**Tender invitation for the procurement of**

**Core switch line cards and F.O. Switches**

April 2020

**Introduction & Scope**

The company under the name Piraeus Container Terminal Single Member S.A. (PCT – hereinafter referred to as “Client” or “PCT”) is seeking proposals from firms qualified and experienced for the procurement of Network line cards for PCT’s Core Network switches and new F.O. switches that meet the technical specifications listed in Chapter A of this document (hereinafter referred to as the “Subject of the Tender”).

The current PCT Core network switches are Cisco Catalyst 9600 Series with dual Supervisor engine cards dual power supplies.

Following are the:

Chapter A: Technical Specifications

Chapter B: Financial Specifications

Chapter C: Terms and Conditions & General Prequalification Criteria

Appendix A: PCT Current Core network Switches and Cards

Appendix B: GDPR Statement & Prequalification documents & Sample Contract Document

1. **Technical Specifications**

**The technical specifications of the C9600 series Line cards and F.O. switches are the following:**

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| **Line cards/SFP/Power Supplies/Support Contract** |
| **Line No** | **Part Number** | **Description** | **QTY** |
| 1 | C9600-LC-48TX= | Cisco Catalyst 9600 Series 48-Port Copper | 4 |
| 2 | C9600-LC-48YL= | Cisco Catalyst 9600 Series 48-Port 25GE/10GE/1GE | 2 |
| 3 | GLC-LH-SMD= | 1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM | 128 |
| 4 | GLC-SX-MMD= | 1000BASE-SX SFP transceiver module, MMF, 850nm, DOM | 10 |
| 5 | GLC-ZX-SMD= | 1000BASE-ZX SFP transceiver module, SMF, 1550nm, DOM | 1 |
| 6 | SFP-10G-LR-S= | 10GBASE-LR SFP Module, Enterprise-Class | 12 |
| 7 | C9600-PWR-2KWAC= | Cisco Catalyst 9600 Series 2000W AC Power Supply | 4 |
| 8 | CAB-TA-EU | Europe AC Type A Power Cable | 4 |
| 9 | CON-SNT-C9606R | SNTC-8X5XNBD Cisco Catalyst 9600 | 2 |

