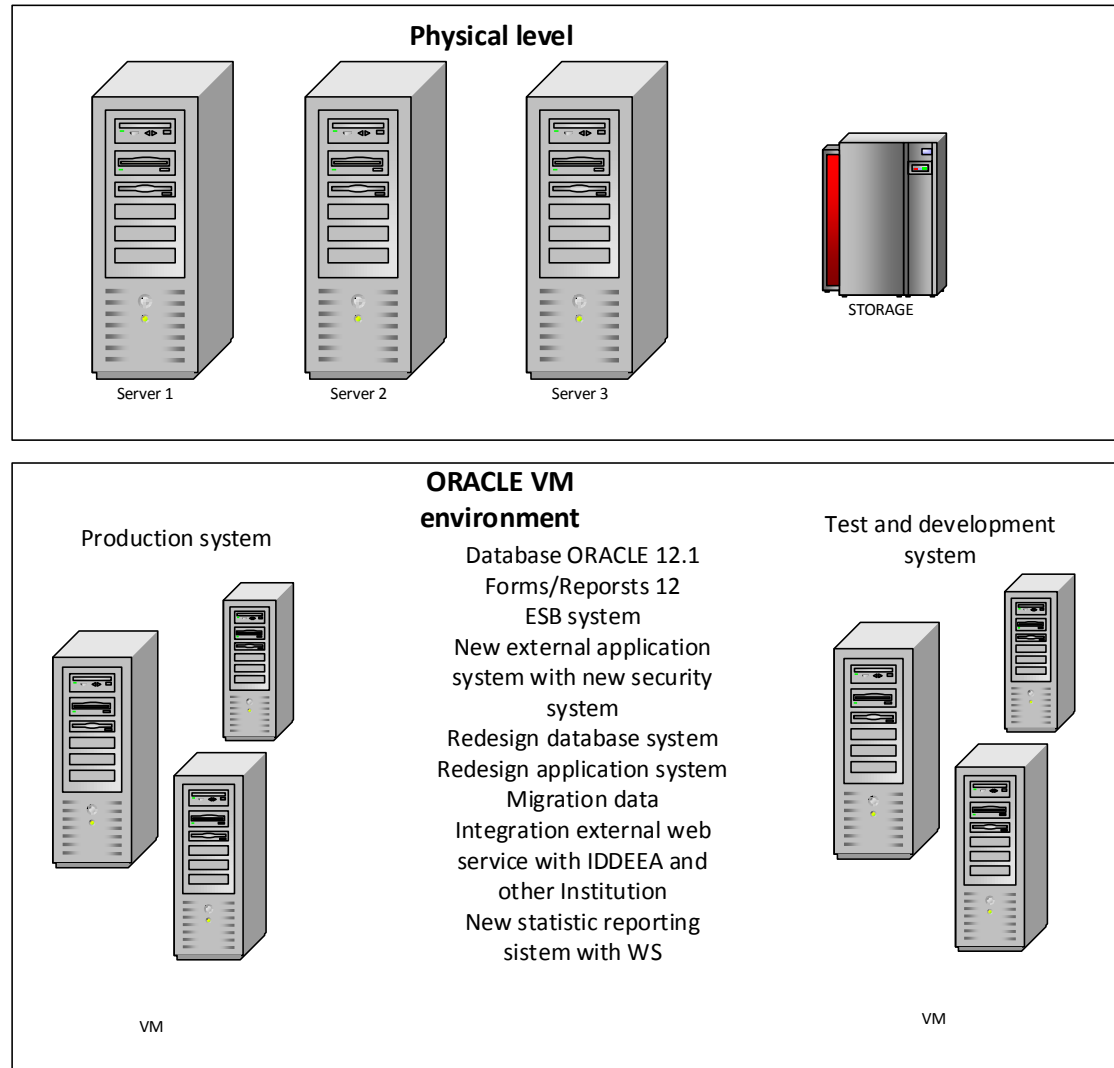
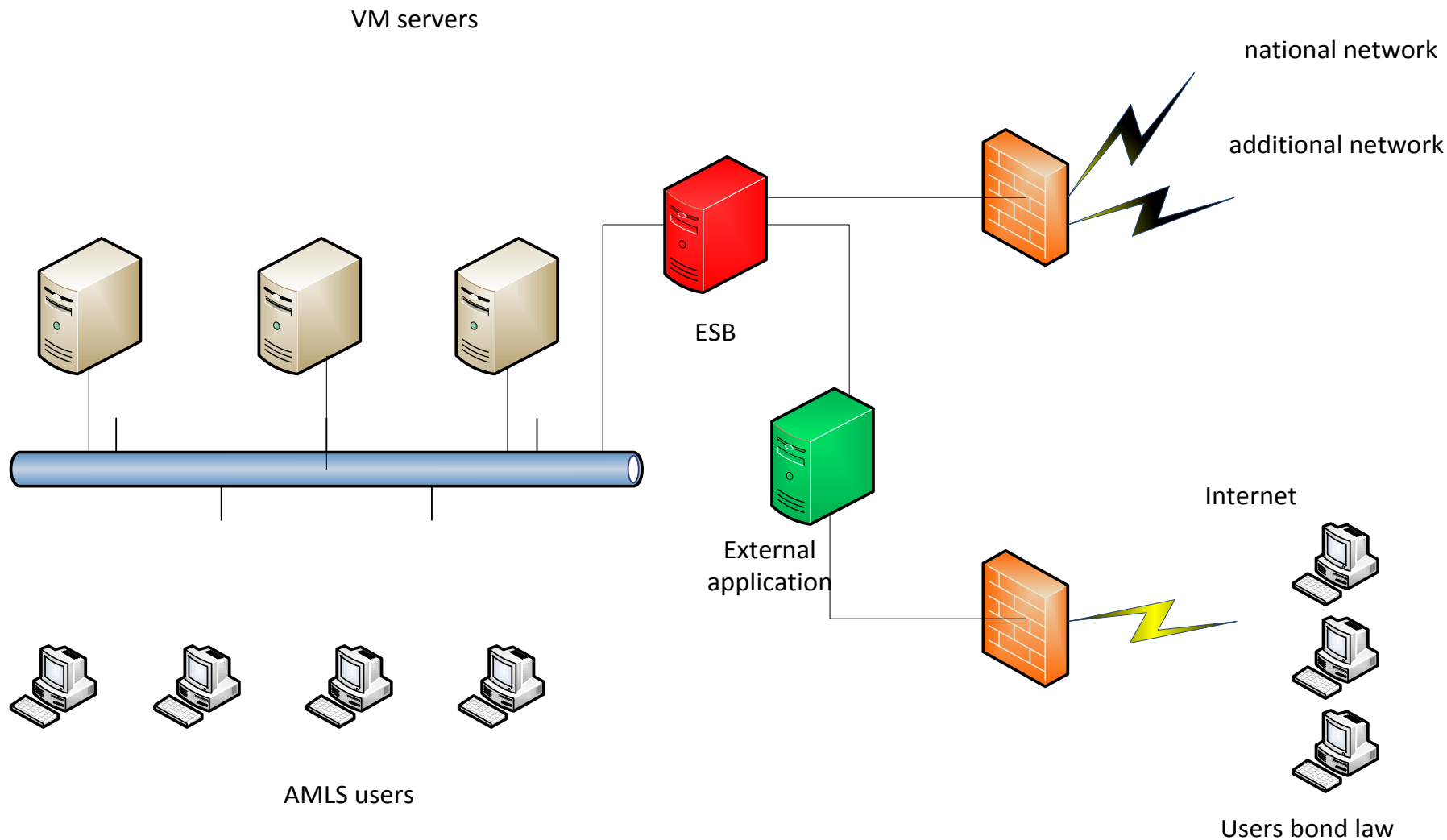


