



BANQUE D'INVESTISSEMENT ET DE DEVELOPPEMENT DE LA CEDEAO
ECOWAS BANK FOR INVESTMENT AND DEVELOPMENT
BANCO DE INVESTIMENTO E DE DESENVOLVIMENTO DA CEDEAO

TERMS OF REFERENCE FOR UPGRADING EBID'S INFORMATION TECHNOLOGY NETWORK

February 2021

I. BRIEF PRESENTATION OF EBID

The ECOWAS Bank for Investment and Development (EBID) is an international financial institution owned by the fifteen (15) ECOWAS Member States of Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

The authorized capital of EBID is one billion Units of Account (UA) and is divided into one million (1,000,000) shares of a nominal value of UA one thousand (1000) each.

1. The corporate object of EBID shall be to:

- a. grant loans and provide guarantees for the financing of investment projects and programmes relating to the economic and social development of Member States, participate in the capital of public and private or mixt Companies and carry out all other investments with special priority to:
 - i. projects or programmes which by their nature or scope concern at least two Regional Members States; especially projects to establish regional integration enhancing infrastructure and all other development projects in both the public and private sectors.
 - ii. projects or programmes aimed at strengthening the economies of the least developed Member-states of the Community, and reconstructing countries which experienced serious armed conflicts or socio-political crises;
 - iii. projects or programmes which contribute towards making the economies of the Community increasingly complementary, and special programmes and projects designed to fight poverty and social inequality.
- b. Mobilize resources within and outside the Community, for the financing of such investment projects and programmes;
- c. provide such technical assistance as may be needed in the Community for the study, preparation, financing and execution of development projects or programmes;
- d. receive and manage, in conformity with Protocol A/P1/7/96 of 27 July 1996 relating to the conditions of application of the ECOWAS Community Levy and by virtue of any other relevant provision, the portion of the resources of the Levy meant for the financing of Community development activities;
- e. manage all Community special funds relevant to its object;
- f. undertake any commercial, industrial or agricultural activity where such an activity is secondary to its object or necessary for the recovery of its debts.

The governing bodies of EBID are:

- a Board of Governors (General Assembly), the highest body made up of representatives (Ministers of Finance) of ECOWAS Member States;
- a Board of Directors appointed by the Board of Governors;
- a Senior Management (a President and two Vice-Presidents) responsible for the day-to-day running of the Bank.

II. **BACKGROUND**

EBID has an information system supported by a well-developed IT infrastructure.

Users of the information system have access to various resources and the Internet.

As part of the upgrading of human resources management systems, a new and comprehensive human resources information system (HRIS) has been put in place.

A business continuity plan (BCP) has been developed in accordance with ISO 22301, which includes an IT continuity plan (ICP).

Several documents have been produced in the areas of security, governance and information technology management in order to implement best practices and comply with recommended standards.

In order to identify potential threats with a view to eliminating/reducing them, EBID commissioned a security audit of its IT system.

The main duties of the consultant engaged through an international competitive bidding process were to

- Assess the vulnerability of the security of the Bank's IT system;
- ap the risks run and the impacts of a malfunction on production;
- Evaluate the optimal need for human resources with respect to available resources, for a better analysis and adequate management of the risks involved;
- Make recommendations to mitigate the risks identified;
- Prepare an implementation plan and the requirements for the selected solutions.

At the end of the audit assignment, several recommendations were made, including the upgrading of the Data centre and the improvement of the IT network.

A new Data centre has been built. It meets all recognized standards in the field, namely:

- Availability;
- Efficiency;
- Security;
- Safety;
- Resilience and business continuity;
- Capacity;
- Scalability;

The next phase involves upgrading the IT network to enhance all the functions of the different levels of the OSI model and reinforce the security of the information system, for which this call for proposals is being made.

III. OBJECTIVES

The objective of this call for proposals is to implement the recommendations on the upgrading of the Bank's IT network.

IV. CONTENTS OF THE ASSIGNMENT

The consultant's assignment involves upgrading EBID's IT network by providing, installing and commissioning network hardware and software as well as providing all required services in the following areas:

- Managing the sharing and security of the LAN Internet connection;
- Replacing certain network assets (switch, router, ASA firewall, etc.) that are obsolete or no longer have technical support;
- Extending the Wi-Fi using the same make and brands of the existing equipment (adding a 2nd AP on each floor, wiring and providing network sockets for additional Aps in the corridors).
- Extending Cisco ISE licences from 100 to 400.
- Implementing a network-based VPN to provide remote access (outside the bank) to business applications;
- Implementing a LAN network monitoring and protection tool (network operating status, monitoring and controlling data going through the network, detecting network intrusion, network protection against intrusion, etc.);
- Optimising cabling and network in general;
- Refurbishing the small computer room on the ground floor on the right-hand side of the building, where the switches for the office sockets are located;
- Network certification, identification and labelling of network outlets and patch panels;
- The transfer of skills to staff.