|  |
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| **2 x F.O SWITCHES SPECIFICATIONS** |
| **Line No** | **Architecture:** |   |
| 1 | Compact design with space requirement on the rack | <= 1 RU |
| 2 | stacking function embedded with module | yes |
| 3 | Minimum Stacking Bus Speed  | ≥ 480 Gbps |
| 4 | Minimum number of supported switches in a stack | ≥ 8 |
| 5 | Minimum Switching Time, Non-Stop Forwarding & State full Switch Over, in an event of a stack member being damaged | ≦ 50ms |
| 6 | Compact design with space requirement on the rack 1 RU  | yes |
| 7 | Support for master and backup cooling fan | yes |
| 8 | Integrated main and backup power supply 220V AC | yes |
| 9 | Power consumption in Watts, in full load mode | ≤ 160 Watt |
|  | **Environmental operating conditions:** |   |
| 10 | Minimum operating temperature | ≦ -5oC |
| 11 | Maximum operating temperature | ≥ 45oC |
| 12 | Minimum operating humidity | ≦ 5% |
| 13 | Maximum operating humidity | ≥ 90% |
|  | **Performance:** |   |
| 14 | Minimum total throughput of switch | ≥ 500 Mpps |
| 15 | Minimum total throughput of switch | ≥ 700 Gbps |
| 16 | DRAM Memory | ≥ 8 GB |
| 17 | Maximum Supported DRAM Memory(GB) | To be mentioned |
| 18 | Maximum Supported DRAM Memory | ≥ 16 GB |
| 19 | FLASH Memory (GB) | To be mentioned |
| 20 | Minimum number of supported MAC addresses | ≥ 30.000 |
| 21 | Ελάχιστος αριθμός υποστηριζόμενων IPv4 routes | ≥ 30.000 |
| 22 | Minimum number of supported IPv6 routes | ≥ 15.000 |
| 23 | Minimum number of Multicast routes supported | ≥ 8.000 |
| 24 | Minimum number of supported Quality of Service (QoS) records | ≥ 5.000 |
| 25 | Minimum number of supported QoS queues per port | ≥ 8 |
| 26 | Minimum number of supported Access List (ACL) records | ≥ 5.000 |
| 27 | Minimum packet buffer size | ≥ 16 ΜΒ |
| 28 | Minimum number of supported VLANs | ≥ 4000 |
| 29 | Minimum number of supported Switched Virtual Interfaces (SVIs) | ≥ 1000 |
| 30 | Minimum number of supported Flexible Netflow recordings | ≥ 60.000 |
|  | **Ethernet Interface’s and power supplies delivered from day one** |   |
| 31 | Have at least forty-eight (48) Gigabit Ethernet ports that support 1000BaseT, 1000Base-ZX, 1000BaseSX, 1000BaseLX / LH & 1000BaseCWDM protocols with a single switch converter | yes |
| 32 | Have at least eight (8) 10 Gigabit Ethernet ports that support 10GBASE-SR, 10GBASE-LR, 10GBASE-LRM, 10GBASE-DWDM, 1000BaseT, 1000Base-ZX, 1000BaseSX, 1000BaseLX/LH και 1000Base-CWDM | yes |
| 33 | Asynchronous port for out of band management (Configuration & Management). Access must be password protected. | yes |
| 34 | Dual power supplies  | yes |
|  | **Local area network (LAN) services:** |   |
| 35 | IEEE 802.1q VLANs support | yes |
| 36 | Support for adding and configuring VLAN without restarting the switch | yes |
| 37 | Integration support for switchers to exchange and share VLANs information. | yes |
| 38 | Support for automatic detection of other like switches in network topology | yes |
| 39 | Private VLAN (PVLAN) support | yes |
| 40 | Q-in-Q support | yes |
| 41 | IEEE 802.1d Spanning Tree Protocol support | yes |
| 42 | IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) Support | yes |
| 43 | IEEE 802.1w Rapid Reconfiguration of Spanning Tree support | yes |
| 44 | IEEE 802.1w support per VLAN so that multiple instances of the 802.1w algorithm can coexist per physical connection. | yes |
| 45 | IEEE 802.1ad Link Aggregation Control Protocol (LACP) Support | yes |
| 46 | Supports up to eight Gigabit Ethernet combinations at a logical connection speed of at least 8 Gbps Full duplex | yes |
| 47 | IEEE 802.1AB Link Layer Discovery Protocol (LLDP) Support | yes |
| 48 | Support VTP v3 or Functional equivalent compatible with Access & Core network | yes |
| 49 | Jumbo frames support | ≥ 9100 bytes |
| 50 | DHCP server support | yes |
|  |  **Multicast services** |   |
| 51 | Multicast support | yes |
| 52 | IPv6 Multicast support | yes |
| 53 | Multicast DNS (mDNS) gateway | yes |
| 54 | RFC1112 Host Extensions for IP Multicasting support | yes |
| 55 | Support RFC1918 Address Allocation for Private Internets | yes |
| 56 | RFC2236 IGMP v2 support and IGMP v1 interoperability | yes |
| 57 | RFC3376 IGMP v3 support | yes |
| 58 | Support RFC2770 GLOP Addressing in 233/8 | yes |
| 59 | Support RFC2934 Protocol Independent Multicast MIB for IPv4 | yes |
| 60 | RFC3618 Multicast Source Discovery Protocol (MSDP) support | yes |
| 61 | RFC6763 DNS-Based Service Discovery support | yes |
|  | **Routing Services:** |   |
| 62 | IPv4 and IPv6 support | yes |
| 63 | IPv4 / IPv6 dual stack support | yes |
| 64 | RIP support | yes |
| 65 | RIP IPv6 support (RIPng) | yes |
| 66 | OSPF v2 and v3 support | yes |
| 67 | Policy-Based Routing Support (PBR) | yes |
| 68 | VRRP support | yes |
|  | **Basic Security Services:** |   |
| 69 | Access using passwords | yes |
| 70 | IEEE 802.1x support | yes |