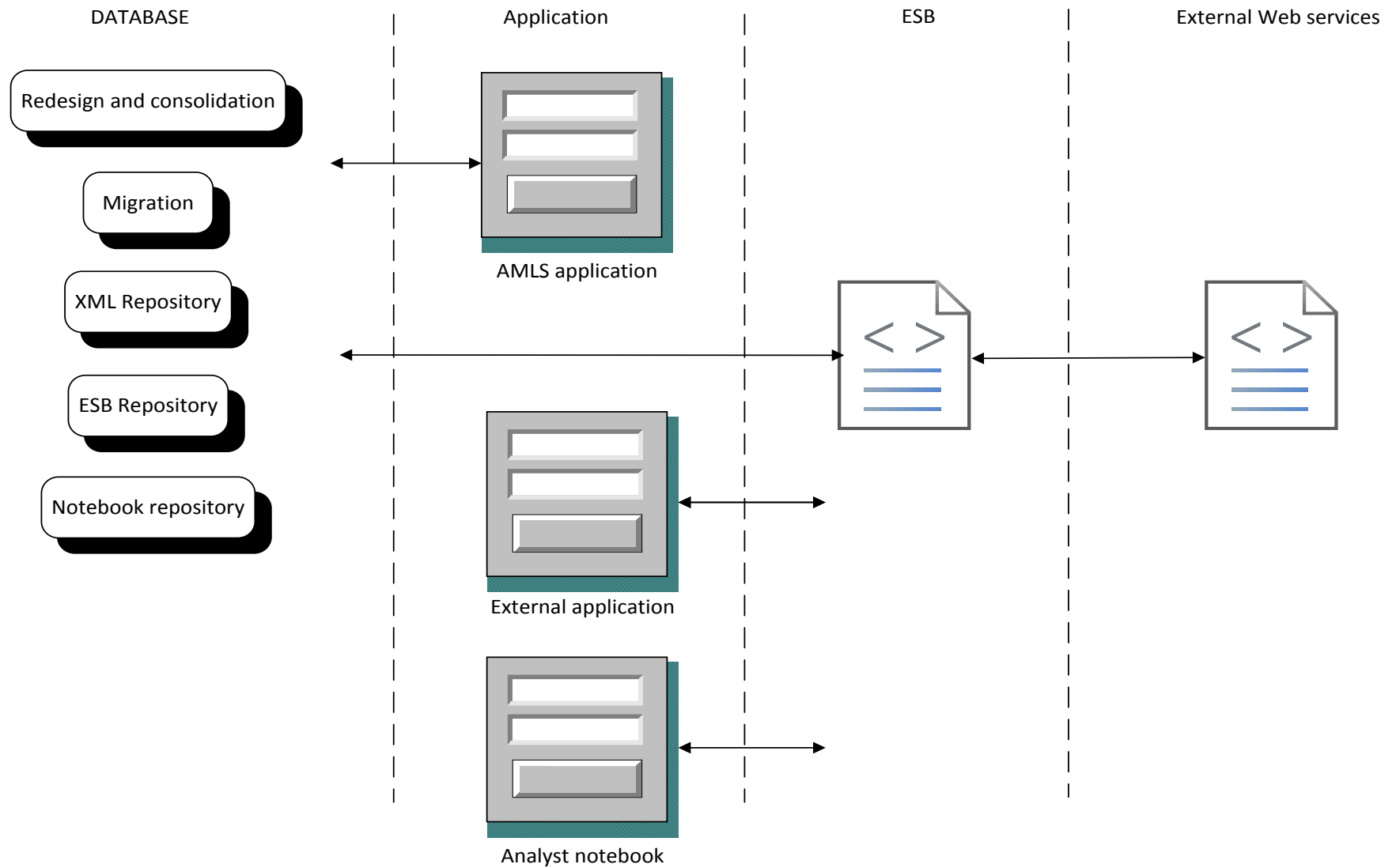
Chart of a new AMLS system



System block scheme



Data flow scheme



The appearance of the current form of the FID applications on the Internet and the intranet to report transactions

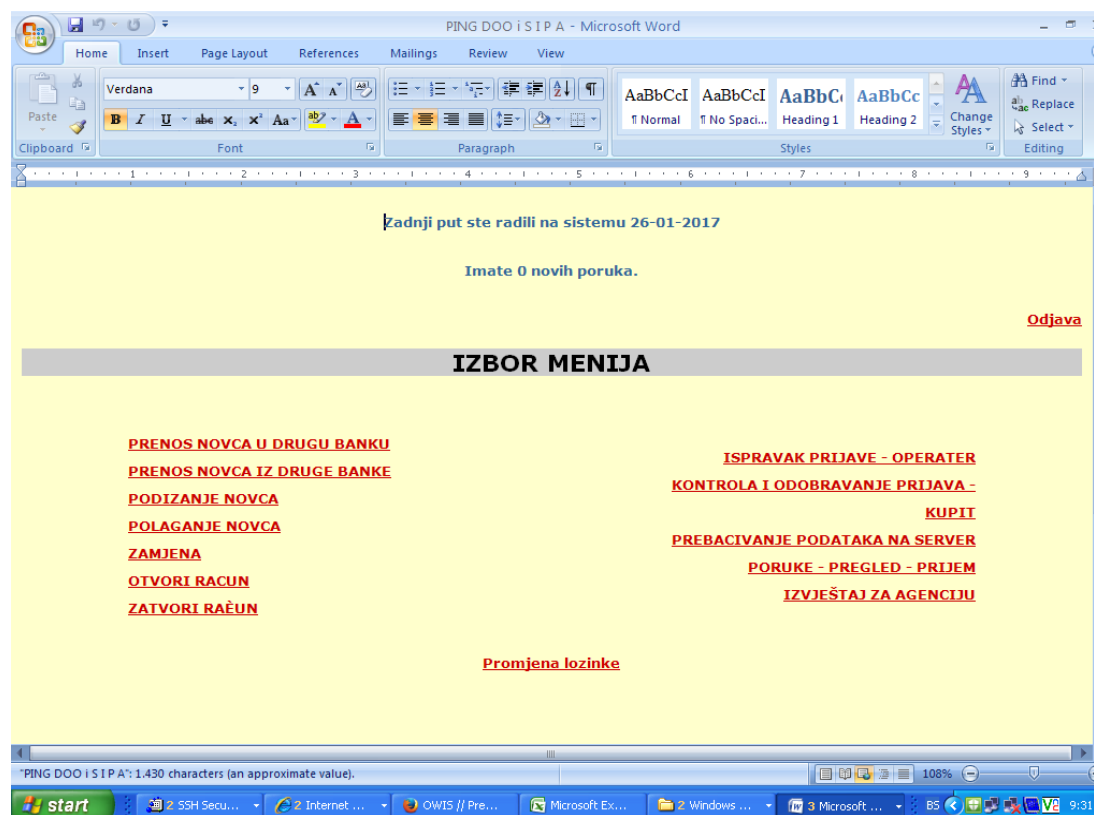
Current application of FID SIPA was developed using the Oracle platform. It shall to adapt to the new systematization, because there has been a change of systematization of jobs in the FID. This application must be adapted to the new Law on the Prevention of Money Laundering Official Gazette of Bosnia and Herzegovina 47/14, 46/16 ,Number Article No. 70th Modifications include: connect the existing form, add a new form (if necessary), access forms through a single menu.The current application is adjusted to the Law of the Money Laundering Prevention Official Gazette of Bosnia and Herzegovina 47/14 ,46/16 Article Number 54 . After modification of all forms in the database and application it is necessary to leave the possibility of making changes to accommodate future upgrades.