The Consultant shall therefore take account of the following:

- The equipment installed must be scalable without interrupting existing equipment from running;
- Solutions (hardware and software) must be flexible, compatible with existing systems and scalable;
- All equipment installed should be tested and certified prior to commissioning;
- The installations must be carried out with the participation of the teams of the IT Department.

V. DELIVERABLES

This contract involves the supply, installation and commissioning of network equipment and software by the firm, for EBID's IT system (as described in the table below).

The firm is required to provide the following services:(the technical specifications of each equipment and software as well as the exact quantities are presented in the annex to this report.

Heading N°	Description	Units	Quantity
1	Managing the sharing and security of the LAN Internet connection		
1-1	Configuration of the sharing and management of the LAN Internet connection.		
2	Replacement of certain network components (switch, router, ASA firewall, etc.)		
2-1	Provide the following equipment and software: - eight (08) Cisco switch - two (02) Cisco routers - two (02) Cisco firewalls - one (01) Cisco access control - two (02) Cisco distribution switches		
2-2	Installation and configuration of the new equipment supplied, taking account of existing configurations for normal network operation, Improve the configurations if necessary		
3	Extension of the Wi-Fi		
3-1	Provide the following equipment : - 30 Cisco APs (15 additional APs and 12 APs for floors without them: 1D, 4D, 10D, 2G, 9G, 13G, and 03 replacement APs)		
3-2	- Wiring and installation of 27 network sockets in the corridors for the extension of WIFI, relocation of existing sockets to space out the 2 APs per floor		
3-3	Provision of 300 additional Cisco ISE licenses (from 100 to 400 base, Plus and APEX licenses)		
4	Setting up a VPN based on the network		
4-1	Set up a VPN network for the secure remote use of business applications outside the bank (e.g. HRIS, accounting, banking software, Intranet, etc.).		
4-2	Configuration of client access		
	Implementation of a LAN network monitoring and protection tool (network operating status, monitoring and control of data passing through the network, network intrusion detection, network protection against intrusions, etc.).		

5-1	Supply and installation of tool for monitoring the proper functioning of the network, monitoring and control of data crossing the network, intrusion detection and alert for network protection in case of attack		
6	Upgrading the cabling and network in general		
6-1	Checking the good operating condition and updating the firmware (IOS) of existing network assets		
6-2	Check the entire network cabling (connection to network assets, patch panel, network jacks, cable routing, etc.;		
6-3	Checking the good operating condition of the network (network transmission speed, network architecture, etc.)		
6-4	Correction of anomalies identified		
7	Refurbishment of the small UPS/regulator room on the ground floor		
7-1	Upgrade the 2 rooms (wall instead of glass), air conditioning, fire detector and extinguisher, rack to store network assets, storage of cables, control of doors to the Datacenter access control system, etc.).		
8	Network certification, identification and labelling of network jacks and patch panels		
8-1	Identify all office network jacks and their connection to the patch panels		
8-2	Label all identified jacks		
9	Services		
9.1	Project management (planning, implementation and supervision)		
9.2	Installation, configuration, testing and launch of all equipment and software supplied		
9.3	Proposal of a maintenance contract for the entire computer network (reused existing ones and new network equipment: immediate launch of existing ones) and launch after the warranty period of the new equipment		
9.4	Training of EBID teams on all equipment and software supplied and installed		

VI. PLACE AND DURATION OF THE ASSIGNMENT

The assignment will be carried out at EBID's headquarters in Lomé, Togolese Republic.

The total duration of the assignment is four (4) months, including the ordering and supply of equipment and software, installation, configuration, testing and certification phases.

VII. WORKING LANGUAGES

Proposals can be drafted in French and/or English.

All deliverables must be prepared in English and French.

VIII. OBLIGATIONS OF EBID

EBID will make available to the successful consultant all the information for the performance of the assignment.

The entire team of the Department of Information Technology as well as other relevant departments will be available and will participate in all the stages of the assignment.

IX. TERMS AND CONDITIONS FOR THE PERFORMANCE OF THE ASSIGNMENT

The practical terms and conditions for the performance of the above-mentioned assignment will be spelt out in a service contract to be entered into by the Consultant and EBID.