| 71 | IEEE 802.1x VLAN-Specified Support for Dynamic VLAN Identification per User Regardless of its Connection Port. | yes |
| 72 | 802.1x certification support across multiple domains, so that they can be certified and integrated into the appropriate VLANs, serial interconnected devices (eg IP phone and computer) through the same port | yes |
| 73 | ACL-specific IEEE 802.1x support for dynamically defining per-user access rights regardless of their login port. | yes |
| 74 | IEEE 802.1AE MACSec support for all ports offered | yes |
| 75 | Port configuration support to allow access only to specific workstations depending on the MAC address they have | yes |
| 76 | Port and VLAN traffic control support | yes |
| 77 | Root selection support from spanning-tree protocol between controlled device data | yes |
| 78 | IP Spoofing and MAC address table protection | yes |
| 79 | Dynamic ARP inspection support | yes |
| 80 | Support for unicast traffic filtering at MAC address level. | yes |
| 81 | Communication support with RADIUS and TACACS + for user authentication | yes |
|  | **Protect the system from malicious software and / or hardware malware:** |   |
| 82 | Modified / Malware Prevention Mechanism Support When Switching Startup | yes |
| 83 | Support for modified / malicious software execution control during switch operation | yes |
| 84 | Support malicious attempt to control software malfunction during switch operation | yes |
| 85 | Software control support, that the switch material is authentic and unmodified | yes |
| 86 | Encryption key support, based on NIST (National Institute of Standards and Technology) SP 800-90A and B standards, to prevent encryption keys | yes |
| 87 | Support for encrypted storage of keys, passwords and certificates | yes |
|  | **Quality of Service:** |   |
| 88 | 802.1p Class of Service (CoS) prioritization support and IP DSCP (Differentiated Service Code Point) support. | yes |
| 89 | Weighted Random Early Detection (WRED) Support | yes |
| 90 | Strict Priority Queuing support | yes |
| 91 | Support for Priority Configuration per Door | yes |
| 92 | Traffic Restriction Support by Door and Type of Traffic (CIR) | yes |
| 93 | Supports packet classification and marking, DSCP & IP ToS field based on each port traffic | yes |
| 94 | Support classification and marking of packages based on package features at 3 or 4 levels. | yes |
| 95 | Support implementation of Priority Policy based on package features at 3 or 4 levels. | yes |
|  | **Management Services:** |   |
| 96 | SNMP v3 k and SNMP over IPv6 support | yes |
| 97 | Support RMON alarms and events | yes |
| 98 | Support for built-in SSH v2 Client and SSH v2 Server functionality | yes |
| 99 | SSH over IPv6 support | yes |
| 100 | Motion replication support sent or received from one or more ports or VLANs to a port on the switch (SPAN / Monitoring port). | yes |
| 101 | Motion duplication support sent or received from one or more ports or VLANs to a different / remote switch port (Remote SPAN) | yes |
| 102 | Network Time Protocol (NTP) support | yes |
| 103 | Management support locally via command line interface | yes |
| 104 | Built-in RFID Tag support | yes |
| 105 | YANG data modeling support, RFC 6020 | yes |
| 106 | Telemetry support based on IETF YANG models | yes |
| 107 | NETCONF support, RFC 6241 | yes |
| 108 | Linux Container Support (LXC) | yes |
| 109 | Support for locally executed Linux commands and programs | yes |
| 110 | Local implementation of Python Scripts | yes |
|  | **Management Services:** |   |
| 111 | Support in-service replacement of cooling fans | yes |
| 112 | Supports in-service replacement of main and backup power supply | yes |
| 113 | Operating system support running through some patches | yes |
|  | **Scalability after adding additional module and / or licenses** |   |
| 114 | BGP support in IPv4 & IPv6 environment | yes |
| 115 | HSRP support | yes |
| 116 | Class-Based Weighted Fair Queuing Support (CBWFQ) | yes |
| 117 | Support Layer 7 (application recognition) applications, their categorization and bandwidth control. | yes |
| 118 | Minimum number of applications that can be recognized, regardless of IP Protocol type, TCP / UDP ports, and DSCP value | >=1000 |
| 119 | Support for threat identification and unusual network behavior, including malware detection even when it is encrypted | yes |
| 120 | MPLS support | yes |
| 121 | VRF support | yes |
| 122 | Layer 3 VPN (L3VPN) support | yes |
| 123 | Ethernet over MPLS (EoMPLS) support | yes |
| 124 | Multicast VPN (MVPN) support | yes |
| 125 | Hierarchical Virtual Private LAN Services (H-VPLS) support | yes |
| 126 | IEEE 802.1AE MACSec-256 support | yes |
| 127 | N-BaseT, 25G and 40G port support | yes |
|  | **Security Specifications:** |   |
| 128 | IEC 60950-1 | yes |
|  | **Electromagnetic Emission Specifications:** |   |
| 129 | FCC Part 15 (CFR 47) Class A | yes |
| 130 | VCCI Class A | yes |
| 131 | CISPR22 | yes |