Current screenshot applications FID. Picture 1.

ODSJEK ZA PRAVNA P. I M. SARADNJU		UPRAVLJAČKI ODSJEK	PROVJERE
Spre...		Brisanje ekrana	Lista vrij
PRIJAVE TRANSAKCIJA OBVEZNIKA		ŠEF ODSJEKA	
DODJELA BROJA REG. DOSIJEU		INSPEKTOR ZA BEZBJEDNOST	
OBVEZNICI		IT ADMINISTRATOR	
REGISTAR IZUZEĆA		REFERENT ZA UNOS PODATAKA	
STATISTIKA		24.01.2017 08:46:02	
UVOZ PODATAKA REGISTRA RACUNA		Broj preuzetih transakcija u AMLS	
CRNE LISTE		Komentar Ukupan	
Obavljena ? XX		TRANSAKCIJU	
HISTORIJA TRANSAKCIJE			

Current screenshot applications FID. Picture 2.

Application for external users, proper payers of the Law on the prevention of money laundering and financing of terrorist activities, must be adapt in part of functionalities for transactions reporting to align with the new regulations, Official Gazette of Bosnia and Herzegovina Number 47/14, 46/16. Existing applications was created in PHP. A new application of external proper payers has to be upgraded using web services that will enable automatic transfer of transactions and reporting. Current application has separate forms for banks and statutory payers. After modification of all forms in the database and application it is necessary to leave the possibility of making changes to accommodate future upgrades.