X. CONSULTANT'S PROFILE

The services must be provided by a firm (legal entity) that satisfies the following conditions:

- a) Have proven experience in computer engineering and security;
- b) Demonstrate a solid experience in networking;
- c) Proof of sound experience and proven knowledge of the banking environment;
- d) A proven record of accomplishment in implementing similar contracts. A good experience working with financial institutions operating in ECOWAS countries would be an advantage;
- e) Be an authorised representative of the brands of the proposed equipment and software (to be justified);

- f) Have an after-sales service and be able to guarantee the proposed equipment (to be justified);
- g) Have trained and qualified personnel for the implementation and maintenance of the proposed equipment and software (CV, training certificate and/or certifications attached to the dossier);
- h) h) Have the ability (personnel and authorisation) to train or transfer skills on the proposed equipment and software;

The Firm must have a core team of experts with extensive and proven experience. It must also provide the resumes of each team member. The team must comprise:

- A project leader;
- An expert in information systems security;
- A network expert;

All key experts must possess excellent analytical skills, be disciplined, methodical, versatile, autonomous and responsive, have a sense of teamwork and interpersonal skills, and be able to adapt well.

The key experts must have the following profiles

1 – Project leader:

The Project Leader must have (and justify with copies of certificates) at least a University degree in Networks and Telecommunications or any other equivalent field (BAC+5) or at least a Master 2 in Computer Science.

He must:

- show proof of at least fifteen (15) years' experience in IT project management;
- have specific work experience in managing at least four (4) similar projects in the last six (6) years;
- Have a very sound knowledge of the banking environment;
- Have a good command of French and English;
- Have an excellent command of a project management tool.

2 – Information systems' security expert

The information systems' security expert must have (and justify with copies of certificates) at least a degree in engineering (at least BAC+5) or a Master 2 in computer science, telecommunications or information and communication technologies (ICT) or any other equivalent field.

It must, among other things:

- have and justify a minimum of seven (7) years of experience in installation and implementation of security systems.

- have carried out at least three (3) recent assignments over the past five years, in the design of complex network architectures, implementation of a security management system (to be justified).
- have knowledge of international institutions or public administration;
- have proven and in-depth knowledge of networks, systems and information system security:
 - Networks: Routing protocols, LAN Switching, TCP/IP, Fiber Optics, VoIP, Firewalls, proxy, etc.
 - Security: Risk assessment methods, information security management system (ISO 27000 family).
- Technical knowledge: intrusion detection and prevention systems, firewalls, VPN, PKI, Supervision, equipment protection systems, etc.
- Have a good command of French and English

3 – Network expert

He must hold and justify (with copies of certificates) at least a degree in engineering (at least BAC+5) or a Master 2 in networks and telecommunications or any other equivalent field.

He must, among other things:

- have and justify at least seven (7) years of experience in setting up complex computer networks.
- have completed at least three (3) recent assignments over the past five years, in the development of complex network architectures (to be justified);
- knowledge of international institutions or public administration and proven experience in developing master plans;
- proven and in-depth knowledge of networks, systems and information system security:
 - Networks: Routing protocols, LAN Switching, TCP/IP, Fiber Optics, VoIP, Firewalls, proxy, etc.
- Have a good command of French and English;

XI. SCALE FOR THE EVALUATION OF PROPOSALS

EBID will evaluate and compare proposals which it would have judged beforehand to be substantially in conformity with the provisions of the tender documents. Proposals considered eligible for preliminary consideration will be evaluated as follows:

- a technical evaluation accounting for 80% of the total score;
- an evaluation of the financial offer, accounting for 20% of the total score.

The total score (TS) will be calculated as follows:

$$TS = 80\% * TS + 20\% * FS,$$

with TS: Technical score and FS: Financial score.

The proposals will be examined as follows:

1. Examination of the technical proposals submitted, awarding of a technical score (TS) over 100 points;

2. For proposals including TS >= 70, evaluation of financial proposals, award of a financial score (FS);
3. Calculation of the Total Score (TS);
4. Final selection of contractor.

Evaluation of the technical score (TS):

The proposals submitted by the bidders will be evaluated, with regard to the technical score, based on the following elements for scoring:

Elements for scoring	Weight
Equipment and software proposed	15
Capacity and expertise of the contractor (experience in setting up complex networks, knowledge of the banking environment, experience in engineering and IT security, references, training)	25
Methodology	20
License of equipment manufacturers and software developers (sales, technical support and warranty)	10
Proposed team, expertise and experience of the lead experts	30

Evaluation of the financial score (FS) :

Financial scores will be determined by weighting the amount of the financial proposal against the minimum amount of the financial proposals.

$$FS = (\text{Minimum amount of financial proposals} / \text{Amount of financial proposal}) * 100.$$