**NOTES:**

* **All replies in the above Technical Specifications table must be detailed and referenced to the relevant proposed product documentation.**
* **The Participants are required to deliver to PCT premises all the requested goods, while the installation services will be performed from PCT IT department.**
* **The proposed solution should consist of new equipment (not refurbished).**
* **For the requested “F.O switches”, the same manufacture vendor as the currently owned of core switches is strongly preferred.**

1. **Financial Specifications**

Participants are requested to submit a financial proposal for providing the total Solution and services that are the Subject of this Tender as described in the Tender invitation document.

**Financial proposal layout**

Financial Table F.1-1

|  |
| --- |
| **HARDWARE & SOFTWARE** |
| Item # | Description / Category | A1: Unit Cost (€) without VAT | Quantity | A2: Total Solution Cost (€) without VAT | Free Warranty Provided(in years) |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| … |  |  |  |  |  |
| **GRAND TOTAL SOLUTION COST** (without VAT) **:** |  |  |

The Participants shall provide the following:

Detailed analysis for the following after the expiration of the free warranty period:

* 1. Annual maintenance cost for the overall solution (analyzed per type of device & software and service type)
	2. Annual SLA cost for 24x7 support with 4 hours hardware and software replacement

**Financial Terms and conditions**

* All prices shall be in Euro currency, excluding VAT
* Prices shall include the entire delivery to PCT premises as per project specifications
* Suggested Payment Terms: Payment terms 90 days after the complete delivery of goods & invoicing.
* Any delivery/shipping and insurance cost shall be included in the Participants’ cost.
* All prices quoted shall include any applicable withholding tax.
* PCT may choose on its own discretion to only purchase some parts of the total offered solution and the Participant is obliged to accept this without any additional change of the financial cost.
1. **Terms and Conditions & General Prequalification Criteria**

### Submission method

The Offers must be submitted **via email to** **Konstantinos.Ampelidis@pct.com.gr**no later than **June 1st 2020 at 12:00. All tender documents should be attached and encrypted with a password (.zip format). The password will be released to PCT at the exact date when the Bid Opening procedure will take place and will be sent only to** **Konstantinos.Ampelidis@pct.com.gr**. The competent employee to provide further information in relation to the submission process is Mr. Konstantinos Ampelidis, tel: +30 2104099100,

fax: +30 2104099101 e-mail: Konstantinos.Ampelidis@pct.com.gr

The encrypted zip file should contain:

* A separate folder including the **Technical proposal**
* A separate folder including the **Financial proposal**
* A separate folder including the **General Prequalification Criteria** in soft format and/or in electronic media as mentioned in Article 1.4 and Appendix C.

The files stored in zip must be either in Microsoft “word .doc files” or Adobe “.pdf” format files for both the Technical and Financial Proposal.

All folders should be clearly marked with the indication “TECHNICAL PROPOSAL” or “FINANCIAL PROPOSAL” or “General Prequalification Criteria”, as appropriate (note: lack of proper identification may invalidate the Proposal).

The email with the encrypted zip file should be sent by email with the subject below:

* With the words: **Procurement of “Core Switches Line cards and F.O. Switches”**
* With the words: Proposal by … (name and address of the respective Participant).
* With the email address of PCT: Konstantinos.Ampelidis@pct.com.gr

Any financial information in the Technical Proposal folder may invalidate your Proposal.

### Validity

The Proposals, including the Financial Proposals of the Participants, shall be valid for a period of four (4) months from the Closing Date. Participants are advised that they may be asked to extend the validity of their proposals for additional months. In that case, all the obligations of the Participants arising from the submission of their Proposal remain binding on them.

Each Participant bears responsibility for the costs and expenses incurred in preparing and submitting a Proposal in response to the Tender Invitation. PCT will not reimburse Participants for any cost they may incur related to this Tender.

A Proposal shall only be deemed to be accepted when a notification of Acceptance is communicated to the Participant by email or facsimile transmission (by fax). The date of transmittal of the email or fax notifying acceptance shall be deemed to be the date of acceptance of the Proposal. Acceptance of a Proposal submitted by the Participant shall create an irrevocable obligation on the Participant to enter into a contract with PCT, immediately after the acceptance date.

### True and Correct statements

Each Participant understands that the information contained in its Proposal will be relied upon by the evaluators in making their decision with respect to the award of the Contract and such information is expressly warranted by the Participant to be true and correct. Furthermore, each Participant will furnish such supporting and confirming information, prior to the award of the tender, as may be reasonably requested by PCT.

Any approvals and permissions (by the Greek or any other Authorities) that are necessary for the provision of the Subject of the Tender should be described by the Participants in the Proposal, along with the activities required for the obtainment thereof (including duration and costs).

Notwithstanding, unless required by relevant rule and regulation (the Participants are obliged to mention explicitly such rule and/or regulation) that this is the obligation of the client to fulfill them, the Participant shall be responsible at their own cost to fulfill those approvals and permissions.

The provision of the Subject of the Tender by the Participant and the use of the Subject of the Tender by PCT shall not constitute an infringement of any existing patent, copyright or other right.