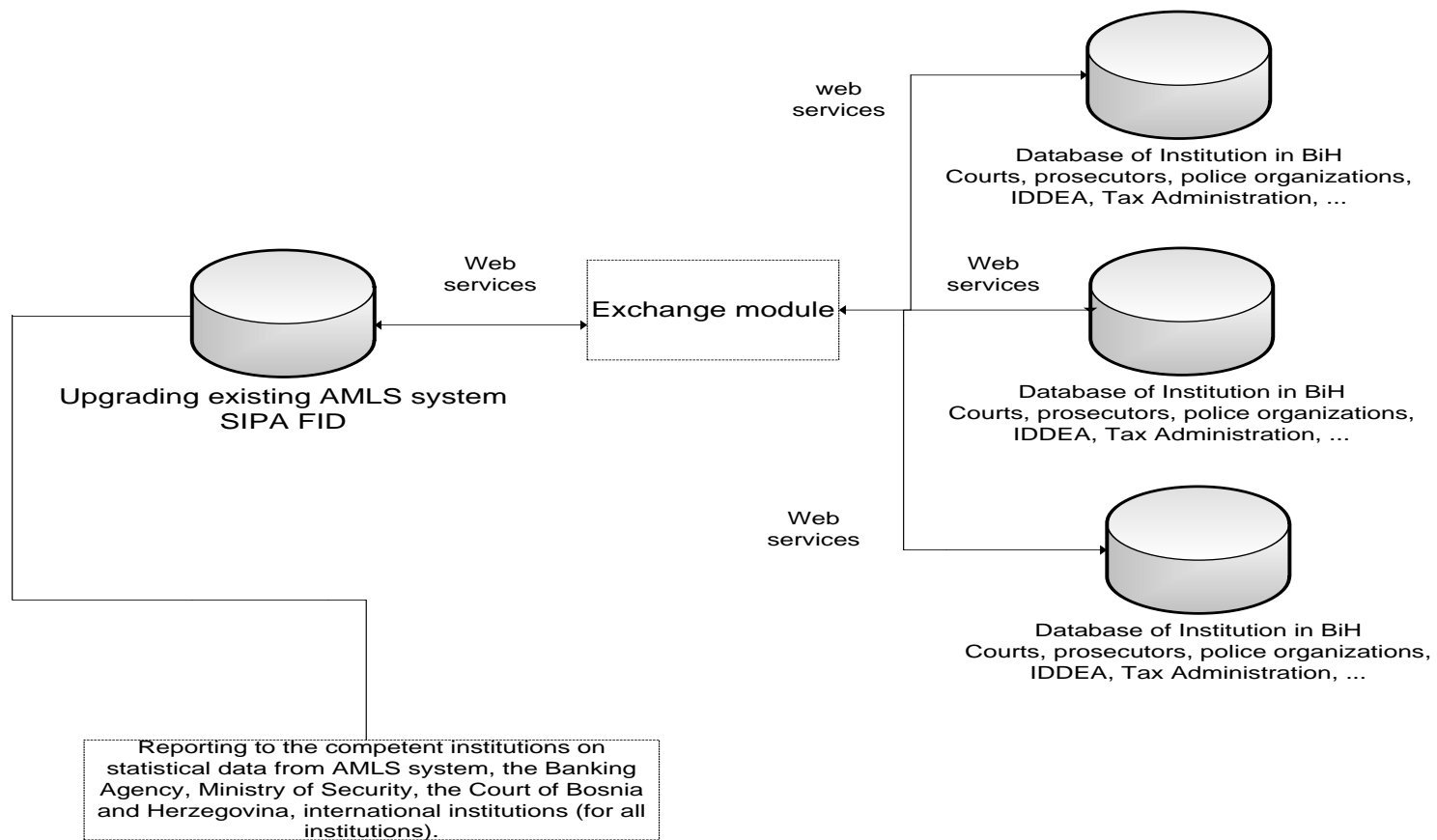


Current applications for registration of transactions for banks. Picture 3

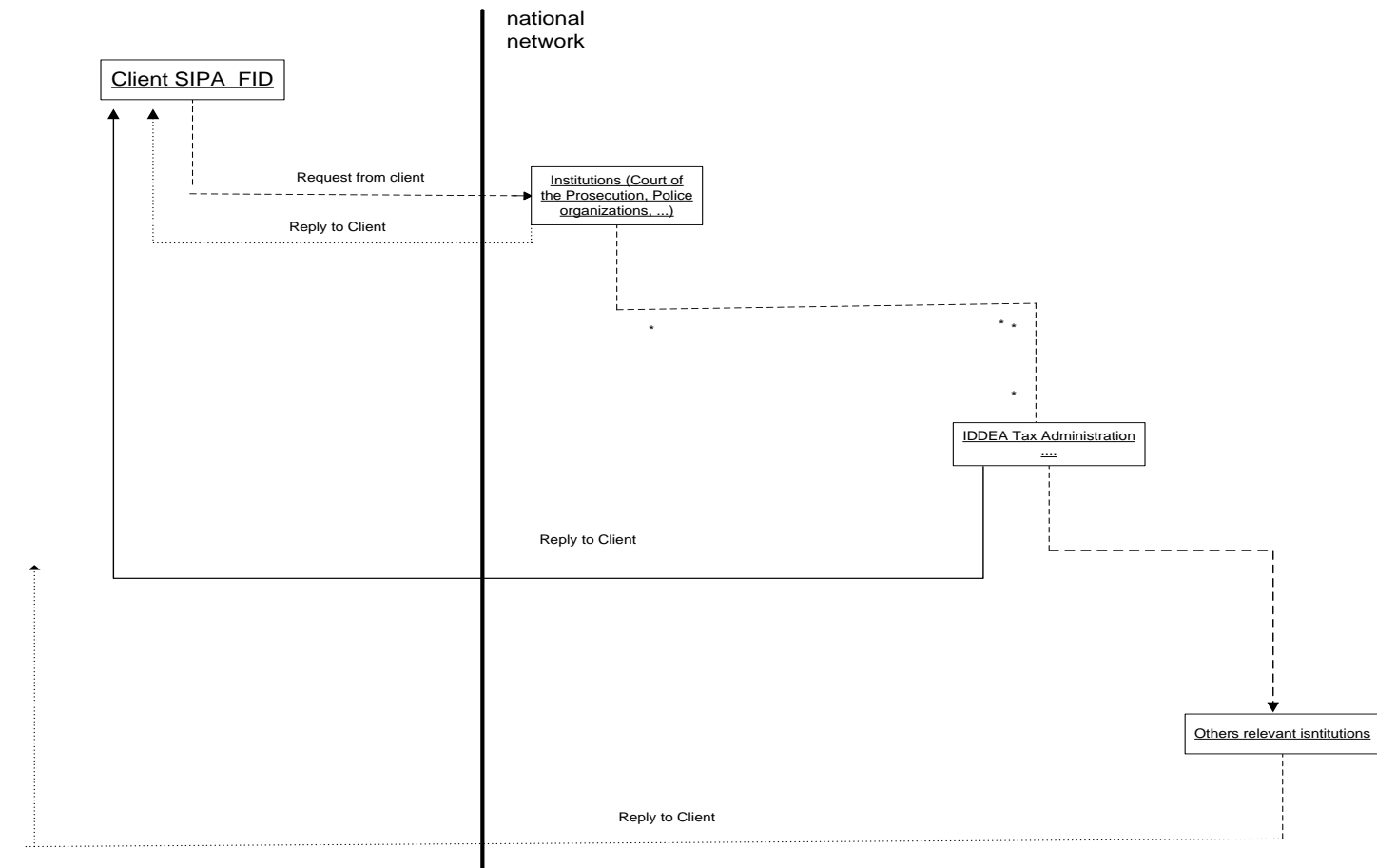


Current applications for registration of transactions for statutory payers. Picture 4.

Diagrams implementation and operation - Operating functionality (AMLS database system and application upgrade with implementation of ESB) of the project task LOT 2

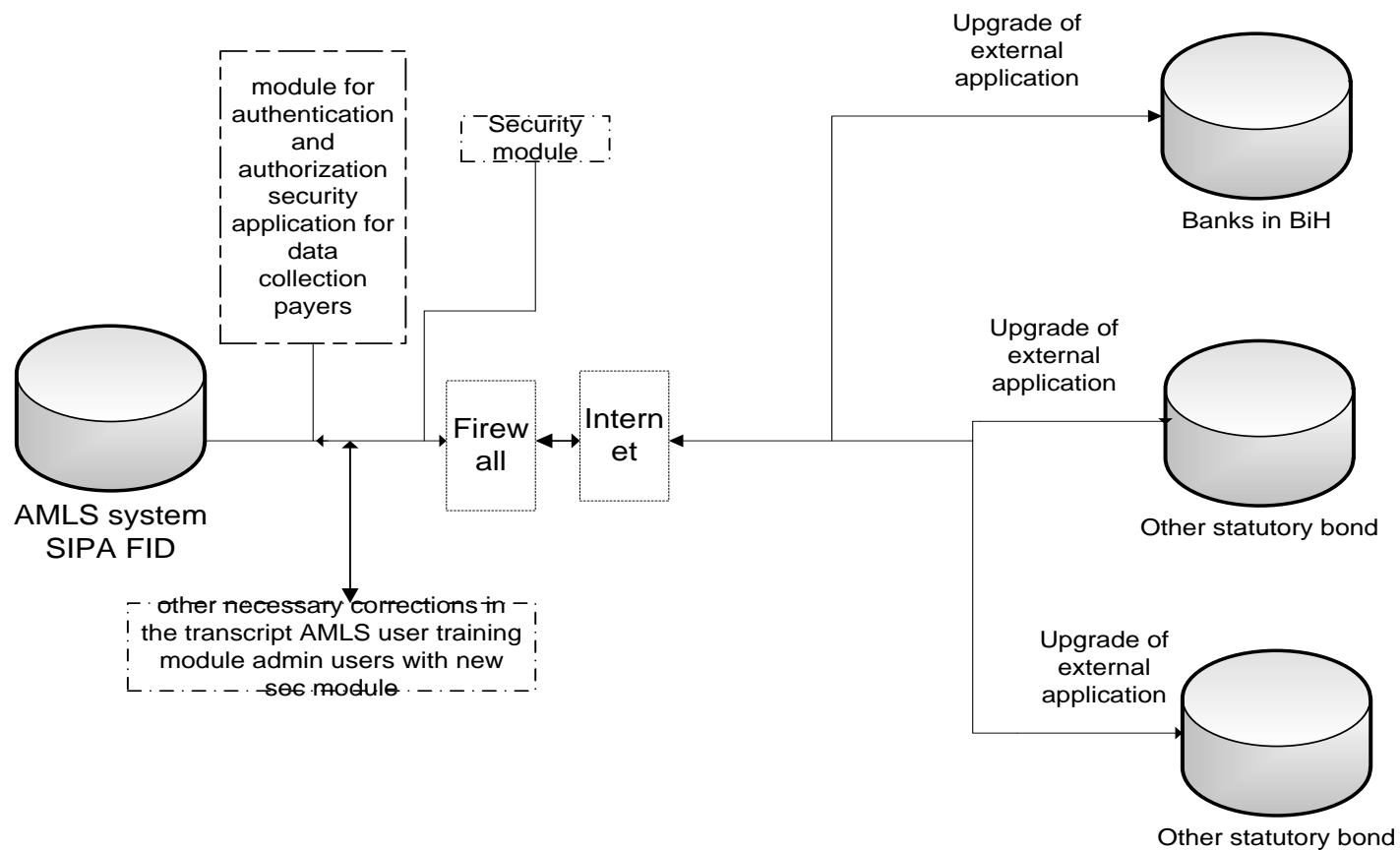


Picture 5

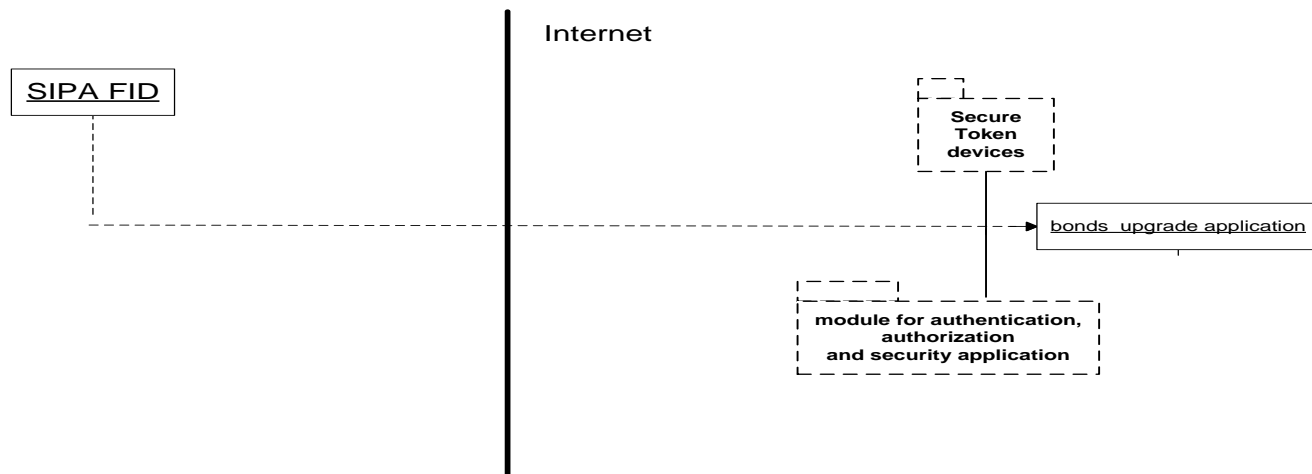


Picture 6

Diagrams implementation and operation - Operating functionality (Upgrade of application of external users and implementation of authentication mechanism – authentication server) of the project task LOT 2

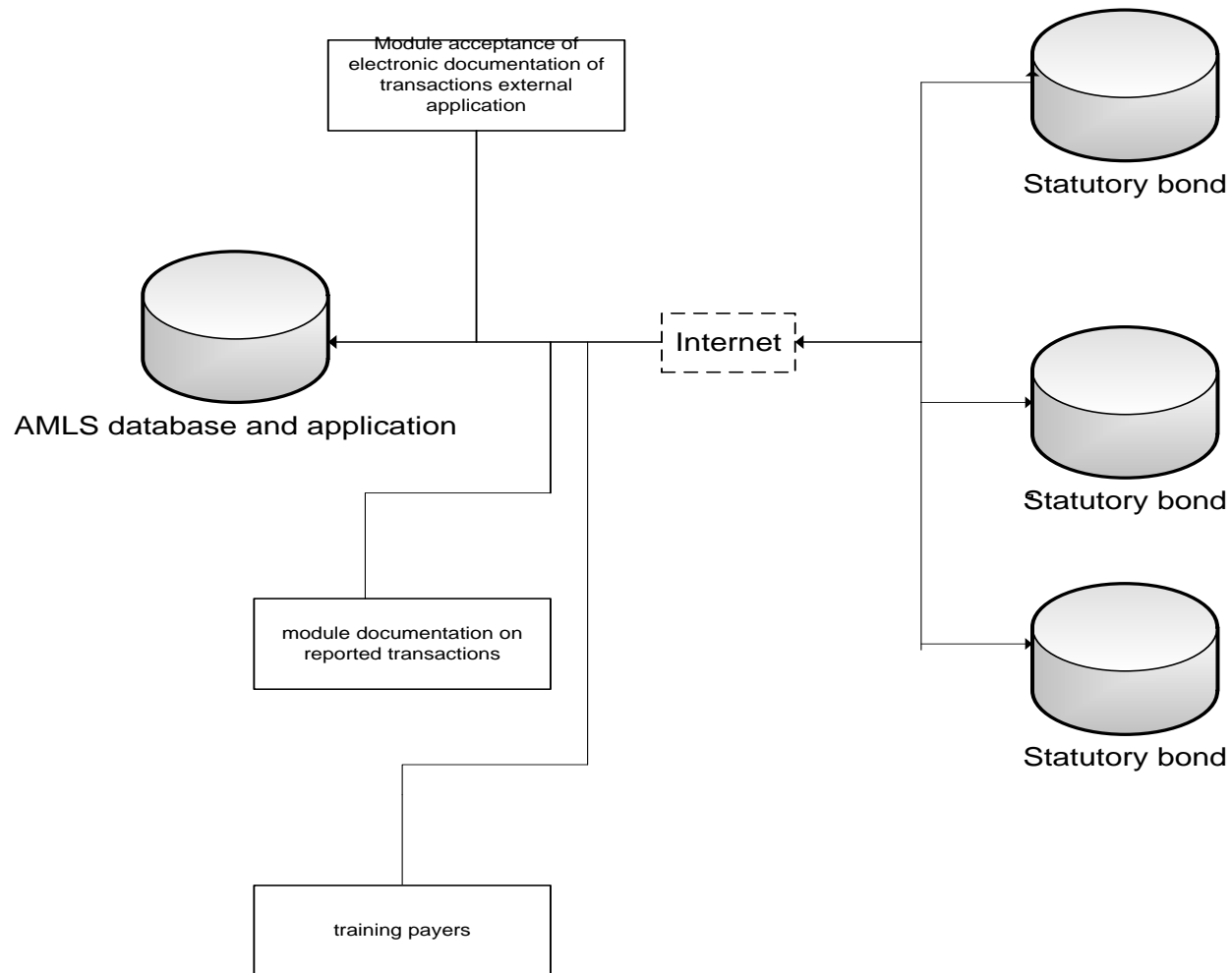


Picture 7

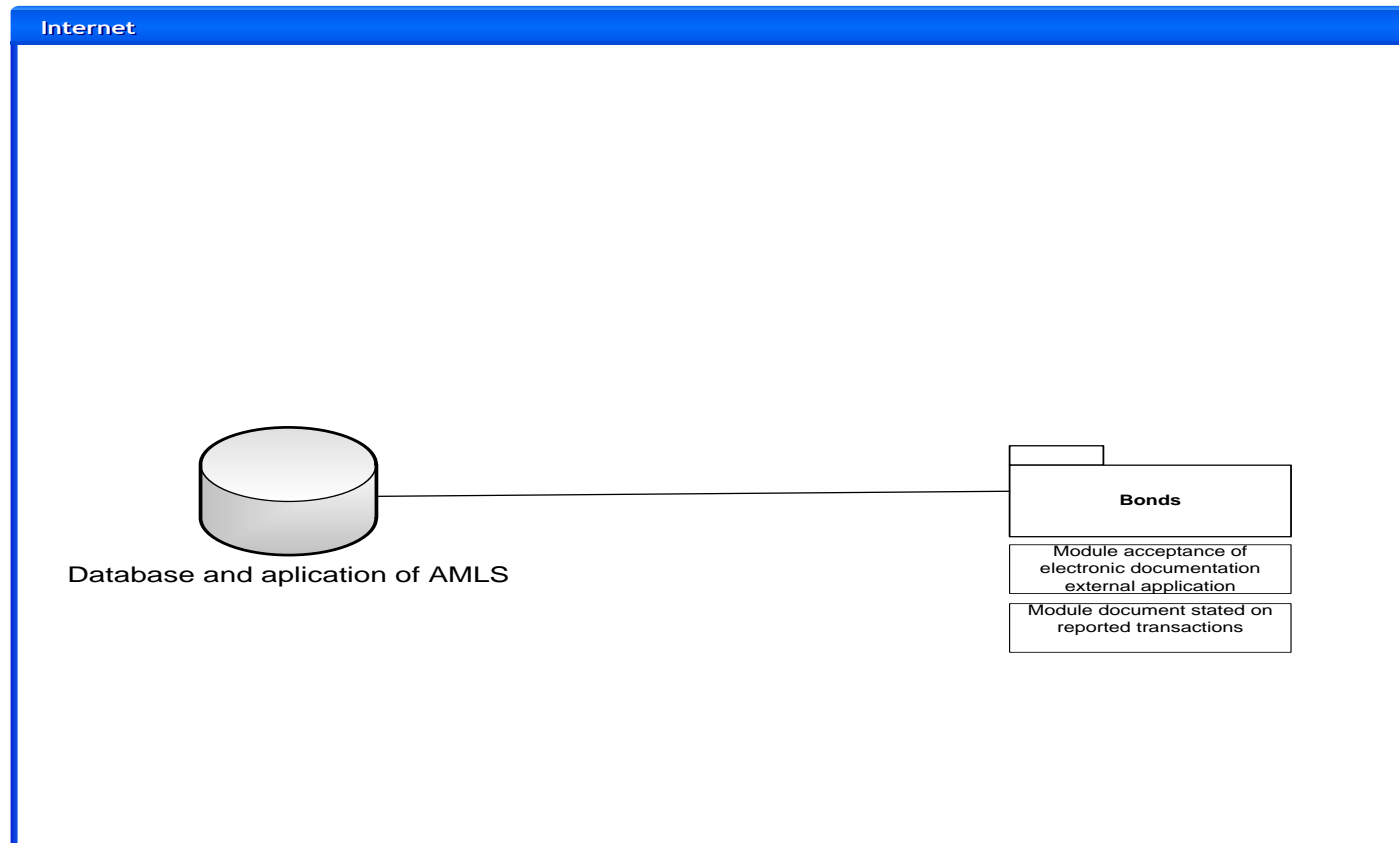


Picture 8

Diagrams implementation and operation - Operating functionality (Module for Application for external users - Electronic data interchange) of the project task LOT 2



Picture 9



Operational Acceptance Tests

All modules of the system must pass the test scenarios. It is expected from the contractor to provide a system test document for all required functionalities. Execution of the test cases will be done by an implementation team comprising representatives of the beneficiary institutions with the assistance of the contractor. The System test document will be reviewed by the implementation team and approved by the contracting authority.

Documentation

The contractor is responsible for providing detailed technical documentation and documentation for administrators and other supporting documentation (two copies) in one of the official languages in Bosnia and Herzegovina.

Legislation with coordinating application FID SIPA for Law proper payers and for officials FID SIPA.

(legislations that has to be followed)

Article 70 Types of records

The FID shall keep the following records:

a) Records of information and notifications under provisions of Article 57 of the Law, including the following information:

- 1) Full name, date of birth and place of residence of a natural person, or the name and seat of a legal person related to which the FID submitted a notification or information;
- 2) Information on the amount, currency, date or period when the transaction was performed, related to which there are reasons to suspect a criminal offence;
- 3) Reasons to suspect a criminal offence.

b) Records of issued orders for temporary suspension of transaction or transactions, containing the data referred to in Article 58 paragraph 3.

c) Records of data forwarded abroad pursuant to provisions of Articles 65, 66, 67, 68 and 69 of the Law, including the following information:

- 1) Full name, date of birth and place of residence of a natural person, or the name and seat of a legal person whose data are sent abroad;
- 2) The name of country and competent authority the data are sent to.

d) Records of measures undertaken related to obliged entity referred to in Article 81 paragraph 2 Point c) shall contain the following:

- 1) Number and date of the misdemeanor-warrant issued or an order to institute proceedings, and the name of the court it was submitted to;
- 2) Full name, date of birth and place of residence of a natural person, or the name and seat of a legal person suspected of having committed an offence;
- 3) Place, time and manner of commission of activity having elements of offence;
- 4) Data on sanctions issued.

Article 54

Content of records

(1) The records on the applied customer due diligence measures of clients and transactions referred to in Article 7 paragraph 1 shall include as a minimum the following information:

- a) The name, seat and identification number of a legal entity having a business relationship or conducting the transaction, i.e. legal entity on behalf of which a permanent business relationship is to be established or on behalf of which a transaction is to be carried out;
- b) Full name, residence address, date and place of birth, personal identification number of an employee or authorized person who establishes a business relationship or carries out a transaction on behalf of a legal entity, as well as the name of the authority that issued a valid identification document;
- c) Full name, residence address, date and place of birth, personal identification number of a natural person who establishes a business relationship, enters in the premises of a casino, gambling house or in the premises of an organizer of games of chance, or who carries out a transaction, i.e. a natural person for whom a business relationship is to be established or for whom a transaction is to be carried out, as well as the number and name of the authority that issued a valid identification number;
- d) Reasons for establishing of a business relationship or execution of transaction and information about the client's occupation;
- e) Date of establishing a business relationship or execution of a transaction;
- f) Time of execution of transaction;
- g) Amount of a transaction and the currency used in execution of a transaction;
- h) The purpose of transaction, as well as the full name and address, and permanent residence i.e. name and seat of a legal entity which the transaction was directed to;
- i) Method of the execution of a transaction;
- j) Full name, or name and seat of the ordering party sending money order from abroad;
- k) Data about the origin of money or property which is the subject of a transaction;
- l) The reasons due to which a transaction, person or client is suspicious;
- m) Full name, address, date and place of birth of each natural person who directly or indirectly possesses at least 20% of business share, stocks, i.e. other rights on basis of which he/she participates in legal entity management i.e. the funds thereof.

(2) For their own needs, the obliged entities shall leave the copies of the documents on basis of which identification of a client was made, on which they are going to confirm that an inspection of original document was performed.

(3) The Council of Ministers of BiH, upon a proposal by the Ministry of Security of BiH, with previous consultations with the FID, shall give the

guidelines with regard to the manner in which the information referred to in paragraph 1 are included in the records of the conducted identification of clients and transactions.

(4) Records as well as information referred to in Article 71 of the Law, on transfer of cash and property across the state border shall contain the following data:

- a) Full name, permanent address, date and place of birth and the unique personal identification number of a natural person who transfers a cash or property across the state border;
- b) Name, seat and registration number of a legal entity or full name, address and the personal identification number of a natural person for whom a transfer of cash or property is carried out across the state border, amount, currency, type and purpose of transaction and place, date and time of the state border crossing;
- c) Data on whether the transaction was reported to the customs authorities and to Indirect taxation authority of Bosnia and Herzegovina.

(5) All data, information and documentation from the record on identification of a client shall be delivered to the FID without any fee.

Picture 10

FID SIPA records in accordance with the Law number 70

Prototype of module FOO SIPA records

search

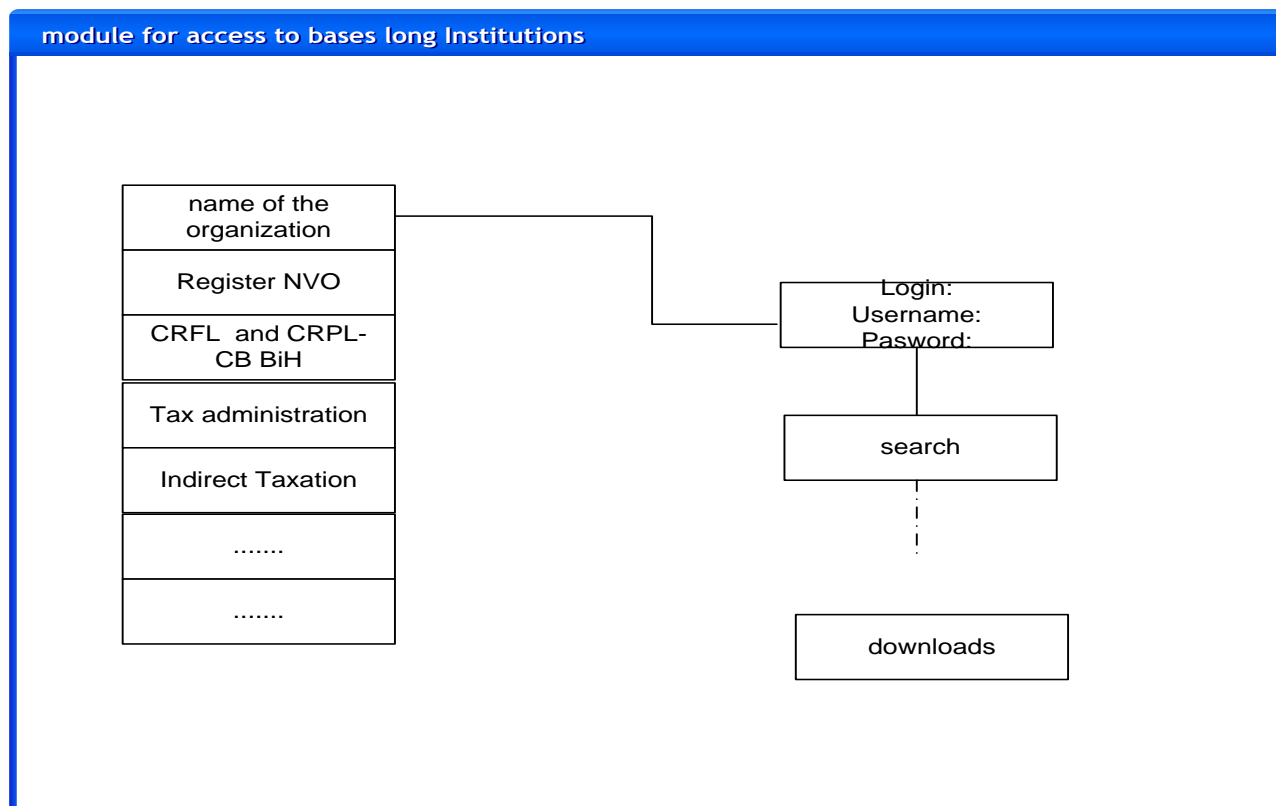
General information on the selected entity

<input type="text" value="name"/>	<input type="text" value="name of country"/>	<input type="text" value="..."/>
<input type="text" value="Second name"/>	<input type="text" value="the name of the competent authority"/>	<input type="text" value="..."/>
<input type="text" value="jmb"/>	<input type="text" value="..."/>	<input type="text" value="..."/>
<input type="text" value="adress"/>	<input type="text" value=".."/>	<input type="text" value="..."/>
<input type="text" value="Date of born"/>	<input type="text" value=".."/>	<input type="text" value="..."/>
<input type="text" value="..."/>	<input type="text" value="..."/>	<input type="text" value="..."/>

date	amount	period of	Period to	valute	Reason to suspect

Picture 11

Module for accessing databases of other institutions in BiH



LOT 2: APPLICATION SOFTWARE

Warranty and Technical Support

The warranty period for all items shall be 12 months.

Maintenance services for software and implementation of AMLS system upgrade and functionalities have to be 3 years. Services include bug fixes, performance and tuning services, with response time of 2 (two) hours. Price for these services has to be included in the total price. It will not be separate maintenance contract.

1. Item number	2. Specification Required	3. Specification Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
2.1 QTY: 1 pcs	<p>AMLS database system and application upgrade with implementation of ESB</p> <p>It is necessary to create a database module for data exchange with institutions in Bosnia and Herzegovina - police agencies, prosecutors' offices and courts, based on the existing state system of data exchange, with integrated modules for authorization, authentication and logging, within an existing database AMLS system. Database module has to contain all the necessary functionalities for data exchange with other institutions in the Exchange project, including IDDEEA Agency and further agreed exchange with the systems of the Tax Administration and with systems of other institutions if the need arises during the project.</p> <p>Database module has to use the resources of</p>			

	<p>Enterprise Service Bus (ESB) infrastructure built in this project and that will only use this project for the data exchange and exchange module will only invoke this ESB infrastructure. Database module has to be upgraded to support the ESB system and the functionalities provided for analytical software for analysis and reporting from AMLS system (visualization of data), the ESB - the exchange of information and the Application for external users.</p> <p>Application module has to be created in an existing AMLS application, with an additional module for data exchange and with implementation of solutions in the existing overviews of data. The proposed solution has to include additional checks carried out in the system as a new data exchange in the context of files to be processed. Existing AMLS application contains functional modules to support the analytical department, the investigative department, administrative, legal department and the Department for International Cooperation, and it is necessary to modify application in accordance with the new systematization of FID department.</p> <p>Analytical software for analysis and reporting from AMLS system has to allow analysts to quickly collate, analyze and visualize data from disparate sources while reducing the time required to discover key information in complex data. This module/tool have to provide visual intelligence analysis environment that can optimize the value of massive</p>			
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	<p>amounts of information collected by government agencies and businesses.</p> <p>Upgrade of AMLS system include the delivery, deployment and implementatino of ESB infrastructure, and delivery of ESB technologies and the necessary components.</p> <p>The middleware features and services provided by an Enterprise Service Bus have to include:</p> <ul style="list-style-type: none"> • Conectivity by supporting transports: HTTP, HTTPS, POP, SMTP, IMAP, JMS, AMQP, FIX, TCP, UDP, FTPS, SFTP, CIFS, MLLP, SMS • Formats and protocols: SOAP 1.1, SOAP 1.2, WS-*, HTML, JSON, XML, EDI, HL7, OAGIS, Hessian, Text, All binary formats, JPEG, • Adapters: Oracle AQ, IBM WebSphere MQ, MSMQ • Routing: content based, header based, rule-based and priority-based routing • Mediation: EIPs, database integration, event publishing, logging & auditing, validation • Transformation: XPath, XQuery, XSLT 1.0/2.0, • Create service facades for legacy/non-standard services • Enforce and manage security centrally, including authentication, authorization & entitlement • Expose existing applications and services over different protocols and message formats 			
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	<ul style="list-style-type: none"> • Virtualize services • Load balancing for scalability and fail-over for high availability of business endpoints • Expose services & applications via RESTful APIs with key management • Logging, audit and SLA monitoring, KPI monitoring • WS-Security, LDAP, Kerberos, OpenID, SAML, XACML • SSL tunneling and SSL profiles support for inbound and outbound scenarios • Supports of minimum 1000s of concurrent non-blocking HTTP(S) connections per server • Pure streaming and on-demand processing of messages • Supports highly available deployment • Comprehensive management & monitoring Web console with enterprise-level security • Built-in collection and monitoring of standard access and performance statistics <p>On this level, as a middleware components, different services have to be implemented for data access and straightforward integration that have the next functionalities:</p> <ul style="list-style-type: none"> • Support for data bases: Oracle, MSSQL, DB2, MySQL, PostgreSQL • Support for data sources: CSV, Excel, ODS, RDF, Any Web page via scraping • Supported transports: HTTP, HTTPS, JMS, SMTP, and others including via Enterprise Service Bus, FTP, FTPS, SFTP and TCP • Agile Development suport through the 			
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	<p>declarative programming model for defining services and resources and XML based DSL with no Java code to be written</p> <ul style="list-style-type: none"> • Federation Support through the combine data from multiple data sources in single response or resource and support for nested queries across data sources • Secured and Managed Data Access through the authentication, authorization, confidentiality, integrity and encryption with HTTP(S) Basic Auth, WS-Security, WS-Trust, WS-SecureConversation, WS-Policy, WS-PolicyAttachment and WS-SecurityPolicy as well as Fine-grained authorization • Data Transformation and Validation via XSLT and Xquery, built-in validators for standard data types and customizable validators via Java extensions <p><i>Application, middleware and database tiers of AMLS systems have to be deploy on the two servers (each with two processors) that are conected throough the SAN switch to shared storage array. Middleware components, ESB and data access integration has to be implemented without limitation regarding number of servers/services or server processors. According to the technical solution and technical specification contractor is obligated to include and cover costs of all necessary licenses (perpetual) for the technology upgrade and software technology that will be used through the project , including but not limited on</i></p>			
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	perpetual licenses for database for server with two processors and perpetual licenses for application server licenses for internal users (thirty users).			
2.2 QTY: 1 pcs	<p>Upgrade of application of external users and implementation of authentication mechanism (authentication server)</p> <p>For the purpose of upgrading existing applications of external user a new security mechanism should be developed that will include authentication engine with tokens and encryption to protect data for ensuring usage of web application.</p> <p>The server component of authentication mechanism has to be integrated in the AMLS system and in the existing application and need to contain a group of API's that will be used for one-time password two-factor authentication solution that integrates into an existing network infrastructure i manage the lifecycle (personalization, initialization, maintenance, etc.) of tokens.</p> <p>This component has to be designed to integrate into applications requiring strong authentication, providing secure multi-channel access independently of environments (Windows, Unix), with options to integrate into multiple applications such as web sites or phone application. This solution combine with tokens has to provide strong security via 3 variables based algorithm - Time, Event Counter and</p>			

	<p>Cryptographic Key and via a device-based PIN.</p> <p>Solution kernel has to be a stateless API so data used for security services must be stored in the AMLS user authentication database. It has to offer the following security services:</p> <ul style="list-style-type: none"> • Asynchronous and synchronous user authentication, • Server authentication, • Asynchronous and synchronous data certification, <p>Device unlocking, event counter synchronization and time clock synchronization.API for Security Data Block (SDB) that holds the data, DES and other cryptographic keys, and other information with which devices are initialized, has to include next functionality:</p> <ul style="list-style-type: none"> • Create, duplicate, and delete SDBs • Merge and split SDBs • Encrypt/decrypt an SDB • Convert an SDB to a prior SDB version • Manage the services available in a specific SDB • Manage key pairs and session keys (for secured channel). <p>Authentication solution also has to include tool for initialization of tokens and smart cards to provide user authentication. Local initialization of devices is mandatory and has to allows beneficiary or trusted third-parties to control and secure their own sets of security keys to which no other party has access, not</p>			
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	<p>even manufacturer.</p> <p>Other components of solution are tokens and coupler. Tokens (500) that have to be delivered have to have One Time password functionality supporting time and event authentication for advanced security. It has to be waterproof up to 1 meter.</p> <p>Other requirements for upgrading of existing applications to external users include:</p> <ul style="list-style-type: none"> • Create a new application modules for the exchange of documentation for AMLS and other institutions that are required by the law of SPNFT – application's users, • Creating functional web services for communication between Application to external users and AMLS system on the ESB infrastructure as part of this project, • Creating schemas for new functionalities for logging transactions of payers in AMLS system, with instructions, suggestions for policies. <p>This application and authentication mechanism have to be deploy on one server.</p>			
<p>2.3</p> <p>QTY:</p> <p>1 pcs</p>	<p>Development and implementation of the module for Application for external users</p> <p>In the scope of the project is necessary to develop and implement a module for data exchange between payers of AMLS system using ESB infrastructure for existing AMLS applications and Applications of</p>			

	<p>external users - payers of law SPNFT.</p> <p>This includes the development and implementation of the following modules and functionalities:</p> <ul style="list-style-type: none"> • Module for documentation input to an external application • Module of ESB services for data exchange (documentation) • Module for notification about documents, requests, responses, reports, and e-mail integration • Integration with the ESB • Integration with the AMLS database • Integrations with AMLS application <p>This module has to be installed on one server.</p>			
2.4	<p>Training and support</p> <p>End-user training and transfer of know-how shall be provided to all system users. Additionally, the involvement of beneficiary staff in the processes of discussions and thinking through of system design, system building, functionality testing, and similar, has to be ensured.</p> <p>The trainings shall be organized as a “train the trainer” courses, where trainees shall be provided with basic training skills and all necessary knowledge for the training of future system users.</p> <p>The estimated number of users requiring training and the related estimated minimum number of training</p>			

	<p>hours for different user groups are as follows:</p> <ul style="list-style-type: none"> - Training group: System administrators & operators; Number of users:1+3; Number of hours:10+10 - Training group: User AMLS; Number of users:20; Number of hours:24 - Training group: Trainersfor the institutions that are proper payers of the Law on prevention of money laundering and financing of terrorism; Number of users: max 50; Number of hours:8 <p>General requirements related to the trainings are:</p> <ol style="list-style-type: none"> 1. The training provider's instructors should have a substantial and proven experience in their respective fields. All instructors must be approved by the beneficiary, before any training. 2. All trainings must be conducted in one of the B&H official languages. 3. All training materials must be in one of the B&H official languages. 4. Trainings will take place at the beneficiary location. 			
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Summary of quantities including place of delivery:

LOT 1: IT AND SUPPORTING EQUIPMENT

Item	Type	Institutions for delivery	Total Qty	
1.1	Host servers for AMLS system	State Agency for Investigation and Protection	2	
1.2	Host servers for Application to external users	State Agency for Investigation and Protection	2	
1.3	Switch type 1	State Agency for Investigation and Protection	2	
1.4	Switch type 2	State Agency for Investigation and Protection	2	
1.5	Router	State Agency for Investigation and Protection	1	
1.6	Desktop computer type 1	State Agency for Investigation and Protection	30	65
		BiH District Brcko Police Administration	10	
		Federation Police Administration	20	
		Ministry of Security	5	
1.7	Desktop computer type 2	RS Ministry of the Interior	14	
1.8	Work station with installed criminal intelligence software with licence	RS Ministry of the Interior	1	
1.9	Work stations with installed Optical character recognition Software (OCR)	RS Ministry of the Interior	5	
1.10	Notebook type 1	RS Ministry of the Interior	17	66
		BiH District Brcko Police Administration	7	
		State Agency for Investigation and Protection	25	
		Ministry of Security	7	
		Federation Police Administration	10	
1.11	Multifunctional printers	RS Ministry of the Interior	1	
1.12	Laser Printer	RS Ministry of the Interior	3	11
		Federation Police Administration	8	
1.13	Portable printer	RS Ministry of the Interior	3	8
		Federation Police Administration	5	
1.14	Work station with installed financial investigation software	RS Ministry of the Interior	1	

	with licence		
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LOT 2: APPLICATION SOFTWARE

Item	Type	Institutions for delivery	Total Qty
2.1	AMLS database system and application upgrade with implementation of ESB	State Agency for Investigation and Protection	1
2.2	Upgrade of application of external users and implementation of authentication mechanism (authentication server)	State Agency for Investigation and Protection	1
2.3	Development and implementation of the module for Application for external users	State Agency for Investigation and Protection	1
2.4.	Training and support	State Agency for Investigation and Protection	

Addresses of delivery locations for Lot 1 and Lot 2:

Institution	Address
State Agency for Investigation and Protection	Nikole Tesle bb, 71123 Istočno Sarajevo, BiH
RS Ministry of the Interior	Bulevar Desanke Maksimović 4, 78000 Banja Luka, BiH
BiH District Brcko Police Administration	Trg Mladih 10, 76100 Brčko, BiH
Federation Police Administration	Mehmeda Spahe 7, 71000 Sarajevo, BiH
Ministry of Security	Trg BiH 1, 71000 Sarajevo, BiH