XII. SUBMISSION OF PROPOSALS

PROPOSALS MUST BE IN ONE (1) SEALED ENVELOPE CONTAINING TWO (2) OTHER SEPARATE ENVELOPES:

- 1) **1) an envelope n°1** containing **three hard copies** of the technical proposal (original + two[2] copies), an electronic version of the technical proposal (CD or flash drive), administrative documents (documents certifying the legal existence of the service provider, up-to-date payment of social and tax contributions) and any other information deemed necessary for the performance of the contract, except financial aspects. **It must be noted that documents attesting the legal existence of the service provider and the up-to-date payment of social security and tax contributions are prerequisites for the acceptance of the proposal;**
- 2) **an envelope n°2** containing **three hard copies** of the financial proposal expressed in US dollars (original + two[2] copies) and an electronic version of the financial proposal (CD or flash drive). Financial proposals must be made exclusive of taxes and customs duties. The bidder must commit to a validity period of at least **ninety (90)** days from the date of receipt of the proposals set forth below.

The contractor is notified that the copy marked "Original" of both the technical and financial proposal shall prevail over any other version of the document.

The sealed envelope containing the two numbered and sealed envelopes shall bear the following information only:

**" Proposal for upgrading EBID's computer network",
"To be opened only during the opening session".**

The deadline for submission of proposals is 30 april 2021 at 15:00 GMT. All proposals must be submitted to the following address:

ECOWAS INVESTMENT AND DEVELOPMENT BANK

General Secretariat Office.

128, Bd. du 13 janvier BP 2704 Lomé - Togo _ E-mail : bidc@bidc-ebid.org

Tel: +(228) 22 21 68 64 - Fax: +(228) 22 21 86 84

Any proposal submitted by e-mail will not be accepted.

EBID will only consider proposals submitted no later than the date and time indicated above.

EBID shall reserve the right not to take any action in response to this call for proposals.

The site visit will take place on the 31 march 2021 at 10:00 GMT, at EBID Headquarters, 128, Bd. du 13 janvier BP 2704 Lomé - Togo.

For further information, bidders are invited to contact one of the following persons:

Elijah OMIJIE : eomijie@bidc-ebid.org or

Adama TRAORE : atraore@bidc-ebid.org

XIII. ANNEXES

Annex I : Technical Specifications

Annex II : Financial Proposal

ANNEX I : TECHNICAL SPECIFICATIONS

The firm must supply equipment and software i that meet the specifications and quantity in the table below. It may add or remove equipment and software deemed useful or unnecessary (taken care of by other equipment or software) after the visit, while arguing for the addition or removal in column 4 of the table below (Notes, remarks, References of the documentation).

All equipment proposed must have a double power supply, must not be at the end of its useful life or close to it, neither at the end of technical support or close to it, nor at the end of the entry-level. They must have at least a remaining useful life of ten (10) years, with the latest version of OS (firmware) installed.

Columns 1-2: filled in by EBID

Columns 3-4: to be filled in by the bidder

Column 5: reserved for the Evaluation Committee

Bidders must fill in the following format:

- Column 2, filled in by EBID, provides the requested specifications (not to be modified by the bidder);
- Column 3, must be filled in by the bidder and must itemize the bid (the use of the words "compliant" and "yes" is insufficient in this regard);
- Column 4, provides the bidder with the opportunity to comment on its proposal and possibly make documentary references.

Any documentation provided must clearly indicate the models proposed and the options included, if any, so that evaluators can determine the exact configuration. Bids that do not make it possible to accurately identify the models and specifications will be rejected by the Evaluation Committee.

The proposal must be sufficiently clear to enable the evaluators to make an easy comparison between the specifications requested and those proposed.

1 N° heading	2 Minimum specifications required	3 Specifications proposed	4 Notes, observations, Documentation References	5 Score of the Evaluation Committee				
1	Management of sharing and security of Internet connection							
1-1	Minimum desired features: <ul style="list-style-type: none"> - Management of LAN Internet access over a fiber connection using new equipment. - Security control of LAN users' access to Internet; 							
1-2	Installation and configuration of the proposed solution, adoption of existing security rules and implementation of new security rules, if need be.							
2	Replacement of certain network assets (switch, router, ASA firewall, etc.)							
2-1	Recommended equipment to provide: switches, ASA firewalls and routers, distribution switches: Switch Cisco: Quantity: 08 Minimum characteristics : <table border="1" data-bbox="275 1289 913 1390"> <thead> <tr> <th colspan="2" data-bbox="275 1289 913 1326">General</th> </tr> </thead> <tbody> <tr> <td data-bbox="275 1326 510 1390">Device Type</td> <td data-bbox="510 1326 913 1390">Switch – 48 ports - L3 - Managed - stackable</td> </tr> </tbody> </table>	General		Device Type	Switch – 48 ports - L3 - Managed - stackable			
General								
Device Type	Switch – 48 ports - L3 - Managed - stackable							

	Enclosure Type	rack-mountable 1U			
	Subtype	Gigabit Ethernet			
	Ports	48 x 10/100/1000 POE+ Ethernet ports			
	Performance	Switching capacity: 176 Gbps Forwarding performance: 77.37 Mpps – 190.95 Mpps			
	Capacity	IPv4 routes: 24000 NetFlow entries: 24000 Virtual interfaces (VLANs): 1000 Switched virtual interfaces (SVIs): 1000			
	MAC Address Table Size	32K entries			
	Jumbo Frame Support	9198 bytes			
	Routing Protocol	OSPF, RIP-1, RIP-2, static IP routing, RIPng			
	Remote Management Protocol	SNMP 1, RMON 1, RMON 2, Telnet, SNMP 3, SNMP 2c, SSH, CLI			
	Authentication Method	Secure Shell (SSH), RADIUS, TACACS+			

	Features	Layer 2 switching, ARP support, trunking, VLAN support, IGMP snooping, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, DHCP snooping, Port Aggregation Protocol (PAgP) support, Access Control List (ACL) support, Quality of Service (QoS), RADIUS support, MLD snooping, Dynamic ARP Inspection (DAI), EIGRP Stub Routing, Uni-Directional Link Detection (UDLD), Rapid Per-VLAN Spanning Tree Plus (PVRST+), Link Aggregation Control Protocol (LACP), Remote Switch Port Analyzer (RSPAN), Energy Efficient Ethernet, Flexible NetFlow (FNF)				
	Compliant Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.1D, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.1p, IEEE 802.3x, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.1s, IEEE 802.1ab (LLDP) IEEE 802.1p CoS prioritisation				
	RAM	4 GB				

	Flash Memory	2 GB			
	Status Indicators	Port transmission speed, port duplex mode, system, active, status			
	Expansion / Connectivity				
	Interfaces	48 x 1000Base-T RJ-45 1 x USB Type A 1 x serial (console) RJ-45 management 1 x management (Gigabit LAN) RJ-45 management 1 x management (mini-USB) Type B management 4 x 10G SFP+ uplinks			
	Expansion Slots	1 (total) / 1 (free) x Stacking Module			
	Power				
	Power Device	Internal power supply - hot-plug			
	Installed Qty	1 (installed) / 2 (max)			
	Power Redundancy	Optional			
	Power Redundancy Scheme	1+1 (with optional power supply)			
	Power Provided	640 Watt			
	Voltage Required	AC 120/230 V (50/60 Hz)			
	Miscellaneous				
	Rack Mounting Kit	Included			
	MTBF	661,800 hours			

Compliant Standards	CISPR 22 Class A, GOST, BSMI CNS 13438 Class A, CISPR 24, EN 61000-3-2, NOM, EN 61000-3-3, EN55024, EN55022 Class A, ICES-003 Class A, RoHS, UL 60950-1 Second Edition, KCC, FCC Part 15 A, ISO 7779, CSA C22.2 No. 60950-1 Second Edition, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, VCCI Class A, KN24, KN22 Class A												
Software / System Requirements													
Software Included	IOS IP Base												
<p>Router Cisco: Quantity: 2 Minimum characteristics :</p>													
<table border="1"> <thead> <tr> <th colspan="2" data-bbox="271 1031 913 1067">General</th> </tr> </thead> <tbody> <tr> <td data-bbox="271 1067 510 1104">Description</td> <td data-bbox="510 1067 913 1104">Integrated services router</td> </tr> <tr> <td data-bbox="271 1104 510 1177">Type of casing</td> <td data-bbox="510 1104 913 1177">Rack mountable – 1U - modular</td> </tr> <tr> <td data-bbox="271 1177 510 1401">Ports</td> <td data-bbox="510 1177 913 1401"> 4 x WAN or LAN 10/100/1000 3 x NIM slots, 1 ISC slot, 1 x USB console port -type B mini 1 x Serial console port - RJ45 1-2 x USB ports 2.0 </td> </tr> </tbody> </table>						General		Description	Integrated services router	Type of casing	Rack mountable – 1U - modular	Ports	4 x WAN or LAN 10/100/1000 3 x NIM slots, 1 ISC slot, 1 x USB console port -type B mini 1 x Serial console port - RJ45 1-2 x USB ports 2.0
General													
Description	Integrated services router												
Type of casing	Rack mountable – 1U - modular												
Ports	4 x WAN or LAN 10/100/1000 3 x NIM slots, 1 ISC slot, 1 x USB console port -type B mini 1 x Serial console port - RJ45 1-2 x USB ports 2.0												

	Performance				
	Switching capacity	500 Mbps upgradable to 1 Gbps			
	Transfer rate	Up to 360 Mpps			
	Capacity				
	Default/max DRAM	4 GB / 16GB			
	Default/max Flash:	8 GB / 32 GB			
	Jumbo frames support	9198 octets			

	Routing protocol	IPv4, IPv6, static routes, Routing Information Protocol Versions 1 and 2 (RIP and RIPv2), Open Shortest Path First (OSPF), Enhanced IGRP (EIGRP), Border Gateway Protocol (BGP), BGP Router Reflector, Intermediate System-to-Intermediate System (IS-IS), Multicast Internet Group Management Protocol Version 3 (IGMPv3), Protocol Independent Multicast sparse mode (PIM SM), PIM Source Specific Multicast (SSM), RSVP, CDP, ERSPAN, IPSLA, Call Home, EEM, IKE, ACL, EVC, DHCP, FR, DNS, LISP, OTV ^[6] , HSRP, RADIUS, AAA, AVC, Distance Vector Multicast Routing Protocol (DVMRP), IPv4-to-IPv6 Multicast, MPLS, Layer 2 and Layer 3 VPN, IP sec, Layer 2 Tunneling Protocol Version 3 (L2TPv3), Bidirectional Forwarding Detection (BFD), IEEE802.1ag, and IEEE802.3ah				
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	Remote monitoring protocol	SNMP, Remote Monitoring (RMON), syslog, NetFlow, IP Flow Information Export (IPFix), EEM			
	Interfaces	4 x RJ45-based ports 4 x SFP-based ports			
	Encapsulation	Generic routing encapsulation (GRE), Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR) (FR.15 and FR.16), High-Level Data Link Control (HDLC), Serial (RS-232, RS-449, X.21, V.35, and EIA-530), and PPP over Ethernet (PPPoE)			
	Encryption algorithm	Encryption: DES, 3DES, AES-128 or AES-256 (in CBC and GCM modes); Authentication: RSA (748/1024/2048 bit), ECDSA (256/384 bit); Integrity: MD5, SHA, SHA-256, SHA-384, SHA-512			
	Power supply specification				
	Voltage	AC 100-240 V (47 - 63 Hz)			
	Maximum power with AC power supply	250 W (no PoE) 500 W (PoE)			

Power supply redundancy	Yes			
Licence				
ID	IP Base + Unified Communications			
<p>Firewall Cisco ASA: Quantity : 2 Minimum characteristics:</p>				
General				
Type of equipment	Security box with FirePOWER technology			
Format	1 U – rack-mountable			
Networking				
Connectivity technology	Cabled			
Use of nodes	Unlimited			
Performance				
Firewall Stateful control throughput (maximum)	2 Gbps			
Firewall stateful inspection throughput (multiprotocol)	1 Gbps			
Simultaneous firewall connections	500 000			
Firewall connections per second	20 000			
Security context	2 ;20			
Packets per second (64 bytes)	700 000			

	Authentication	Agent Active Directory, LDAP, Kerberos, NTLM			
	Maximum speed of 3DES / AES IPsec VPN	300 Mbps			
	Maximum number of sessions VPN client site on site and IPsec IKEv1	200			
	IPsec site-to-site VPN peers	300			
	Maximum number of Cisco AnyConnect or VPN sessions without clients	Up to 10.000			
	Interfaces	8 x ports 10/100/1000 gigabits 2 x USB 2.0 ports 1 x RJ45 console port/auxillary			
	Integrated network management ports	1 ports RJ45			
	Interface slot	1			
	Virtual interfaces (VLAN)	200			
	Characteristics	Firewall Protection: Access Control Anti-spyware Antivirus Application Layer Filtering Content Filtering Intrusion Prevention Malware			

		Protection Remote Access Authentication Worm Scanning			
	Upgradability	VPN Clustering and load balancing			
	High accessibility	Active / Active and Active / Standby			
	Redundant power	non			
	Monitoring, Configuration, logs and reporting	Multi-device security management software			
	Memory	8 Go			
	Minimum flash system	8 Go			
	Solid-state drive	120 GB MLC (1 slot)			
	Temperature	-40 to + 158 ° F (-40 to + 70 ° C)			
	Voltage	100 to 240 VAC			
	Maximum current	9A (100 VAC), 4.5A (200 VAC)			
	Frequency	50 to 60 Hz			
	Maximum thermal dissipation	3960 Btu / h (100 VAC), 5450 Btu / h (200 VAC)			
	Dimensions (H x L x P)	4.45 x 20.04 x 36.20 cm			
	Weights	10 kg a single power supply unit			

Security	UL 60950-1, CAN / CSA-C22.2 No. 60950-1 EN 60950-1, IEC 60950-1, AS / NZS 60950-1GB4943				
Electro-magnetic Compatibility (EMC)	47CFR Part 15 (CFR 47) Class A, AS / NZS CISPR22 Class A, CISPR2 2 Class A, EN55022 Class A, ICES003 Class A, VCCI Class A EN61000-3-2, EN61000-3-3, KN22 Class A, CNS13438 Classe A, EN50082-1, EN55024, CISPR24, EN300386, KN 61000-4				
Licence					
Characteristics	Bundle				
<p>Access control Cisco: Quantity : 1 Minimum characteristics:</p>					

General				
Type of equipment	Server			
Format	1 U – rack-mountable			
Processor	1 - Intel Xeon / 2.10 GHz 4110			
Number of cores per CPU	8			
Networking				
Connectivity technology	Cabled			
Use of nodes	Unlimited			
Performance				
Interfaces	2 x 10 Gigabit Ethernet (Base-T) 4 x 1 Gigabit Ethernet (Base-T) 2 x USB 2.0 ports 1 x RJ45 console port serie 1 x Port KVM 1 x Port VGA 1 x Port Monitoring - RJ-45			
Memory	32 Go			
Solid-state drive	1 - 2.5-in. 600-GB 6Gb SAS (10K RPM)			
Storage controller	RAID (SATA 6Gb/s / SAS 12Gb/s)			
Number of devices supported in Standalone configuration	10 000			
Number of devices	10 000			

supported in Policy Services Node				
Interface slots	1			
High accessibility	Optional			
Redundant power	non			
Characteristics	<p>Web authentication (local, central, device registration), Base RADIUS AAA, including 802.1X, MAC authentication Bypass Guest portal and sponsor services ISE Manufacturer portal Wired and wireless network access control API status monitoring (Representational State Transfer) Cisco TrustSec Better visibility of industrial IoT devices with IND integration</p>			
Power supplied	770 W			
Frequency	50 à 60 Hz			
Dimensions (H x L x P)	4.32 x 43 x 75.6 cm			
Compliance standards	CISPR 22 class A, CISPR 24, EN55024, EN 55022 class A, AS/NZS 60950-1, ICES-003 class A, UL 60950-1, EN			

		<p>60950-1 Second Edition, IEC 60950-1 Second Edition, VCCI Class A, KN24, KN22 Class A, EN 300386, GB4943.1-2001, EN61000-3-2, EN61000-3-3, CNS 13438 Class A, CAN/CSA C22.2 No. 60950-1 Second Edition, 21 CFR 1040 Second Edition, KN35, AS/NZS CISPR22 Class A</p>			
<p>Base License Characteristics Bundle</p>		<p>Cisco Distribution Switch : Quantity : 02 Minimum requirements :</p> <p>Chassis functions Total number of connectors 7 Line card connectors 5 Number of dedicated connectors for supervision motor 3 and 4 Supervision engine redundancy Yes Supported Supervisory Motors C9400-SUP-1, C9400- SUP-1XL Maximum PoE per connector 2,880 W Number of feed bays 8 AC input power Yes Integrated PoE Yes Number of ventilation bays 1</p>			

<p>Power supply modules supported 3200 W AC / 2100 W AC</p> <p>Format Front 19-inch rackmount - 10 RU</p> <p>Maximum bandwidth per connector for the supervision motor</p> <p>Supervision engine C9400-SUP-1 Cisco Catalyst9400 80Gbit/s/connector</p> <p>Supervision engine C9400-SUP-1XL Cisco Catalyst9400 80Gbit/s/connector</p> <p>Physical Characteristics</p> <p>Dimensions (h x w x d) 44,22 x 43,94 x 41,40cm</p> <p>Chassis weight (with fan unit) 28.58 Kg (63.0 lb)</p> <p>Mounting Compatible with 19" racks (19" rack and cable guide included)</p> <p>Interface configuration</p> <p>RJ45 communication module card C9400-LC-48T Cisco Catalyst 9400 48ports 10/100/1000 (RJ-45)</p> <p>SFP C9400-LC-24XS communication module board Cisco Catalyst 9400 24ports 10Gigabit Ethernet (SFP+)</p> <p>Power supply</p> <p>Redundancy Yes</p> <p>Input current (nominal)</p> <p>Input voltage From 10.4A to 100VAC / From 10.4A to 200VAC</p> <p>From 100 to 240VAC ($\pm 10\%$, for full range)</p> <p>Output power of redundant mode (N + N) (PoE + data) (2102W x N) / 2 + 10W (3.3V standby) for 230VAC (940W x N) / 2 + 10W (3.3V standby) for 115VAC N= number of power supplies (N>1)</p> <p>Output power of redundant mode (N + 1) (PoE + data) (2102W x (N-1)) + 10W (3.3V standby) for 230VAC (940W x (N-1)) + 10W (3.3V standby) for 115VAC N = number of power supplies (N>1)</p> <p>Heat dissipation 460BTU/h x NN = number of power supply units</p>			
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	Holding time 20ms Hot pluggable Yes Mean time between failures 300,000 hours Specifications Regulatory compliance CE Marking Safety • UL60950-1 • CAN/CSA-C222.2 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950.1 • IEEE 802.3 EMC •47 CFR Paragraph 15 •CISPR22 classA •KN 32 class A • EN 300 386 V1.6.1 •EN55022 classA •EN55032 classA •CISPR 32 class A • EN61000-3-2 • EN61000-3-3 •ICES-003 classA •TCVN 7189 classA •V-3 classA •CNS13438 classA •CISPR24 • EN 300 386 • EN55024 •TCVN 7317 •KN35			
2-2	Installation and configuration of the proposed solutions, reuse of existing configurations			
3	WIFI extension Equipment to be provided :			

	<p>Access Point (AP) Cisco model AIR-AP1832I-E-K9 Quantity : 30 Minimum requirements : Cisco Aironet 1832 Series 832 11ac Dual Band Access Point Input/Input: 48 ::: 350mA Wiring and installation of 27 network sockets in the corridors for the extension of WIFI, relocation of existing sockets to space out the 2 APs per floor Supply of 300 additional Cisco ISE licences (extension from 100 to 400 basic, Plus and APEX licences) - Cisco ISE Apex License: 300 - Cisco ISE Plus License: 300 - Cisco ISE base: 300</p>			
4	Installation of a network-based VPN			
4-1	<p>Minimum desired features: Secure remote access to core applications outside the Bank (HRIS, accounting, banking software, Intranet, etc.), configured on a new equipment</p>			
4-2	Configuring host and client access			
4	Installation of the LAN network-monitoring and protection tool (network operating status, monitoring and control of data transiting the network, network intrusion detection, protection against intrusion etc).			
5-1	Supplying and implementing a tool for monitoring the proper functioning of the network, monitoring and control of data passing through the network, intrusion detection and alert, network protection in case of attack			

	Minimal desired functions: Software supplied and running on the switches, firewalls, routers, and monitoring from the remote network on computers.			
5-1	Minimum desired features: Software provided and running on the switches, firewalls and routers of heading n°2, and monitoring from the administrators' workstations			
5-2	Configuration, testing and commissioning			
6	Optimisation of cabling and network in general			
6-1	Checking the status of existing network assets and updating firmware (IOS)			
6-2	Checking all network cabling (connection to network assets, patch panel, network jacks, cable routing, etc.;			
6-3	Checking the status of the network (network transmission speed, network architecture, etc.)			
6-4	Correction of identified defects and improvement of network operation			
7	Refurbishment of the small computer room and the inverter/regulator room on the ground floor			
7-1	Bring the 2 rooms up to standard (wall in place of glass windows, conditioning, fire detector and extinguisher, rack to store network assets, cabling storage, control doors to the Datacenter access control system, etc.)			
8	Network certification, identification and labelling of network outlets and patch panels			
8-1	Identification of all office network sockets and their connection to the patch panels			
2-2	Labelling of all identified jacks			
9	Services			

9.1	Project management (planning, implementation and supervision)			
9.2	Installation, configuration, testing and commissioning of all equipment and software supplied.			
9.3	Proposal of a maintenance contract for the entire computer network (existing reused and new network equipment: immediate starting) and starting after the warranty period of the new equipment			
9.4	Training EBID teams on all equipment and software supplied and installed			

ANNEX II : FINANCIAL PROPOSAL

The financial proposal **MUST be detailed and MUST be presented** in the form of the table below. The firm must include in its proposal the unit cost per equipment or software, the total cost per equipment or software, the subtotal per item and the total cost of the proposal.

Similarly, the firm must indicate the cost per expert in day/man and per task.

The total costs must be in figures and letters.

All costs must be exclusive of taxes and customs, as EBID is exempt.

Financial proposals that do not meet these requirements will not be considered, so the disqualified firm, even if technically qualified, will not be considered.

N° heading	Description	Quantity	Unit costs, including delivery (excluding taxes, excluding duties)	Total cost in figures (excluding taxes, excluding duties)	Total cost in words (excluding taxes, excluding duties)