Therefore, the Subject of the Tender shall be equipped with any required license or certificate to guarantee the lawful usage of the hardware and software products in the European Union.

### GDPR statement & Prequalification Criteria

The Participants shall abide by the GDPR and any applicable legislation pertinent to data protection, such as, indicatively but not restrictively, Law 4624/2019.

The participants are required to fill in, print and sign the GDPR statement as attached in Appendix C and include the hardcopy printed or scanned document in the General Prequalification Criteria envelope.

Additionally the participants are required to include in the General Prequalification Criteria envelope the relevant documents as mentioned in Appendix C, “REQUESTED PREQUALIFICATION DOCUMENTS”. These documents can be either hardcopy printed or scanned documents.

## ASSESSMENT OF PROPOSALS

### Evaluation Process

A panel will be formed to review and evaluate the Proposals, as well as any supplementary information it may obtain in the course of the evaluation process through clarifications, presentations and interviews with Participants. The assessment will be performed according to the compliance with the mandatory requirements of the technical specifications.

**Suppliers are required to submit their BEST AND FINAL OFFER.**

Each offer will be evaluated and only the Proposals that comply with the technical specifications will be further evaluated in respect of the financial offer.

Technical proposals that do not meet the minimum criteria set may be considered are inadmissible and will not be further taken into consideration.

**PCT will select the best price Proposal which complies fully with the requirements of this Tender.**

PCT may choose on its own discretion to only purchase some parts of the total offered solution and the Participant is obliged to accept without any change of the financial cost.

1. **General Terms.**

a. PCT reserves the right to repeat, postpone, cancel, suspend or amend the terms hereof, at any time without it being held liable in any way to the Participants and/or third parties. No person acquires, on any ground or cause, any right or claim for compensation (not even for the cost of submitting the Proposal) against PCT, its employees, officers or advisors, and agents in general, arising from the participation in the tender. Exclusion from the Tender or failure in the Tender does not give rise to any right to claim compensation from PCT and/or its employees, officers or advisors, and agents in general; it is at the PCT’s sole discretion to consider the Proposals void and invalid in their entirety, without it being held liable in any way to the Participants and/or third parties.

b. The selected Participant is engaged to enter into the Contract immediately after being notified of the award. The Contract will be governed by and construed in accordance with the laws of Greece. The parties will make every effort to settle amicably any dispute or difference, which may arise concerning the interpretation or the execution of the Contract. Any dispute or difference, which may arise concerning the interpretation or the execution of the Contract and any claims arising there under, shall be subject to the exclusive jurisdiction of the courts of Athens, Greece.

c. All applicable regulations and standards (Greek, EU) must be observed by the Participants.

d. The Participants are prohibited from forming alliance or exchanging information, which may cause damage to the interests of PCT and/or may exclude the participation of other Participants.

e. The Participants by submitting a Proposal represent that they are fully apprised of the Tender and unreservedly accept the terms and conditions thereof.

f. The Participants by submitting the Proposal confirm that they are under no corporate, competition-related or other legal restrictions which impede them from submitting the Proposal.

g. The Participants by submitting the Proposal represent that neither the Participants themselves, their controlling shareholder(s) nor any of their subsidiaries, or (to their knowledge) any of their directors or senior officers is, or is subject to dominant influence of or controlled by an individual/entity that is, the subject of any economic or financial sanctions or trade embargoes (collectively, “Sanctions”) administered, enforced or imposed by the United Nations Security Council, the European Union or the United States from time to time.

h. PCT relies upon the Participant warranties that all documents, information, declarations, data and supporting documentation submitted in the Proposal are true and accurate and no information relating to the Tender has been concealed.

i. PCT will not use the documents, information, data and supporting documentation for any purposes other than the Contract award.

j. The Participants will not share with PCT personal data of data subjects. Personal Data means any information relating to an identified or identifiable natural person; an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

## APPENDICES

## Appendix A – PCT Current Core network Switches and Cards

|  |
| --- |
| **Line cards/SFP/Power Supplies/Support Contract** |
| **Line No** | **Part Number** | **Description** | **QTY** |
|  | C9606R | Cisco Catalyst 9600 Series 6 Slot Chassis | 2 |
|  | C9600-SUP-1 | Supervisor 1 Module | 4 |
|  | C9600-PWR-2KWAC | Cisco Catalyst 9600 Series 2000W AC Power Supply | 4 |
|  | CAB-TA-EU | Europe AC Type A Power Cable | 4 |

## Appendix B

## GDPR Statement & Prequalification documents & Sample Contract Document



**REQUESTED PREQUALIFICATION DOCUMENTS**

Please submit the relevant documents as per each company details mentioned below:

