

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**

**11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776**

**Request For a Standing Offer
Demande d'offre à commandes**

National Master Standing Offer (NMSO)

Offre à commandes principale et nationale (OCPN)

Canada, as represented by the Minister of Public Works and
Government Services Canada, hereby requests a Standing Offer
on behalf of the Identified Users herein.

Le Canada, représenté par le ministre des Travaux Publics et
Services Gouvernementaux Canada, autorise par la présente,
une offre à commandes au nom des utilisateurs identifiés
énumérés ci-après.

Comments - Commentaires

**Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Acquisition Branch, STAMS, ITSPD / Direction générale
des acquisitions, SGAST, DASIT
Computer Hardware Division
Div. de l'équipement informatique
Place du Portage, Phase III, 4C2
11 Laurier Street/11, rue Laurier
Gatineau
Québec
K1A 0S5

Title - Sujet NMSO - COMPUTERS	
Solicitation No. - N° de l'invitation E60EJ-11000C/H	Date 2012-09-20
Client Reference No. - N° de référence du client E60EJ-11000C	GETS Ref. No. - N° de réf. de SEAG PW-\$\$EJ-436-24924
File No. - N° de dossier 436ej.E60EJ-11000C	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-11-30	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
Delivery Required - Livraison exigée See Herein	
Address Enquiries to: - Adresser toutes questions à: Lipski, Sarah	Buyer Id - Id de l'acheteur 436ej
Telephone No. - N° de téléphone (819)956-4013 ()	FAX No. - N° de FAX (819)956-1156
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: See herein	
Security - Sécurité This request for a Standing Offer does not include provisions for security. Cette Demande d'offre à commandes ne comprend pas des dispositions en matière de sécurité.	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

SOLICITATION FOR
NATIONAL MASTER STANDING OFFERS (NMSOS) FOR COMPUTER SYSTEMS

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Solicitation No. - N° de l'invitation

E60EJ-11000C/H

Amd. No. - N° de la modif.

File No. - N° du dossier

436ejE60EJ-11000C

Buyer ID - Id de l'acheteur

436ej

CCC No./N° CCC - FMS No/ N° VME

E60EJ-11000C

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Annex E: Request for Product Substitution / Price Revision Sheet

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Annex H: Benchmark Procedures and Set-up Instructions

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Annex J: Intertek/Offeror Agreement

Annex K: Technical Offer

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Annex M: Basis of Selection

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PART 1 GENERAL INFORMATION

1.1 INTRODUCTION

- (a) The Request for Standing Offers (RFSO) template is divided into seven parts:
- (i) Part 1, General Information;
 - (ii) Part 2, Offeror Instructions;
 - (iii) Part 3, Offer Preparation Instructions;
 - (iv) Part 4, Evaluation Procedures and Basis of Selection;
 - (v) Part 5, Certifications;
 - (vi) Part 6, Resulting Standing Offer Clauses;
 - (vii) Part 7, Resulting Contract Clauses; and,
 - (viii) the Annexes.
- (b) Part 1: provides a general description of the requirement;
- (c) Part 2: provides the instructions applicable to the clauses and conditions of the RFSO and states that the Offeror agrees to be bound by the clauses and conditions contained in all parts of the RFSO;
- (d) Part 3: provides Offerors with instructions on how to prepare their offer to address the evaluation criteria specified;
- (e) Part 4: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, the security requirement, if applicable, and the basis of selection;
- (f) Part 5: includes the certifications to be provided;
- (g) Part 6: includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;
- (h) Part 7: includes the clauses and conditions that will apply to any contract resulting from a call-up made pursuant to the Standing Offer.
- (i) The Annexes include:
- (i) Annex A: Technical Specifications
 - (ii) Annex B: List of Products
 - (iii) Annex C: Call-up Limitations
 - (iv) Annex D: RVD Process
 - (v) Annex E: Request for Product Substitution / Price Revision Sheet
 - (vi) Annex F: List of Authorized Resellers and Service Outlets
 - (vii) Annex G: Standing Offer Activity Report
 - (viii) Annex H: Benchmark Procedures and Set-up Instructions
 - (ix) Annex I: Benchmark Ratings Analysis
 - (x) Annex J: Intertek/Offeror Agreement
 - (xi) Annex K: Technical Offer
 - (xii) Annex L: Financial Offer
 - (xiii) Annex M: Basis of Selection
 - (xiv) Annex N: Offer Forms

1.2 SUMMARY

This solicitation is being issued to satisfy the Government of Canada's requirement for the supply, delivery, configuration, installation, integration and implementation of Computer Systems, including System Upgrades, System Components, Other Related Items, warranty, maintenance, software support services and documentation, all of which is to be provided on an "as-and-when-requested" basis to locations throughout Canada, excluding any locations in areas subject to any of the Comprehensive Land Claims Agreements, when a Call-up is made in accordance with any resulting NMSOs. Any resulting standing offers may be used by any Government Department, Departmental Corporation or Agency, or other body of the Government of Canada (including all those described in the *Financial Administration Act*, as amended from time to time) or any other party for which the Department of Public Works and Government Services has been authorized to act from time to time under section 16 of the *Department of Public Works and Government Services Act*. This solicitation does not preclude Canada from using another method of supply for entities of the Government of Canada with the same or similar needs.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-Chile Free Trade Agreement (CCFTA), the Canada-Peru Free Trade Agreement (CPFTA), the Canada-Columbia Free Trade Agreement, the Canada-Panama Free Trade Agreement and the Agreement on Internal Trade (AIT).

Offerors are not required to obtain security clearance in order to be issued a Standing Offer, because most Call-ups will be unclassified – see the article in the Resulting Contract Clauses entitled "Security Requirement". However, the Standing Offer Authority or Identified User making a Call-up may, in its discretion, substitute an alternative Security Requirement for individual requirements. In those cases, the Call-up will only be issued to an Offeror who, at the time of the Call-up, satisfies the Security Requirement specified by the Identified User. It is recommended that suppliers (and key individuals within suppliers) who do not currently hold a security clearance at the level of Secret consider upgrading their security clearance status, since procurements will not be delayed in order to provide time for suppliers to obtain required security clearances.

The series of resulting NMSOs, as a whole, will have no expiry date (unless PWGSC determines, in its sole discretion, to set aside this procurement vehicle). As demand for new computer technologies develops, new Categories will be competed on the GETS, allowing new suppliers to qualify or existing suppliers to add Categories to their Standing Offer. Each individual Category will be valid for a period of two years, plus two optional one-year extension periods from the date it is originally awarded. Each time a Category is subsequently awarded after publishing a new competition on the GETS, this two-year period plus the two one-year extension periods will begin running again. As a result, different Categories may be subject to different end dates. At the time individual Categories are re-competed, or new Categories are added, suppliers who already hold NMSOs may be exempted from providing certain information that they have previously provided in order to obtain their existing NMSO (for example, if the experience requirements remain unchanged, existing Offerors may not be required to re-demonstrate that they have the necessary experience).

For the definition of some of the terms used in this Article, refer to Article 6.1, "Offer".

This RFSO includes the following Group and Categories of equipment:

- (a) Server Systems
 - (i) Category 1.0S Rack-Optimized 2-Socket 1 U;
 - (ii) Category 2.0S Rack-Optimized Socket 2-Socket 2U;
 - (iii) Category 2.1S Rack-Optimized Enterprise 2-Socket 2U;
 - (iv) Category 3.0S Rack-Optimized Pedestal-to-Rack Convertible Departmental 2-Socket 5U;

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- (v) Category 4.0S Rack-Mount Departmental 4-Socket 4U;
 - (vi) Category 1.0B Blade Chassis / Enclosure;
 - (vii) Category 2.0B 2-Socket Blade;
 - (viii) Category 2.1B 2-Socket Blade Enterprise;
 - (ix) Category 3.0B 4-Socket Blade;
 - (x) Category 3.1B 4-Socket Enterprise Blade;
- (b) Within the Group, each Category is then divided in 4 Sections:
- (i) Default System
 - (ii) System Upgrade
 - (iii) System Components
 - (iv) Other Related Items

All potential suppliers capable of meeting the requirements of this RFSO are invited to make offers. Suppliers are not required to be the Manufacturer of any Products to submit an offer, although the Manufacturer must certify non-manufacturer suppliers. The Annex entitled "Technical Specifications" describes the detailed technical specifications for all Categories.

All offers must consist of a technical offer and a financial offer. The detailed requirements for these offers are contained in Annexes entitled "Technical Offer" and "Financial Offer" and include mandatory requirements. Offerors are limited to a maximum of two (2) Systems per Category (the first System listed in the Category will be titled System A, the second System listed in the same Category will be titled System B); also, the same System will not be included in one Category more than once; furthermore, no more than two (2) Systems from any given Manufacturer will be included in one Category.

The basis of selection is described in detail in the Annex entitled "Basis of Selection" and consists of four phases: Confirmation of Compliance to Mandatory Requirements, Evaluation of Financial Offer, Benchmark Testing and Offeror Selection. Only offers that satisfy all the mandatory requirements and pass the financial evaluation will be considered.

For each Category, Canada anticipates qualifying up to eight (8) Systems that meet the requirements of this RFSO. If fewer Systems are qualified in a given Category than Canada considers advantageous, Canada reserves the right, in its sole discretion, to issue a further RFSO in order to identify additional offers eligible for standing offer issuance.

Offers will be evaluated on a "Category" basis. Therefore, if an Offeror wishes to submit an offer in only one specific Category, then it has the opportunity to do so. It is not mandatory to make an offer or be selected in all Categories to be issued a Standing Offer.

For each System proposed, all items listed in the Annex entitled "List of Products" (for the Category of System offered) must be offered in order for the offer to be considered for that Category.

Call-up Limitations for each Category and Section are defined in the Annex entitled "Call-up Limitations". Pre-determined discount percentages will apply to orders exceeding certain dollar values.

During the Standing Offer Period for a given Category, as technology evolves, Offerors will have the opportunity to propose substitute Products that offer equal or better value to Canada. Periodically, all Offerors will also have the opportunity to refresh their prices.

After any resulting Standing Offers have been issued, all Offerors will be notified in writing regarding the outcome of this solicitation.

1.3 RFSO SCHEDULE

(a) Deadline for first set of questions, Q1 (by noon EST):	Friday, September 28, 2012
(b) Release of answers to Q1 (estimated):	3 weeks following the close of Q1.
(c) Deadline for second set of questions, Q2 (by noon EST):	2 weeks following the release of answers from Q1
(d) Release of answers to Q2 (estimated):	3 weeks following the close of Q2
(e) RFSO closing date:	November 30, 2012
(f) Systems delivered for Benchmark testing:	3 days following bid closing
(g) NMSO award (estimated):	January, 2013

1.4 COMMUNICATIONS NOTIFICATION

As a courtesy, Canada requests that successful Offerors notify the Standing Offer Authority in advance of their intention to make any public announcement related to the issuance of a standing offer.

1.5 DEBRIEFINGS

After issuance of a standing offer, unsuccessful Offerors will be provided with information about the way in which their offers were evaluated. Offerors are requested to follow up with further questions about the procurement process within 15 working days of receiving notification that their offer was unsuccessful.

PART 2 OFFEROR INSTRUCTIONS

2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS

- (a) All instructions, clauses and conditions identified in the Request for Standing Offer (RFSO) by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual <https://buyandsell.gc.ca/policy-and-guidelines/> issued by Public Works and Government Services Canada (PWGSC).
- (b) Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).
- (c) The 2006 (2012-07-11) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements are incorporated by reference into and form part of the RFSO.
- (d) The text under Subsection 4 of Section 01 – Code of Conduct and Certifications of 2006 referenced above is replaced by:

Offerors should provide, with their bid or promptly thereafter, a complete list of names of all individuals who are currently directors of the Offeror. If such a list has not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to provide such a list within the required time frame will render the offer non-responsive. Offerors must always submit the list of directors before contract award.

Canada may, at any time, request that a Bidder provide properly completed and Signed Consent Forms ([Consent to a Criminal Record Verification form - PWGSC-TPSGC 229](#)) for any or all individuals named in the aforementioned list within a specified delay. Failure to provide such Consent Forms within the delay will result in the bid being declared non-responsive.

- (e) The text under Subsection 5 of Section 01 – Code of Conduct and Certifications of 2006 referenced above is replaced by:

The Offeror must diligently maintain the list up-to-date by informing Canada in writing of any change occurring during the validity period of the offer, and must also provide Canada, when requested, with the corresponding Consent Forms. The Offeror will also be required to diligently maintain the list and when requested, provide Consent Forms during the period of any contract arising from this bid solicitation.

- (f) Subsection 5.4 of Standard Instructions - Request for Standing Offers -Goods or Services - Competitive Requirements 2006 is amended as follows:
 - (i) Delete: sixty (60) days
 - (ii) Insert: one hundred and eighty (180) days
- (g) Section 4 of Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements 2006 is augmented with Subsection 4.8 as follows:

“An Offer cannot be assigned or transferred in whole or in part.”

2.2 SUBMISSION OF OFFERS

- (a) Offers must be submitted only to Public Works and Government Services Canada Bid Receiving Unit by the date, time and place indicated on page 1 of the RFSO.
- (b) Due to the nature of the Request for Standing Offers, offers transmitted by facsimile or electronic mail to Public Works and Government Services Canada will not be accepted.

2.3 ENQUIRIES - SOLICITATION

- (a) **Where to Direct Enquiries:** All enquiries and other communications with government officials relating to this Request for Standing Offers must be directed ONLY to the Standing Offer Authority named below.
- Standing Offer Authority: Sarah Lipski
E-mail Address: sarah.lipski@pwgsc-tpsgc.gc.ca
Telephone: (819) 956-4013
- (b) **Time for Making Enquiries:** All questions and other communications with Canada throughout the RFSO period and until any resulting Standing Offers are issued must be submitted by e-mail and must be received in accordance with the RFSO Schedule identified above. Enquiries received after the Q2 deadline may not be answered.
- (c) **Enquiries to be in Writing:** All enquiries must be submitted in writing.
- (d) **Content of Enquiries:** Offerors should reference as accurately as possible the numbered item of the solicitation to which the enquiry relates. Care should be taken by Offerors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a "proprietary" nature must be clearly marked "proprietary" at each relevant item. Items identified as proprietary will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Offeror do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all Offerors. Enquiries not submitted in a form that can be distributed to all Offerors may not be answered by Canada.
- (e) **Failure to Make Enquiries:** Offerors should make enquiries as early as possible and should not make assumptions regarding the nature of the requirements of this solicitation. Offerors who do not raise issues and questions they may have during the solicitation period do so at their own risk. Offerors who, instead of raising issues during the enquiries period, deviate from the mandatory requirements of this
- (f) Solicitation in their Offers, will be disqualified as non-responsive.

2.4 APPLICABLE LAWS

- (a) The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.
- (b) Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of its offer, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of its choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Offerors.

Note to Offerors: Offerors are requested to indicate the Canadian province or territory they wish to apply to any resulting contract in their Offer Submission Form.

PART 3 OFFER PREPARATION INSTRUCTIONS**3.1 OFFER PREPARATION INSTRUCTIONS**

- (a) Offerors are requested to organize and to provide copies of their offers in separately bound sections as follows:
- (i) Section I: Technical Offer (1 hard copy and 2 soft copies).
The requirements for the technical offer are described in the Annex entitled "Technical Offer".
 - (ii) Section II: Financial Offer (1 hard copy and 1 soft copy)
The requirements for the financial offer are described in the Annex entitled "Financial Offer".
- (b) If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.
- (c) Prices must appear in the financial offer only. No prices must be indicated in any other section of the offer.
- (d) Canada requests that Offerors follow the format instructions described below in the preparation of their Offer:
- (i) use 8.5 x 11 inch (216 mm x 279 mm) paper;
 - (ii) use a numbering system that corresponds to the solicitation;
 - (iii) include a title page at the front of each volume of the offer that includes the title, date, solicitation number, Offeror's name and address and contact information of its representative; and
 - (iv) include a table of contents.
- (e) The Offeror may submit more than one offer. If an alternate offer is submitted, it must be a physically separate document, clearly marked as an alternate offer. Each offer will be evaluated independently, without regard to the other offers submitted by the Offeror. As a result, every offer must be complete on its own. Even though material submitted in one offer will not be used to supplement another offer submitted by the same Offeror, where inconsistencies are noted among multiple offers submitted by the same Offeror, Canada may take those inconsistencies into account in evaluating the multiple offers. If the Offeror submits multiple offers and wishes to withdraw one or more of those offers, Canada may require that the Offeror withdraw either all its offers, or none of them.
- (f) **Confidential or Proprietary Information:** Any information that the Offeror consistently treats as proprietary and/or confidential should be clearly marked "Proprietary" or "Confidential".

PART 4 EVALUATION PROCEDURES AND BASIS OF SELECTION**4.1 EVALUATION PROCEDURES**

- (a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- (b) An evaluation team will evaluate the offers on behalf of Canada. Canada reserves the right to hire any independent consultant, or use any Government resources, to evaluate any offer. Not all members of the evaluation team will necessarily participate in all aspects of the evaluation.
- (c) To supplement the written Technical Offer, proposed Systems will be subject to Benchmark Testing, as described in this solicitation. The Offeror is responsible for all costs associated with the benchmark testing, including delivery, installation, and removal of the equipment and testing fees. All costs associated with the benchmark testing are non-refundable and nonnegotiable.
- (d) In addition to any other time periods prescribed in this solicitation:
 - (i) **Requests for Clarifications:** If Canada seeks clarification or verification from the Offeror regarding its offer, the Offeror will have **2 working days** (or a longer period if specified in writing by the Standing Offer Authority) to provide the necessary information to Canada. Failure to meet this deadline will result in the proposal being declared non-responsive.
 - (ii) **Extension of Time:** If additional time is required by the Offeror, the Contracting Authority may grant an extension in his or her sole discretion.

4.2 BASIS OF SELECTION

The detailed evaluation procedures and the basis of selection are detailed in the Annex entitled "Basis of Selection".

PART 5 CERTIFICATIONS**5.1 CODE OF CONDUCT CERTIFICATIONS – CERTIFICATIONS REQUIRED PRECEDENT TO CONTRACT AWARD VERIFICATION**

Offerors should provide, with their offers or promptly thereafter, a complete list of names of all individuals who are currently directors of the Offeror. If such a list has not been received by the time the evaluation of bids is completed, the Contracting Authority will inform the Offeror of a time frame within which to provide the information. Offerors must submit the list of directors before contract award, failure to provide such a list within the required time frame will render the bid non-responsive.

The Contracting Authority may, at any time, request that an Offeror provide properly completed and Signed Consent Forms (*Consent to a Criminal Record Verification form - PWGSC-TPSGC 229*) for any or all individuals named in the aforementioned list within a specified delay.

Failure to provide such Consent Forms within the delay will result in the offer being declared non-responsive.

5.2 CERTIFICATIONS PRECEDENT TO ISSUANCE OF STANDING OFFER

The certifications listed below should be completed and submitted with the offer, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirement within that time period will render the offer non-responsive.

5.3 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

- (a) The Federal Contractors Program for Employment Equity (FCP-EE) requires that some suppliers bidding for federal government contracts, valued at \$200,000 or more (including all applicable taxes), make a formal commitment to implement employment equity. This is a condition precedent to contract award. If the Offeror is subject to the FCP-EE, evidence of its commitment must be provided before the award of the Contract.
- (b) Suppliers who have been declared ineligible contractors by Human Resources and Social Development Canada (HRSDC) are no longer eligible to receive government contracts over the threshold for solicitation of bids as set out in the *Government Contract Regulations*. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP-EE for a reason other than the reduction of their workforce to fewer than 100 employees. Any bids from ineligible contractors will be declared non-responsive.
- (c) If the Offeror does not fall within the exceptions enumerated in (d)(i) or (ii) below, or does not have a valid certificate number confirming its adherence to the FCP-EE, the Offeror must fax (819-953-8768) a copy of the signed form LAB 1168, Certificate of Commitment to Implement Employment Equity (<http://www1.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc?=e>), to the Labour Branch of HRSDC.
- (d) Each Offeror is requested to indicate in its offer whether it is:
 - (i) not subject to FCP-EE, having a workforce of fewer than 100 permanent full or part-time employees in Canada;
 - (ii) not subject to FCP-EE, being a regulated employer under the *Employment Equity Act*, S.C. 1995, c. 44;
 - (iii) subject to the requirements of FCP-EE, because it has a workforce of 100 or more permanent full or part-time employees in Canada, but it has not previously obtained a certificate number from

HRSD (because it has not bid before on requirements of \$200,000 or more), in which case a duly signed certificate of commitment is required from the Bidder; or

- (iv) subject to FCP-EE, and has a valid certification number (i.e., has not been declared an ineligible contractor by HRSDC).
- (e) Further information on the FCP-EE is available on the following HRSDC Website:
<http://www.hrsdc.gc.ca/en/gateways/topics/wzp-gxr.shtml>.

Note to Offerors: Offerors are requested to use the Offer Submission Form to provide information about their status under this program. For a joint venture Offeror, this information must be provided for each member of the joint venture.

5.4 MANUFACTURER CERTIFICATIONS

All Offerors are required to submit the Manufacturer Certification(s) provided in the Annex entitled Offer Forms.

5.5 OFFEROR CERTIFIES THAT ALL EQUIPMENT AND SOFTWARE IS “OFF-THE-SHELF”

Any equipment and software offered to meet this requirement must be “off-the-shelf” (unless otherwise stated in this RFSO), meaning that each item of equipment and software is commercially available and requires no further research or development and is part of an existing product line with a field-proven operational history (that is, it has not simply been tested in a laboratory or experimental environment). If any of the equipment or software offered is a fully compatible extension of a field-proven product line, it must have been publicly announced on or before the RFSO closing date. By submitting an offer, the Offeror is certifying that all the equipment and software offered is off-the-shelf.

PART 6 RESULTING STANDING OFFER CLAUSES

Note to Offerors: The clauses contained in these Resulting Standing Offer Clauses are intended to form the basis of any Standing Offer issued as a result of this solicitation. Except where specifically set out in these Resulting Standing Offer Clauses, acceptance by Offerors of all the clauses is a mandatory requirement of this solicitation. No modification or other terms and conditions included in any offer will be applicable to any Standing Offer issued or the contracts made under such Standing Offers, despite the fact that the offer may become part of the Standing Offer.

Offers that contain statements implying that the offer is conditional on modification of these clauses or containing terms and conditions that purport to supersede these clauses will be considered non-responsive.

Offerors with concerns about the provisions of these Resulting Standing Offer Clauses should raise their concerns in accordance with the Enquiries provision of this bid solicitation. If additional legal issues are raised by an offer, Canada reserves the right to address those issues in any Standing Offer issued as a result of this bid solicitation (including the Resulting Standing Offer Clauses incorporated in that Standing Offer). If the additional provisions are unacceptable to the Offeror, the Offeror may withdraw its offer.

6.1 OFFER

- (a) The Offeror named on page 1 of this National Master Standing Offer (NMSO) offers to supply, deliver, configure, install (if required by a Call-up), integrate and implement (if required by a Call-up), provide warranty, maintenance, software support services and documentation for the Computer System(s) and other Products subject to this Standing Offer, all according to the prices, terms and conditions of this Standing Offer, as and when an Identified User or PWGSC orders Products in accordance with this Standing Offer.
- (b) The Offeror offers to deliver all Products in accordance with the Default Configuration, as defined in the Annex entitled "List of Products", unless the Call-up specifically requests changes to the Default Configuration.
- (c) Unless otherwise expressly provided for in this Standing Offer, the Offeror agrees to supply only goods/services authorized for supply under this Standing Offer on the date the Call-up is issued, without variation or substitution. The Offeror acknowledges that only Products listed on the Computer Acquisition Guide (CAG) website on the date the Call-up is issued may be supplied.
- (d) The Offeror acknowledges that multiple National Master Standing Offers have been issued for this requirement. Call-ups will be allocated among the Offerors in accordance with the process described in the Article entitled "Call-up Procedures".
- (e) "**Call-up**", which is defined in 2005 General Conditions, includes any contract issued as a result of a Request for Volume Discount ("RVD"). All Call-ups are subject to the terms and conditions set out in the Resulting Contract Clauses.
- (f) "**Group**" means the broadest grouping of similar commodities. UNIX Systems, x86 Systems, Notebooks and Blade Systems are examples of Groups.
- (g) "**Category**" means a specific class of equipment within a Group.
- (h) "**Section**" means each of the divisions of Products within a Category offered. Unless otherwise specified, the 4 Sections are: 1-Default System, 2- Upgrades, 3-Components and 4-Other Related Items.
- (i) "**System**" means a system that meets the minimum Technical Specifications set out in the Annex entitled "Technical Specifications". It is fully operational and in ready-to-use state, containing all major components and all requisite ancillary items. These include but are not limited to: Chassis / enclosure, motherboard / system board, processor / processor modules, memory / memory cards, Operating System, device drivers / software licenses, port licenses, power supplies, cooling fans, internal / external cables to the system, I/O cables, etc. to allow the system to satisfy the requirements.

- (j) **“Default System”** means a system configured exactly as set out in the Annex entitled “List of Products”, Item No. 1 for the relevant Category, without variation.
- (k) **“Product”** means any System, Upgrade, Component, or Other Related Items. Products are subject to the Call-up limitations specified unless otherwise specified.
- (l) **“Upgrade”** means a change to one or more aspects of the Default System described in the Annex entitled “List of Products”, Upgrade Section, by enhancing its functionality, processing capacity or performance. Upgrades are performed by the Offeror as part of the configuration.
- (m) **“Component”** means equipment or product that is part of a System described in the Annex entitled “List of Products”, Component Section. Each Component with a separate price may be ordered by itself unless otherwise specified.
- (n) **“Other Related Items”** means the related equipment listed on an Offeror’s optional equipment list and approved by the Technical Authority.
- (o) **“CAG website”** means the PWGSC Computer Acquisition Guide website (<http://computer.pwgsc.gc.ca>).
- (p) **“Manufacturer”** means the entity that manufactures a system (as determined by the brand name appearing on a system and in all certifications, supporting manuals and documentation, which must be the same), not necessarily the Offeror.

6.2 SECURITY REQUIREMENT

The Resulting Contract Clauses contain an Article entitled “Security Requirement”. The Standing Offer Authority or Identified User making a Call-up may, in its discretion, substitute an alternative Security Requirement. In such instances, the Call-up will only be issued to an Offeror who, at the time of the Call-up, satisfies the Security Requirement specified by the Identified User.

6.3 STANDARD CLAUSES AND CONDITIONS

- (a) All clauses and conditions identified in the Standing Offer and resulting Contract(s) by title, number and date are set out in the Standard Acquisition Clauses and Conditions Manual issued by PWGSC.
- (b) The Manual is available on the PWGSC Website: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

6.4 GENERAL CONDITIONS

2005 General Conditions – Standing Offers – Goods or Services (2012-07-16), apply to form part of this Standing Offer, subject to the stipulation in Section 8 of 2005 General Conditions, “standing offer unit prices” do not include the prices offered by the Offeror in response to individual Requests for Volume Discounts. Canada will not be liable for any errors, inconsistencies or omissions in any information published regarding this series of Standing Offers. If the Offeror identifies any errors, inconsistencies or omissions, the Offeror agrees to notify the Standing Offer Authority immediately.

6.5 STANDING OFFER REPORTING

- (a) The Offeror must compile and maintain records on its provision of goods, services or both to the federal government under contracts resulting from the Standing Offer. This data must include all purchases, including purchases paid for using a Government of Canada Acquisition Card. The data must be aggregated and submitted to the Standing Offer Authority on a quarterly basis. The reported data must include the data shown in the Annex entitled “Standing Offer Activity Report”.
- (b) Quarterly periods are defined as follows:
 - (i) 1st quarter: April 1 to June 30;
 - (ii) 2nd quarter: July 1 to September 30;

- (iii) 3rd quarter: October 1 to December 31; and
- (iv) 4th quarter: January 1 to March 31.
- (c) Electronic reports must be completed and forwarded to the Standing Offer Authority no later than 30 calendar days after the end of the quarterly period.
- (d) All data fields of the report must be completed as requested. If some data is not available, the reason must be indicated in the report. If no goods or services are provided during a given period, the Offeror must still provide a "NIL" report.
- (e) Failure to submit fully completed quarterly reports in accordance with the above instructions will result in the immediate suspension of the Offeror's National Master Standing Offer. After the first instance, Systems will be reinstated on the CAG website refresh date immediately following the submission of the completed report. Subsequent instances will be dealt with under the Article below entitled "Withdrawal or Suspension of Authority to Use Standing Offer".
- (f) If requested by the Standing Offer Authority, the Offeror must provide details on its processes for compiling the data required to fulfill its reporting obligations.
- (g) For each Category, the Offeror must retain all the data and the filed reports for 6 years from the expiry of that Category.

6.6 STANDING OFFER PERIOD

- (a) This series of National Master Standing Offers does not expire, and will continue to be valid until Canada sets aside this series of NMSOs (the "**Overall Standing Offer Period**").
- (b) Canada may place Call-ups under any given Category under this NMSO from the date that Category is issued for a period of two years, plus two optional one-year extensions (the "**Standing Offer Period for a given Category**" or "**Standing Offer Period for that Category**"). For any given Category, this period will be "re-activated" each time that Category is again the subject of a competition published on the Government Electronic Tendering Service. As a result, different Categories may be subject to different end dates.
- (c) The Offeror agrees that, for each Category, the rates/prices will be in accordance with the provisions of this Standing Offer throughout the Standing Offer Period for that Category.
- (d) The Contract Period of individual Call-ups may extend beyond the Standing Offer Period for a given Category and beyond the Overall Standing Offer Period. That is, a Call-up may be placed up until the last day of the Standing Offer Period for a given Category; the resulting contract will be in force until all the work has been completed, including warranty services.
- (e) At the time individual Categories are recompeted, or new Categories are added, suppliers who already hold NMSOs may be exempted from providing certain information that they have previously provided in order to obtain their existing NMSO (for example, if the experience requirements remain unchanged, existing Offerors may not be required to re-demonstrate that they have the necessary experience).

6.7 AUTHORITIES & REPRESENTATIVES

(a) Standing Offer Authority

The Standing Offer Authority for this Standing Offer is the contracting officer named on page one of this Standing Offer. The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. The Standing Offer Authority is also the Contracting Authority for all Call-ups issued under this Standing Offer. The Offeror acknowledges that the Standing Offer Authority is entitled to exercise any and all audit and verification rights described in this Standing Offer, including the Resulting Contract Clauses, in respect of any Call-ups made under this Standing Offer and to request any information concerning Call-ups that the Standing Offer Authority considers necessary.

(b) Technical Authority

The Technical Authority is responsible for all matters concerning the technical content of the Work under contracts resulting from this Standing Offer. Any proposed changes to the scope of the Work are to be discussed with the Technical Authority, but any resulting change can only be confirmed by a revision issued by the Standing Offer Authority.

The technical authority is: PWGSC – STAMS, ITS (Informatics Technical Services)

(c) Identified Users

The Identified Users authorized to make call-ups against the Standing Offer include any Government Department, Departmental Corporation or Agency, or other body of the Government of Canada (including all those described in the *Financial Administration Act*, as amended from time to time) or any other party for which the Department of Public Works and Government Services has been authorized to act from time to time under section 16 of the *Department of Public Works and Government Services Act*.

(d) No Contracting Outside Authorities

The Offeror agrees not to accept Call-ups to perform work in excess of or outside the scope of this Standing Offer without specific written authorization from the Standing Offer Authority. The Offeror acknowledges that the Identified Users are without authority to vary or amend the terms or the scope of this Standing Offer.

(e) Offeror's Contact

The Offeror's contact for all matters relating to this Standing Offer, including all resulting Call-ups, is:

Contact: _____

E-mail Address: _____

Telephone: _____

(f) Offeror's Agents

The Offeror confirms that the Authorized Resellers listed in the Annex entitled "List of Authorized Resellers and Service Outlets" are authorized to act on its behalf as its agent for the purposes of performing the Work under Call-ups and receiving payment. Any payment made by Canada to an Authorized Reseller will be considered payment to the Offeror itself. This agency relationship (through which the Authorized Reseller performs contractual obligations on behalf of the Offeror) does not amend, diminish or modify any of the responsibilities of the Offeror under the Standing Offer or any resulting Call-ups. The Offeror agrees and understands that it is solely responsible for ensuring that all of its Authorized Resellers complete all Call-ups in accordance with their terms and conditions and that, if the Authorized Reseller fails to fulfill all the Call-up obligations, the Offeror must, upon written notification from the Standing Offer Authority, immediately complete and fulfill those obligations directly at no additional cost to Canada. The Offeror agrees to inform the Standing Offer Authority in writing of any changes in the list of its Authorized Resellers during the Standing Offer Period for a given Category and to remove any Authorized Reseller if requested to do so by the Standing Offer Authority.

(g) Offeror's Service Outlets

- (i) Throughout the Standing Offer Period for a given Category, the Offeror must maintain a nationwide maintenance service network, which means that the Offeror must have a sufficient number of service outlets necessary to meet the response times specified in other requirements of this document, throughout Canada (other than locations covered by any Comprehensive Land Claims Agreements).
- (ii) Service Outlets must be commercial (not residential) establishments. Service Outlets must have technical support and system service facilities. The Offeror confirms that any Service Outlets listed in the Annex entitled "List of Authorized Resellers and Service Outlets" that are not owned and

operated by the Offeror are subcontractors it has chosen to perform Hardware Maintenance Services. Unless the Service Outlet has also been designated by the Offeror as an Authorized Reseller, the Service Outlet will not be considered an agent of the Offeror.

- (iii) The Offeror agrees and understands that it is solely responsible for ensuring that all of its Service Outlets perform all work in accordance with the terms and conditions of the relevant Call-up, and that, if the Service Outlet fails to fulfill any Call-up obligation, the Offeror must, upon written notification from the Standing Offer Authority, immediately fulfill those obligations directly at no additional charge to Canada. The Offeror agrees to inform the Standing Offer Authority in writing of any changes in the list of its Service Outlets during the Standing Offer Period for a given Category.
- (iv) Identification of Service Outlets: The Offeror has identified the Service Outlets from which it will provide maintenance and support services under any Call-ups against this Standing Offer in the Annex entitled "List of Authorized Resellers and Service Outlets". Service Outlets are listed on the CAG website.

6.8 JOINT VENTURE OFFEROR

- (a) The Offeror confirms that the name of the joint venture is _____ and that it is comprised of the following members: *[list all the joint venture members named in the Offeror's original offer]*.
- (b) With respect to the relationship among the members of the joint venture Offeror, each member agrees, represents and warrants (as applicable) that:
 - (i) _____ has been appointed as the "representative member" of the joint venture Offeror and has fully authority to act as agent for each member regarding all matters relating to the Contract;
 - (ii) by giving notice to the representative member, Canada will be considered to have given notice to all the members of the joint venture Offeror; and
 - (iii) all payments made by Canada to the representative member will act as a release by all the members.
- (c) All the members agree that Canada may terminate the Contract in its discretion if there is a dispute among the members that, in Canada's opinion, affects the performance of the Work in any way.
- (d) All the members are jointly and severally or solitarily liable for the performance of the entire Contract.
- (e) The Offeror acknowledges that any change in the membership of the joint venture (i.e., a change in the number of members or the substitution of another legal entity for an existing member) constitutes an assignment and is subject to the assignment provisions of the General Conditions.
- (f) The Offeror acknowledges that all security and controlled goods requirements in the Contract, if any, apply to each member of the joint venture Offeror.

Note to Offerors: This Article will be deleted if the Offeror issued a Standing Offer is not a joint venture. If the Offeror is a joint venture, this clause will be completed with information provided in its offer.

6.9 NOTICES

Under this Standing Offer, where the Offeror is required to provide notice to Canada or the Minister, notice must be provided in writing to the Standing Offer Authority; where Canada or the Minister is required to provide notice to the Offeror, notice must be provided in writing to the Offeror's representative named above.

6.10 CALL-UP PROCEDURES

- (a) **Only Authorized Call-ups to be Accepted:** The Offeror agrees only to accept individual Call-ups made by Identified Users pursuant to this Standing Offer that do not exceed the applicable Call-up

Limitations. The Offeror acknowledges that any Call-up made by an Identified User exceeding the applicable Call-up Limitation is not permitted under this Standing Offer and is without authority.

- (b) **Division and Consolidation of Requirements:** Multiple Call-ups will not be issued in order to circumvent competition. The Standing Offer Authority may consolidate requirements across Identified Users and issue Call-ups on a periodic basis to receive better pricing.
- (c) **Contracting Authority:** PWGSC is the Contracting Authority for all Call-ups, including those made directly by Identified Users.
- (d) **Technical Authority for Call-ups:** PWGSC is the Technical Authority for all Call-ups, including those made directly by Identified Users.
- (e) **Call-ups made directly by Identified Users:** An Identified User may issue a Call-up directly to any Offeror up to the applicable Government Department Call-up Limitations.
- (f) **Call-ups made directly by the Standing Offer Authority:** The Standing Offer Authority may issue a Call-up directly to any Offeror up to the applicable PWGSC Acquisitions Call-up Limitations.
- (g) **Call-ups made by the Standing Offer Authority Using Request for Volume Discount Process:** For requirements that exceed the Call-up Limitations, PWGSC will issue a Request for Volume Discount ("RVD"). In addition to these requirements, PWGSC may, in its discretion, issue a Request for Volume Discount for any requirement. The Request for Volume Discount process is described in the Annex entitled "RVD Process".

6.11 CALL-UP INSTRUMENT

- (a) Authorized Call-ups against this Standing Offer will be made by Identified Users using Form 942 or by the Standing Offer Authority using its own form. Authorized Call-ups may also be made under this Standing Offer through the RVD process described in this Standing Offer, in which case the Standing Offer Authority will issue a Call-up using its own form.
- (b) Call-ups can also be made by other methods such as telephone, facsimile or electronic means. With the exception of call-ups paid for with a Government of Canada acquisition card (credit card), call-ups made by telephone must be confirmed in writing on the document specified in the Standing Offer.
- (c) Call-ups against the Standing Offer paid for with the Government of Canada acquisition card (credit card) at point of sale must be accorded the same prices and conditions as any other Call-up.
- (d) Each Call-up results in a separate contract between Canada and the Offeror.
- (e) Each Call-up must specify the Standing Offer number, the applicable Category(ies), the item number, the Product name, model, and part number.
- (f) With the exception of call-ups paid for with a Government of Canada acquisition card (credit card), the Offeror acknowledges that no costs incurred before the receipt of a signed Call-Up can be charged to this Standing Offer or any Call-ups made against it.
- (g) The Offeror acknowledges and agrees that the terms and conditions set out in the Resulting Contract Clauses that form part of this Standing Offer apply to every Call-up made under this Standing Offer.

6.12 LIMITATION OF CALL-UPS

The Call-up Limitations are described in the Annex entitled "Call-up Limitations".

6.13 PRIORITY OF DOCUMENTS

The documents specified below form part of and are incorporated into the Standing Offer. If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears will prevail over the wording of any document that appears later on the list:

- (a) These Standing Offer clauses;

- (b) 2005 - General Conditions – Standing Offers – Goods or Services (2012-07-16);
- (c) The Resulting Contract Clauses;
- (d) Annex A: Technical Specifications;
- (e) Annex B: List of Products;
- (f) Annex C: Call-up Limitations;
- (g) Annex D: RVD Process;
- (h) Annex E: Request for Product Substitution / Price Revision Sheet;
- (i) Annex F: List of Authorized Resellers and Service Outlets;
- (j) Annex G: Standing Offer Activity Report;
- (k) Annex H: Benchmark Procedures and Set-up Instructions;
- (l) Annex I: Benchmark Ratings Analysis;
- (m) Annex J: Intertek/Offeror Agreement;
- (n) The Offeror's Offer dated _____, as clarified by _____.

6.14 CERTIFICATIONS MADE WITH THE OFFER

Compliance with the certifications provided by the Offeror is a condition of authorization of the Standing Offer and subject to verification by Canada during the entire Standing Offer Period for a given Category and during any resulting contract. If the Offeror does not comply with any certification or it is determined that any certification made by the Offeror in its offer is untrue, whether made knowingly or unknowingly, the Standing Offer Authority has the right to terminate any resulting contract(s) for default and set aside the Standing Offer.

6.15 REPRESENTATIONS AND WARRANTIES

- (a) The Offeror represents and warrants that, throughout the Standing Offer Period for a given Category:
 - (i) every System will be manufactured at a facility registered under ISO 9001: 2008 by an accredited registrar under the ISO 9001: 2008, whether that registration is held by the Offeror or the Manufacturer of the System.
 - (ii) all electrical equipment offered under this Standing Offer is certified or approved for use in accordance with the Canadian Electrical Code, Part 1, by a certification organization accredited by the Standards Council of Canada (SCC) and bears the certification logo that is applicable to the accredited agency. NOTE: Offerors may obtain further information by contacting the SCC at 613-238-3222.
 - (iii) in the case of each Product offered that includes a digital apparatus, an accredited agency has certified that it does not exceed the FCC Class B limits for radio noise emissions set out in the Radio Interference Regulations and the Products must bear the certification logo of the appropriate accredited agency.
- (b) Compliance with these representations and warranties is a condition of authorization of the Standing Offer and subject to verification by Canada during the entire Standing Offer Period for a given Category and during any resulting contract. If the Offeror does not comply with any of these representations or warranties or it is determined that any representation or warranty made by the Offeror is untrue, whether made knowingly or unknowingly, the Standing Offer Authority has the right to terminate any resulting contract(s) for default and set aside the Standing Offer.

6.16 APPLICABLE LAWS

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed by the laws in force in Ontario.

6.17 STANDING OFFER EXPANSION

PWGSC may, at any time, conduct further Requests for Standing Offers for new Groups, Categories and Sections, and the resulting offers may be incorporated into this series of National Master Standing Offers. Requirements for new Groups and Categories will be subject to an open competition posted on the Government Electronic Tendering Service. New Sections within an existing Category could be added by PWGSC having existing Offerors in that Category supplement their Standing Offers. In cases where changes to the NMSO terms and conditions have occurred since the Offeror was first issued a Standing Offer, Offerors may be requested to agree to apply the updated terms and conditions incorporated in a subsequent solicitation process to all Groups, Categories and Sections within their Standing Offer.

6.18 UPDATED INFORMATION ABOUT PRODUCTS

During the Standing Offer Period for a given Category, Offerors are requested to provide regular updates to the Technical Authority regarding upgrades to the capabilities of the Products, such as when additional operating systems are supported or new drivers become available.

6.19 MANDATORY PRODUCT SUBSTITUTIONS

- (a) If 50% or more of Offerors in a Category have migrated to next-generation technology, PWGSC reserves the right to require that any dated Products be up-dated. Offerors will be given written notice by the Standing Offer Authority to complete a substitution. Submission of a complete request for substitution must be completed within 30 days; otherwise, the identified Product will be removed from the Standing Offer. The "place" held by that System will be held pending submission of a request for substitution, provided it is made in accordance with these terms and within 60 days of the date of removal.
- (b) As newer technology becomes available, PWGSC may update the Categories in this Standing Offer. Only Offerors approved to offer Products (as indicated on the CAG website) within the existing Category will be invited to submit substitution requests to supply new Products for the replacement Category. The Standing Offer Authority would provide the applicable Offerors with written notice describing the replacement requirements. The period for requesting clarifications and submitting the substitution request would be a minimum of 30 days.

6.20 PRODUCT SUBSTITUTIONS INITIATED BY OFFEROR

- (a) **Conditions for Proposing Substitution(s):** The Offeror may propose a substitution for an existing Product authorized for supply under this Standing Offer, provided the proposed substitute meets or exceeds the specification(s) detailed in the Annex entitled "Technical Specifications", as well as meeting or exceeding the specifications of the existing Product being substituted in all respects unless otherwise specified. The price for the substitute Product must not exceed:
 - (i) the ceiling price for the Product originally offered in the Offeror's Offer;
 - (ii) the current published list price of the substitute Product, less any applicable Government discount; or
 - (iii) the price at which the substitute Product is generally available for purchase,
 - (iv) whichever is the lowest.
- (b) **Ceiling Prices:** During substitutions, situations can occur where it is difficult to use the ceiling price of an existing individual Product as a ceiling price limit for the new Product. In cases like this, price support may be requested by the Standing Offer Authority for the individual Product. This is at the sole discretion of the Standing Offer Authority. The Standing Offer Authority also has the right to

refuse any substitution that, in the Standing Offer Authority's view, does not represent good value to Canada.

- (c) **Substitution Costs:** The proposed substitution will be subject to technical assessment and any costs associated with the technical evaluation will be at the Offeror's expense.
- (d) **Benchmark Testing:** PWGSC may require that the Offeror demonstrate through testing (including compatibility testing) that the proposed substitute Product meets or exceeds the specifications in the Annex entitled "Technical Specifications" as well as meeting or exceeding the specifications of the existing Product being substituted. Testing will be done in accordance with the procedure describe in the Annex entitled "Benchmark Procedures". Canada is not obligated to evaluate any or all substitute Products proposed.
- (e) **Process for Requesting Substitution:** The request for substitution must be made by submitting to the Standing Offer Authority a completed "Request for Product Substitution/Price Revision Form", which must provide the full details on the nature of the substitution including the URL(s) for the applicable technical specification(s) of the Product, any necessary technical documentation, certifications, manuals and a copy of the current published list price for the Product. Upon request, the Offeror must provide information substantiating compliance with the requirements listed in the annex entitled "Technical Specifications". Also, a revised Annex entitled "List of Products" in both hard and electronic copy may be requested by Canada depending on the extent the of proposed Product substitution(s).
- (f) **Limit on Number of Systems from Same Offeror or Same Manufacturer:**
 - (i) **For Thin Client Categories:** Offerors are not permitted to have more than two Systems approved in any Category. No more than two Systems from any one Manufacturer will be approved in any Category. Proposed substitutions that would result in either case will not be approved.
 - (ii) **For all other Categories:** Offerors are not permitted to have more than two Systems approved in any Category. No more than two Systems from any one Manufacturer will be approved in any Category. Proposed substitutions that would result in either case will not be approved.
- (g) **Same System:** Offerors are not permitted to substitute a System that would result in the Same System (from the same Manufacturer) appearing more than once in a Category. Proposed substitutions that would result in this case will not be approved.
- (h) **Category Migration (Re-categorization as a Result of Substitution):** Whenever the nature of the proposed substitution is such that the replacement System meets the minimum specifications/requirements of a higher NMSO Category within the same Group of Categories (e.g., the Product is listed in Category X.1, but the proposed substitution satisfies the specifications in Category X.2), the replacement System may (if requested by the Offeror, and if space exists in that Category) be reclassified in the Category where it belongs (i.e. the highest Category in which it can meet all the mandatory specifications within the same Group), subject to the above-noted condition that Offerors and Manufacturers are not permitted to have more than two (or three for Thin Clients) Systems approved in any NMSO Category and the Same System cannot appear more than once in a Category. Whether to approve any request by an Offeror to re-categorize a System is within the discretion of the Standing Offer Authority.
- (i) **Acceptance of Substitution Discretionary:** Whether or not to accept or reject a proposed substitution is entirely within the discretion of Canada. If Canada does not accept a proposed substitution, the original Product will continue to be authorized under this Standing Offer, unless the Offeror withdraws that Product from the Standing Offer or that Product becomes End of Life (unless the article above entitled "Mandatory Product Substitutions" applies).
- (j) **Documentation of Accepted Substitution:** Approved substitutions cannot be supplied under a Call-up or in response to RVDs until posted on the CAG website. In the case of a Call-up, the substitution must be posted at the time the Call-up is issued; otherwise, the item posted on the CAG website at the time the Call-up was issued must be supplied. In the case of an RVD, only items posted on the CAG website at the time the RVD is issued can be offered in response to the RVD.

- (k) **Discontinued Products:** The Offeror must immediately notify the Standing Offer Authority if any Product listed in this Standing Offer is discontinued or is otherwise unavailable (e.g., End of Life). The Offeror may propose a substitution, as set out above, within 60 days of providing such notice. The discontinued or unavailable Product will be removed by PWGSC from this Standing Offer, but the “place” held by that Product will be held pending submission of a request for substitution, provided it is made in accordance with this Article and within 60 days of providing notice of the lack of availability, or by the next substitution deadline date, whichever is later. If a request for substitution is not made within the timelines described above, a substitution request might not be granted, in which case the Product would no longer be included in the Standing Offer without the possibility of being reinstated. For the purpose of calculating the Evaluated Price, a removed Product that had formed part of the evaluated price calculation will have a value assigned to it equal to the most expensive equivalent Product offered by the other Offerors in the same Category.
- (l) **Initially Unavailable Products:** Where Offerors are not required to offer all requested upgrades/components and not all Offerors provide a price, for the purpose of calculating the Evaluated Price, a value will be assigned equal to the most expensive equivalent Product in the same category. The Offeror may propose a substitution, provided it is in accordance with this Article. The price for the substitute Product must not exceed the highest ceiling price among all the Offerors. Should no one be offering that particular item in the category, then the first Offeror to offer the item will establish the ceiling price.
- (m) **Generational Changes:** Canada recognizes that, during the Standing Offer Period for a given Category, there may be a generational change in technology that may affect some of the mandatory requirements detailed in the Technical Specifications in the Annex entitled “Technical Specifications”. If this occurs, Canada will examine the available technologies, determine which would be acceptable for substitutions, and will advise all Offerors accordingly.
- (n) **One-for-one Substitutions Only:** Substitutions of Products will be on a “one-for-one” basis.
- (o) **Other Related Items – Product Substitutions or Additions:** For Other Related Items the Offeror may offer a limited number of items that relate directly to the system in that particular Category. PWGSC will not authorize professional services as Other Related Items. Whether or not to approve any proposed substitution or additional “Other Related Items” is within PWGSC’s sole discretion. Substitute and additional “Other Related Items” must be proposed by the Offeror by submitting a fully completed Annex entitled “List of Products”, together with the following:
- (i) the URL for Product specifications and/or sufficient documentation for the PWGSC team to complete a technical assessment of the Product;
 - (ii) a copy of published list prices, where available or price support;
 - (iii) if any substitute or Optional Item being offered is manufactured by a Manufacturer not already represented in Products already offered under the Offeror’s Standing Offer, a Manufacturer Certification in the form set out in the original solicitation that resulted in this Standing Offer being issued; and
 - (iv) the discount off the list price for each item being proposed. The Standing Offer Authority may require the Offeror to provide price support for any proposed Other Related Items at any time.
- (p) Canada recognizes that during the period of the Standing Offer some of the lower capacity hard disk drives and RAM, specified in the Annex entitled “List of Products”, may no longer be available for some of the Default Systems. If this occurs, then NMSO holders may request a substitution for the item for which the specified capacity is no longer available. However, to be acceptable, the current incremental capacity relationship between each of the items defining a hard disk drive or RAM must be maintained.
- (q) Canada recognizes that during the period of the Standing Offer the Operating System(s) specified in the Annex entitled “List of Products”, may no longer be available for purchase. If this occurs, then NMSO holders may request a substitution for the item and PWGSC will negotiate a fair and equitable replacement for all Offerors.

6.21 PRICE REVISIONS

- (a) **Price Refresh:** During the Standing Offer Period for a given Category, the Offeror may submit a request to reduce the current price being offered for any existing Standing Offer Product. Price increases will only be accepted in conjunction with a substitution to a maximum of the ceiling unit price. Price reductions and increases are both subject to the terms detailed in the article entitled “Product Substitutions Initiated by Offeror”; however, the substitution timelines do not apply to price reductions.
- (b) **Temporary Price Drop:** During the Standing Offer Period for a given Category, the Offeror may submit a request to temporarily reduce the current price being offered for an existing Standing Offer Product. The price drop period must be no shorter than 2 periods and no longer than 4 periods. At the end of the period, the Standing Offer price will revert to the price level in effect before the price drop.
- (c) **Process for Requesting Price Revision:** The request for a price revision must be made by submitting to the Administrative Authority a completed “Request for Product Substitution/Price Revision Form”, which must provide the full details on the nature of the revision.
- (d) **Acceptance of Price Revision Discretionary:** Whether or not to accept or reject a proposed price revision is entirely within the discretion of Canada. The Standing Offer Authority may also require a certification, before approving a revision, that the pricing satisfies the requirement described in the article entitled “Price Protection – Most Favoured Customer”. The Offeror agrees that no price revision will be effective until formally authorized by PWGSC in writing and posted on the CAG website.
- (e) **Published Price Drop:** If, during the Standing Offer Period for a given Category, a price decrease is published or publicly announced, the Offeror must provide the benefit of that decrease to Canada by submitting a completed “Request for Product Substitution/Price Revision Form” to reflect the published or publicly announced price reduction.
- (f) **Consistent Pricing:** An Offeror that has the same Product listed in multiple Categories must have a consistent price across each of those Categories. It is the Offeror’s responsibility, throughout the Standing Offer Period for a given Category, to respect this pricing rule. Where the Offeror lowers the price in one Category, Canada has the right to lower the price on the CAG for that Product in all other Categories where it is offered by the Offeror, if the Offeror has not done so.
- (g) **Pricing to be lower than specified Call-up Limitations:** Offerors should ensure that all unit pricing in Section 4 is below the specified Call-up Limitation for that Section. This will ensure that authorized users will be able to call-up the particular item when required.

6.22 PRODUCT REMOVAL

The Standing Offer Authority reserves the right to remove any offered Product. The Product will be removed by PWGSC from this Standing Offer, but the “place” held by that Product will be held pending submission of a request for substitution, provided it is made in accordance with the article entitled “Product Substitutions”. For the purposes of calculating Evaluated Price, a Product that has been removed but which forms part of the evaluated price calculation will have a value assigned to it equal to the most expensive equivalent Product offered by the other Offerors in the same Category.

6.23 TIME FOR PROCESSING OF PRODUCT SUBSTITUTIONS AND PRICE REVISION

- (a) The CAG website will be updated every two weeks throughout the year to incorporate all newly approved product substitutions and price revisions into the NMSO. These regular, pre-determined dates for the CAG web site updates will be indicated on the CAG website. PWGSC provides no guarantee regarding the time required to process substitution requests or price revision requests.
- (b) The Offeror acknowledges that the period from January 1 to March 31 is particularly busy for PWGSC and that there may be delays in processing price revision requests during that time. PWGSC will not delay the release of RVDs to coincide with substitutions. Offerors need to consider the possibility of delays in timing their requests.

- (c) Only product substitutions that are submitted and testing completed (if applicable) a minimum of two weeks before the posting date will be reflected in the next posting.
- (d) Only price revisions that are be completed and approved a minimum of three business days before the posting date will be reflected in the next posting.

6.24 WITHDRAWAL OR SUSPENSION OF AUTHORITY TO USE STANDING OFFER

- (a) Canada may, at any time, for operational reasons, withdraw authority from Identified Users to use the Standing Offer.
- (b) Canada may also, at any time, withdraw authority from Identified Users to use this Standing Offer if the Offeror breaches the terms of this Standing Offer or any Call-up, including:
 - (i) Delivery of Products not listed in this Standing Offer, except to the extent expressly authorized by this Standing Offer. Authorized Products are those that have been specifically approved in writing by PWGSC for inclusion in this Standing Offer and are posted on the CAG website on the date the Call-up is made;
 - (ii) Delivery of any Product that provides a lower level of performance than or does not meet the minimum specifications and requirements described in the Technical Specifications set out in Annex entitled "Technical Specifications" or the technical specifications of the Product approved for that Offeror and posted on the CAG website, whichever is higher;
 - (iii) Substitution of any Product without prior written authorization from the Standing Offer Authority;
 - (iv) Price revision without prior written authorization by PWGSC;
 - (v) Late deliveries;
 - (vi) Poor warranty/maintenance service;
 - (vii) Distribution or publication of advertising, including information included in supplier websites, that has not been approved by the Standing Offer Authority and/or that might be interpreted as suggesting that unauthorized items are available under the Standing Offer or providing any information that conflicts with any aspect of the terms and conditions, pricing, or availability of Systems currently available under this Standing Offer;
 - (viii) Failure to submit complete and accurate Standing Offer Activity Reports within the required time frames;
 - (ix) Breach of any of the specific terms and conditions detailed in this Standing Offer or any Call-up (e.g. failure to meet the hotline support requirements, failure to respect the Call-up limitations, change of manufacturing facility to a non-ISO 9001: 2008 certified facility, failure to maintain an environmental certification (such as EPSC) where an Offeror is gaining an advantage for being certified, etc.);
 - (x) Refusing a Call-up at any time or for any reason from any Identified User where the Call-up is for a Product currently listed and approved under this Standing Offer, or for options agreed to in a RVD Call-up; and
 - (xi) Listing (or failing to remove) any End of Life (EOL) System Products from this Standing Offer and the CAG website.
- (c) The Offeror acknowledges that Canada may suspend the authority of Identified Users to use the Offeror's Standing Offer for a period of up to 3 months on the first suspension. Any suspension may affect multiple Categories.
- (d) The Offeror acknowledges that Canada may suspend the authority of Identified Users to use the Offeror's Standing Offer for up to the remaining period of the Standing Offer or simply withdraw authority to use the Standing Offer entirely on any additional breach of any of the terms and conditions of the Standing Offer.

- (e) The Offeror acknowledges that Canada may publish information regarding the status of the Offeror's Offer, including the suspension or withdrawal of authority to use the Offeror's Standing Offer.
- (f) If an individual Call-up made under this Standing Offer is terminated, for default or otherwise, that termination will not automatically result in withdrawal of authority to use the Standing Offer. The Offeror acknowledges, however, that a default under any contract made under this Standing Offer may result in the suspension or withdrawal of authority to use this Standing Offer.
- (g) Any Offeror whose Authorized Reseller or Service Outlet breaches any of the terms and conditions of this Standing Offer or a Call-up may be asked to remove that Authorized Reseller or Service Outlet from its list of authorized agents or subcontractors, in addition to any other remedy PWGSC may invoke. A breach by an Authorized Reseller or Service Outlet is a breach by the Offeror itself.

6.25 EXPANSION OF OFFERORS FOLLOWING WITHDRAWAL OF AUTHORITY TO USE STANDING OFFER OR VOLUNTARY WITHDRAWAL OF OFFEROR

After permanently withdrawing authority to use any Offeror's Standing Offer or if any Offeror voluntarily withdraws its Standing Offer, in whole or in part, Canada may, in its sole discretion, do one or more of the following in respect of any Category:

- (a) leave the Category "as is" (i.e., the Standing Offers of the remaining Offerors will remain available for Call-ups and no new Offerors will be added);
- (b) call for new Offers in respect of one or more affected Categories through the Government Electronic Tendering Service; or
- (c) contact the Offeror (if any) whose offered System complied with all the requirements of the Request for Standing Offer that resulted in the issuance of this Standing Offer and was "next in line" under the evaluation methodology, but who was not issued a Standing Offer because it fell outside the acceptable price range. If that Offeror agrees to honour the ceiling price of the Offeror whose Standing Offer has been cancelled, that Offeror may be issued a Standing Offer in the applicable Category; if that Offeror does not wish to honour the previous Offeror's pricing, Canada may, but will have no obligation to, contact the next-ranked Offeror.

PART 7 RESULTING CONTRACT CLAUSES

Note to Offerors: The clauses contained in these Resulting Contract Clauses are intended to form the basis of any contract resulting from Standing Offers issued as a result of this solicitation. Except where specifically set out in these Resulting Call-up clauses, acceptance by Offerors of all the clauses is a mandatory requirement of this solicitation. No modification or other terms and conditions included in the Offeror's Offer will be applicable to any Standing Offer issued or the contracts made under such Standing Offers, despite the fact that the Offeror's Offer may become part of the Standing Offer.

Offerors submitting an offer containing statements implying that the offer is conditional on modification of these clauses or containing terms and conditions that purport to supersede these clauses will be considered non-compliant.

Offerors with concerns regarding the provisions of these Resulting Call-up clauses should raise such concerns in accordance with the Enquiries provision of this solicitation. If additional legal issues are raised by an offer, Canada reserves the right to address such issues in any Standing Offer issued as a result of this solicitation (including the Resulting Call-up clauses incorporated in that Standing Offer). If the additional provisions are unacceptable to the Offeror, the Offeror may withdraw its offer.

The following clauses apply to and form part of any contract resulting from a call-up against the Standing Offer.

7.1 REQUIREMENT

- (a) The Contractor agrees to supply to the Client the goods and services described in the Call-up against the Standing Offer in accordance with, and at the prices set out in, this Contract.
- (b) **Client:** Any reference to “Client” or “Clients” includes any Government Department, Departmental Corporation or Agency, or other Crown entity described in the *Financial Administration Act* (as amended from time to time), and any other party for which the Department of Public Works and Government Services has been authorized to act from time to time under section 16 of the *Department of Public Works and Government Services Act*. With respect to each contract, the Client is the Identified User identified in the Call-up or Request for Volume Discount resulting in the contract.
- (c) **Reorganization of Client:** The Contractor's obligation to perform the Work will not be affected by (and no additional fees will be payable as a result of) the renaming, reorganization, reconfiguration, or restructuring of the Client. The reorganization, reconfiguration and restructuring of the Client includes the privatization of the Client, its merger with another entity, or its dissolution, where that dissolution is followed by the creation of another entity or entities with mandates similar to the original Client.
- (d) **Transfer of Products to Another Identified User:** The Contractor agrees that Canada may transfer the Products and the licenses to use the Licensed Software running on them from one Identified User to another, without affecting the Contractor's obligation to provide the services described in the Contract or the Contractor's obligation to deliver additional quantities in accordance with the Contract.

7.2 STANDARD CLAUSES AND CONDITIONS

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<http://sacc.pwgsc.gc.ca/sacc/index-e.jsp>) issued by Public Works and Government Services Canada.

7.3 GENERAL CONDITIONS

2030 (2012-07-16), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

7.4 SUPPLEMENTAL GENERAL CONDITIONS

4001 (2010-08-16), Supplemental General Conditions - Hardware Purchase, Lease and Maintenance, as modified in these Articles of Agreement, apply to and form part of the Contract.

7.5 SECURITY REQUIREMENT

- (a) Unless otherwise specified in the Call-up form, the security classification of this Contract is “UNCLASSIFIED”. However, the Contractor must treat as confidential, during as well as after the provision of goods or services contracted for, any information of a character confidential to the affairs of Canada, to which the Contractor’s servants, subcontractors or agents become privy. All personnel assigned to provide services must have a current security clearance to the level specified in the Call-up, granted by the Canadian Industrial Security Directorate.
- (b) Should it become necessary, during the Contract Period, for the Client to invoke further security measures, the Contractor must comply with the security classification at that time.

7.6 CONTRACT PERIOD

- (a) **Contract Period:** The “**Contract Period**” is the entire period of time during which the Contractor is obliged to perform the Work, which:
- (b) begins on the date the Call-up is awarded; and
- (c) ends on the day that the Hardware Warranty Period for the most recently purchased Product expires, or on the day that the final warranty work initiated during the Hardware Warranty Period is complete, whichever is later.

7.7 DELIVERY AND INSTALLATION OF PRODUCTS

- (a) **Delivery of Products:** The Contractor agrees to supply, deliver, configure, install (if required by a Call-up), integrate and implement (if required by the Call-up), provide warranty, maintenance, software support services and documentation for the Computer System(s) and other Products ordered under this Contract (as specified in the Call-up), to the Identified User, according to the prices, terms and conditions in this Contract. Products must be delivered on an “as and when requested” basis to the location(s) specified in the Call-up, which may be locations anywhere in Canada, excluding any locations in areas subject to one of the Comprehensive Land Claims Agreements (CLCAs), when the Call-up is made in accordance with this NMSO.
- (b) **Contact after receipt of Call-up:** Upon receipt of the Call-up, the Contractor must acknowledge receipt and advise the Identified User of its best delivery date (which date must be no later than the Delivery Date). If the required number of Products exceeds or threatens to exceed the Contractor’s ability to supply by the Delivery Date, the Contractor must immediately advise the Contracting Authority and the Identified User. The Contracting Authority will have the option of terminating the Call-up for default, extending the delivery date, or of accepting late delivery. Deliveries received after the Delivery Date will be subject to the discounts described in the clause entitled “Discounts for Late Deliveries and Reimbursement of Reprocurement Costs”.
- (c) **Contact before Delivery:** Unless otherwise specified in the Call-up or the Identified User has agreed in writing to other arrangements, the Contractor must contact the Identified User (or any individual designated as “Delivery Contact” in the Call-up) a minimum of twenty-four (24) hours prior to the delivery of any equipment. Failure to make contact may result in the shipment being refused at destination; any re-shipping costs will be the Contractor’s responsibility.
- (d) **Delivery Report:** If specified in the Call-up, the Contractor must provide the Identified User with a Delivery Report detailing the delivery location and asset number of all Systems delivered within two weeks of delivery.
- (e) **Licensed Software:**

- (i) The Products must be delivered with any software specified in the Call-up or required for the Products to function in accordance with the Technical Specifications in the Annex entitled "Technical Specifications" (the "**Licensed Software**"). The unit price(s) include all fees and costs associated with the licenses to the Licensed Software, as well as the software maintenance and support services described in this Contract, which must be provided throughout the Hardware Maintenance Period.
- (ii) The Licensed Software must be the current release and, unless otherwise specified, require no further research or development to meet the Technical Specifications (and any other functionality described in the Standing Offer or Call-up).
- (iii) The Licensed Software must be supported by, and fully compatible with the Product(s) up to the limit of the Product's expansion capability (with no additional licensing fees payable). All software must be completely integrated with and fully interfaced to the Product.
- (iv) This Contract grants to Canada the perpetual license (i.e., the license to use the Licensed Software is not a "demo" model and does not expire) to install, copy, deploy and use the Licensed Software with the Product(s) in accordance with the terms of this Contract (which does not include any terms or conditions contained in a shrink-wrap or click-wrap license, or other form of license delivered with the Licensed Software).
- (v) Canada acknowledges that the Licensed Software is only licensed to Canada, not sold.
- (vi) If the Licensed Software includes any features, functions or characteristics ("**Disabling Codes**") that might cause the Licensed Software to be unusable by Canada without passwords, authorization codes or similar information, the Contractor must provide to Canada, in advance and on an ongoing basis (including after the Contract Period) all the information required by Canada to continue to use the Licensed Software with the Products.
- (vii) The Contractor must deliver the Products together with documentation about the Licensed Software that contains enough detail to permit the Identified User to access, install, copy, deploy, test and use all features of the Licensed Software. The documentation regarding the Licensed Software must be provided in either the same language as the Hardware Documentation, or must be bilingual (French and English), as specified by Canada.
- (f) **Installation of System:** The Contractor must, if specified in the Call-up, provide on-site installation of the Default System(s) or System Upgrades and System Components. On-site installation consists of:
 - (i) Unpack equipment (if appropriate);
 - (ii) Inspect for damage;
 - (iii) Assemble/Set up system(s);
 - (iv) Install per product specification;
 - (v) Run standard test/diagnostic;
 - (vi) Install appropriate service tools;
 - (vii) Co-ordinate the removal of packing materials (if requested); and
 - (viii) Provide basic operating information, such as:
 - (A) Powering on and off;
 - (B) Running applications (eg: vendor provided OS); and
 - (C) Invoking routine preventative maintenance.
- (g) **Default Configuration:** The Contractor must deliver all Systems in accordance with the System configuration, as defined in the Annex entitled "Technical Specifications". If the Call-up specifically requests changes to the Default Configuration the alternate configuration must be in accordance with Annex C (Call-up Limitations) of the Standing Offer.

(h) Exercising Options to Purchase Optional Additional Quantities:

- (i) If this Contract was issued following a Request for Volume Discount (RVD) process under the Standing Offer, options to purchase additional quantities specified in the RVD may be exercised through a maximum of 3 amendments to the RVD Call-up at any time within 12 months of the RVD Call-up date, unless the RVD specifies a longer period or an alternative number of amendments. Canada is under no obligation to purchase any optional quantities.
- (ii) If this Contract was made by an Identified User issuing a Call-up directly, the Contractor agrees not to supply any additional quantities (i.e., additional quantities may only be specified in Call-ups made by the Contracting Authority).
- (i) **Substitution of Products:** If this Contract was issued following a Request for Volume Discount (RVD) process under the Standing Offer, and if Canada exercises its option to purchase additional quantities specified in the RVD and the item has, since the time the RVD Call-up was issued, been the subject of a substitution under the Contractor's Standing Offer, the Contractor may notify the Standing Offer Authority and substitute a System and/or Component currently listed on the Contractor's Standing Offer on the CAG website that meets the specifications of the RVD Call-up; however, the Contractor must supply the substituted item at the original price provided for in the RVD Call-up. Substitutions will only be permitted if and when Canada exercises its option to purchase additional quantities; for greater certainty, substitutions will not be permitted for the delivery of the original quantities required to be delivered under this Contract.
- (j) **Definitions:** Any capitalized terms not defined in this Contract have the meaning given to them in the Standing Offer or the General Conditions or Supplemental General Conditions incorporated into this Contract by reference.

7.8 INSPECTION AND ACCEPTANCE

- (a) Each Product and its supply, delivery, configuration, installation (if required by a Call-up), integration and implementation (if required by the Call-up) including the warranty, maintenance, software support services and associated documentation (as specified in the Call-up) is subject to inspection and acceptance by the Identified User in accordance with Supplemental General Conditions 4001. If the Products do not correspond to the System(s) (including configuration), or Component(s) offered under the Standing Offer or otherwise specified in the Call-up, or if the Products do not meet the Technical Specifications described in the Annex entitled "Technical Specifications" and the Call-up, the Contractor will be in default of this Contract and Canada may reject the Products or require that they be corrected at the sole expense of the Contractor before accepting them. No payment for any Product is due under the Contract unless the Product is accepted. No restocking fees or other charges will apply to Products that are not accepted.
- (b) If the Identified User is the Department of National Defence, the Contractor must, upon request at no additional cost to Canada, submit form CF-1280, Certificate of Acceptance and Release, as detailed in the Call-up, following completion of acceptance.

7.9 BASIS OF PAYMENT

- (a) For the supply, delivery, configuration, installation (if required by a Call-up) and integration and implementation (if required by the Call-up) of the Products described in the Call-up, including the associated documentation, and including the Hardware Maintenance Service, the Contractor will be paid:
 - (i) if this Contract results from a Call-up made directly by an Identified User within the Call-up Limitations set out in the Standing Offer, the current unit prices published on the CAG website on the date the Call-up is issued; or
 - (ii) if this Contract results from a Call-up made by the Contracting Authority, the unit prices set out in the Call-up.

- (b) All prices are in Canadian dollars, F.O.B. Destination, Goods and Services Tax (GST)/Harmonized Sales Tax (HST) extra, and Customs Duty included, if applicable.
- (c) Provincial Disposal Surcharge: All unit prices are exclusive of any disposal surcharge. Any provincial disposal surcharge is extra to the price and will be paid by Canada.

7.10 LIMITATION OF EXPENDITURE

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.11 METHOD OF PAYMENT

- (a) With the exception of call-ups paid for with a Government of Canada acquisition card (credit card Canada will pay the Contractor following delivery of the Products in accordance with the payment provisions of the Contract if:
- (b) An accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (c) All such documents have been verified by Canada; and
- (d) The Work delivery has been accepted by Canada provided, however, that where warranty, maintenance or support services are included in the price of any deliverable, payment will be made for that deliverable, notwithstanding that all of the warranty, maintenance and support services have yet to be performed.

Note to Offerors: Offerors are requested to indicate whether or not Government of Canada Acquisition Cards (credit cards) will be accepted for payment of call-ups against the Standing Offer Submission Form. This has no impact on evaluations. If an Offeror responds with a "no", (d) and (e) below will not be included in their resulting offer.

- (e) Credit cards will be accepted for payment of invoices up until the 15th calendar day of the payment period as set out in the Contract. Payment of invoices made by credit card on or before this date will not be subject to the Payment and Interest on Overdue Accounts provisions, as set out in general conditions 2030. Payment of invoices after this date will only be accepted by Government of Canada cheque, direct deposit, or electronic funds transfer, and will be subject to the above-mentioned general conditions provisions.
- (f) Government of Canada Acquisition Cards will only be used for Call-ups raised by Identified Users valued at \$100,000.00 (GST/HST included) or less.

7.12 DISCOUNTS FOR LATE DELIVERIES AND REIMBURSEMENT OF REPROCUREMENT COSTS

- (a) If any Products are not delivered by the Delivery Date, and Canada does not terminate the Call-up for default and instead provides the Contractor with additional time to make delivery, the Contractor agrees to reduce the price of the Products by:
 - (i) 2% of the value of the Products delivered late, if they are delivered within 1 week of the Delivery Date;
 - (ii) 5% for late delivery within 2 weeks of the Delivery Date; and
 - (iii) 10% for late delivery more than 2 weeks after the Delivery Date.
- (b) If any Products are not configured as required by a Call-up, and Canada does not terminate the Call-up for default and instead provides the Contractor with an opportunity to re-configure the Products in accordance with the Call-up, the Contractor agrees to reduce the price of the Products by 5% of the total value of the Products that are NOT in accordance with the System configuration or the alternative configuration described in the Call-up, in addition to the liquidated damages payable for late delivery

of the Products (i.e., where the re-configured goods are delivered after the Delivery Date, the price must also be discounted as described in sub-article (a)).

- (c) These discounts constitute liquidated damages and, in total, will not exceed 15% of the total value of the applicable Call-up. The Parties agree that these amounts are their best pre-estimate of the loss to Canada in the event of the defaults described, and that they are not intended to be, nor are they to be construed as, a penalty.
- (d) If this Contract is terminated by Canada for default, the Contractor must reimburse Canada for any difference in cost between the contract price for the Products and the cost of procuring the Products from another supplier.
- (e) To collect the liquidated damages, Canada has the right to hold back, drawback, deduct or set off from and against any money Canada owes to the Contractor from time to time.
- (f) Nothing in this article limits the rights and remedies to which Canada is otherwise entitled under this Contract (including the right to terminate the Contract for default), the Standing Offer, or the law generally.

7.13 PRICE PROTECTION - MOST FAVOURED CUSTOMER

- (a) Items (b) to (h) apply to non-evaluated and non-NMSO products only. Items (b) to (h) do not apply to products bid in response to a Request for Volume Discount ("RVD).
- (b) To the best of the Contractor's knowledge, the prices it is charging to Canada under the Contract are not higher than the lowest prices/rates that it has charged any other customer (including other Government of Canada entities) for a similar quality and quantity of goods and services in the year before the Contract was awarded.
- (c) The Contractor also agrees that, if after the date of this Contract it reduces the prices it charges to other customers for a similar quality and quantity of goods and services, it will reduce the prices for all remaining deliveries under this Contract (with notice to the Contracting Authority).
- (d) At any time during the 6 years after making the final payment under this Contract or until all claims and disputes then outstanding are settled, whichever is later, Canada has the right to audit the Contractor's records to verify that it is receiving (or has received) these prices. Canada will give at least 2 weeks of notice before the audit.
- (e) During this audit, the Contractor must produce invoices and contracts for similar quality or quantity of goods or services sold to other customers from one year before the Contract was awarded until the end of the Contract Period. If the Contractor is required by law or by contract to keep another customer's information confidential, the Contractor may black out any information on the invoices or contracts that could reasonably reveal the identity of the customer (such as the customer's name and address), as long as the Contractor provides, together with the invoices and contracts, a certification from its Senior Financial Officer describing the profile of the customer (e.g., whether it is a public sector or private sector customer and the customer's size and service locations).
- (f) In determining whether the goods and services sold to another customer were of similar quality, the terms and conditions of the contract under which those goods and services were delivered will be considered, if those terms and conditions are reasonably likely to have had a material effect on pricing.
- (g) If Canada's audit reveals that the Contractor charged lower prices for a similar quality and quantity of goods and services under any contract where deliveries were made in the year before the Contract was awarded, or that the Contractor delivered additional goods or services under the Contract after reducing its prices for other customers but without reducing the prices under the Contract, then the Contractor must pay to Canada the difference between the amount charged to Canada and the amount charged to the other customer, up to a maximum of 25% of the value of the Contract.
- (h) Canada acknowledges that this commitment does not extend to prices charged by any affiliates of the Contractor.

7.14 INVOICING INSTRUCTIONS

- (a) The Contractor must submit invoices in accordance with the information required in the General Conditions.
- (b) The Contractor's invoice must include a separate line item for each Product delivered.
- (c) By submitting invoices, the Contractor is certifying that the goods and services have been delivered and that all charges are in accordance with the Basis of Payment provision of the Contract, including any charges for work performed by subcontractors.
- (d) The Contractor must provide the original copy of each invoice to the Client identified in the Call-up. A copy of the invoice must be provided to the Standing Offer Authority when specified in the Call-up document.

7.15 CERTIFICATIONS

Compliance with the certifications provided by the Contractor in its offer is a condition of the Contract and subject to verification by Canada during the entire Contract Period. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its offer is untrue, whether made knowingly or unknowingly, Canada has the right, under the default provision of the Contract, to terminate the Contract for default.

7.16 APPLICABLE LAWS

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

7.17 PRIORITY OF DOCUMENTS

With respect to individual contracts made under the Standing Offer, if there is a discrepancy between the wording of any documents that appear on the following list, the wording of the document that first appears on the list has priority over the wording of any document that appears later on the list:

- (a) The separate Call-up document, if it exists (including any appendices);
- (b) These Articles of Agreement;
- (c) Annex A, Technical Specifications
- (d) Supplemental General Conditions 4001 (2011-05-16), Hardware Purchase, Lease and Maintenance;
- (e) General Conditions 2030 (2012-07-16), Higher Complexity – Goods; and
- (f) Standing Offer E60EJ-11000C/XXX/EJ. Although these Articles of Agreement form part of the Standing Offer, for matters concerning the Standing Offer as a whole (rather than a specific contract), the priority of documents clause in the Standing Offer applies. For matters concerning a specific contract, the Priority of Documents clause in the Standing Offer does not apply.

7.18 INSURANCE REQUIREMENTS

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

7.19 LIMITATION OF LIABILITY - INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY

- (a) This section applies despite any other provision of the Contract and replaces the section of the general conditions entitled "Liability". Any reference in this section to damages caused by the Contractor also includes damages caused by its employees, as well as its subcontractors, agents, and representatives, and any of their employees. This section applies regardless of whether the claim is

based in contract, tort, or another cause of action. The Contractor is not liable to Canada with respect to the performance of or failure to perform the Contract, except as described in this section and in any section of the Contract pre-establishing any liquidated damages. The Contractor is only liable for indirect, special or consequential damages to the extent described in this section, even if it has been made aware of the potential for those damages.

(b) First Party Liability:

- (i) The Contractor is fully liable for all damages to Canada, including indirect, special or consequential damages, caused by the Contractor's performance or failure to perform the Contract that relate to:
 - (A) any infringement of intellectual property rights to the extent the Contractor breaches the section of the general conditions entitled "Intellectual Property Infringement and Royalties";
 - (B) physical injury, including death.
- (ii) The Contractor is liable for all direct damages caused by the Contractor's performance or failure to perform the Contract affecting real or tangible personal property owned, possessed, or occupied by Canada.
- (iii) Each of the Parties is liable for all direct damages resulting from its breach of confidentiality under the Contract. Each of the Parties is also liable for all indirect, special or consequential damages in respect of its unauthorized disclosure of the other Party's trade secrets (or trade secrets of a third party provided by one Party to another under the Contract) relating to information technology.
- (iv) The Contractor is liable for all direct damages relating to any encumbrance or claim relating to any portion of the Work for which Canada has made any payment. This does not apply to encumbrances or claims relating to intellectual property rights, which are addressed under (i) above.
- (v) The Contractor is also liable for any other direct damages to Canada caused by the Contractor's performance or failure to perform the Contract that relate to:
 - (A) any breach of the warranty obligations under the Contract, up to the total amount paid by Canada (including any applicable taxes) for the goods and services affected by the breach of warranty; and
 - (B) any other direct damages, including all identifiable direct costs to Canada associated with re-procuring the Work from another party if the Contract is terminated either in whole or in part for default, up to an aggregate maximum for this subparagraph (B) of the greater of 0.5 times the total estimated cost (meaning the dollar amount shown on the first page of the Contract in the block titled "Total Estimated Cost" or shown on each call-up, purchase order or other document used to order goods or services under this instrument), or \$1,000,000.00.

In any case, the total liability of the Contractor under subparagraph (v) will not exceed the total estimated cost (as defined above) for the Contract or \$1,000,000.00, whichever is more.
- (vi) If Canada's records or data are harmed as a result of the Contractor's negligence or willful act, the Contractor's only liability is, at the Contractor's own expense, to restore Canada's records and data using the most recent back-up kept by Canada. Canada is responsible for maintaining an adequate back-up of its records and data.

(c) Third Party Claims:

- (i) Regardless of whether a third party makes its claim against Canada or the Contractor, each Party agrees that it is liable for any damages that it causes to any third party in connection with the Contract as set out in a settlement agreement or as finally determined by a court of competent jurisdiction, where the court determines that the Parties are jointly and severally liable or that one Party is solely and directly liable to the third party. The amount of the liability will be the amount set out in the settlement agreement or determined by the court to have been the Party's portion of the

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damages to the third party. No settlement agreement is binding on a Party unless its authorized representative has approved the agreement in writing.

- (ii) If Canada is required, as a result of joint and several liability, to pay a third party in respect of damages caused by the Contractor, the Contractor must reimburse Canada by the amount finally determined by a court of competent jurisdiction to be the Contractor's portion of the damages to the third party. However, despite paragraph (i), with respect to special, indirect, and consequential damages of third parties covered by this section, the Contractor is only liable for reimbursing Canada for the Contractor's portion of those damages that Canada is required by a court to pay to a third party as a result of joint and several liability that relate to the infringement of a third party's intellectual property rights; physical injury of a third party, including death; damages affecting a third party's real or tangible personal property; liens or encumbrances on any portion of the Work; or breach of confidentiality.
- (iii) The Parties are only liable to one another for damages to third parties to the extent described in this subparagraph (c).

7.20 HARDWARE

With respect to the provisions of Supplemental General Conditions 4001:

Part III of 4001 applies to the Contract (Additional Conditions: Purchase)	Yes
Part IV of 4001 applies to the Contract (Additional Conditions: Lease)	No
Part V of 4001 applies to the Contract (Additional Conditions: Maintenance)	Yes
Delivery Location	<p>As indicated in the Call-up issued against the Standing Offer, which may identify any one or more locations in Canada, except locations subject to one or more of the Comprehensive Land Claims Agreements.</p> <p>Canada reserves the right to adjust the location of acceptance for the equipment specified in any Call-up. Acceptance may take place at the Contractor's plant or at a warehouse facility. Goods will still remain FOB Destination where the vendor is liable for delivery to all end locations including all shipping costs. The Warranty Period begins on the date received by the site authority at the final destination.</p> <p>If this Contract was issued following a RVD process under the Standing Offer, and if Canada exercises its option to purchase additional quantities specified in the RVD, Canada reserves the right to adjust the Delivery Location(s).</p>
Installation Site (if required by a Call-up)	As indicated in the Call-up issued against the Standing Offer, which may identify any one or more locations in Canada, except locations subject to one or more of the Comprehensive Land Claims Agreements. If not indicated, the installation site is the same as the delivery location.
Delivery Date	For Products in the Unix Group: as set out in Supplemental General Conditions 4001 under the definition of Delivery Date (i.e., 30 days), unless another

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	<p>Delivery Date is specified in the Call-up.</p> <p>For all other Products: Despite 4001, delivery to locations within a radius of 100km from any population center of at least 30,000 inhabitants must be completed within the following period (the "Delivery Date"):</p> <ul style="list-style-type: none"> • 15 calendar days for orders of 20 units or fewer; • 20 calendar days for orders of 21 to 1000 units; or • 30 calendar days for orders of more than 1000 units. <p>For all other locations, deliveries must be completed with 30 calendar days.</p>
Contractor must deliver Hardware Documentation	Yes, one complete set with each Product delivered.
Contractor must update Hardware Documentation throughout Contract Period	Yes
Hardware Documentation must include maintenance documentation	No
Language of Hardware Documentation	The Hardware Documentation must be delivered in either English or French, based on the Identified User's selection, as indicated in the Call-up. If the Call-up does not indicate the Identified User's choice of language, the Hardware Documentation must be delivered in English. If available, the Hardware Documentation must be delivered in bilingual format.
Special Delivery Requirements	No
Special Site Delivery or Installation Requirements	No
Contractor must Install Hardware at time of Delivery	As per Call-up issued against the Standing Offer
Contractor must Integrate and Configure Hardware at time of Installation	As per Call-up issued against the Standing Offer
Hardware is part of a System	Yes, the System includes the Hardware and the Licensed Software.
Hardware Warranty Period	<p>Despite 4001, the Hardware Warranty Period is three (3) years from the date of acceptance, unless a different Hardware Warranty Period is indicated in the Call-up.</p> <p>Notebook batteries are not included in the 3-year warranty period. Notwithstanding the General and Supplemental General Conditions, the Warranty Period for Notebook Batteries is one (1) year.</p>
Hardware Maintenance Period	The Hardware Maintenance Period is the same as the Hardware Warranty Period.
Parts Supplied as Part of Hardware Maintenance Service	Parts used to provide Hardware Maintenance Service may be refurbished parts, as long as they are certified "equal

	quality” to new equipment.
Class of Maintenance Service	<p>There are four classes of maintenance service:</p> <ul style="list-style-type: none"> • Standard On-Site Maintenance Service, as described in 4001 and modified in these Articles of Agreement; • 4-hour Response On-site Maintenance Service, as described below; • Enhanced On-Site Maintenance Service, as described below; and • Return-to-Service-Outlet Maintenance Service, as described in 4001 and modified in these Articles of Agreement. <p>Despite 4001, Section 26(1), if the Call-up does not specify a class of service, the Contractor must provide On-Site Maintenance Service.</p>
Principal Period of Maintenance (PPM)	<p>Despite 4001, the PPM for Standard On-site Maintenance Service and 4-hour Response On-site Maintenance Service is 8:00 to 17:00 local time where the Product is in use, Monday through Friday, excluding statutory holidays observed by the federal government at that location. For Enhanced On-Site Maintenance Service, the PPM is 24 hours a day, 7 days a week, 365 days a year.</p>
Toll-free Telephone Number for Maintenance Service	[to be completed with information from the Offeror at the time of Standing Offer issuance]
Website for Maintenance Service	[to be completed with information from the Offeror at the time of Standing Offer issuance]

7.21 **HARDWARE MAINTENANCE SERVICE**

In addition to 4001, Section 25, the following applies to the Hardware Maintenance Service:

- (a) **Manufacturer’s Warranty:** If the Contractor wishes to rely on the Manufacturer’s warranty to provide the Hardware Maintenance Services, the Contractor must complete all warranty registration requirements with any Manufacturers on behalf of the Identified User. The Offeror must also notify the Identified User in writing of any requirement to register for international warranty coverage required if the end user will travel abroad with Products supplied under this Contract. Regardless of any Manufacturer’s warranty, the responsibility for providing the Hardware Maintenance Services remains with the Contractor.
- (b) **Magnetic Media:** To maintain the confidentiality of information that may be recorded on magnetic media incorporated into a Product requiring Hardware Maintenance Services, the magnetic media in all components requiring replacement (or the entire Product if the media is not removable) must remain in the possession of Canada. Faulty discs and hard drives will not be returned to the Manufacturer and Offerors need to factor that into their cost.
- (c) **Hotline Services:** With respect to the hotline services required to be provided under Supplemental General Conditions 4001, Section 25(5)(a), the Contractor must issue a trouble ticket for all end user problems that cannot be resolved over the telephone, regardless of the class of service being provided.

7.22 **CLASSES OF HARDWARE MAINTENANCE SERVICE**

In addition to 4001, Section 26, the following applies to the Classes Hardware Maintenance Service:

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- (a) **4-hour Response On-site Maintenance Service:** For some categories, an upgraded class of On-site Hardware Maintenance Service is available, if indicated in the Call-up, referred to as “4-hour Response, On-site Maintenance Service”. This service is an upgrade subject to the additional charge set out on the CAG or in the Contract.
- (i) 4-hour Response On-Site Maintenance Service is the same in all respects as On-Site Maintenance Service, except for the response time.
- (ii) For 4-hour Response On-Site Maintenance Service, the Contractor must arrive on site to perform Hardware Maintenance Service on any Product for which a problem is reported at the location in Canada where the Product was in use at the time the problem occurred, within the following timeframes:
- (A) where the System is located within a radius of 100km from any population centre of at least 100,000 people, a service technician must respond by telephone within 1 hour of the telephone call for service and a service technician must arrive on site within 4 hours of the initial call requesting service;
- (B) where the System is located within a radius of 100km from any population centre of 30,000 to 99,999 people, a service technician must respond by telephone within 1 hour of the telephone call for service and a service technician must arrive on site within 24 hours of the initial call requesting service; and
- (C) for all other locations within Canada, a service technician must respond by telephone within 1 hour of the telephone call for service and a service technician must arrive on site within 48 hours of the initial call requesting service
- (b) **Enhanced On-site Maintenance Service:** For some categories, an upgraded class of On-site Hardware Maintenance Service is available, if indicated in the Call-up, referred to as “Enhanced On-site Maintenance Service”. This service is an upgrade subject to the additional charge set out on the CAG or in the Contract.
- (i) Enhanced On-site Maintenance Service is the same in all respects as 4-hour Response On-Site Maintenance Service, except for the PPM. The PPM for Enhanced On-Site Maintenance Service is set out in the hardware table above.
- (c) **Upgrades, Components and Other Related Items:** If a System is ordered with an upgraded class of Hardware Maintenance Service and/or an extended Hardware Warranty Period, all Upgrades, Components and Other Related Items ordered at the same time as, and for use with, the System will be covered by the same upgraded Hardware Maintenance Service and Hardware Warranty Period.

7.23 SOFTWARE MAINTENANCE AND SUPPORT SERVICES

As part of the Hardware Maintenance Service, the Contractor must also perform the following software maintenance and support services throughout the Hardware Maintenance Period:

- (a) provide Canada with the most recent minor revision, maintenance release and patch version of all of the Licensed Software during the Hardware Maintenance Period, as soon as they are available;
- (b) provide both routine and emergency code corrections and fixes;
- (c) provide telephone and on-site assistance with software problem resolution through the hotline;
- (d) provide on-line use of the Contractor’s software diagnostic routines, support tools, and services as and when requested, if available, through the Contractor’s NMSO website at **[to be filled in upon NMSO award]**.
- (e) provide assistance in the correction of software errors, and assistance in System tuning and configuration;
- (f) provide telephone response within one hour of a request for assistance during the PPM. If telephone assistance is not satisfactory to the end user and where a Product is rendered inoperative by a software

problem that cannot be remedied by the Contractor within 24 hours of the request for assistance (or the beginning of the next PPM, if the request for assistance is made outside of the PPM), the Contractor must provide a solution or circumvention;

7.24 PRODUCT REPLACEMENT SERVICE

If any Product fails to perform in accordance with the Technical Specifications and functional descriptions contained or referenced in the Call-up and requires remedial Hardware Maintenance Service three or more times during the Hardware Maintenance Period, the Contractor must, if requested by the Identified User, replace the Product at no cost with another item meeting the specifications of the Product. The replacement Product must be delivered no later than 15 days after the request is received. The Contractor must provide Operating System restoration and hardware-specific configuration on the replacement Product at no charge.

7.25 WARRANTY/MAINTENANCE SERVICES INFORMATION FOR END USERS

The Contractor must include the following information with each System when it is delivered:

- (a) the toll-free number to be used for Hardware Maintenance Service;
- (b) the Hardware Warranty Period and applicable dates for each System in accordance with the Call-up;
- (c) the information that will be required by the call center to provide any Hardware Maintenance Services; and
- (d) details of the Hardware Maintenance Services being provided under this Contract, including the definition of the Principal Period of Maintenance, repair times, response times, etc. all in accordance with the provisions of this Contract.
- (e) The information in (a) through (d) must be attached to each System in the form of an information sticker.

7.26 USER-SERVICEABLE PRODUCTS

The Contractor agrees that the Identified User's technical support staff may perform maintenance and/or upgrades to the Products and replace user-replaceable or user-serviceable components without affecting the obligation of the Contractor to provide the Hardware Maintenance Services.

7.27 ACCESS TO CANADA'S FACILITIES

The Contractor is responsible for timely identification of the need for access to Canada's facilities, equipment and personnel, if required (for example, for delivery and installation). Subject to the approval of the Identified User, arrangements will be made with the Contractor for access. The Contractor agrees to comply with all standing orders or other regulations in force on the site where the work is performed, including those relating to the safety of persons on the site or the protection of property against loss or damage from any and all causes including fire.

7.28 LOSS OR DAMAGE TO MAGNETIC RECORDS OR DOCUMENTATION

If, in the course of transit from the Contractor's site to the specified delivery site or while otherwise in the Contractor's care, magnetically recorded information and/or documentation becomes damaged or lost, including accidental erasure, it must be replaced at the Contractor's expense.

7.29 SAFEGUARDING ELECTRONIC MEDIA

Before using them on Canada's equipment or sending them to Canada, the Contractor must use a regularly updated product to scan electronically all electronic media used to perform the Work for computer viruses and other coding intended to cause malfunctions. The Contractor must notify Canada if any electronic media used for the Work are found to contain computer viruses or other coding intended to cause malfunctions.

ANNEX A: TECHNICAL SPECIFICATIONS - SERVERS

1.0 INTRODUCTION

- (a) This document addresses the requirement for eight (8) categories of Rack / Pedestal based systems and eight (8) Blade based systems. The categories are as follows:

Note: Categories shown in italics are not being competed at this time.
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- (i) *Category 1.0V Low-cost Computing (LCC) 1-Socket Pedestal or Rack-optimized 2U;*
 - (ii) Category 1.0S Rack-Optimized 2-Socket 1U;
 - (iii) Category 2.0S Rack-Optimized 2-Socket 2U;
 - (iv) Category 2.1S Rack-Optimized Enterprise 2-Socket 2U;
 - (v) Category 3.0S Pedestal-To-Rack Convertible Departmental 2-Socket 5U;
 - (vi) Category 4.0S Rack-Mount Departmental 4-Socket 4U;
 - (vii) *Category 4.1S Rack-Mount Enterprise 4-Socket 4U;*
 - (viii) *Category 4.2S Rack-Mount Enterprise 8-Socket 10U;*
 - (ix) Category 1.0B Blade Chassis / Enclosure;
 - (x) Category 2.0B 2-Socket Blade;
 - (xi) Category 2.1B 2-Socket Blade Enterprise;
 - (xii) Category 3.0B 4-Socket Blade;
 - (xiii) *Category 3.1B 4-Socket Blade Enterprise;*
 - (xiv) *Category 4.0B Entry-Level UNIX 1 RISC or EPIC Processor Based;*
 - (xv) *Category 4.1B Mid-Level UNIX 2-to-4 RISC or EPIC Processor Based; and*
 - (xvi) *Category 5.0B 1-to-2 Socket HPC - Graphics Intensive Blade.*
- (b) The Systems must:
- (i) Be commercially available;
 - (ii) Use a single chassis / enclosure with the exception of Categories 4.2S, 3.1B and 4.1B where a maximum of 2 is allowed provided the configuration runs and recognizes the Operating System under 3.2 Operating System and Hypervisor as one system image;
 - (iii) Be based on industry standard x86 64-Bit architecture from either Intel or AMD with the exception of Categories 4.0B and 4.1B where systems must be based on either 64-Bit RISC or EPIC architecture;
 - (iv) Be compatible with the installed base of Intel Xeon, and AMD Opteron systems within the Federal Government and conform to industry standard architecture with the exception of Categories 4.0B and 4.1B;
 - (v) Be certified to operate under one of the currently released UNIX Operating System variants if offered under categories 4.0B and 4.1B: IBM's AIX, Hewlett-Packard's HP-UX, or Oracle's Solaris;
 - (vi) Provide 100% binary compatibility to any of the existing UNIX OS variants identified in (v) if offered under categories 4.0B and 4.1B;
 - (vii) Not be embellished from its original purpose (e.g.: portable / mobile turned server or desktop / workstation turned server);

- (viii) Be fully operational and in ready-to-use state, containing all major components and all requisite ancillary items. These include but are not limited to: Chassis / enclosure, motherboard / system board, processor / processor modules / memory / memory cards, UNIX Operating System (for Categories 4.0B & 4.1B), power supplies, cooling fans, internal / external cables to the System, I/O cables, etc. to allow the system to satisfy the requirements in the environments identified in 3.2, Operating System and Hypervisor.

2.0 CONFIGURATIONS

Systems must meet or exceed the technical specifications outlined in this annex.

2.1 CATEGORY 1.0V LOW-COST COMPUTING (LCC) 1-SOCKET PEDESTAL OR RACK-OPTIMIZED 2U:

- (a) Competed under E60EJ-11000C/E – currently not being tendered.

2.2 CATEGORY 1.0S RACK-OPTIMIZED 2-SOCKET 1U:

- (a) Be available in a rack form-factor with a maximum size of 1U (1.75").
- (b) Have two (2) Intel Xeon E5-26xx or two (2) AMD Opteron 6284SE processors.
- (c) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (d) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (e) Support a minimum of 512 Gigabyte (GB) of Quad-Channel PC3-12800 (DDR3-1600) Registered DIMMs.
- (f) Include a SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, 1, 5 and 6 (double-parity) with 256MB of ECC (BBWC) Battery-Backed-Write-Cache.
- (g) Have six (6) vacant hot-swap drive bays to accommodate the installation of SAS Hard Disk Drives.
- (h) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (i) Have one (1) internal ISO9660 compliant 8X speed DVD-ROM drive or via virtual media (eg: ILO or ILOM) that facilitates access to a remote optical media.
- (j) Have two (2) vacant 64bit PCI-Express Gen 2 (minimum 4x lane) slots or better after configuration.
- (k) Provide Keyboard, Mouse, and Serial ports or three (3) USB ports.
- (l) Have one (1) management port. A serial port or NIC port may be used for this function. If a NIC port is used, it must not be from item (h) above.
- (m) Have an integrated video graphics controller supporting a minimum of 1024 x 768 resolution.
- (n) Have a minimum of two (2) hot-swap / hot plug power supplies one of which must be redundant.
- (o) Support 110 to 125 VAC or 200 to 240 VAC @ 50Hz & 60Hz.
- (p) Provide hot-swap / hot-plug redundant cooling fans. These fans are in addition to the power supply fans and any CPU fans (if offered). These fans must either be constantly operational or thermostatically controlled.
- (q) Provide sufficient cooling to permit full density rack mounting (without spacing).

2.3 CATEGORY 2.0S RACK-OPTIMIZED 2-SOCKET 2U:

- (a) Be available in a rack form-factor with a maximum size of 2U (3.5").
- (b) Have two (2) Intel Xeon E5-26xx or two (2) AMD Opteron 6284SE processors.
- (c) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon or HyperTransport Technology 3.0 (HT3) for AMD Opteron.

- (d) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (e) Support a minimum of 512 Gigabyte (GB) of Quad-Channel PC3-12800 (DDR3-1600) Registered DIMMs.
- (f) Include a SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, 1, 5 and 6 (double-parity) with 512MB of ECC (BBWC) Battery-Backed-Write-Cache.
- (g) Have sixteen (16) vacant hot-swap drive bays to accommodate the installation of SAS Hard Disk Drives.
- (h) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (i) Have one (1) internal ISO9660 compliant 8X speed DVD-ROM drive or via virtual media (eg: ILO or ILOM) that facilitates access to a remote optical media.
- (j) Have five (5) vacant 64bit PCI-Express Gen 2 (minimum 4x lane) slots or better after configuration.
- (k) Provide Keyboard, Mouse, and Serial ports or three (3) USB ports.
- (l) Have one (1) management port. A serial port or NIC port may be used for this function. If a NIC port is used, it must not be from item (h) above.
- (m) Have an integrated video graphics controller supporting a minimum of 1024 x 768 resolution.
- (n) Have a minimum of two (2) hot-swap / hot plug power supplies one of which must be redundant.
- (o) Support 110 to 125 VAC or 200 to 240 VAC @ 50Hz & 60Hz.
- (p) Provide hot-swap / hot-plug redundant cooling fans. These fans are in addition to the power supply fans and any CPU fans (if offered). These fans must either be constantly operational or thermostatically controlled.
- (q) Provide sufficient cooling to permit full density rack mounting (without spacing).

2.4 CATEGORY 2.1S RACK-OPTIMIZED ENTERPRISE 2-SOCKET 2U:

- (a) Be available in a rack form-factor with a maximum size of 2U (3.5").
- (b) Have two (2) Intel Xeon E7-2870 or equivalent processors.
- (c) Have no less than four (4) QuickPath Interconnect (QPI) links for Intel Xeon or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (d) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (e) Support a minimum of 1 Terabyte (TB) of Quad-Channel PC3-8500R (DDR3-1066) Registered DIMMs.
- (f) Include a SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, 1, 5 and 6 (double-parity) with 512MB of ECC (BBWC) Battery-Backed-Write-Cache.
- (g) Have six (6) vacant hot-swap drive bays to accommodate the installation of SAS Hard Disk Drives.
- (h) Have an dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (i) Have one (1) internal ISO9660 compliant 8X speed DVD-ROM drive or via virtual media (eg: ILO or ILOM) that facilitates access to a remote optical media.
- (j) Have four (4) vacant 64bit PCI-Express Gen 2 (minimum 4x lane) slots or better after configuration.
- (k) Provide Keyboard, Mouse, and Serial ports or three (3) USB ports.

- (l) Have one (1) management port. A serial port or NIC port may be used for this function. If a NIC port is used, it must not be from item (h) above.
- (m) Have an integrated video graphics controller supporting a minimum of 1024 x 768 resolution.
- (n) Have a minimum of two (2) hot-swap / hot plug power supplies one of which must be redundant.
- (o) Support 110 to 125 VAC or 200 to 240 VAC @ 50Hz & 60Hz.
- (p) Provide hot-swap / hot-plug redundant cooling fans. These fans are in addition to the power supply fans and any CPU fans (if offered). These fans must either be constantly operational or thermostatically controlled.
- (q) Provide sufficient cooling to permit full density rack mounting (without spacing).
- (r) Have DDDC (Double Device Data Correction) capability in support of 3.2 (a) and (b).
- (s) Have MCA (Machine Check Architecture) Recovery in support of 3.2 (a), (b) and (c).

2.5 CATEGORY 3.0S PEDESTAL-TO-RACK CONVERTIBLE DEPARTMENTAL 2-SOCKET 5U:

- (a) Be available in a rack form-factor with a maximum size of 5U (8.75")
- (b) Be available in a tower or pedestal configuration
- (c) Have two (2) Intel Xeon E5-26xx or two (2) AMD Opteron 6284SE processors.
- (d) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (e) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (f) Support a minimum of 512 Gigabyte (GB) of Quad-Channel PC3-12800 (DDR3-1600) Registered DIMMs.
- (g) Include a SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, 1, 5 and 6 (double-parity) with 512MB of ECC (BBWC) Battery-Backed-Write-Cache.
- (h) Have twenty-four (24) vacant hot-swap drive bays to accommodate the installation of SAS Hard Disk Drives.
- (i) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (j) Have one (1) internal ISO9660 compliant 8X speed DVD-ROM drive or via virtual media (eg: ILO or ILOM) that facilitates access to a remote optical media.
- (k) Have seven (7) vacant 64bit PCI-Express Gen 2 (minimum 4x lane) slots or better after configuration.
- (l) Provide Keyboard, Mouse, and Serial ports or three (3) USB ports.
- (m) Have one (1) management port. A serial port or NIC port may be used for this function. If a NIC port is used, it must not be from item (i) above.
- (n) Have an integrated video graphics controller supporting a minimum of 1024 x 768 resolution.
- (o) Have a minimum of two (2) hot-swap / hot plug power supplies one of which must be redundant.
- (p) Support 110 to 125 VAC or 200 to 240 VAC @ 50Hz & 60Hz.
- (q) Provide hot-swap / hot-plug redundant cooling fans. These fans are in addition to the power supply fans and any CPU fans (if offered). These fans must either be constantly operational or thermostatically controlled.
- (r) Provide sufficient cooling to permit full density rack mounting (without spacing).

2.6 CATEGORY 4.0S RACK-MOUNT DEPARTMENTAL 4-SOCKET 4U:

- (a) Be available in a rack form-factor with a maximum size of 4U (7").
- (b) Have four (4) Intel Xeon E5-46xx or four (4) AMD Opteron 6284SE processors.
- (c) Have no less than four (4) QuickPath Interconnect (QPI) links for Intel Xeon or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (d) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (e) Support a minimum of 1 Terabyte (TB) of Quad-Channel PC3-8500R (DDR3-1066) Registered DIMMs.
- (f) Include a SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, 1, 5 and 6 (double-parity) with 512MB of ECC (BBWC) Battery-Backed-Write-Cache.
- (g) Have four (4) vacant hot-swap drive bays to accommodate the installation of SAS Hard Disk Drives.
- (h) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (i) Have one (1) internal ISO9660 compliant 8X speed DVD-ROM drive or via virtual media (eg: ILO or ILOM) that facilitates access to a remote optical media.
- (j) Have six (6) vacant 64bit PCI-Express Gen 2 (minimum 4x lane) and/or PCI-X (minimum 100mhz) slots or better after configuration.
- (k) Provide Keyboard, Mouse, and Serial ports or three (3) USB ports.
- (l) Have one (1) management port. A serial port or NIC port may be used for this function. If a NIC port is used, it must not be from item (h) above.
- (m) Have an integrated video graphics controller supporting a minimum of 1024 x 768 resolution.
- (n) Have a minimum of two (2) hot-swap / hot plug power supplies one of which must be redundant.
- (o) Support 110 to 125 VAC or 200 to 240 VAC @ 50Hz & 60Hz.
- (p) Provide hot-swap / hot-plug redundant cooling fans. These fans are in addition to the power supply fans and any CPU fans (if offered). These fans must either be constantly operational or thermostatically controlled.
- (q) Provide sufficient cooling to permit full density rack mounting (without spacing).

2.7 CATEGORY 4.1S RACK-MOUNT ENTERPRISE 4-SOCKET 4U:

- (a) Competed under E60EJ-11000C/E – currently not being tendered.

2.8 CATEGORY 4.2S RACK-MOUNT ENTERPRISE 8-SOCKET 10U:

- (a) Competed under E60EJ-11000C/E – currently not being tendered.

BLADE SYSTEM PLATFORM

A valid blade system platform must include the following sub-systems and must meet or exceed the technical specifications in 2.9 (Chassis/Enclosure) and whichever Categories 2.10 – 2.16 (Blade Systems) are offered:

- (a) Blade Chassis / Enclosure (Frame)
- (b) Power Sub-system (Pooled)
- (c) Networking / Interconnect
- (d) Port Connectivity

- | |
|------------------------------------|
| (e) Chassis / Enclosure Management |
| (f) Blade Systems |

2.9 CATEGORY 1.0B BLADE CHASSIS / ENCLOSURE:

(a) BLADE CHASSIS / ENCLOSURE (FRAME):

- (i) Must be no greater than 10U (17.5") including all cooling, power, management device, and network interconnect while adhering to all other stated minimum specifications listed in this document.
- (ii) Provide redundant interconnect devices designed for and hosted inside the chassis / enclosure. However, if external devices are provided, they must be purpose built by the blade system platform manufacturer only for switching and management operations of the blade system product line and must be explicitly required for standard operation of the blade system platform. Furthermore, these external devices may not be purchased separately from the chassis / enclosure.
- (iii) Standard PC or "white box" server motherboards in trays will be deemed non-compliant.
- (iv) A valid blade system platform must include one other category from 2.10 to 2.16.

(b) POWER SUB-SYSTEM (POOLED)

(i) Power

- (A) Include a power sub-system that is internal to the chassis / enclosure.
- (B) Be sufficient to support any configuration (e.g.: from a single blade system up to the maximum number of fully configured blade systems and redundant network interconnects allowed in the chassis / enclosure.)
- (C) Be fully redundant allowing the blade system platform to continue uninterrupted operation in the event of a power supply failure until such time as a replacement can be installed.
- (D) Redundancy may be achieved either through a second power supply or through an N+1 approach to power protection.
- (E) Provide a fully redundant AC power input from multiple discrete AC power sources.
- (F) The power sub-system must have the ability to connect to 3-Phase North America 2 x NEMA L15-30p or to Single Phase 6 x IEC-320 C20.

(ii) Cooling

- (A) Include a cooling sub-system that is internal to the chassis / enclosure.
- (B) Be sufficient to support any configuration (e.g.: from a single blade system up to the maximum number of fully configured blade systems and redundant network interconnects allowed in the chassis / enclosure.)
- (C) Be fully redundant allowing the blade system platform to continue uninterrupted operation in the event of a cooling unit failure until such time as a replacement can be installed.
- (D) Redundancy may be achieved either through a second cooling unit or through an N+1 approach to cooling protection.

(c) NETWORKING/INTERCONNECT: Network, SAN & Fabric

Vendors must provide either Option (1) 10GbE switch & 8Gb FC switch (discrete redundant 10Gb Ethernet and Fibre Channel switching devices for blade systems that use separate network cards and fibre channel host bus adapters), Option (2) FCoE switch (converged 10Gb Ethernet switches that support Fibre Channel over Ethernet if the proposed blade system and chassis / enclosure support
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Converged Network Adapters) or Option (3) 10GbE switch (discrete redundant 10Gb Ethernet switching device for blade systems that use separate network cards).

Option 1:

- (i) 10GbE Switch
 - (A) The blade system platform must include a pair of redundant 10Gb Ethernet OSI Layer-2 switches that are integral to the blade system chassis / enclosure for aggregating connections to each blade system network card in the proposed chassis / enclosure.
 - (B) The redundant 10Gb Ethernet switches must provide downlinks to each blade system in the chassis / enclosure such that each blade system has a discrete 10Gb network connection to each of the switches.
 - (C) The 10Gb Ethernet switches must each support a minimum of 4 X 10Gb uplinks to outside network environments exclusive of any Fibre Channel uplink requirements.
 - (D) The uplink ports from the 10Gb Ethernet switches must be in an industry standard SFP+ form factor accommodating both optical SWL transceivers and CX4, CX1, or Twinax copper cables.
 - (E) The KR based Ethernet switches must meet the following standards:
 - (I) IEEE 802.3ae 10 Gigabit Ethernet
 - (II) IEEE 802.3 Ethernet
 - (III) IEEE 802.1Q VLAN tagging
 - (IV) IEEE 802.1p Quality of Service (QoS)
 - (V) IEEE 802.3x Flow Control
 - (VI) IEEE 802.1w Rapid Spanning Tree Protocol
 - (VII) Jumbo Frames of sizes up to 9000 bytes
 - (VIII) Internet Group Management Protocol (IGMP) Snooping Versions 2
- (ii) 8Gb FC Switch
 - (A) The blade system platform must include a pair of redundant Fibre Channel 8Gb switches that are integral to the blade system chassis / enclosure for aggregating Fibre Channel connections to each blade system in the chassis / enclosure.
 - (B) The 8Gb Fibre Channel switches must support a minimum of 4 X 8Gb uplinks to outside storage area network environments exclusive of any 10Gb Ethernet uplink requirements.
 - (C) The uplink ports from the 8Gb Fibre Channel switches must be in an industry standard SFP+ form factor accommodating optical 8Gb fibre channel transceivers with the ability to auto-negotiate to 4Gb.
 - (D) The 8Gb Fibre Channel switches must have the ability to seamlessly connect and pass through all blade system Fibre Channel connections to existing external Fibre Channel Storage network fabrics without the need for enabling interoperability mode in the existing fabrics by interfacing with NPIV enabled Fibre Channel ports in those existing storage fabrics.

Option 2:

- (iii) FCoE Switch
 - (A) The blade system platform must include a pair of redundant 10Gb OSI Layer 2 Ethernet switches that support Fibre Channel over Ethernet and are able to provide both Ethernet and ANSI T11 FC-BB-5 (when ratified as a standard) Fibre Channel over Ethernet protocol to each blade system in the chassis / enclosure.

- (B) The redundant 10Gb FCoE switches must provide downlinks to each blade system in the chassis / enclosure such that each blade system has a discrete 10Gb network connection to each of the switches.
- (C) The uplink ports from the 10Gb Ethernet FCoE switches must be in an industry standard SFP+ form factor accommodating both optical SWL transceivers and CX4, CX1, or Twinax copper cables and the 8Gb uplink ports from the FCoE switches must be in an industry standard SFP+ form factor accommodating optical 8Gb fibre channel transceivers respectively.
- (D) The 10Gb Ethernet FCoE capable switches must support a minimum of 4 X 10Gb uplinks to outside network environments and a minimum of 4 X 8Gb uplinks to outside storage area network environments simultaneously.
- (E) The 10Gb FCoE based switch it must meet the following standards:
 - (I) IEEE 802.3ae 10 Gigabit Ethernet
 - (II) IEEE 802.3 Ethernet
 - (III) IEEE 802.1Q VLAN tagging
 - (IV) IEEE 802.1p Quality of Service (QoS)
 - (V) IEEE 802.3x Flow Control
 - (VI) IEEE 802.1w Rapid Spanning Tree Protocol
 - (VII) Jumbo Frames of sizes up to 9000 bytes
 - (VIII) Internet Group Management Protocol (IGMP) Snooping Versions 2
 - (IX) IEEE 802.1Qbb Priority-based Flow Control (PFC)
 - (X) IEEE 802.1Qaz Enhanced Transmission Selection (ETS) and Data Centre Bridging eXchange (DCBX)
 - (XI) ANSI T11 FC-BB-5 Fibre Channel over Ethernet
- (F) The 8Gb uplink ports from 10Gb FCoE switches must be in an industry standard SFP+ form factor accommodating optical 8Gb fibre channel transceivers respectively.
- (G) The 10Gb FCoE switches must support a facility to seamlessly connect and pass through all blade server Fibre Channel over Ethernet connections to existing external Fibre Channel Storage network fabrics without the need for enabling interoperability mode in the existing fabrics by interfacing with NPIV enabled Fibre Channel ports in those existing storage fabrics.
- (H) The 10Gb Ethernet FCoE switches must be either:
 - (I) Integrated 10Gb FCoE switching modules that functionally fit internally to and are physically part of the blade system chassis / enclosure
 - (II) External switching devices that are logically managed and are port extensions of 10Gb Ethernet and 4Gb Fibre Channel over Ethernet ports in each of the blade systems in one or more chassis / enclosure.

Option 3:

(iv) 10GbE Switch

- (A) The blade system platform must include a pair of redundant 10Gb Ethernet OSI Layer-2 switches that are integral to the blade system chassis / enclosure for aggregating connections to each blade system network card in the proposed chassis / enclosure.
- (B) The redundant 10Gb Ethernet switches must provide downlinks to each blade system in the chassis / enclosure such that each blade system has a discrete 10Gb network connection to each of the switches.
- (C) The 10Gb Ethernet switches must each support a minimum of 4 X 10Gb uplinks to outside network environments exclusive of any Fibre Channel uplink requirements.

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- (D) The uplink ports from the 10Gb Ethernet switches must be in an industry standard SFP+ form factor accommodating both optical SWL transceivers and CX4, CX1, or Twinax copper cables.
 - (E) The KR based Ethernet switches must meet the following standards:
 - (I) IEEE 802.3ae 10 Gigabit Ethernet
 - (II) IEEE 802.3 Ethernet
 - (III) IEEE 802.1Q VLAN tagging
 - (IV) IEEE 802.1p Quality of Service (QoS)
 - (V) IEEE 802.3x Flow Control
 - (VI) IEEE 802.1w Rapid Spanning Tree Protocol
 - (VII) Jumbo Frames of sizes up to 9000 bytes
 - (VIII) Internet Group Management Protocol (IGMP) Snooping Versions 2
 - (d) **I/O Ports Connectivity**

Provide connectivity to a keyboard, mouse and video monitor. Must provide an internal (either to the chassis/enclosure or blade system) or external (via ILO or ILOM connectivity) compliant 8X speed DVD-ROM drive.
 - (e) **CHASSIS / ENCLOSURE MANAGEMENT**
 - (i) Include chassis / enclosure management device designed for and hosted inside the blade chassis / enclosure.
 - (ii) Include management software that is fully licensed for the blade systems, hardware components, and software. All management software must be specific to the model and family of blade system platform.
 - (iii) At a minimum, the management device and software must:
 - (A) Facilitate the rapid deployment (eg: provisioning of an operating system) of blade systems.
 - (B) Facilitate single sign-on to blade servers resident in the chassis / enclosure.
 - (C) Facilitate power capping capabilities inside the blade chassis / enclosure.
 - (D) Provide capabilities for monitoring thermal, fan and power status.
 - (E) Provide capabilities for powering on and off individual systems, setting SNMP traps, and recycling "hung" systems.
 - (F) Provide capabilities for pre-failure alerts on CPU, RAM, and DISK
 - (G) Provide capabilities for asset reporting and inventory information for all devices in the chassis / enclosure.
 - (H) Provide a secure web-based console redirection for monitoring and management of the chassis and each blade-based server.
 - (f) **BLADE SYSTEMS**
 - (i) Be fully "hot pluggable" with respect to the blade chassis / enclosure and feature on-board diagnostics.
 - (ii) Have an LED or LCD display that indicates the system status.
 - (iii) Have a latching mechanism which secures the blade system into the chassis / enclosure.
 - (iv) Have an electrical and mechanical design of the blade system such that insertion or removal is accomplished without the need for the manual connection of cables such as power, I/O or network interfaces.

- (v) Have an embedded Ethernet connector in the backplane of the chassis / enclosure that is hardwired to either a pass-through or switch device.
- (vi) Include management module or management integrated into each blade system (Applies to 2.10 up to 2.16).

2.10 CATEGORY 2.0B 2-SOCKET BLADE SYSTEM:

- (a) Have two (2) Intel Xeon E5-26xx or two (2) AMD Opteron 6284SE processors.
- (b) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon, or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (c) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (d) Support a minimum of 384 Gigabyte (GB) of Quad-Channel PC3-12800 (DDR3-1600) Registered DIMMs.
- (e) Include an integrated SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, and 1.
- (f) Have two (2) vacant drive connections to accommodate the installation of SAS Hard Disk Drives or SATA Solid State Disks.
- (g) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (h) Have one (1) vacant 64bit PCI-Express Gen 2 (minimum 4X lane) mezzanine slots or better after configuration.
- (i) Provide connection port for keyboard, mouse and video on each blade-based server, or a single chassis-based KVM switch capability.
- (j) Support PXE boot

2.11 CATEGORY 2.1B 2-SOCKET BLADE ENTERPRISE SYSTEM:

- (a) Have two (2) Intel Xeon E7-2870 or equivalent processors.
- (b) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon, or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (c) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (d) Support a minimum of 512 Gigabyte (GB) of Quad-Channel PC3-8500R (DDR3-1066) Registered DIMMs per blade-based server.
- (e) Include an integrated SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, and 1.
- (f) Have two (2) vacant drive connections to accommodate the installation of SAS Hard Disk Drives or SATA Solid State Disks.
- (g) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (h) Have one (1) vacant 64bit PCI-Express Gen 2 (minimum 4X lane) mezzanine slots or better after configuration.
- (i) Provide connection port for keyboard, mouse and video on each blade-based server, or a single chassis-based KVM switch capability.
- (j) Support PXE boot.
- (k) Have DDDC (Double Device Data Correction) capability in support of 3.2 (a) & (b).
- (l) Have MCA (Machine Check Architecture) Recovery in support of 3.2 (a), (b) and (c).

2.12 CATEGORY 3.0B 4-SOCKET BLADE SYSTEM:

- (a) Have four (4) Intel Xeon E5-46XX or equivalent processors.
- (b) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon, or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (c) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (d) Support a minimum of 512 Gigabyte (GB) of Quad-Channel PC3-8500R (DDR3-1066) Registered DIMMs per blade-based server.
- (e) Include an integrated SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, and 1.
- (f) Have two (2) vacant drive connections to accommodate the installation of SAS Hard Disk Drives or SATA Solid State Disks.
- (g) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (h) Have two (2) vacant 64bit PCI-Express Gen 2 (minimum 4X lane) mezzanine slots or better after configuration.
- (i) Provide connection port for keyboard, mouse and video on each blade-based server, or a single chassis-based KVM switch capability.
- (j) Support PXE boot

2.13 CATEGORY 3.1B 4-SOCKET BLADE ENTERPRISE SYSTEM:

- (a) Have four (4) Intel Xeon E7-4870 or equivalent processors.
- (b) Have no less than two (2) QuickPath Interconnect (QPI) links for Intel Xeon, or HyperTransport Technology 3.0 (HT3) for AMD Opteron.
- (c) Provide hardware virtualization (e.g.: Intel VT or AMD-V 2.0) capability.
- (d) Support a minimum of 1 Terabyte (TB) of Quad-Channel PC3-8500R (DDR3-1066) Registered DIMMs per blade-based server.
- (e) Include an integrated SAS controller with sufficient ports supporting the maximum installable disk drives. Controller must have minimum support for RAID 0, and 1.
- (f) Have two (2) vacant drive connections to accommodate the installation of SAS Hard Disk Drives or SATA Solid State Disks.
- (g) Have an integrated dual-port 100/1000Base-T or integrated 10GSFP+ network interface adapter capable of fault tolerance (FT) and load balancing.
- (h) Have two (2) vacant 64bit PCI-Express Gen 2 (minimum 4X lane) mezzanine slots or better after configuration.
- (i) Provide connection port for keyboard, mouse and video on each blade-based server, or a single chassis-based KVM switch capability.
- (j) Support PXE boot
- (k) Have DDDC (Double Device Data Correction) capability in support of 3.2 (a) & (b).
- (l) Have MCA (Machine Check Architecture) Recovery in support of 3.2 (a), (b) and (c).

2.14 CATEGORY 4.0B ENTRY-LEVEL UNIX 1 RISC OR EPIC PROCESSOR BASED SYSTEM:

- (a) Competed under E60EJ-11000C/E – currently not being tendered.

2.15 CATEGORY 4.1B MID-LEVEL UNIX 2-TO-4 RISC OR EPIC PROCESSOR BASED SYSTEM:

- (a) Competed under E60EJ-11000C/E – currently not being tendered.

2.16 CATEGORY 5.0B 1-TO-2 SOCKET HPC – GRAPHICS INTENSIVE BLADE SYSTEM:

- (a) To be competed under a future solicitation – currently not being tendered.

3.0 CERTIFICATIONS

3.1 HARDWARE CERTIFICATION:

- (a) All high voltage electrical equipment supplied under the Standing Offer must be certified or approved for use in accordance with the Canadian Electrical Code, Part 1, before delivery, by an agency accredited by the Standards Council of Canada. All Systems must bear the certification logo that applies to the accredited agency. Any System not bearing a logo from the accredited agency described below will be considered non-compliant. Current accredited agencies include, but are not exclusively comprised of:
- (i) Canadian Standards Association (CSA);
 - (ii) Underwriters' Laboratory Inc. (cUL) (cULus);
 - (iii) Underwriters' Laboratories of Canada (ULC);
 - (iv) Entela Canada (cEntela);
 - (v) Intertek Testing Services (cETL);
 - (vi) Met Laboratories (cMET); and
 - (vii) OMNI Environmental Services Inc (cOTL).
 - (viii) TUV Rhineland of North America (cTUV).
- (b) Systems must comply with the emission limits and labeling requirements set out in the Interference Causing Standard ICES-003, "Digital Apparatus", published by Industry Canada. Systems that have obtained Industry Canada ICES-003 approval that have been assembled from tested components and have not undergone entire system testing will be considered noncompliant. All devices tested must bear the appropriate labels indicating trade name, model number, and the words indicating Industry Canada ICES-003 compliance.

3.2 OPERATING SYSTEM AND HYPERVISOR - ALL X86 CATEGORIES ONLY

- (a) Systems must have the following Microsoft Windows Server logo: Certified for Windows Server 2008 R2 and Certified for Windows Server 2008. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets.
- (b) Systems must have the following Linux certification: Red Hat Enterprise Linux 6 or SUSE Linux Enterprise Server 11 and SLES 11 with XEN certifications (logo level). This certification must be performed on the entire system and must fall under what a certified system is as defined by Red Hat and SUSE. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets.
- (c) Except for Category 1.0V, systems must must have the following VMWare certification: Certified for vSphere 4.X and 5.X server level. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets.
- (d) Except for Category 1.0V, systems must have vSphere 4.X and 5.X I/O level certified devices.
- (e) With the exception of VMWare I/O device certification on (d) above, all operating system and hypervisor certifications must be performed on the entire system and not performed autonomously on separate components (e.g.: motherboard / systemboard certification tested separately, hard disk drive controller tested separately). Component level certification or a collection of certified components forming a system is not acceptable. An entire certified system is defined as CPU type and speed, motherboard / system board brand and model, BIOS/firmware brand and major revision (this includes the first number in front of the decimal and the first two numbers after the decimal

(e.g. 4.XX)). The certification agreement must be between the OEM and the respective Operating System and Hypervisor certification laboratory. Category 1.0V is excluded from this requirement.

- (f) Certifications performed on identical Xeon or Opteron processor based servers in a faster model class are acceptable (e.g. E7-8870 certifications will apply to an identically equipped E7-8830 system).
- (g) Systems must provide full support for Microsoft's Windows Server Failover Clustering.
- (h) Systems must natively support or be logo'd for IPv6 Silver Ready (Phase-1) and commit to achieving Phase-2 or Gold Ready status when available.

4.0 GREEN PROCUREMENT INITIATIVES

- (a) In support of the Canadian Federal Government's Sustainable Development Strategy which includes policies on Green Procurement, system manufacturers must commit to a comprehensive, nationally recognized environmental standards for:
 - (i) The reduction or elimination of environmentally hazardous materials
 - (ii) Design for reuse and recycling
 - (iii) Energy efficiency
 - (iv) End of Life Management for reuse and recycling
 - (v) Environmental stewardship in the manufacturing process
 - (vi) Packaging
- (b) All systems must be RoHS Certified.
- (c) The OEM must be a member in good standing of EPSC – Electronic Product Stewardship of Canada.
- (d) The OEM must be ISO 14001 certified.
- (e) The OEM must have a "Contributor Membership" level to www.thegreengrid.org in good standing.
- (f) The OEM must have a plan or strategy in place for achieving EPA's evolving Energy Star compliancy requirements for all systems.
- (g) The OEM must have a plan or strategy in place for achieving 80 PLUS compliancy requirements for all systems.
- (h) As Category technical requirements are modified and new Categories are added through the processes outlined in this NMSO, additional emerging requirements in support of Green Procurement and Sustainable Development will be introduced.

5.0 VALUE-ADDED VENDOR SUPPORT

5.1 PERSONNEL SUPPORT – ALL CATEGORIES EXCEPT 4.0B & 4.1B

- (a) The Offeror must have on-staff, or through an authorized national dealer network, an existing and experienced technical support infrastructure, staffed with personnel that is trained on the Offeror's products. This technical support infrastructure must consist of no less than twenty-five (25) support personnel available across North America. Of those twenty five technical support personnel, a minimum of seven (7) must be (MCSE) Microsoft Certified Systems Engineer with MCITP for Windows Server 2008, a minimum of seven (7) must be (RHCSA) Red Hat Certified System Administrator for RHEL 6, a minimum of seven (7) must be (VCP4 or VCP5) VMware Certified Professional on vSphere 4 or 5, and must be direct employees of the system manufacturer.
- (b) All technical support personnel as specified above, and telephone support personnel, as specified below, must possess knowledge specific to the Offeror's exact configuration as offered. This must include accreditation for completing the system manufacturer's hardware training course described in paragraph (c) below.

- (c) The Offeror must have an established hardware and OS training program for on-staff technical support personnel and third-party technical support organizations that is specific to the system brand and model (as indicated by the label on the system and all supporting manuals and documentation). The course curriculum must include hardware (which includes the model or model family bid), operating environment identified in 3.2, Operating System and Hypervisor, management software, diagnostics and other service utilities as offered by the system manufacturer. This course must be available to federal government employees upon request.

5.2 PERSONNEL SUPPORT – CATEGORIES 4.0B & 4.1B

- (a) The Offeror must have on-staff, or through an authorized national dealer network, an existing and experienced technical support infrastructure, staffed with personnel that is trained on the Offeror's products. This technical support infrastructure must consist of no less than fifteen (15) support personnel available across Canada. Of those fifteen technical support personnel, a minimum of seven (7) must be UNIX Operating System support specialists; must be fully trained or certified and must be direct employees of the system manufacturer.
- (b) All technical support personnel as specified above, and telephone support personnel, as specified below, must possess knowledge specific to the Offeror's exact configuration as offered. This must include accreditation for completing the system manufacturer's hardware training course and the UNIX Operating System described in paragraph (c) below.
- (c) The Offeror must have an established hardware and OS training program for on-staff technical support personnel and third-party technical support organizations that is specific to the system brand and model (as indicated by the label on the system). The course curriculum must include hardware (which includes the model or model family bid), Operating System, management software, diagnostics and other service utilities as offered by the system manufacturer. This course must be available to federal government employees upon request.

5.3 TELEPHONE SUPPORT

- (a) The Offeror must provide end-user accessible, telephone-based, bilingual (French and English) technical support involving: Operating System issues, hardware trouble shooting, configuration support, any systemic software/hardware inter-operability issues and/or connectivity issues. The telephone support service must be performed by the manufacturer of the system (as defined by the brand name appearing on the system unit and in all supporting manuals and documentation). The telephone support staffs are obligated to support:
 - (i) All internal hardware components of the system;
 - (ii) Operating System and/or Hypervisor issues if supplied by the Offeror, as it relates to the Offeror's hardware;
 - (iii) LAN infrastructure, regardless of supplier, as it relates to the Offeror's system; and
 - (iv) All additional components if purchased from the Offeror.
- (b) The bilingual telephone support line service must be active and must include the following:
 - (i) Be a toll-free service;
 - (ii) Employ a minimum staff of ten support personnel, 24 hours a day, seven days a week dedicated to the Offeror's system platform;
 - (iii) Offer this support service in both official languages (French and English) based on the caller's preference;
 - (iv) Be accessible from all parts of Canada, United States and from international locations here telephone service is available.
 - (v) Use a serial number tracking system that identifies all components, respective versions and driver versions of the installed system undergoing the troubleshooting. These components must include but are not limited to: motherboard / system board model and revision; firmware model and revision; memory / memory modules model and revision, controller model and

revision; hard drive brand, model and revision; Operating System and/or Hypervisor revision (if included in the system);

- (vi) Use an electronically shared, nationwide knowledge database to be used by support staff for all acquired troubleshooting expertise, product idiosyncrasies and configuration parameters for each specific component supplied;
- (vii) Provision to escalate issues to plant of manufacture;
- (viii) Provide a minimum 90% first call connection rate to a trained and qualified support personnel on calls defined as highest priority by the caller on systems where that level of service is specified in the warranty, during the warranty period, or where it has been purchased according to a service contract;
- (ix) Not exceed an initial on-hold time of more than five minutes on initial call; and
- (x) Be available for the duration of the warranty or service contract period.

5.4 WEB SITE SUPPORT

The Offeror must have an Internet WEB site referencing the exact make and model(s) of System(s) offered and must contain the following:

- (a) Pages specific to the NMSO. These pages must contain details on the default system configuration, options, default system illustrations and pricing.
- (b) Support file areas offering download/upload access for drivers, setup and configuration files and other pertinent software specific to the exact model(s). These files, drivers and documents must be clearly identified as pertaining to the specific make and model of system;
- (c) Message areas for technical assistance and problem diagnosis with support personnel if covered under the warranty or service contact on the system;
- (d) Technical information library for downloading product information files, pertinent white papers, hardware service manuals or detailed technical manuals (that cover the exact model with all internal components described in the same document);
- (e) FAQ (frequently asked questions) areas;
- (f) Bulletins pertaining to product announcements, recalls, bug fixes, etc;
- (g) "Plain language" technical support question search engine with immediate response;
- (h) Areas detailing system accessories and upgrades;
- (i) Offer e-mail notification subscription services to alert clients of device driver revisions, BIOS / firmware updates that pertain to the exact model family purchased;
- (j) The features in articles (a) through (i) must be contained on the OEM's (as defined by the brand name appearing on the system unit and in all supporting manuals and documentation) web site. Links to other manufacturer's web sites cannot be used to achieve the mandatory requirements.
- (k) The features in articles (a) through (i) must offer navigation links in French and English up to the final destination page. That destination page may be either French or English. Exceptions for unilingual content are allowed for technical descriptions, part number references and technical documentation.
- (l) When the Offeror refers specifically to this NMSO on its web site, the information presented must be accurate in that only equipment and related prices listed on the CAG web site may be represented on the Offeror's web site as being available on its NMSO.

6.0 DETAILED SPECIFICATIONS

6.1 PROCESSORS & CHIPSET:

- (a) PROCESSOR – X86

All processors must:

- (i) Be an Intel Xeon or an AMD Opteron.
 - (ii) Function in a symmetrical multi-processing SMP or Parallel mode (with the exception of Category 1.0V).
 - (iii) Provide the latest release in hardware virtualization (i.e.: Intel VT or AMD V 2.0) capability
 - (iv) Be able to support 32-bit and 64-bit applications natively and simultaneously.
 - (v) Be of identical stepping within each processor socket.
- (b) PROCESSOR – RISC & EPIC

All Processors must:

- (i) Be any one of the following 64-bit RISC and EPIC architecture.
- (ii) Be the current released models from the OEM. The acceptable models are: Power 7, SPARC T3/T4, and Itanium 9300. The number of processor is based on: #1 For RISC based systems running Solaris, a processor is counted by processor socket; #2 For RISC based systems running AIX, a processor is counted by processor core; or #3 For EPIC based systems running -UX, a processor is counted by processor socket.
- (iii) Function in a symmetrical multiprocessing SMP or Parallel processing mode.
- (iv) Systems must support ECC on the CPU cache.

6.2 BIOS / FIRMWARE:

All BIOS / firmware must:

- (a) Be upgradeable through flash ROM technology.
- (b) Have the ability to accept a previous version of the BIOS or firmware in the event of an incompatible or corrupted version.

6.3 RAM:

All RAM must:

- (a) Be a minimum of 2GB per DIMM (e.g.: 1 x 2GB DIMM) for Category 1.0V and a minimum of 4GB per Registered DIMM (e.g.: 1 x 4GB RDIMM) for all other categories.
- (b) Be manufactured by an ISO (International Standards Organization) 9001:2008 specs certified manufacturer. The ISO certification applies to the RAM manufacturer's manufacturing process and applies to both the RAM chip manufacturer and the DIMM assembly manufacturer.
- (c) Have standard ECC for Category 1.0V and have advanced ECC, chip-kill functionality or equivalent feature for all other categories.
- (d) All RAM modules must either be an OEM or OEM approved component.

6.4 HARD DISK AND CONTROLLER:

- (a) Serial Attached SCSI (SAS)
 - (i) If the storage platform uses Serial Attached SCSI hard disk drives, the hard disks must:
 - (A) Have a maximum average seek time of 5 ms. or less and a minimum spin rate of 10,000 revolutions per minute;
 - (B) Have physical bytes of storage as specified without the use of hardware or software disk compression utilities, as actual data space available to user;
 - (C) Support all of the capabilities and throughput of the SAS controller below;

- (D) Except for Category 1.0V, all drives must be hot-pluggable (without downing the system and without disruption of service when configured).
- (ii) The SAS disk controller must:
 - (A) Be a minimum of PCI-Express x4 wide;
 - (B) Support a burst transfer rate of 600MB per second.
- (b) Enhanced Multi-Level Cell – Solid State Drive (eMLC-SSD)
 - (i) If the storage platform uses Solid-State-Drive hard disk device, the hard disks must:
 - (A) Have a read / write speeds (IOPS) (4K blocks) of 20,000 / 3,000;
 - (B) Have physical bytes of storage as specified without the use of hardware or software disk compression utilities, as actual data space available to user;
 - (C) Support all of the capabilities and throughput of the SAS controller below;
 - (D) Except for blade-based systems, all drives must be hot-pluggable (without downing the system and without disruption of service when configured).
 - (ii) The SAS Disk controller must be a 64-Bit PCI-Express supporting a burst transfer rate of 3Gb/sec per SAS/SATA port.

6.5 SERIAL & MANAGEMENT PORTS

This port must be:

- (a) A USB port;
- (b) An RS-232-C serial interface port or;
- (c) Similar in function that will provide a method for out of band management capability.

7.0 EXPANDABILITY:

7.1 CATEGORY 1.0V LOW-COST-COMPUTING (LCC) 1-SOCKET PEDESTAL OR RACK-OPTIMIZED 2U:

The system must have:

- (a) N/A

7.2 CATEGORY 1.0S RACK-OPTIMIZED 2-SOCKET 1U:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.3 CATEGORY 2.0S RACK-OPTIMIZED 2-SOCKET 2U:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.4 CATEGORY 2.1S RACK-OPTIMIZED ENTERPRISE 2-SOCKET 2U:

The system must have:

- (a) Ability to be configured with half the number of CPUs with no less than half the maximum RAM available.

7.5 CATEGORY 3.0S PEDESTAL-TO-RACK CONVERTIBLE DEPARTMENTAL 2-SOCKET 5U:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.6 CATEGORY 4.0S RACK-MOUNT DEPARTMENTAL 4-SOCKET 4U:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.7 CATEGORY 4.1S RACK-MOUNT ENTERPRISE 4-SOCKET 4U:

The system must have:

- (a) Ability to be configured with two (2) CPUs with no less than half the maximum RAM available

7.8 CATEGORY 4.2S RACK-MOUNT ENTERPRISE 8-SOCKET 10U:

The system must have:

- (a) Ability to be configured with four (4) CPUs with no less than half the maximum RAM available

7.9 CATEGORY 1.0B BLADE CHASSIS / ENCLOSURE:

The system must have:

- (a) N/A

7.10 CATEGORY 2.0B 2-SOCKET BLADE:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.11 CATEGORY 2.1B 2-SOCKET ENTERPRISE BLADE:

The system must have:

- (a) Ability to be configured with half the number of CPUs with no less than half the maximum RAM available.

7.12 CATEGORY 3.0B 4-SOCKET BLADE:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.13 CATEGORY 3.1B 4-SOCKET ENTERPRISE BLADE:

The system must have:

Ability to be configured with half the number of CPUs with no less than half the maximum RAM available

7.14 CATEGORY 4.0B ENTRY-LEVEL UNIX 1 RISC OR EPIC PROCESSOR BASED:

The system must have:

- (a) N/A

7.15 CATEGORY 4.1B MID-LEVEL UNIX 2-TO-4 RISC OR EPIC PROCESSOR BASED:

The system must have:

- (a) N/A

7.16 CATEGORY 5.0B 1-TO-2 SOCKET HPC - GRAPHICS INTENSIVE BLADE:

RESERVED

8.0 POWER SUPPLY

8.1 POWER SUPPLY - CATEGORY 1.0V:

- (a) The power supply must run on 100 - 240 volts AC 60Hz.
- (b) The power supply must be available as a Single IEC-320 C13.
- (c) If the power supply fails (if the power supply is redundant) there must be a provision to communicate the condition through the system management utility to alert the network administrator.

- (d) The power supply must be able to support a fully populated system on its own. A fully populated system is defined as having the maximum installed processors, all internal drive bays, all I/O slots or modules and memory slots populated.
- (e) It must operate in temperature and humidity conditions of the normal business office environment, with no special air conditioning required.
- (f) All external cabling must be positively secured and resistant to damage.

8.2 REDUNDANT POWER SUPPLIES - CATEGORIES 1.0S, 2.0S, 2.1S, 3.0S, 4.0S, 4.1S, AND 4.2S:

- (a) The power supplies must be installed and removed without requiring any tool or requiring the removal of the chassis / enclosure cover.
- (b) The power supplies must have the ability to connect to 3-Phase North America N x NEMA L15-30p or Single Phase N x IEC-320 13 or C19 where N matches the number of power supplies in the system.
- (c) The power supply must run on 100 - 240 volts AC @ 60Hz or 200 - 240 volts AC @ 60 Hz.
- (d) If dual power supplies are included in the system, then at least one power supply must operate in a redundant fashion to the other(s) in that in the case of one power supply failing the other will continue to power the system without any interruption of services or performance. If three or more power supplies are included in the system, then they must be configured in an N+1 configuration so that in the case of one power supply failing, the others will continue to power the system without any interruption of services or performance.
- (e) If the power supply fails there must be a provision to communicate the condition through the system management utility to alert the network administrator.
- (f) If one power supply fails, the remaining functional power supply or supplies must be able to support a fully populated system on its own. A fully populated system is defined as having the maximum installed processors, all internal drive bays, all I/O slots or modules and memory slots populated.
- (g) System must use a secondary system of additional cooling fans or provide sufficient cooling to support a fully configured system. If a secondary system of additional cooling fans is provided, these fans must be in addition to the power supply fan and any CPU fans (if included in Default System). These fans must either be constantly operational or thermostatically controlled.
- (h) All external cabling must be positively secured and resistant to damage.

8.3 REDUNDANT POWER SUPPLIES - CATEGORIES 1.0B:

- (a) The power supplies must be installed and removed without requiring any tool or requiring the removal of the chassis / enclosure cover.
- (b) The power supplies must have the ability to connect to 3-Phase North America N x NEMA L15-30p and Single Phase N x IEC-320 13 or C19 where N matches the number of power supplies in the system.
- (c) The power supply must run on 100 - 240 volts AC @ 60Hz or 200 - 240 volts AC @ 60 Hz.
- (d) If dual power supplies are included in the system, then at least one power supply must operate in a redundant fashion to the other(s) in that in the case of one power supply failing the other will continue to power the system without any interruption of services or performance. If three or more power supplies are included in the system, then they must be configured in an N+1 configuration so that in the case of one power supply failing, the others will continue to power the system without any interruption of services or performance.
- (e) If the power supply fails there must be a provision to communicate the condition through the system management utility to alert the network administrator.

- (f) If one power supply fails, the remaining functional power supply or supplies must be able to support a fully populated system on its own. A fully populated system is defined as having the maximum installed processors, all internal drive bays, all I/O slots or modules and memory slots populated.
- (g) System must use a secondary system of additional cooling fans or provide sufficient cooling to support a fully configured system. If a secondary system of additional cooling fans is provided, these fans must be in addition to the power supply fan and any CPU fans (if included in Default System). These fans must either be constantly operational or thermostatically controlled.
- (h) All external cabling must be positively secured and resistant to damage.

9.0 ETHERNET CONTROLLER:

- (a) Rackmount and Pedestal Systems - Network interface cards must:
 - (i) Have 100/1000 MB per second unshielded twisted pair or 10Gb (SFP+) network interface controllers (NIC);
 - (ii) Be 100Base-T and 1000Base-T or 10GSFP+ compliant and capable of auto-negotiating;
 - (iii) Be capable of supporting Fault-Tolerance and Load-Balancing;
 - (iv) Meet IEEE 802.3u and 802.3ab or 802.3ae compliancy;
 - (v) Support category 5 wiring;
 - (vi) Capable of being disabled;
 - (vii) Allow for PXE 2.0 booting.
- (b) Blade Systems - Network interface cards must:
 - (i) Be 100Base-T and 1000Base-T or 10GBase-KR compliant;
 - (ii) Be capable of supporting Fault-Tolerance and Load-Balancing;
 - (iii) Capable of being disabled;
 - (iv) Allow for PXE 2.0 booting

10.0 REMOTE SYSTEM MANAGEMENT CONTROLLER:

Except for Category 1.0V, each system must have available a remote management controller with requisite software. This controller must be manufactured or optimized by the system manufacturer and must bear the same brand label as the system manufacturer. Third party controllers will not be accepted. The controller must:

- (a) Provide continuous in-band and out-of-band communication, status/threshold and alert monitoring;
- (b) Provide connectivity through an Ethernet LAN, serial port or USB port;
- (c) Provide capability for virtual media (e.g.: CD-ROM, DVD-ROM);
- (d) Provide capability allowing for event logging, on-demand remote system power-up, reboot, and power-down;
- (e) Provide support for remote BIOS / Firmware updates and system re-configuration;
- (f) Provide SSH (Secure Shell) connectivity using military grade ciphers (3DES or AES) and SSL (Secure Socket Layer) through 128-bit encryption while communicating via HTTP; and
- (g) Use system management utilities and diagnostics (as detailed item 11.0) to trap out-of-band alerts and generate SNMP traps or WBEM alerts that will execute corrective measures remotely.

11.0 LIGHTS OUT SYSTEM MANAGEMENT / DIAGNOSTICS AND INSTALLATION / CONFIGURATION UTILITY:

11.1 LIGHTS OUT SYSTEM MANAGEMENT & DIAGNOSTICS

The System must have:

- (a) A ROM based "SELF-TEST" procedure that is automatically executed on system power-up. This built-in test routine must test all installed memory and motherboard / system board based components (including ports), all I/O controller(s), all network interface controllers, and report all malfunctions during boot up.
- (b) A system based diagnostics and system management utility that provides configuration information, status/threshold monitoring and failure/pre-failure alerting for:
 - (i) Environment conditions which include processor temperature, thermal warning, or failure conditions;
 - (ii) Power supply detection, information and status;
 - (iii) Cooling fan detection, speed and status;
 - (iv) Enclosure/Chassis temperature, thermal warning or failure conditions;
 - (v) System load and current sensors status; and
 - (vi) Voltages.
- (c) All of the above information must be accessible to an SNMP (Simple Network Management Protocol) compatible management service or other management tools/services providing same capabilities. This must comply to the DMTF standards like WBEM and CIM, providing compatibility with other enterprise management platforms.
- (d) If a CD/DVD-ROM is provided, it must be a pressed production media and must be written by or optimized by the system OEM (Original Equipment Manufacturer) with a suitable label that identifies it as such, including the system manufacturer's name, applicable model(s) and the revision number. The system OEM specific brand and model must be referenced through the software utility as well. Gold, write-once CD/DVDs (CD-R/+R, CD-RW/+RW, DVD-R/+R or DVD-RW/+RW) will not be accepted. All other system diagnostics and system management utility will not be accepted.

11.2 INSTALLATION AND CONFIGURATION UTILITY:

The OEM (Original Equipment Manufacturer) must provide either an embedded or a bootable CD/DVD-ROM(s) based configuration application or set of applications to aid in the initial hardware setup of the system and installation of the Operating System and Hypervisor. These applications must be menu driven and allow reconfiguration and device driver optimization of the system under the environments identified in 3.2. The installation procedure must be intuitive and be provided in both French and English. If a CD/DVD-ROM is provided, it must be a pressed production CD/DVD and must be written by the system OEM with a suitable label that identifies it as such, including the system manufacturer's name and applicable model(s) and the revision number. The OEM specific brand and model must be referenced through the software utility as well. Gold, write-once CD/DVDs (CD-R/+R, CD-RW/+RW, DVD-R/+R or DVD-RW/+RW) will not be accepted.

12.0 SECURITY & ENCRYPTION FEATURES – CATEGORY 4.0B & 4.1B:

Categories 4.0B and 4.1B must have a minimum number of Security and Encryption features. Category 4.0B must have a minimum of four (4) and Category 4.1B must have a minimum of six (6) feature items. The acceptable features are:

- (a) 3DES;
- (b) HMAC or CMAC;
- (c) AES;
- (d) RC4;
- (e) SHA-1;

- (f) SHA-2;
- (g) MD5;
- (h) RSA to 2048 key;
- (i) ECC; and
- (j) FHMQV

13.0 (RAS) RELIABILITY-AVAILABILITY-SERVICEABILITY FEATURES – CATEGORY 4.0B & 4.1B:

Systems must have a minimum number of eight (8) RAS feature items. Acceptable RAS features are:

- (a) RAM: ECC & Extended ECC support;
- (b) RAM: Data path integrity;
- (c) RAM: SRAM and register protection;
- (d) RAM: Configurable memory mirroring; Partial / fine grained
- (e) RAM: Proactive memory scrubbing;
- (f) RAM: Double-chip sparing;
- (g) RAM: Offlining or Deconfiguration;
- (h) Memory page retirement;
- (i) CPU: Automatic Offlining or Deconfiguration;
- (j) CPU: Error Protection;
- (k) CPU: Automatic System Recovery w/ Instruction Retry;
- (l) Hot-plug processor boards;
- (m) Auto diagnosis and recovery;
- (n) Service Processor to monitor system status;
- (o) Redundant Management Processor;
- (p) Live OS upgrade;
- (q) Hardware partition; Fujitsu
- (r) Fault-isolated dynamic domains / re-configurable partitions;
- (s) System Bus: Redundant data, address, and response crossbar;
- (t) Online Addition / replacement of I/O devices;
- (u) I/O Bus / Bus Controller: Error checking / correcting of I/O Paths;
- (v) I/O Boards / Slots: Dynamic de-allocation;
- (w) Redundant network connections; and
- (x) Hardened I/O Drivers or System Configuration / Hardening Tool.

14.0 PARTITIONING / VIRTUALIZATION FEATURES – CATEGORY 4.0B AND 4.1B:

Categories 4.0B and 4.1B must support a minimum number of Partitioning / Virtualization Feature level. Category 4.0B must support no less than two (2) levels and Category 4.1B must support no less than two (2) levels where Level-3 is one of the two features supported.

- (a) Level-1 Partitioning / Virtualization Feature:
System must:

- (i) Run a minimum of two 'isolated partitions' each running its own instance of the OS, and each having dedicated CPU and memory; and
 - (ii) Dynamically add/install, remove, replace, and re-configure core system components into the system while the OS and applications are running.
- (b) Level-2 Partitioning / Virtualization Feature:
System must:
- (i) Run a minimum of two 'isolated environments' or 'workloads' within a single OS;
 - (ii) Share/provide sharing resources between multiple partitions. This feature must allow for resources to flow between running partitions on the same physical system; and
 - (iii) Perform a Virtual OS abstraction that provides a protected environment in which applications run. This feature must ensure applications are protected from each other to provide software fault isolation.
- (c) Level-3 Partitioning / Virtualization Feature:
System must:
- (i) Run a minimum of eight 'isolated partitions' each running its own instance of the OS; each having the capability to expand / contract CPU, memory, Ethernet, and HBA resources in each running partition without requiring a partition or system to reboot;
 - (ii) Provide the ability to move or migrate active/running workload or virtual machine from one physical system to another physical system while it continues to run;
 - (iii) Perform resource allocation (e.g.: CPU, memory, I/O) into logical groupings or domains, where it provides the ability to create multiple discrete systems, each having their own OS, resources, and identity within a single physical system; and
 - (iv) Dynamically add/install, remove, replace, and re-configure core system components into the system while the OS and applications are running. These partitions must be flexible, fault isolated that allows the administrator to run multiple applications/workloads and multiple copies/instances of the OS on a single system.

15.0 TECHNICAL DOCUMENTATION:

15.1 USER MANUALS:

Each system must include an operator/user manual(s). These manuals must be comprehensive guides that offer the user instructions for setting up, installing, and configuring of all components of the default system. These manual(s) must consist of at least the following:

- (a) Bilingual: The manual(s) for each system must be available in both official languages.
- (b) User manual: The user manual for each System must include an accurate description of all hardware components and all their respective features. This must include descriptions of, and installation and configuration instructions for all components
- (c) Diagrams: For the purposes of orientation, and as a compliment to the setup and configuration instructions, the manual must have internal and external diagrams of the system as delivered. These diagrams must accurately illustrate external chassis (front and rear), cover removal, rear chassis port configuration, hard drive cage assembly (for the purposes of hard disk configuration), exact motherboard / system board showing expansion slot types and location, processor socket or modules / cards and Memory boards and modules
- (d) The manual(s) must include documentation for power, power management, environmental or site preparation requirements.
- (e) A chapter on the system management utilities detailed in this Annex.

- (f) The manual(s) must include diagnostics/troubleshooting section referencing errors generated through power-on self-test (POST), system Firmware/BIOS and any other hardware error. This section must also include appropriate explanations and troubleshooting advice for each error described.
- (g) The features in articles (a) through (f) must be included in the same document, in the same format and their respective chapters must be referenced properly in a table of contents and indexes.
- (h) The manuals must be finished products and must not describe components that are obsolete and are not included in the system.
- (i) If the system undergoes a major configuration change (e.g.: changes in motherboard / system board, Firmware/BIOS make, setup/configuration routines, external cabinet and chassis) during the life of the Standing Offer, the manuals must reflect that change in the form of a manual reissue or an addendum shipped with the original manual. The addendum must be the same quality, typeface and page size as the original manual.
- (j) The manual(s) must be published by the system OEM with a suitable label that identifies it as such, including the system manufacturer's name and applicable model(s).
- (k) The manuals described in this annex must be available electronically (contained on an accompanying CD/DVD-ROM or available on the manufacturer's web site specified in this annex). The manual must be bundled with an applicable reader. The reader must have a table of contents, index, hypertext links and word search capabilities. "Read me" files to be viewed by a text editor are unacceptable. The on-line versions must have the mandatory illustrations with the same level of detail as a paper equivalent. If a CD/DVD-ROM is submitted it must be a pressed production CD/DVD and must be written by the original equipment manufacturer with a suitable label that identifies it as such, including the manufacturer's name, applicable model(s) and revision number.

15.2 TECHNICAL MANUALS:

- (a) The technical manuals must be made available at no cost to Canada. The technical manuals must describe the hardware in sufficient level of detail for a qualified technician to repair the equipment to its original level of operation.
- (b) Technical manuals must be published by the system OEM with a suitable label that identifies it as such, including the system manufacturer's name and applicable model(s).
- (c) Any third party components not originally equipped by the OEM (eg: hard disks, I/O controllers & adapters) must also be documented to the same level of detail and included as appendices in the OEM technical manual.
- (d) The manuals described in this annex must be available electronically (contained on an accompanying CD/DVD-ROM or available on the manufacturer's web site specified in this annex). The manual must be bundled with an applicable reader. The reader must have a table of contents, index, hypertext links and word search capabilities. "Read me" files to be viewed by a text editor are unacceptable. The on-line versions must have the mandatory illustrations with the same level of detail as a paper equivalent. If a CD/DVD-ROM is submitted it must be a pressed production CD/DVD and must be written by the original equipment manufacturer with a suitable label that identifies it as such, including the manufacturer's name, applicable model(s) and revision number.

Processor Definition:

- N Default Processor Model
- N - 1 Processor model that is one step below the OEM's default model in terms of specification and performance.
- N + 1 Processor model that is the top bin from the OEM's available product list at any time. This is generally the model with the highest specification and performance.

	Category 2.1S	Category 4.1S	Category 4.2S	Category 2.1B
CPU Model Upgrade / Downgrade (where N = Default model)	Default is 2 x E7-2870	Default is 4 x E7-4870	Default is 8 x E7-8870	Default is 2 x E7-2870
UPGRADE to N + 1 (Maximum number of CPUs)	2 x E7-2890	4 x E7-4890	8 x E7-8890	
UPGRADE to N - 1 (Half the number of CPUs)	1 x E7-2890	2 x E7-4890	4 x E7-8890	
DOWNGRADE to half the number of N	1 x E7-2870	2 x E7-4870	4 x E7-8870	1 x E7-2870
DOWNGRADE to N - 1 (Maximum number of CPUs)	2 x E7-2860	4 x E7-4860	8 x E7-8850	2 x E7-2850
DOWNGRADE to N - 1 (Half the number of CPUs)	1 x E7-2860	2 x E7-4860	4 x E7-8850	1 x E7-2850

Example:

1. If E7-xx90 is the available N+1 model, fill-in the corresponding line items, otherwise leave blank.
2. If E7-xx60 or E7-xx50 is the immediate (N - 1) model below the OEM's default processor, fill-in the corresponding line items.

Annex B System Upgrade & System Component Instructions:

- a. Bidders must fill-in every line item, if available, in the OEM's product portfolio.
- b. If an item does not exist in the OEM's product portfolio, the bidder must either enter a product that exceeds the requirement or leave the line blank. If left blank, for EVALUATION PRICE calculations, PWGSC will insert a price equal to highest price among all Offerors for this item in the category. This will occur during the RFSO financial phase and the on-going Call-up Limitation calculation during the life of the NMSO.
Example: There are 3 bidders in a category: Bidder A provides a complete Annex B (with a price of \$1000 for item 25); Bidder B provides a complete Annex B (with a price of \$1500 for item 25); and Bidder C provides a Annex B with item 25 left blank. When PWGSC calculates the Evaluation Price of each system, Bidder C will have a price of \$1500 added to item 25.
- c. If an item is left blank in Annex B and is found to be available during technical evaluation, that system will be deemed non-compliant.
- d. Items identified as 'Model A' and 'Model B' are understood to be two different products.

Category 1.0S Rack-Optimized 2-Socket 1U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Disk Controller w/ 512MB ECC Cache, RAID 0, 1, 5 & 6			
5	4 x 300GB 10K SAS HDD			
6	2 x 64-Bit PCI-e Gen 2 slots			
7	2 port 1Gb or 1 port 10Gb NIC			
8	One 8X DVD-ROM or ILO/ILOM			
9	2 x Power Supply (Redundant)			
10	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
11	UPGRADE to N + 1 (Maximum number of CPUs)			
12	UPGRADE to N + 1 (Half the number of CPUs)			
13	DOWNGRADE to half the number of N			
14	DOWNGRADE to N - 1 (Maximum number of CPUs)			
15	DOWNGRADE to N - 1 (Half the number of CPUs)			
	Disk Controller Upgrade			
16	Upgrade from 512MB cache to 1GB ECC BBWC (Battery-Backed-			
	Optical Drive Upgrade			
17	DOWNGRADE Optical Drive to 0			
	HDD Downgrade			
18	Dowgrade to 0 - HDD			
	Installation Upgrade			
19	System Installation at end user site			
	Warranty Upgrade			
20	Standard On-Site Maintenance Service: 4 Years			
21	Standard On-Site Maintenance Service: 5 Years			
22	4-hour response On-Site Maintenance Service: 3 Years			
23	4-hour response On-Site Maintenance Service: 4 Years			
24	4-hour response On-Site Maintenance Service: 5 Years			
25	Enhanced On-Site Maintenance Service: 3 Years			
26	Enhanced On-Site Maintenance Service: 4 Years			

Category 1.0S Rack-Optimized 2-Socket 1U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
27	Enhanced On-Site Maintenance Service: 5 Years			
	System Component			
	Component Group A			
	Memory (Single DIMM Module)			
28	4GB ECC SDRAM Memory - A			
29	4GB ECC SDRAM Memory - B			
30	8GB ECC SDRAM Memory - A			
31	8GB ECC SDRAM Memory - B			
32	16GB ECC SDRAM Memory - A			
33	16GB ECC SDRAM Memory - B			
34	32GB ECC SDRAM Memory - A			
35	32GB ECC SDRAM Memory - B			
	Component Group B			
	Disk Array Solution (HDDs, Cabinet, and Controller)			
36	PCI-e Controller supporting RAID 0, 1, 5, 10 w/ 512MB ECC BBWC			
37	12-Bay Rack-Mount (JBOD) Hot-Swap/Hot-Plug Drive Cabinet			
38	146GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
39	300GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
40	500GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
41	1TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
42	2TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
43	3TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
	System Disks			
44	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
45	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
46	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
47	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
48	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
49	100GB SLC SATA-SSD			
50	100GB SLC SAS-SSD			
51	200GB SLC SATA-SSD			
52	200GB SLC SAS-SSD			
53	400GB SLC SATA-SSD			
54	400GB SLC SAS-SSD			

Category 1.0S Rack-Optimized 2-Socket 1U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	Host Bus Adapter			
55	PCI-e 8GB Single-port Fibre-Channel HBA			
56	PCI-e 8GB Dual-port Fibre-Channel HBA			
57	PCI-e 1GbE iSCSI Adapter			
58	10GbE CNA Dual Port			
59	300GB MLC I/O Acclerator			
60	300GB SLC I/O Acclerator			
61	600GB MLC I/O Acclerator			
62	600GB SLC I/O Acclerator			
63	1.2TB MLC I/O Accelerator			
	Network Adapters			
64	64-Bit PCI-e 1000 Base-T Server Adapter - Single port			
65	64-Bit PCI-e 1000 Base-T Server Adapter - Dual port			
66	64-Bit PCI-e 1000 Base-T Server Adapter - Quad port			
67	64-Bit PCI-e 1000 Base-SX Server Adapter - Single port			
68	64-Bit PCI-e 10GSFP+ Server Adapter - Dual port			
	Component Group D			
	Server Management			
69	Add-on or integrated Server Management Adapter with software			
	Power Supply			
70	Redundant Hot-swap/hot-plug Power Supply Kit			
	Display and Keyboard			
71	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	KVM Switchbox			
72	8-port rack-mountable Analog KVM switch			
73	8-port rack-mountable Digital KVM switch with SNMP support			
74	16-port rack-mountable Analog KVM switch			
75	16-port rack-mountable Digital KVM switch with SNMP support			
76	32-port rack-mountable Analog KVM switch			
77	32-port rack-mountable Digital KVM switch with SNMP support			

Category 1.0S Rack-Optimized 2-Socket 1U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Uninterruptible Power Supplies w/ power cables			
78	Uninterruptible Power Supply 1.5KVA (1000W) - rack mount			
79	Uninterruptible Power Supply 3KVA (1920W) - rack mount			
80	Uninterruptible Power Supply 5KVA (3300W) - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
81	Power Distribution Unit - 110V - 15A			
82	Power Distribution Unit - 110V - 20A			
83	Power Distribution Unit - 220V - 20A			
84	Power Distribution Unit - 220V - 30A			
	19" Rack			
85	Minimum 41U Large-Rack w/ Side-Panels			

Category 2.0S Rack-Optimized 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Disk Controller w/ 512MB ECC Cache, RAID 0, 1, 5 & 6			
5	4 x 300GB 10K SAS HDD			
6	5 x 64-Bit PCI-e Gen 2 slots			
7	2 port 1Gb or 1 port 10Gb NIC			
8	One 8X DVD-ROM or ILO/ILOM			
9	2 x Power Supply (Redundant)			
10	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
11	UPGRADE to N + 1 (Maximum number of CPUs)			
12	UPGRADE to N + 1 (Half the number of CPUs)			
13	DOWNGRADE to half the number of N			
14	DOWNGRADE to N - 1 (Maximum number of CPUs)			
15	DOWNGRADE to N - 1 (Half the number of CPUs)			
	Disk Controller Upgrade			
16	Upgrade from 512MB cache to 1GB ECC BBWC (Battery-Backed-			
	Optical Drive Upgrade			
17	DOWNGRADE Optical Drive to 0			
	HDD Downgrade			
18	Dowgrade to 0 - HDD			
	Installation Upgrade			
19	System Installation at end user site			
	Warranty Upgrade			
20	Standard On-Site Maintenance Service: 4 Years			
21	Standard On-Site Maintenance Service: 5 Years			
22	4-hour response On-Site Maintenance Service: 3 Years			
23	4-hour response On-Site Maintenance Service: 4 Years			
24	4-hour response On-Site Maintenance Service: 5 Years			
25	Enhanced On-Site Maintenance Service: 3 Years			
26	Enhanced On-Site Maintenance Service: 4 Years			

Category 2.0S Rack-Optimized 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
27	Enhanced On-Site Maintenance Service: 5 Years			
	System Component			
	Component Group A			
	Memory (Single DIMM Module)			
28	4GB ECC SDRAM Memory - A			
29	4GB ECC SDRAM Memory - B			
30	8GB ECC SDRAM Memory - A			
31	8GB ECC SDRAM Memory - B			
32	16GB ECC SDRAM Memory - A			
33	16GB ECC SDRAM Memory - B			
34	32GB ECC SDRAM Memory - A			
35	32GB ECC SDRAM Memory - B			
	Component Group B			
	Disk Array Solution (HDDs, Cabinet, and Controller)			
36	PCI-e Controller supporting RAID 0, 1, 5, 10 w/ 512MB ECC BBWC			
37	12-Bay Rack-Mount (JBOD) Hot-Swap/Hot-Plug Drive Cabinet			
38	146GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
39	300GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
40	500GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
41	1TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
42	2TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
43	3TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
	System Disks			
44	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
45	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
46	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
47	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
48	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
49	100GB SLC SATA-SSD			
50	100GB SLC SAS-SSD			
51	200GB SLC SATA-SSD			
52	200GB SLC SAS-SSD			
53	400GB SLC SATA-SSD			
54	400GB SLC SAS-SSD			

Category 2.0S Rack-Optimized 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	Host Bus Adapter			
55	PCI-e 8GB Single-port Fibre-Channel HBA			
56	PCI-e 8GB Dual-port Fibre-Channel HBA			
57	PCI-e 1GbE iSCSI Adapter			
58	10GbE CNA Dual Port			
59	300GB MLC I/O Acclerator			
60	300GB SLC I/O Acclerator			
61	600GB MLC I/O Acclerator			
62	600GB SLC I/O Acclerator			
63	1.2TB MLC I/O Accelerator			
	Network Adapters			
64	64-Bit PCI-e 1000 Base-T Server Adapter - Single port			
65	64-Bit PCI-e 1000 Base-T Server Adapter - Dual port			
66	64-Bit PCI-e 1000 Base-T Server Adapter - Quad port			
67	64-Bit PCI-e 1000 Base-SX Server Adapter - Single port			
68	64-Bit PCI-e 10GSFP+ Server Adapter - Dual port			
	Component Group D			
	Server Management			
69	Add-on or integrated Server Management Adapter with software			
	Power Supply			
70	Redundant Hot-swap/hot-plug Power Supply Kit			
	Display and Keyboard			
71	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	KVM Switchbox			
72	8-port rack-mountable Analog KVM switch			
73	8-port rack-mountable Digital KVM switch with SNMP support			
74	16-port rack-mountable Analog KVM switch			
75	16-port rack-mountable Digital KVM switch with SNMP support			
76	32-port rack-mountable Analog KVM switch			
77	32-port rack-mountable Digital KVM switch with SNMP support			

Category 2.0S Rack-Optimized 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Uninterruptible Power Supplies w/ power cables			
78	Uninterruptible Power Supply 1.5KVA (1000W) - rack mount			
79	Uninterruptible Power Supply 3KVA (1920W) - rack mount			
80	Uninterruptible Power Supply 5KVA (3300W) - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
81	Power Distribution Unit - 110V - 15A			
82	Power Distribution Unit - 110V - 20A			
83	Power Distribution Unit - 220V - 20A			
84	Power Distribution Unit - 220V - 30A			
	19" Rack			
85	Minimum 41U Large-Rack w/ Side-Panels			

Category 2.1S Rack-Optimized Enterprise 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Disk Controller w/ 512MB ECC Cache, RAID 0, 1, 5 & 6			
5	4 x 146GB 10K SAS HDD			
6	4 x 64-Bit PCI-e Gen 2 slots			
7	2 port 1Gb or 1 port 10Gb NIC			
8	One 8X DVD-ROM or ILO/ILOM			
9	2 x Power Supply (Redundant)			
10	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
11	UPGRADE to N + 1 (Maximum number of CPUs)			
12	UPGRADE to N + 1 (Half the number of CPUs)			
13	DOWNGRADE to half the number of N			
14	DOWNGRADE to N - 1 (Maximum number of CPUs)			
15	DOWNGRADE to N - 1 (Half the number of CPUs)			
	Disk Controller Upgrade			
16	Upgrade from 512MB cache to 1GB ECC BBWC (Battery-Backed-			
	Optical Drive Upgrade			
17	DOWNGRADE Optical Drive to 0			
	HDD Downgrade			
18	Dowgrade to 0 - HDD			
	Installation Upgrade			
19	System Installation at end user site			
	Warranty Upgrade			
20	Standard On-Site Maintenance Service: 4 Years			
21	Standard On-Site Maintenance Service: 5 Years			
22	4-hour response On-Site Maintenance Service: 3 Years			
23	4-hour response On-Site Maintenance Service: 4 Years			
24	4-hour response On-Site Maintenance Service: 5 Years			
25	Enhanced On-Site Maintenance Service: 3 Years			
26	Enhanced On-Site Maintenance Service: 4 Years			

Category 2.1S Rack-Optimized Enterprise 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
27	Enhanced On-Site Maintenance Service: 5 Years			
	System Component			
	Component Group A			
	Memory (Single DIMM Module)			
28	4GB ECC SDRAM Memory - A			
29	4GB ECC SDRAM Memory - B			
30	8GB ECC SDRAM Memory - A			
31	8GB ECC SDRAM Memory - B			
32	16GB ECC SDRAM Memory - A			
33	16GB ECC SDRAM Memory - B			
34	32GB ECC SDRAM Memory - A			
35	32GB ECC SDRAM Memory - B			
	Component Group B			
	Disk Array Solution (HDDs, Cabinet, and Controller)			
36	PCI-e Controller supporting RAID 0, 1, 5, 10 w/ 512MB ECC BBWC			
37	12-Bay Rack-Mount (JBOD) Hot-Swap/Hot-Plug Drive Cabinet			
38	146GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
39	300GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
40	500GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
41	1TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
42	2TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
43	3TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
	System Disks			
44	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
45	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
46	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
47	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
48	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
49	100GB SLC SATA-SSD			
50	100GB SLC SAS-SSD			
51	200GB SLC SATA-SSD			
52	200GB SLC SAS-SSD			
53	400GB SLC SATA-SSD			
54	400GB SLC SAS-SSD			

Category 2.1S Rack-Optimized Enterprise 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	Host Bus Adapter			
55	PCI-e 8GB Single-port Fibre-Channel HBA			
56	PCI-e 8GB Dual-port Fibre-Channel HBA			
57	PCI-e 1GbE iSCSI Adapter			
58	10GbE CNA Dual Port			
59	300GB MLC I/O Acclerator			
60	300GB SLC I/O Acclerator			
61	600GB MLC I/O Acclerator			
62	600GB SLC I/O Acclerator			
63	1.2TB MLC I/O Accelerator			
	Network Adapters			
64	64-Bit PCI-e 1000 Base-T Server Adapter - Single port			
65	64-Bit PCI-e 1000 Base-T Server Adapter - Dual port			
66	64-Bit PCI-e 1000 Base-T Server Adapter - Quad port			
67	64-Bit PCI-e 1000 Base-SX Server Adapter - Single port			
68	64-Bit PCI-e 10GSFP+ Server Adapter - Dual port			
	Component Group D			
	Server Management			
69	Add-on or integrated Server Management Adapter with software			
	Power Supply			
70	Redundant Hot-swap/hot-plug Power Supply Kit			
	Display and Keyboard			
71	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	KVM Switchbox			
72	8-port rack-mountable Analog KVM switch			
73	8-port rack-mountable Digital KVM switch with SNMP support			
74	16-port rack-mountable Analog KVM switch			
75	16-port rack-mountable Digital KVM switch with SNMP support			
76	32-port rack-mountable Analog KVM switch			
77	32-port rack-mountable Digital KVM switch with SNMP support			

Category 2.1S Rack-Optimized Enterprise 2-Socket 2U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Uninterruptible Power Supplies w/ power cables			
78	Uninterruptible Power Supply 1.5KVA (1000W) - rack mount			
79	Uninterruptible Power Supply 3KVA (1920W) - rack mount			
80	Uninterruptible Power Supply 5KVA (3300W) - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
81	Power Distribution Unit - 110V - 15A			
82	Power Distribution Unit - 110V - 20A			
83	Power Distribution Unit - 220V - 20A			
84	Power Distribution Unit - 220V - 30A			
	19" Rack			
85	Minimum 41U Large-Rack w/ Side-Panels			

Category 3.0S Pedestal-To-Rack Convertible Departmental 2-So

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Disk Controller w/ 512MB ECC Cache, RAID 0, 1, 5 & 6			
5	4 x 300GB 10K SAS HDD			
6	7 x 64-Bit PCI-e Gen 2 slots			
7	2 port 1Gb or 1 port 10Gb NIC			
8	One 8X DVD-ROM or ILO/ILOM			
9	2 x Power Supply (Redundant)			
10	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
11	UPGRADE to N + 1 (Maximum number of CPUs)			
12	UPGRADE to N + 1 (Half the number of CPUs)			
13	DOWNGRADE to half the number of N			
14	DOWNGRADE to N - 1 (Maximum number of CPUs)			
15	DOWNGRADE to N - 1 (Half the number of CPUs)			
	Disk Controller Upgrade			
16	Upgrade from 512MB cache to 1GB ECC BBWC (Battery-Backed-			
	Optical Drive Upgrade			
17	DOWNGRADE Optical Drive to 0			
	HDD Downgrade			
18	Dowgrade to 0 - HDD			
	Installation Upgrade			
19	System Installation at end user site			
	Warranty Upgrade			
20	Standard On-Site Maintenance Service: 4 Years			
21	Standard On-Site Maintenance Service: 5 Years			
22	4-hour response On-Site Maintenance Service: 3 Years			
23	4-hour response On-Site Maintenance Service: 4 Years			
24	4-hour response On-Site Maintenance Service: 5 Years			
25	Enhanced On-Site Maintenance Service: 3 Years			
26	Enhanced On-Site Maintenance Service: 4 Years			

Category 3.0S Pedestal-To-Rack Convertible Departmental 2-So

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
27	Enhanced On-Site Maintenance Service: 5 Years			
	System Component			
	Component Group A			
	Memory (Single DIMM Module)			
28	4GB ECC SDRAM Memory - A			
29	4GB ECC SDRAM Memory - B			
30	8GB ECC SDRAM Memory - A			
31	8GB ECC SDRAM Memory - B			
32	16GB ECC SDRAM Memory - A			
33	16GB ECC SDRAM Memory - B			
34	32GB ECC SDRAM Memory - A			
35	32GB ECC SDRAM Memory - B			
	Component Group B			
	Disk Array Solution (HDDs, Cabinet, and Controller)			
36	PCI-e Controller supporting RAID 0, 1, 5, 10 w/ 512MB ECC BBWC			
37	12-Bay Rack-Mount (JBOD) Hot-Swap/Hot-Plug Drive Cabinet			
38	146GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
39	300GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
40	500GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
41	1TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
42	2TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
43	3TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
	System Disks			
44	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
45	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
46	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
47	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
48	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
49	100GB SLC SATA-SSD			
50	100GB SLC SAS-SSD			
51	200GB SLC SATA-SSD			
52	200GB SLC SAS-SSD			
53	400GB SLC SATA-SSD			
54	400GB SLC SAS-SSD			

Category 3.0S Pedestal-To-Rack Convertible Departmental 2-So

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	Host Bus Adapter			
55	PCI-e 8GB Single-port Fibre-Channel HBA			
56	PCI-e 8GB Dual-port Fibre-Channel HBA			
57	PCI-e 1GbE iSCSI Adapter			
58	10GbE CNA Dual Port			
59	300GB MLC I/O Acclerator			
60	300GB SLC I/O Acclerator			
61	600GB MLC I/O Acclerator			
62	600GB SLC I/O Acclerator			
63	1.2TB MLC I/O Accelerator			
	Network Adapters			
64	64-Bit PCI-e 1000 Base-T Server Adapter - Single port			
65	64-Bit PCI-e 1000 Base-T Server Adapter - Dual port			
66	64-Bit PCI-e 1000 Base-T Server Adapter - Quad port			
67	64-Bit PCI-e 1000 Base-SX Server Adapter - Single port			
68	64-Bit PCI-e 10GSFP+ Server Adapter - Dual port			
	Component Group D			
	Server Management			
69	Add-on or integrated Server Management Adapter with software			
	Power Supply			
70	Redundant Hot-swap/hot-plug Power Supply Kit			
	Display and Keyboard			
71	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	KVM Switchbox			
72	8-port rack-mountable Analog KVM switch			
73	8-port rack-mountable Digital KVM switch with SNMP support			
74	16-port rack-mountable Analog KVM switch			
75	16-port rack-mountable Digital KVM switch with SNMP support			
76	32-port rack-mountable Analog KVM switch			
77	32-port rack-mountable Digital KVM switch with SNMP support			

Category 3.0S Pedestal-To-Rack Convertible Departmental 2-So

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Uninterruptible Power Supplies w/ power cables			
78	Uninterruptible Power Supply 1.5KVA (1000W) - rack mount			
79	Uninterruptible Power Supply 3KVA (1920W) - rack mount			
80	Uninterruptible Power Supply 5KVA (3300W) - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
81	Power Distribution Unit - 110V - 15A			
82	Power Distribution Unit - 110V - 20A			
83	Power Distribution Unit - 220V - 20A			
84	Power Distribution Unit - 220V - 30A			
	19" Rack			
85	Minimum 41U Large-Rack w/ Side-Panels			

Category 4.0S Rack-Mount Departmental 4-Socket 4U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	4 x CPU			
3	0 - RAM			
4	Disk Controller w/ 512MB ECC Cache, RAID 0, 1, 5 & 6			
5	4 x 300GB 10K SAS HDD			
6	6 x 64-Bit PCI-e Gen 2 slots			
7	2 port 1Gb or 1 port 10Gb NIC			
8	One 8X DVD-ROM or ILO/ILOM			
9	2 x Power Supply (Redundant)			
10	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
11	UPGRADE to N + 1 (Maximum number of CPUs)			
12	UPGRADE to N + 1 (Half the number of CPUs)			
13	DOWNGRADE to half the number of N			
14	DOWNGRADE to N - 1 (Maximum number of CPUs)			
15	DOWNGRADE to N - 1 (Half the number of CPUs)			
	Disk Controller Upgrade			
16	Upgrade from 512MB cache to 1GB ECC BBWC (Battery-Backed-			
	Optical Drive Upgrade			
17	DOWNGRADE Optical Drive to 0			
	HDD Downgrade			
18	Dowgrade to 0 - HDD			
	Installation Upgrade			
19	System Installation at end user site			
	Warranty Upgrade			
20	Standard On-Site Maintenance Service: 4 Years			
21	Standard On-Site Maintenance Service: 5 Years			
22	4-hour response On-Site Maintenance Service: 3 Years			
23	4-hour response On-Site Maintenance Service: 4 Years			
24	4-hour response On-Site Maintenance Service: 5 Years			
25	Enhanced On-Site Maintenance Service: 3 Years			
26	Enhanced On-Site Maintenance Service: 4 Years			

Category 4.0S Rack-Mount Departmental 4-Socket 4U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
27	Enhanced On-Site Maintenance Service: 5 Years			
	System Component			
	Component Group A			
	Memory (Single DIMM Module)			
28	4GB ECC SDRAM Memory - A			
29	4GB ECC SDRAM Memory - B			
30	8GB ECC SDRAM Memory - A			
31	8GB ECC SDRAM Memory - B			
32	16GB ECC SDRAM Memory - A			
33	16GB ECC SDRAM Memory - B			
34	32GB ECC SDRAM Memory - A			
35	32GB ECC SDRAM Memory - B			
	Component Group B			
	Disk Array Solution (HDDs, Cabinet, and Controller)			
36	PCI-e Controller supporting RAID 0, 1, 5, 10 w/ 512MB ECC BBWC			
37	12-Bay Rack-Mount (JBOD) Hot-Swap/Hot-Plug Drive Cabinet			
38	146GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
39	300GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
40	500GB SAS HDD w/ hot-swap drive carrier (15K RPM)			
41	1TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
42	2TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
43	3TB SATA HDD w/ hot-swap drive carrier (7200 RPM)			
	System Disks			
44	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
45	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
46	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
47	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
48	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
49	100GB SLC SATA-SSD			
50	100GB SLC SAS-SSD			
51	200GB SLC SATA-SSD			
52	200GB SLC SAS-SSD			
53	400GB SLC SATA-SSD			
54	400GB SLC SAS-SSD			

Category 4.0S Rack-Mount Departmental 4-Socket 4U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	Host Bus Adapter			
55	PCI-e 8GB Single-port Fibre-Channel HBA			
56	PCI-e 8GB Dual-port Fibre-Channel HBA			
57	PCI-e 1GbE iSCSI Adapter			
58	10GbE CNA Dual Port			
59	300GB MLC I/O Acclerator			
60	300GB SLC I/O Acclerator			
61	600GB MLC I/O Acclerator			
62	600GB SLC I/O Acclerator			
63	1.2TB MLC I/O Accelerator			
	Network Adapters			
64	64-Bit PCI-e 1000 Base-T Server Adapter - Single port			
65	64-Bit PCI-e 1000 Base-T Server Adapter - Dual port			
66	64-Bit PCI-e 1000 Base-T Server Adapter - Quad port			
67	64-Bit PCI-e 1000 Base-SX Server Adapter - Single port			
68	64-Bit PCI-e 10GSFP+ Server Adapter - Dual port			
	Component Group D			
	Server Management			
69	Add-on or integrated Server Management Adapter with software			
	Power Supply			
70	Redundant Hot-swap/hot-plug Power Supply Kit			
	Display and Keyboard			
71	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	KVM Switchbox			
72	8-port rack-mountable Analog KVM switch			
73	8-port rack-mountable Digital KVM switch with SNMP support			
74	16-port rack-mountable Analog KVM switch			
75	16-port rack-mountable Digital KVM switch with SNMP support			
76	32-port rack-mountable Analog KVM switch			
77	32-port rack-mountable Digital KVM switch with SNMP support			

Category 4.0S Rack-Mount Departmental 4-Socket 4U

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Uninterruptible Power Supplies w/ power cables			
78	Uninterruptible Power Supply 1.5KVA (1000W) - rack mount			
79	Uninterruptible Power Supply 3KVA (1920W) - rack mount			
80	Uninterruptible Power Supply 5KVA (3300W) - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
81	Power Distribution Unit - 110V - 15A			
82	Power Distribution Unit - 110V - 20A			
83	Power Distribution Unit - 220V - 20A			
84	Power Distribution Unit - 220V - 30A			
	19" Rack			
85	Minimum 41U Large-Rack w/ Side-Panels			

Category 1.0B Blade Chassis / Enclosure

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Chassis / Enclosure			
2	Optical Drive Module or ILO / ILOM			
3	Redundant (Power & Cooling Sub-system)			
4	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	Installation Upgrade			
5	Chassis / Enclosure Installation at end user site			
	Warranty Upgrade			
6	Standard On-Site Maintenance Service: 4 Years			
7	Standard On-Site Maintenance Service: 5 Years			
8	4-hour response On-Site Maintenance Service: 3 Years			
9	4-hour response On-Site Maintenance Service: 4 Years			
10	4-hour response On-Site Maintenance Service: 5 Years			
11	Enhanced On-Site Maintenance Service: 3 Years			
12	Enhanced On-Site Maintenance Service: 4 Years			
13	Enhanced On-Site Maintenance Service: 5 Years			
	SYSTEM COMPONENTS			
	Component Group A			
	Chassis / Enclosure Expansion Modules			
14	Management Module			
14.1	Management software including Rapid-Deployment tools			
15	1Gb Copper ethernet (network) switch - Model A			
16	1Gb Copper ethernet (network) switch - Model B			
17	1Gb Fibre ethernet (network) switch - Model A			
18	1Gb Fibre ethernet (network) switch - Model B			
19	10GbE (network) switch with corresponding license - Model A			
19.1	10GbE (network) switch with corresponding license - Model B			
20	10-port 8Gb SAN Switch (including 10-port licenses) - Model A			
21	10-port 8Gb SAN Switch (including 10-port licenses) - Model B			
22	License for remaining 10-ports 8Gb SAN Switch - Model A			
23	License for remaining 10-ports 8Gb SAN Switch - Model B			
24	10Gb Ethernet Pass-Through Module			
25	8Gb Fibre-Channel Pass-Thru Module			

Category 1.0B Blade Chassis / Enclosure

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
25.5	FCoE Switch (including 10-port licenses)			
25.6	License for remaining 10-ports (FCoE)			
25.7	License per port (FCoE)			
	Component Group B			
	Expansion Module Tranceivers & Cables			
28	8Gb Short-Wave SFP Tranceiver			
29	8Gb Long-Wave SFP Tranceiver			
30	1M Twinax 10Gb cables			
31	3M Twinax 10Gb cables			
32	5M Twinax 10Gb cables			
33	10M Twinax 10Gb cables			
35	10Gb SR Optical tranceiver			
	Component Group C			
	Display and Keyboard			
36	1U Rack-mountable 17" TFT fold away display with keyboard/pointing			
	Uninterruptible Power Supplies w/ power cables			
37	Uninterruptible Power Supply 5KVA - rack mount			
	Power Distribution Units (PDU) w/ respective power cables			
38	Single-Phase Power Distribution Unit - 220V - 30A			
39	Three-Phase Power Distribution Unit - 220V - 60A			
	19" Rack			
40	Minimum 41U Large-Rack w/ Side-Panels			

Category 2.0B 2-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Integrated Disk Controller w/ support for RAID 0 and 1			
5	2 x 100GB eMLC SATA-SSD			
6	1 x Mezzanine slot			
7	2 port 1Gb or 1 port 10Gb NIC			
8	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
9	UPGRADE to N + 1 (Maximum number of CPUs)			
10	UPGRADE to N + 1 (Half the number of CPUs)			
11	DOWNGRADE to half the number of N			
12	DOWNGRADE to N - 1 (Maximum number of CPUs)			
13	DOWNGRADE to N - 1 (Half the number of CPUs)			
	HDD Downgrade			
14	Dowgrade to 0 - HDD			
	Installation Upgrade			
15	System Installation at end user site			
	Warranty Upgrade			
16	Standard On-Site Maintenance Service: 4 Years			
17	Standard On-Site Maintenance Service: 5 Years			
18	4-hour response On-Site Maintenance Service: 3 Years			
19	4-hour response On-Site Maintenance Service: 4 Years			
20	4-hour response On-Site Maintenance Service: 5 Years			
21	Enhanced On-Site Maintenance Service: 3 Years			
22	Enhanced On-Site Maintenance Service: 4 Years			
23	Enhanced On-Site Maintenance Service: 5 Years			

Category 2.0B 2-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	SYSTEM COMPONENTS			
	Component Group A			
	Memory (Single DIMM Module)			
24	4GB ECC SDRAM Memory - A			
25	4GB ECC SDRAM Memory - B			
26	8GB ECC SDRAM Memory - A			
27	8GB ECC SDRAM Memory - B			
28	16GB ECC SDRAM Memory - A			
29	16GB ECC SDRAM Memory - B			
30	32GB ECC SDRAM Memory - A			
31	32GB ECC SDRAM Memory - B			
	Component Group B			
	I/O Cards			
32	Multi-Port 8GB Fibre HBA Model A			
33	Multi-Port 8GB Fibre HBA Model B			
34	Multi-Port Infiniband HCA			
35	2-port Blade 1Gb Ethernet Expansion Card / Adapter			
36	4-port Blade 1Gb Ethernet Expansion Card / Adapter			
37	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
38	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
39	300GB MLC I/O Acclerator			
40	300GB SLC I/O Acclerator			
41	600GB MLC I/O Acclerator			
42	600GB SLC I/O Acclerator			

Category 2.0B 2-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	System Disks			
43	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
44	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
45	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
46	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
47	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
48	100GB SLC SATA-SSD			
49	100GB SLC SAS-SSD			
50	200GB SLC SATA-SSD			
51	200GB SLC SAS-SSD			
52	400GB SLC SATA-SSD			
53	400GB SLC SAS-SSD			

Category 2.1B 2-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	2 x CPU			
3	0 - RAM			
4	Integrated Disk Controller w/ support for RAID 0 and 1			
5	2 x 100GB eMLC SATA-SSD			
6	1 x Mezzanine slot			
7	2 port 1Gb or 1 port 10Gb NIC			
8	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
9	UPGRADE to N + 1 (Maximum number of CPUs)			
10	UPGRADE to N + 1 (Half the number of CPUs)			
11	DOWNGRADE to half the number of N			
12	DOWNGRADE to N - 1 (Maximum number of CPUs)			
13	DOWNGRADE to N - 1 (Half the number of CPUs)			
	HDD Downgrade			
14	Dowgrade to 0 - HDD			
	Installation Upgrade			
15	System Installation at end user site			
	Warranty Upgrade			
16	Standard On-Site Maintenance Service: 4 Years			
17	Standard On-Site Maintenance Service: 5 Years			
18	4-hour response On-Site Maintenance Service: 3 Years			
19	4-hour response On-Site Maintenance Service: 4 Years			
20	4-hour response On-Site Maintenance Service: 5 Years			
21	Enhanced On-Site Maintenance Service: 3 Years			
22	Enhanced On-Site Maintenance Service: 4 Years			
23	Enhanced On-Site Maintenance Service: 5 Years			

Category 2.1B 2-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	SYSTEM COMPONENTS			
	Component Group A			
	Memory (Single DIMM Module)			
24	4GB ECC SDRAM Memory - A			
25	4GB ECC SDRAM Memory - B			
26	8GB ECC SDRAM Memory - A			
27	8GB ECC SDRAM Memory - B			
28	16GB ECC SDRAM Memory - A			
29	16GB ECC SDRAM Memory - B			
30	32GB ECC SDRAM Memory - A			
31	32GB ECC SDRAM Memory - B			
	Component Group B			
	I/O Cards			
32	Multi-Port 8GB Fibre HBA Model A			
33	Multi-Port 8GB Fibre HBA Model B			
34	Multi-Port Infiniband HCA			
35	2-port Blade 1Gb Ethernet Expansion Card / Adapter			
36	4-port Blade 1Gb Ethernet Expansion Card / Adapter			
37	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
38	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
39	300GB MLC I/O Acclerator			
40	300GB SLC I/O Acclerator			
41	600GB MLC I/O Acclerator			
42	600GB SLC I/O Acclerator			

Category 2.1B 2-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	System Disks			
43	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
44	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
45	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
46	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
47	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
48	100GB SLC SATA-SSD			
49	100GB SLC SAS-SSD			
50	200GB SLC SATA-SSD			
51	200GB SLC SAS-SSD			
52	400GB SLC SATA-SSD			
53	400GB SLC SAS-SSD			

Category 3.0B 4-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	4 x CPU			
3	0 - RAM			
4	Integrated Disk Controller w/ support for RAID 0 and 1			
5	2 x 100GB eMLC SATA-SSD			
6	2 x Mezzanine slot			
7	2 port 1Gb or 1 port 10Gb NIC			
8	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
9	UPGRADE to N + 1 (Maximum number of CPUs)			
10	UPGRADE to N + 1 (Half the number of CPUs)			
11	DOWNGRADE to half the number of N			
12	DOWNGRADE to N - 1 (Maximum number of CPUs)			
13	DOWNGRADE to N - 1 (Half the number of CPUs)			
	HDD Downgrade			
14	Dowgrade to 0 - HDD			
	Installation Upgrade			
15	System Installation at end user site			
	Warranty Upgrade			
16	Standard On-Site Maintenance Service: 4 Years			
17	Standard On-Site Maintenance Service: 5 Years			
18	4-hour response On-Site Maintenance Service: 3 Years			
19	4-hour response On-Site Maintenance Service: 4 Years			
20	4-hour response On-Site Maintenance Service: 5 Years			
21	Enhanced On-Site Maintenance Service: 3 Years			
22	Enhanced On-Site Maintenance Service: 4 Years			
23	Enhanced On-Site Maintenance Service: 5 Years			

Category 3.0B 4-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	SYSTEM COMPONENTS			
	Component Group A			
	Memory (Single DIMM Module)			
24	4GB ECC SDRAM Memory - A			
25	4GB ECC SDRAM Memory - B			
26	8GB ECC SDRAM Memory - A			
27	8GB ECC SDRAM Memory - B			
28	16GB ECC SDRAM Memory - A			
29	16GB ECC SDRAM Memory - B			
30	32GB ECC SDRAM Memory - A			
31	32GB ECC SDRAM Memory - B			
	Component Group B			
	I/O Cards			
32	Multi-Port 8GB Fibre HBA Model A			
33	Multi-Port 8GB Fibre HBA Model B			
34	Multi-Port Infiniband HCA			
35	2-port Blade 1Gb Ethernet Expansion Card / Adapter			
36	4-port Blade 1Gb Ethernet Expansion Card / Adapter			
37	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
38	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
39	300GB MLC I/O Acclerator			
40	300GB SLC I/O Acclerator			
41	600GB MLC I/O Acclerator			
42	600GB SLC I/O Acclerator			

Category 3.0B 4-Socket Blade

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	System Disks			
43	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
44	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
45	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
46	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
47	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
48	100GB SLC SATA-SSD			
49	100GB SLC SAS-SSD			
50	200GB SLC SATA-SSD			
51	200GB SLC SAS-SSD			
52	400GB SLC SATA-SSD			
53	400GB SLC SAS-SSD			

Category 3.1B 4-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	DEFAULT SYSTEM			
1	Base Unit			
2	4 x CPU			
3	0 - RAM			
4	Integrated Disk Controller w/ support for RAID 0 and 1			
5	2 x 100GB eMLC SATA-SSD			
6	2 x Mezzanine slot			
7	2 port 1Gb or 1 port 10Gb NIC			
8	Standard On-Site Maintenance Service: 3 Years			
	System Upgrade / Downgrade			
	CPU Model Upgrade / Downgrade (where N = Default model)			
9	UPGRADE to N + 1 (Maximum number of CPUs)			
10	UPGRADE to N + 1 (Half the number of CPUs)			
11	DOWNGRADE to half the number of N			
12	DOWNGRADE to N - 1 (Maximum number of CPUs)			
13	DOWNGRADE to N - 1 (Half the number of CPUs)			
	HDD Downgrade			
14	Dowgrade to 0 - HDD			
	Installation Upgrade			
15	System Installation at end user site			
	Warranty Upgrade			
16	Standard On-Site Maintenance Service: 4 Years			
17	Standard On-Site Maintenance Service: 5 Years			
18	4-hour response On-Site Maintenance Service: 3 Years			
19	4-hour response On-Site Maintenance Service: 4 Years			
20	4-hour response On-Site Maintenance Service: 5 Years			
21	Enhanced On-Site Maintenance Service: 3 Years			
22	Enhanced On-Site Maintenance Service: 4 Years			
23	Enhanced On-Site Maintenance Service: 5 Years			

Category 3.1B 4-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	SYSTEM COMPONENTS			
	Component Group A			
	Memory (Single DIMM Module)			
24	4GB ECC SDRAM Memory - A			
25	4GB ECC SDRAM Memory - B			
26	8GB ECC SDRAM Memory - A			
27	8GB ECC SDRAM Memory - B			
28	16GB ECC SDRAM Memory - A			
29	16GB ECC SDRAM Memory - B			
30	32GB ECC SDRAM Memory - A			
31	32GB ECC SDRAM Memory - B			
	Component Group B			
	I/O Cards			
32	Multi-Port 8GB Fibre HBA Model A			
33	Multi-Port 8GB Fibre HBA Model B			
34	Multi-Port Infiniband HCA			
35	2-port Blade 1Gb Ethernet Expansion Card / Adapter			
36	4-port Blade 1Gb Ethernet Expansion Card / Adapter			
37	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
38	2-port Blade 10Gb Expansion Card / Adapter (Ethernet and/or Fibre) Model			
39	300GB MLC I/O Acclerator			
40	300GB SLC I/O Acclerator			
41	600GB MLC I/O Acclerator			
42	600GB SLC I/O Acclerator			

Category 3.1B 4-Socket Blade Enterprise

Item No.	Item Summary (see Annex A for full Specs)	Manufacturer and Model	Part #	URL for specifications
	Component Group C			
	System Disks			
43	146GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
44	146GB SAS HDD w/ hot-swap drive carrier (15K RPM) 2.5"			
45	300GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
46	500GB NL-SAS or SATA HDD w/ hot-swap drive carrier (7200 RPM) 2.5"			
47	900GB SAS HDD w/ hot-swap drive carrier (10K RPM) 2.5"			
48	100GB SLC SATA-SSD			
49	100GB SLC SAS-SSD			
50	200GB SLC SATA-SSD			
51	200GB SLC SAS-SSD			
52	400GB SLC SATA-SSD			
53	400GB SLC SAS-SSD			

ANNEX C: CALL-UP LIMITATIONS - SERVERS

This annex describes the Call-up Limitations of each Category and how they are established. Within each Category, a System will be ranked based on its evaluated price. A System's ranking determines what its Call-up Limitation is and what volume discounts can apply to different Call-up values. A summary table appears in an Appendix to this Annex.

1.1 EVALUATED PRICES

- (a) **Evaluated Price Ranking:** Call-up Limitations are determined by each System's Evaluated Price. A System's Evaluated Price will fluctuate during the Standing Offer Period for a given Category and the Evaluated Price must be determined at the time of each Call-up to determine the applicable Call-up Limitation.
- (b) **Evaluated Price:** Evaluated Prices are calculated as follows:
 - (i) **Servers:** Evaluated Prices = [(Default System price) X (100% - Benchmark Discount)) X 45%] + [(System Upgrade prices) X 10%] + [(System Component prices) X 45%]
 - (ii) **Blade Servers:** Evaluated Prices = {(Default Blade System price) + [(Chassis Price) + (Chassis Upgrades) + (Chassis Components)] / Maximum Number Blade Systems per Chassis } X (100% - Benchmark Discount)) X 45% + [(Blade System Upgrade prices) X 10%] + [(Blade System Component prices) X 45%]
 - (iii) **Benchmark Discounts:** If applicable, the Benchmark Discount percentages as calculated in Annex I are indicated on the Benchmark Testing Report section of the PWGSC CAG website.

1.2 RANKINGS

- (a) **Rank 1:** The System with the Lowest Evaluated Price in the Category and any System with an Evaluated Price within 3% of the Lowest Evaluated Price.
- (b) **Rank 2:** Any System with an Evaluated Price within 10% of the Lowest Evaluated Price in the Category.
- (c) **Rank 3:** Any System with an Evaluated Price more than 10% higher than the Lowest Evaluated Price but within 10% of the Mean Evaluated Price of the Category.
- (d) **Mean Evaluated Price:** Each Category's Mean Evaluated Price is calculated using all Systems for all Offerors in the Category.
- (e) **Only one System in a Category:** If there is only a single Offeror in a Category, their System(s) will be given a Ranking of Rank 2.
- (f) **Blade Server Chassis:** Regardless of Evaluated Price, all Blade Server Chassis will be given a Ranking of Rank 3.

1.3 CATEGORY CALL-UP LIMITATIONS

- (a) All limitations are inclusive of GST, HST and any applicable provincial disposal surcharges and volume discount.
- (b) **Blade Server Chassis:** Identified Users may not purchase a Blade Server Chassis unless they are also purchasing Blade Servers.
- (c) **Call-ups made directly by Identified Users for Components:** Call-ups that include only Components (i.e., equipment that may be purchased without a System), have a Call-up Limitation of that will be determined by the associated System's Evaluated Price.
- (d) **Call-ups made directly by Identified Users for Other Related Items:** Call-ups that include only Other Related Items have a Call-up Limitation of the lesser of \$25,000.00 or the associated System's Call-up Limitation.

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- (e) **Call-ups made directly by the PWGSC Standing Offer Authority for Components:** Call-ups that include only Components (i.e., equipment that may be purchased without a System) have a Call-up Limitation that will be determined by the associated System's Evaluated Price.
 - (f) **Call-ups made directly by the PWGSC Standing Offer Authority for Other Related Items:** Call-ups that include Other Related Items (i.e., equipment that may be purchased without a System) have a Call-up Limitation of \$50,000.
 - (g) **Total Component Cost:** A System's Components will only be available for purchase without a system if its Total Component Cost (TCC) falls within the evaluated price range, as detailed below:
 - (i) The TCC will consist of the sum of the ceiling unit prices for supplying all mandatory Components specified in Annex "B". The TCC will be determined per Component Grouping (i.e. "A", "B", "C"...).
 - (ii) In order to qualify the set of System Components, the TCC must be no greater than the mean (calculated using the "AVERAGE" function in Microsoft Excel 2000 SR-1) plus one standard deviation (calculated using the "STDEVP" function in Microsoft Excel 2000 SR-1) of the total TCC of the Systems/Groupings in the Category.
 - (iii) The lowest TCC of the Systems/Groupings in each Category will NOT be used for purposes of calculating the mean plus one standard deviation.
 - (iv) This evaluation will coincide with the schedule detailed in the article entitled "Product Substitution and Price Revision".
 - (h) **Call-ups made directly by Identified Users for Servers:**
 - (i) **Rank 1:** A Call-up limitation of \$100,000.00.
 - (ii) **Rank 2:** A Call-up limitation of \$75,000.00.
 - (iii) **Rank 3:** A Call-up limitation of \$50,000.00.
 - (i) **Call-ups made directly by Identified Users for Blade Servers:**
 - (i) **Rank 1:** A Call-up limitation of \$100,000.00 for Blade Servers + \$50,000 for Chassis.
 - (ii) **Rank 2:** A Call-up limitation of \$75,000.00 for Blade Servers + \$50,000 for Chassis.
 - (iii) **Rank 3:** A Call-up limitation of \$50,000.00 for Blade Servers + \$50,000 for Chassis.
 - (j) **Call-ups made directly by the PWGSC Standing Offer Authority for Servers:**
 - (i) **Rank 1:** A Call-up limitation of \$400,000.00.
 - (ii) **Rank 2:** A Call-up limitation of \$300,000.00.
 - (iii) **Rank 3:** A Call-up limitation of \$200,000.00.
 - (k) **Call-ups made directly by the PWGSC Standing Offer Authority for Blade Servers:**
 - (i) **Rank 1:** A Call-up limitation of \$400,000.00 for Blade Servers + \$200,000 for Chassis.
 - (ii) **Rank 2:** A Call-up limitation of \$300,000.00 for Blade Servers + \$200,000 for Chassis.
 - (iii) **Rank 3:** A Call-up limitation of \$200,000.00 for Blade Servers + \$200,000 for Chassis.

1.4 VOLUME DISCOUNTS

- (a) Provided the Offeror agrees to the volume discounts below at the time of order, the PWGSC Standing Offer Authority may issue Call-ups, up to the described Call-up limitations.
- (b) When a volume discount applies to a Call-up, the discount is applied to the current NMSO prices (meaning the NMSO price published on the CAG website on the day of the Call-up).

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- (c) The applicable GST, HST and any applicable provincial disposal surcharges must be added after the discount has been applied.
- (d) The PWGSC Standing Offer Authority will require, before issuing any such Call-up, a written confirmation from the Offeror agreeing to honor the discount. If an Authorized Agent will be involved in the performance of the Work, an Authorized Agent Certification will be required. Sample certifications are included as an appendix to this annex.
- (e) **Other Related Items only:**
- (i) A Call-up valued up to \$25,000.00 at current NMSO prices will not be subject to any volume discount.
- (ii) A Call-up valued over \$25000.01 at current NMSO prices is subject to a volume discount of at least 15%. The total value of the Call-up cannot exceed \$50,000.00.
- (f) **Servers and Blade Servers (including Components):**
- (i) **Rank 1:**
- (A) A Call-up valued up to \$100,000.00 at current NMSO prices will not be subject to any volume discount.
- (B) A Call-up valued between \$100,000.01 and \$200,000.00 at current NMSO prices is subject to a volume discount of at least 5%.
- (C) A Call-up valued between \$200,000.01 and \$300,000.00 at current NMSO prices is subject to a volume discount of at least 10%.
- (D) A Call-up valued over \$300,000.01 at current NMSO prices is subject to a volume discount of at least 15%.
- (ii) **Rank 2:**
- (A) A Call-up valued up to \$75,000.00 at current NMSO prices will not be subject to any volume discount.
- (B) A Call-up valued between \$75,000.01 and \$100,000.00 at current NMSO prices is subject to a volume discount of at least 5%.
- (C) A Call-up valued between \$100,000.01 and \$200,000.00 at current NMSO prices is subject to a volume discount of at least 10%.
- (D) A Call-up valued between \$200,000.01 and \$300,000.00 at current NMSO prices is subject to a volume discount of at least 15%.
- (iii) **Rank 3:**
- (A) A Call-up valued up to \$50,000.00 at current NMSO prices will not be subject to any volume discount.
- (B) A Call-up valued between \$50,000.01 and \$75,000.00 at current NMSO prices is subject to a volume discount of at least 5%.
- (C) A Call-up valued between \$75,000.01 and \$100,000.00 at current NMSO prices is subject to a volume discount of at least 10%.
- (D) A Call-up valued between \$100,000.01 and \$200,000.00 at current NMSO prices is subject to a volume discount of at least 15%.

(g) Blade Server Chassis:

- (i) A Call-up valued up to \$50,000.00 at current NMSO prices will not be subject to any volume discount.
- (ii) A Call-up valued between \$50,000.01 and \$75,000.00 at current NMSO prices is subject to a volume discount of at least 5%.
- (iii) A Call-up valued between \$75,000.01 and \$100,000.00 at current NMSO prices is subject to a volume discount of at least 10%.
- (iv) A Call-up valued between \$100,000.01 and \$200,000.00 at current NMSO prices is subject to a volume discount of at least 15%.

1.5 MULTIPLE CATEGORY CALL-UP LIMITATIONS

- (a) Contemporaneous requirements for multiple Categories of Products from the same Offeror may be placed on one Call-up.
- (b) Identified Users are limited to ordering up to each Category's Call-up limitation as described in the "Individual Category Call-up Limitations" section and are further limited to an aggregate value of \$200,000.00 for the entire order.
- (c) The PWGSC Standing Offer Authority is limited to ordering up to each System's Call-up limitation as described in the "Individual Category Call-up Limitations". The entire order will be subject to a mandatory discount equal to the highest volume discount that would apply as if each of the Products been purchased separately. For example, if the order is for \$120K of Rank 1 systems (5%), \$20K of Rank 2 systems (0%) and \$120K of Rank 3 systems (15%), the entire order would be discounted by 15%.
- (d) The Individual Category Call-up Limitations will apply to each of these Categories for the Products purchased from those Categories, but there is no restriction on the total value of the Call-up (so the maximum value of the Call-up would be the sum of all the Individual Category Call-up Limitations for the applicable Systems). Should the Call-up exceed \$400,000.00, PWGSC will negotiate a higher discount of at least 20% for the entire order.

1.6 NON-STANDING OFFER ITEMS

- (a) The Identified User may incorporate, within the Call-up Limitations indicated above, up to a total of \$5,000.00 of non-Standing Offer items (i.e., peripherals and components but not Systems) on any Call-up. All non-Standing Offer items must be provided at a price in accordance with the Offeror's current published price list less any applicable government discounts. Canada reserves the right to approve or reject any non-Standing Offer item at any time.
- (b) The PWGSC Standing Offer Authority reserves the right to add up to \$25,000 of Non-Standing Offer items to any Call-up.

APPENDIX C-1: CALL-UP LIMITATIONS TABLE

Servers and Blade Servers including Components	Rank	Call-up Limitation after applying Volume Discount*			
		Identified Users	PWGSC		
			0%	5%	10%
	1	\$100K	\$200K	\$300K	\$400K
	2	\$75K	\$100K	\$200K	\$300K
	3	\$50K	\$75K	\$100K	\$200K
Chassis **		\$50K	\$75K	\$100K	\$200K
Other Related Items		\$25K	-	-	\$50K

* All Call-up Limitations include GST/HST and any applicable provincial disposal surcharges. The GST/HST is applied to the current NMSO prices (as published on the CAG website on the day of the Call-up) AFTER applying any applicable volume discount and applicable provincial disposal surcharges.

** **Blade Server Chassis:** Identified Users may not purchase a Blade Server Chassis unless they are also purchasing Blade Servers.

APPENDIX C-2: SAMPLE CERTIFICATION FORMS

CALL-UP PRICING DISCOUNT CERTIFICATION

By signing below, the NMSO Offeror hereby agrees that the prices charged by the NMSO Offeror or NMSO Reseller (acting in its capacity as the NMSO Offeror's agent) for Call-up number _____ will be the NMSO Prices less ___% on the date of the Call-up.

This price reduction is to be applied to all NMSO items (Default System, Upgrades, and Components) in accordance with Annex C of your NMSO.

NMSO **Offeror** Authorized Signing Authority

Date

AUTHORIZED RESELLER CERTIFICATION (CALL-UP)

The NMSO Offeror, _____ (the "NMSO Offeror"), hereby certifies that:

(the "NMSO Reseller") has been designated as its agent under the NMSO and continues to be its authorized agent for the purposes of receiving and fulfilling Call-ups and receiving payments under this NMSO.

By signing below, the NMSO Offeror and the NMSO Reseller both confirm that the call-up will be executed by the NMSO Reseller.

By signing below, the NMSO Offeror hereby agrees and acknowledges that:

1. The NMSO Offeror's authorization of the NMSO Reseller to act as its agent in respect of this NMSO (including the performance of this Call-up) does not amend, diminish, or modify any of the responsibilities of the Offeror under the NMSO or the contracts awarded under this NMSO (including those awarded to the NMSO Offeror through its agent, the NMSO Reseller).
2. It is the responsibility of the NMSO Offeror to ensure that the NMSO Reseller conforms to the terms and conditions of the NMSO. If the NMSO Reseller fails to fulfill the obligations of this call-up, the NMSO Offeror will, upon written notification from the PWGSC Contracting Authority, complete and fulfill those obligations directly at no additional cost to Canada.
3. In accordance with the provisions of the NMSO, if at any time during the performance of this call-up, the NMSO Offeror terminates its agency relationship with the NMSO Reseller, it will advise Canada and will fulfill the obligations under the contract directly. Notwithstanding such a notice, any amounts paid by Canada to the NMSO Reseller in good faith will be deemed to have been received by the NMSO Offeror.

NMSO **Offeror** Authorized Signing Authority

Date

NMSO **Reseller** Authorized Signing Authority

Date

ANNEX D: RVD PROCESS**1.1 CALL-UPS MADE BY PWGSC STANDING OFFER AUTHORITY USING REQUEST FOR VOLUME DISCOUNT PROCESS:**

- (a) **Use of RVD Process:** For requirements that exceed the Call-up Limitations, PWGSC will issue a Request for Volume Discount (“RVD”). In addition to these requirements, PWGSC may, in its discretion, issue a Request for Volume Discount for any requirement. The Request for Volume Discount process allows Offerors to confirm to PWGSC their best and final offer in respect of a specific requirement for one or more Identified Users.
- (b) **Recipients of RVD:** The RVD will be sent by PWGSC to all Offerors who hold a Standing Offer in the relevant Category(ies) and are listed in the selected Category(ies) at the date and time the RVD is issued (or to those Offerors that meet all the applicable security requirements). Where an RVD includes Products from multiple Categories of this NMSO, the RVD will be sent to Offerors who hold Standing Offers in any of the relevant Categories. Eligible Offerors will be determined on the date the RVD is issued by verifying the CAG website. The specifications (taken as a whole) in any given RVD will be sufficiently generic that a minimum of 50% of the Offerors in each of the relevant Category(ies) are able to submit an RVD Response.
- (c) **Technical Authority:** PWGSC will act as the Technical Authority during the RVD process and for all Call-ups resulting from RVDs.

1.2 SUBJECT-MATTER OF RVDs:

- (a) RVDs may be issued for Products that are listed on the Standing Offers.
- (b) Each RVD issued by PWGSC will specify:
 - (i) the time and date by which any interested Offeror must respond to the RVD to be considered for any resulting Call-up. PWGSC will generally provide Offerors with 5 working days from the date it issues the RVD to provide their RVD response. This period may be reduced (e.g. for urgent requirements) or extended (e.g. for more complex requirements), at the discretion of the Standing Offer Authority;
 - (ii) any special security requirements, if they differ from those set out in the Resulting Contract Clauses;
 - (iii) the applicable NMSO Category(ies);
 - (iv) the required items in each Category;
 - (v) the required quantities for immediate delivery (every RVD will specify some quantities for immediate delivery);
 - (vi) the optional quantities for delivery at a later date at Canada’s option. Optional quantities will generally be limited to 100% of the quantity specified for immediate delivery. Unless otherwise noted in the RVD, PWGSC must exercise the option to purchase the optional quantities within 12 months. Longer-term RVDs with higher optional quantities will be considered only where PWGSC determines that an Identified User has demonstrated a requirement to purchase additional quantities over a longer period;
 - (vii) if different from the standard delivery time required by the Resulting Contract Clauses, the required delivery date. From time to time, PWGSC may reduce the standard delivery period set out in the Article entitled “Delivery” in the Resulting Contract Clauses by specifying a shorter delivery period in the RVD;
 - (viii) delivery location(s);
 - (ix) whether installation is required;

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- (x) any desirable features (described below) and whether the basis of selection will be “lowest price” or “best value”. The definition of best value, if applicable, will be included in the RVD; and
 - (xi) any requirements that differ from the NMSO Default System configuration for the selected Category(ies), including any Other Related Options.
- (c) **Cancellation of RVD:** PWGSC may cancel an RVD process at any time and may later re-issue the same or a similar RVD.

1.3 RVD RESPONSE REQUIREMENTS:

- (a) Only responses to RVDs that meet all the following requirements will be considered by PWGSC for a Call-up:
- (i) The Products proposed for delivery in the RVD Response must be identical to the Offeror’s Default System(s) and/or Upgrades and/or Components and/or Other Related Items (as applicable) that have been approved and authorized for supply under this NMSO, as identified on the CAG website at the time the RVD was issued by PWGSC, unless:
 - (A) it is otherwise expressly stated in the RVD;
 - (B) the specifications listed in the RVD exceed the specifications in this NMSO; or
 - (C) for certain Products (as defined in (iii),below), the proposed Product exceeds the specifications of the currently listed NMSO Product.
 - (ii) Proposed systems must be approved and authorized for supply under this NMSO. For greater certainty, Systems that have been the subject of requests for substitutions may not be proposed for delivery in response to an RVD, even if approved, unless they are listed on the CAG website at the time the RVD is issued by PWGSC.
 - (iii) PWGSC will only consider Products allowable under the provisions of (i) (C) for: Optical Drives, Hard Drives, Mice, Keyboards.
 - (iv) If the RVD requests enhancement(s) to the minimum Default System specifications for any Category, the Offeror must offer either the requested enhancement or the Offeror’s existing approved and listed Default System specifications in that Category, whichever is greater.
 - (v) For proposed Products that are not listed in the NMSO, the RVD Response must include technical specification sheets or the specific URL address for the technical specifications demonstrating that the offered Product meets the requirements of the RVD and the NMSO.
 - (vi) If the RVD response is being submitted by, or any portion of the Work will be performed by, an Authorized Reseller on behalf of the Offeror, the RVD response must include a completed Authorized Reseller Certification;
 - (vii) All quoted prices must be in Canadian dollars;
 - (viii) The quoted prices of NMSO items must not exceed the current ceiling prices of that Offeror listed for that item on the CAG website;
 - (ix) Where the response includes more than one Product in a single Category, the RVD response must also include an individual price and the make and model number of each line item requested in the RVD and must clearly identify which System the Offeror will supply if issued the Call-up; and
 - (x) All prices must be unit prices and include all discounts off the NMSO ceiling prices, rather than bundled discounts. Where PWGSC believes that any unit price does not correspond to the extended pricing, PWGSC will use the unit prices to determine the correct extended pricing and notify the Offeror. Where multiple items have been priced on a bundled basis, PWGSC may request that the Offeror break down the pricing; in those cases, the Offeror’s total price for the items, once broken down into separate prices, must equal the originally submitted price for the bundle.

1.4 SELECTION OF OFFEROR FOR RVD CALL-UP:

- (a) **Basis of Selection:** An Offeror may be selected for an RVD Call-up on the basis of “**lowest price**” or “**best value**”.
- (i) If the basis of selection is lowest price, Canada will calculate the aggregate cost of all items (both the initial and optional quantities) listed in the RVD. The responsive RVD response with the lowest aggregate cost will be recommended for award of a contract.
- (ii) If the basis of selection is best value, Canada will calculate the aggregate cost of all items (both the initial and optional quantities) listed in the RVD after applying the applicable reduction percentages from the RVD Discounts and/or Desirable Features.
- (A) **Benchmark Discounts:** The Benchmark Discount percentages that will be applied are those indicated on the Benchmark Testing Report section of the PWGSC CAG website at the date and time of RVD issuance. The Benchmark Discount percentages will be applied to the price of the NMSO System(s) only. The Benchmark Discount percentages will be included in an Annex to the RVD.
- (B) **Desirable Features:** Where approved by the PWGSC Technical Authority, an RVD may specify desirable features that will be taken into account in selecting the Offeror for Call-up. Desirable features will be associated with a percentage by which the quoted price for the RVD will be notionally reduced to reflect the added value to Canada represented by those features. When the Product quoted in response to an RVD includes the desirable feature(s) specified in the RVD, then the corresponding percentage (e.g., 2%) will be deducted from the price of the mandatory (plus any optional) quantities of the applicable Products. A maximum of 5% for any single item will apply, along with a maximum overall reduction to an Offeror’s quoted price of 10%.
- (C) **Example:** If an RVD is issued for Systems and another Product and uses the best value basis of selection with Benchmark Discounts for the System and a Desirable Feature on the other Product, the **Best and Final Offer Price (BFOP)** will be calculated as follows:

$$\text{BFOP} = \text{System Unit Price} \times \text{Quantity} \times (100\% - \text{Applicable RVD Discount } \%) + \text{Product 2 Unit Price} \times \text{Quantity} \times (100\% - \text{Applicable Desirable Features Discount})$$
- (D) PWGSC will apply the price reduction to the quoted price(s) and Offerors are not required to do so in their RVD responses. These price reductions will be used only for the purposes of selecting an Offeror for Call-up and will not affect the price chargeable if a Call-up is issued.
- (E) The responsive RVD response with the lowest BFOP will be recommended for award of a contract.
- (b) **Multiple Categories:** When a RVD is issued for multiple Categories:
- (i) If the all Offerors active in each category covered by the RVD are identical, evaluation will be done on the requirement as a whole. If requested by the Identified User, and described in the RVD, evaluation will be done on a per Category basis.
- (ii) If the Offerors active in each category covered by the RVD are different, evaluation will be done on a per Category basis. Where approved by the PWGSC Technical Authority, a desirable feature discount may be applied to the price offered by Offeror/Authorized Reseller submitting a response to multiple Categories. Any RVD where this applies will explain how the desirable feature discount will be applied.
- (c) **Multiple Responses:** If an Offeror submits multiple responses to an RVD offering to supply the same System (e.g., the Offeror has more than one of its Authorized Resellers submit responses as its agent), and the Offeror wishes to withdraw one of those responses, the PWGSC Standing Offer Authority reserves the right to require that all of the Offeror’s responses offering the same System be withdrawn.

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- (d) **Withdrawal of RVD Response by Offeror:** An Offeror may withdraw its response to an RVD at any time, in which case PWGSC will no longer consider that Offeror's response, but may continue to consider all other responses.
 - (e) **Socio-economic considerations:** The selection of an Offeror for Call-up using an RVD process will not be based on socio-economic considerations; however, desirable features may include Product qualities or supplier commitments that are more consistent with Canada's commitments to Green Procurement and Sustainable Development.
 - (f) **Only one response:** If only one response that meets the RVD requirements is received, Canada may request that the Offeror submit price support in the form of one or more of the following:
 - (i) a current published price list and the percentage discount available to Canada;
 - (ii) paid invoices for like goods or services (like quality and quantity) sold to other customers; and
 - (iii) a price certification from the Offeror.
 - (iv) If Canada determines that the prices being offered by do not represent good value to Canada, Canada reserves the right to reject the response or negotiate with that Offeror.
 - (g) **Demonstration or Compatibility Testing:** PWGSC may require that the Offeror demonstrate through testing (including compatibility testing) that any items that it proposes to deliver in response to an RVD meet the RVD specifications. Canada is not obligated to test any or all Products offered.
 - (h) **Multiple Call-ups Resulting from RVD Process:** If specified in the RVD, the total requirement may be split between two or more Offerors.
 - (i) **Negotiation:** Further negotiations may be conducted before issuing a Call-up resulting from an RVD. Any negotiations will be conducted by the Standing Offer Authority specified in the RVD. The Standing Offer Authority may also require a certification before issuing a contract, confirming that the pricing satisfies the requirement described in Article 7.13 of the Resulting Contract Clauses.

1.5 RVD CONTRACT:

- (a) **Terms and Conditions:** The RVD Contract consists of the Resulting Contract Clauses set out in the NMSO, plus any additional terms and conditions identified in the RVD.
- (b) **Option to Include Implementation Services:** For RVDs, PWGSC reserves the right to request an upfront fixed price for implementation. The definition of implementation may be defined during PWGSC and client engagement.
- (c) **Expansion (for UNIX, Blade Systems and Servers with 4 or more CPU sockets):** RVDs under this Standing Offer will be conducted to satisfy a requirement for one or more Systems. Over the course of any contract awarded as a result of this RVD, the required computing capacity may expand; compatibility and proprietary issues may arise with respect to any expansion once the System(s) is/are put in place. Therefore, Offerors are advised that Canada may negotiate with the resulting Contractor for these computing expansion requirements by way of amendments to any contract awarded as a result of an RVD, as long as:
 - (i) contract amendments expanding the computing capacity of the RVD Product(s) will be made only within the System warranty period for the System put in place as a result of this RVD;
 - (ii) the general scope of the Work will remain unchanged; any computing expansion must clearly be an expansion of the System(s) purchased (and not a replacement or a completely new System in order to circumvent the Call-up terms and conditions) and it must be for use by the same Identified User (unless the Identified User under the Contract has been amended since award, so that the System is now being used by another Identified User);
 - (iii) the final contract value will be no more than double the value of the total value of any Contract (including the exercised options) resulting from this RVD;
 - (iv) no more than 3 amendments to the contract can be made for computing expansion requirements (although additional amendments may be made for other reasons); and

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- (v) any amendment expanding the computing capacity of the System(s) purchased under this RVD must come through the PWGSC Standing Offer Authority for review and approval.
 - (vi) pricing for equipment purchased through an RVD Call-up Amendment to expand the capacity of the System will not exceed 10% above the RVD price proposed for that equipment. Where an item is quoted in both the Mandatory and Option quantity sections of the RVD, the RVD Option pricing will be used for comparison purposes. For all other items: in order to qualify for capacity expansion a similar discount must be offered.
 - (d) **Non-Standing Offer Items:** PWGSC reserves the right to add up to \$25,000.00 of Non-Standing Offer items (which were not specified in the RVD document) to any Call-up resulting from a RVD. These items must be provided at a price in accordance with the Offeror's current published price list less any applicable government discounts; a minimum 10% discount must be offered, otherwise the Non-Standing Offer items will not be included in the Call-up.

1.6 NOTIFICATION OF RVD RESULTS:

- (a) All Offeror/Authorized Resellers who respond to an RVD will be notified in writing of the outcome of the RVD process. This notice will include the following information:
 - (i) RVD Number (e.g., RVD # 12345-012345);
 - (ii) Offeror(s) selected for Call-up (e.g., XYZ Inc.);
 - (iii) Value of Call-up (e.g., \$177,004.33, GST/HST Included); and
 - (iv) Number of RVD responses received by PWGSC (e.g., 5); and
 - (v) Best and Final Offer Price of the Offeror to whom the notification is being sent and the Best and Final Offer Price of the Offeror selected for Call-up.
- (b) Unless required to do so by a court or other body of competent jurisdiction, Canada will not disclose the unit prices quoted by an Offeror in response to an RVD. Nor will Canada identify in the notification of RVD results the specific quantities of items subject to the Call-up.

Annex F - Authorized Resellers and Service Outlets

The list of Authorized Resellers and Service Outlets should be submitted in English and French as separate files. The list should be submitted in the format detailed below.

FORMAT:

Reseller Name	Telephone	PBN	FAX	Contact Name	Email	Street Address	City	Province	Postal Code	Sales	Service
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Example:

XYZ Solutions 613-956-1000 PBN: 11111111PG0001 800-956-1500 John Smith ismith@xyz.ca 100 ABC St, Suite 111 Ottawa ON K1A 0S5 Yes Yes

Compagnie	Téléphone	NEA	Télécopieur	Contact	Courriel	Adresse	Ville	Province	Code Postale	Ventes	Service
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Example:

XYZ Solutions 613-956-1000 NEA: 11111111PG0001 800-956-1500 John Smith ismith@xyz.ca 100 rue ABC, Suite 111 Ottawa ON K1A 0S5 Yes Yes

Offeror	Quarter	Order Type	Department	Department - Long	Call-up	Order Date	Category	Systems	Subtotal	Total	Reseller	Group
1	2	3	4	5	6	7	8	9	10	11	12	13

Notes:

- 1 Enter Offer Name
- 2 Enter Quarter and Year - ie., **QX 201X** (Q1 2010 April - June 2010, Q2 2010 = July - Sep 2010, ...)
- 3 Enter Order Type (**CU** = Call-up, **EC** = Elevated Call-up, **RVD** = Request for Volume Discount Contract, **AMD** = RVD Amendment)
- 4 Leave Blank - for PWGSC use
- 5 Enter Department
- 6 Enter Call-up Order Number
- 7 Enter Order Date (MM/DD/YY)
- 8 Enter Category (1.0D, 2.0D, 3.0D, 4.0D, 1.0N, 2.0N, 3.0N, 4.0N, 1.0S, 2.0S, 3.0S, 4.0S, 5.0S, 6.0S, 1.0T, 2.0T, 3.0T, 4.0T, 1.0A, 2.0A, 3.0A, 4.0A, 5.0A, 6.0A)
- 9 Enter Number of Systems only
- 10 Enter Subtotal value of order excluding taxes and environmental fees
- 11 Enter Total value of order including taxes and environmental fees
- 12 Enter Reseller name (optional)
- 13 Leave Blank - for PWGSC use

ANNEX H: BENCHMARK PROCEDURES AND SET-UP INSTRUCTIONS**1.1 STANDING OFFER BENCHMARK TESTING**

NMSO Systems are subject to functional and performance evaluation in accordance with this Annex.

1.2 NMSO BENCHMARK TESTING

- (a) **Set-up Instructions:** Refer to the appendix of this annex.
- (b) **Benchmarking hours:** The hours of operation for benchmark testing will be 08:00 a.m. to 14:00 p.m. Monday to Friday local time at the benchmark site, with the exception of any local Federal Government and Provincial holidays.
- (c) **Late System:** For the initial NMSO Benchmark testing, systems not delivered by the deadline for testing will not be listed on the CAG and will be unable to accept Call-ups for 4 refresh periods from the date the Standing Offer is issued.
- (d) **Same System:** The System(s) supplied for the benchmark testing must be identical to the Offeror's proposed system. Systems improperly configured will be assessed an Administrative Fault.
- (e) **Set-up:** It is the Offeror's responsibility to install, set up and test the System(s) at the benchmark site before the commencement of the benchmark test to verify the mandatory requirements and performance of the System(s) proposed. Systems improperly set up will be assessed an Administrative Fault.
- (f) **Test period:** The Systems provided are required for a period of up to 60 working days. Offeror(s) may be requested in writing to extend this period. Offers from any Offerors who do not agree to the extension will be removed from consideration.
- (g) **Fees:** The Offeror is responsible for paying any applicable fees to INTERTEK TESTING SERVICES NA LTD. All costs associated with the benchmark, except for Canada's monitoring and site costs, will be at the Offeror's expense, regardless of whether its Product passes testing or not.
- (h) **Offeror's representatives:** The Offeror's technical staff will be required to install and demonstrate the Systems before the testing, but the Offeror will not be permitted to be present during testing unless requested otherwise. Only one marketing representative will be allowed during set up.
- (i) **Substitutions:** The Offeror will be notified by PWGSC when a proposed substitution has been accepted for benchmark testing. The System supplied for benchmark testing must be identical to the System specified in the Offeror's substitution request.

1.3 RVD BENCHMARK TESTING

- (a) PWGSC may also require that, in conjunction with an RVD, the selected Offeror demonstrate through testing (including compatibility testing, where existing equipment has been specified in the RVD, with which the offered Products must be compatible) that any items that it proposes to deliver in response to an RVD meet the RVD specifications. Canada is not obligated to benchmark any or all Products proposed.
- (b) **Notification:** If a demonstration or compatibility sub-test is requested by PWGSC and/or the Identified User to verify System functionality and/or compatibility following an RVD process, the PWGSC Contracting Officer will notify the Offeror. The System(s) specified in the notice must be provided within 2 working days of the notice being issued.
- (c) **Late Systems:** Systems not delivered by the deadline for testing will be assessed an Administrative Fault.
- (d) **Same System:** The System(s) supplied for the benchmark testing must be identical to the Offeror's System proposed in the RVD.

1.4 BENCHMARK TESTING PROCESS

The following apply to all benchmark tests:

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- (a) **Administrative Fault:** If any System(s) delivered to the benchmark site late, is not identical to the Offeror's proposed system or is not configured as specified in the written benchmark invitation letter issued by the specified PWGSC Standing Offer Authority, the Offeror will be required to rectify the discrepancy within 48 hours of written notification. This fault will be considered an Administrative Fault. A maximum of two (2) Administrative Faults per System will be allowed. If the System(s), or its replacement, exhibits a third Administrative Fault, or if the Offeror fails to meet the 48-hour deadline, the System will be declared non-compliant and eliminated.
- (b) **Technical Fault:** If the System does not function in accordance with the Technical Requirements, the Offeror will be required to repair the System within 48 hours of notification. This fault will be considered a Technical Fault. A maximum of three (3) Technical Faults will be allowed per System. Failure by the Offeror to repair the System within 48 hours of notification of a Technical Fault will result in the System being declared non-compliant. If the System, or its replacement, exhibits a fourth Technical Fault, the System will be declared non-compliant and eliminated.
- (c) **Software or BIOS/NVRAM Embedded Threats Fault:** Any System found to contain any threats or exploits (including but not exclusive of Malware, Viruses, Spyware, keyboard loggers or Rootkits) on the System's hard disk or the system BIOS or associated NVRAM areas or any of the supporting media, requested or otherwise, will be declared non-compliant and eliminated.
- (d) **Bus Speed Fault:** Any System found with any bus speed exceeding the motherboard/chip set manufacturer's design specification will be declared non-compliant and eliminated.
- (e) **Notification of Fault:** Notification of a Technical or Administrative Fault will be made to the Offeror's designated representative by telephone and a written confirmation sent by fax. The 48-hour clock will start after sender's FAX confirmation of receipt. At the request of the Offeror(s), the PWGSC Technical Authority (unless specified otherwise) will demonstrate to the Offeror any fault found during the evaluation.
- (f) **Component Replacement:**
- (i) Replacement of components (i.e. video controllers, hard drive controllers, motherboards, monitors, etc.) is allowed to facilitate a repair. These replaced components must be of the same manufacturer and model number as the component being replaced. The revision of a component may change (e.g. video BIOS version, motherboard BIOS version, SCSI controller model revision, video driver version). The Offeror is permitted to change a specific component once during testing. If that component is integrated on the motherboard and a replacement of the entire motherboard is required to facilitate a repair, then two changes of the motherboard are allowed (once each per problem component for a maximum of two Technical Faults).
 - (ii) If a BIOS revision (video or motherboard or SCSI) is necessary to facilitate a repair, the new BIOS revision must be a released, production version that is currently shipping. Only one motherboard BIOS revision and/or one video BIOS revision and/or one SCSI BIOS revision per System is allowed during testing. If a video or SCSI BIOS change is performed to facilitate a repair, a corresponding Technical Fault will be assessed on the video or SCSI component as a whole. A BIOS revision will be allowed only for the purposes of solving an incompatibility. No BIOS modifications will be allowed to bring a System from a non-compliant state to a compliant state.
 - (iii) Only one network interface card (NIC) change will be allowed without fault during testing. As this is not a mandatory requirement in the base configuration a Technical Fault will not be assessed on the first replacement. Should the replacement NIC cause further problems, a Technical Fault will be assessed.

ANNEX I: BENCHMARK RATINGS ANALYSIS

1. Category 1.0S Rack-Optimized 2-Socket 1U: Default System + 128GB RAM + 3 x 146GB SAS HDD 15K
 2. Category 2.0S Rack-Optimized 2-Socket 2U: Default System + 128GB RAM + 3 x 146GB SAS HDD 15K
 3. Category 2.1S Rack-Optimized Enterprise 2-Socket 2U: Default System + 256GB RAM + 3 x 146GB SAS HDD 15K
 4. Category 3.0S Pedestal-To-Rack Convertible Departmental 2-Socket 5U: Default System + 128GB RAM + 3 x 146GB SAS HDD 15K
 5. Category 4.0S Rack-Mount Departmental 4-Socket 4U: Default System + 256GB RAM + 3 x 146GB SAS HDD
 6. Category 2.0B 2-Socket Blade: Default System + 128GB RAM + 2 x 100GB SATA-SSD
 7. Category 2.1B 2-Socket Blade Enterprise: Default System + 128GB RAM + 2 x 100GB SATA-SSD
 8. Category 3.0B 4-Socket Blade: Default System + 256GB RAM + 2 x 100GB SATA-SSD
 9. Category 3.1B 4-Socket Blade Enterprise: Default System + 256GB RAM + 2 x 100GB SATA-SSD
- Note: For those planning on bidding on more than one category, they have an option to bring in their systems in a 20U or 40U rack.

1.1 OVERALL SCORE METHODOLOGY

- (a) The overall score for each system is determined by calculating the weighted individual Performance, Features, Usability and Problem ratings. The weights applied to the five basic components are listed below
 - (i) Performance 41%
 - (ii) Features 41%
 - (iii) Environmental Stewardship 15%
 - (iv) Usability 2%
 - (v) Problems 1%
- (b) Formula: $[\text{Product}(\text{Score} \wedge \text{Individual Weight})] \wedge [1 / \text{Sum of weights}]$, where '^' is the exponentiation operator

1.2 PERFORMANCE SCORING METHODOLOGY

- (a) The server methodology Intertek uses for benchmarking under Microsoft Server 2008 R2 Enterprise Edition is designed to simulate real world environment. The testing is based on four different areas of performance: Web, Database, E-Mail, and Disk. Each of these is individually tuned for every server category based on the specifications for that category. The following applications used in the testing are as follows: Internet Information Services (Web), Microsoft SQL Server (Database), Microsoft Exchange Server (E-Mail) and the Intertek Disk (Disk) test. Except for Disk test, all applications are multi-threaded exercising current multi-core based technology.

1.3 FEATURES SCORING METHODOLOGY

- (a) Intertek compiles and verifies the list of features provided for each system (details such as specifications, configuration, and models are provided by the vendors). The presence of a weighted item results in a score being assigned, while its absence would procure a 0. The features score is a weighted average of scores for individual items. The weights assigned to each item are listed below. The weighted average is then multiplied by 10 to rescale from 0 to 10

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- (b) Vendors must provide clear proof when giving answers to questions that are accorded points, otherwise Intertek & PWGSC will give 0 points.
- (c) Formula: Features Score = [Sum of the weighted elements / Sum of the weights]×10

Weight Item**DATE**

0 Date of Last Update – FOR INTERTEK ENTRY ONLY

FORM FACTOR

0 Height of rack-mount server (expressed in U)

PROCESSOR

0 CPU Manufacturer (Intel / AMD)

0 Processor Model Name (eg: Xeon E7-8870)

0 Processor Generation (eg: E7)

0 # of installed Processors (Physical Sockets)

0 # of Cores per Processor

0 # of Threads per Processor

0 Internal GHZ. speed per Processor

0 Amount of cache per processor (eg: L1-64KB, L2-256KB, L3-30MB)

2 MCA (Machine Check Architecture) Recovery

300 Benchmarked CPU exceeds specification (where n is minimum CPU specification, n+1 is the next model up, determination of n+ models as per CPU OEM roadmap and PWGSC's approval) (n+1 = 100pts, n+2 = 200pts, N+3 = 300pts)

0 Does the BIOS / UEFI have the ability to enable and disable CPU hardware virtualization function? (Yes or No)

EQUIPMENT INFORMATION

0 Motherboard manufacturer

0 Motherboard model

0 Motherboard revision identifier

0 Disk controller manufacturer

0 Chipset manufacturer

0 Chipset model/number

CERTIFICATIONS

.5 (max 1.5) SuSE Linux Enterprise Server 11 (.5 extra point for every version increase thereafter)

.5 (max 1.5) RedHat Enterprise Linux 6 (.5 extra point for every version increase thereafter)

.5 (max 1.5) VMWare ESX Server 5 (.5 extra point for every version increase thereafter)

.5 (max 1.5) Citrix XenServer 6 (.5 extra point for every version increase thereafter)

.5 (max 1.5) Windows Server 2008 R2 Enterprise Edition w SP1 (.5 extra point for every version increase thereafter)

.5 (Max 2) Membership to Cloud industry initiatives (NIST cloud, Openstack community (www.Openstack.org), Cloudfoundry, Deltacloud - .5pt per membership)

0 CSA Approval

0 ICES-003

0.5 IPv6 Gold Logo

2 System model certified as cloud ready or cloud optimized (eg: Microsoft Azure, etc)

2 System model HPC certified or optimized (eg:)

SYSTEM RAM

0 Memory type (eg: DDR3 , DDR4, etc)

0 Amount of RAM installed for benchmark

0 RAM density used for benchmark (eg: 4GB DIMM, 8GB DIMM, etc)

0 Total RAM expandability

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2 (max 6)	Total RAM expandability exceeds minimum specification by 50% (4 points if 100%, 6 points if 150%)
0	Number of DIMM slots
0	Supported memory speeds (MHz.)
0	RAM manufacturer & part #
0	ISO 9001 certified manufacturer
0	Available RAM density supported (e.g. 4GB, 8GB, 16GB, 32GB, etc.)
2	OS independent Hot-Add Memory
2	Memory Protection: Supports RAID-5 level memory with Hot-Plug/Hot-Swap (no user interruption)
2	Memory Protection: Online Spare
2	Memory Protection: Memory Mirroring
2	DDDC (Double Device Data Correction) capability

HARD DISKS

0	Hard drive manufacturer
0	# of HDD supported
1.5 (Max 3)	# of HDD supported exceeds minimum specification by 1-2 (1.5 points if 3-4, 3 points if 5-8)
.25 (Max 1)	Supported HDD Types: (eg: SAS Spindle - .25pt, SATA Spindle - .25pt, SAS-SSD - .25pt, SATA-SSD - .25pt)
0	Native Hard Disk Drive support: SAS
1	Native Hard Disk Drive support: SAS-2 6Gb/s
3	Native Hard Disk Drive support: SAS-3 12Gb/s

HARD DISK CONTROLLER

0	SAS controller manufacturer
0	SAS controller model and rev
0	Number of internal SAS ports
.5 (max 1)	Number of external SAS ports (.5 per port)
0	Total number of internal disk drives supported
2	Default controller supports SAS-2 (SAS-3 receives 2pts)
.5 (max 1.5)	Number of logical drives supported (60 - .5pt, 120 - 1.0pt, 180 - 1.5pts)
0	RAID 0 support
0	RAID 1 support
0	RAID 5 support
0.25	RAID 1+0 support
0.25	RAID 5+0 support
0.25	RAID 6 or Double disk parity supported
0	Bus type (ie: PCIe-X4, PCIe-X8, PCIe-X16, etc)
0	Integrated on motherboard
0	Size of default Disk controller Cache/Memory
1 (max 4)	Size of default Disk controller Cache/Memory exceeds specification (50% more receives 1pt, 100% more receives 2pts, 150% more receives 3pts, 200% receives 4pts)
0	Maximum Disk Cache amount
1	Supports "hot add" (increasing number of drive volumes)
0	External Disk ports
1	Redundant Disk array support (fail-over controller)
1	Stripe configuration migration to other systems
0	Auto termination
0	Default Battery Backed-up Cache
1	Default Transportable Cache

CHASSIS, DRIVES AND POWER SUPPLIES

0	Total available internal 3.5-inch hot swap bays
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.5 (max 3)	Total number of internal hot-plug/swap HDD bays above specification (.5 each)
0	Total number of media (eg: Optical) bays
0	Number of cooling fans excluding power supply
0	Redundant power supply external cabling included
.25 (max .5)	Number of hot-swap cooling fans excluding power supply (.25 each)
.25 (max .5)	Number of redundant power supplies (.25 each)
.25 (max .5)	Redundant hot-swap power supplies bid (.25 each)
0	Power supply output rating for each (Watts)
0	Number of chassis based cooling fans
0.25	Tool-less motherboard/systemboard removal
0.25	Tool-less CPU back-plane removal
0.25	Tool-less I/O adapter removal
0.25	Tool-less drive cage removal
0.25	Tool-less expansion slot back-plane removal
.25 (max .75)	Color coded tabs for hot swap, hot add on all internal devices (.25 for drives, .25 for I/O devices, .25 for power devices)
1 (max 4)	Chassis U size smaller than specification (1 point for every 1U size reduction)

BLADE CHASSIS / ENCLOSURE

2	Hot-Plug Hard Disk Drives (Yes or No)
1 (max 10)	2-Socket Blade: Number of compute bays (6 blades per chassis / enclosure = 0 pts, 1 point for every blade system greater than 6)
1 (max 5)	4-Socket Blade: Number of compute bays (3 blades per chassis / enclosure = 0 pts, 1 point for every blade system greater than 3)
1 (max 2)	Chassis / enclosure allows simultaneous blade architecture node (Intel & AMD - 1 pt, Intel/AMD & RISC/EPCI - 2 pts)
Max 1	Chassis / enclosure allows simultaneous blade category node (2-CPU blade and 4-CPU blade - 1 pt)

SYSTEM BUS AND MOTHERBOARD

0	Number of available PCI Express (PCIe) expansion slots
.5 (max 3)	Number of available PCI Express (PCIe) expansion slots exceeds specification (.5 pt. each available slot, maximum 3 points)
0	# of PCIe 4X slot
2	PCIe slots supports 4GBps (8x8 bi-directional): (50% slots 1 point, 100% 2 points)
0	# of PCIe 8X slot
2	PCIe slots supports 8GBps (8x8 bi-directional): (50% slots 1 point, 100% 2 points)
0	# of PCIe 16X slot
2	PCIe slots supports 16GBps (16x16 bi-directional): (50% slots 1 point, 100% 2 points)
4	PCIe slots supports 32GBps (bi-directional): 4 points
2	Support for Active PCI-E or Hot-Plug PCI-E
1 (max 3)	PCI-E lane exceeds specification (1 pt. per speed increase)
1 (max 2)	PCIe generation exceeds specification (1 point for Gen 3, 2 points for Gen 4)

BIOS / UEFI

0	Version
0	Flash ROM
0	Renewable CMOS battery

I/O PORTS

0	Number of 9 pin serial ports
0	Number of USB ports
0	Number of external SCSI ports vacant
0	# of On-board 100/1000-BaseT or 10GSFP+ NIC ports
0	On-board 100/1000-BaseT or 10GSFP+ NIC support TOE, I/OAT or equivalent

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1 (max 4)	Number of On-board 100/1000-Base T or 10GSFP+ NIC ports exceeds specification (1 point for each additional 100/1000Base-T ports and 2 points for each additional 10Gb ports)
1	On-board NIC upgradable to 10Gb without using empty PCIe slot (Yes or No)
1	USB 3.0 (Yes or No)
0	Number of frontal USB ports
0.5	Supports bootable USB port

OPTICAL DRIVE

0	Optical Drive included (Yes or No)
0	DVD-ROM Manufacturer
0	DVD-ROM Model
0	Speed (e.g. 8X)
0	Interface type

SERVER CONFIGURATION UTILITY

0	Bootable CD/DVD ROM-based server configuration manager (SCM)
0	Name of Server Configuration Manager (SCM)
0.5	SCM NOS support for RedHat 6
0.5	SCM NOS support for SuSe 11
0.5	SCM NOS support for Windows Server 2008 R2
0.5	Remote server configuration web support
0.5	Replicated setup capability across like servers

SERVER MANAGEMENT

0	Server Management Utility (SMU) manufacturer and name
0.5	Operating Systems Supported by SMU: RedHat 6
0.5	Operating Systems Supported by SMU: SuSE 11
0.5	Operating Systems Supported by SMU: Windows Server 2008 R2
0.5	Support for forwarding of server alerts via e-mail and mobile device (eg: smartphone, blackberry, etc.)
.25 (max1)	fault prediction and proactive tracking for: storage, power supply, processor, RAM (.25 point each)
0..25	server alarm for thermal monitoring and fan failures
.25 (max .75)	Statistics and user definable alarms for: NIC, CPU, PCI devices (.25 point each)
.5 (max 3.0)	Pre-failure alerts on: CPU, RAM, HDD, VRM, Fans/Blowers, and Power Supplies (.5 point each)
0	O.E.M. CD/DVD ROM-based diagnostics
0.5	Remote server diagnostics and warm & cold reboot capabilities
0.5	Remote server diagnostics web support
0.5	CMOS stored error message tracking with time and date stamp
0.5	Provide lighted path to failed or failing components to expedite repair and diagnostics
1	Management adapter providing SSH (Secure Shell) connectivity using military grade ciphers (3DES or AES) and SSL (Secure Socket Layer) through 128-bit encryption while communicating via HTTP.
1	Redundant internal media slots (eg: Mirrored SD slots) supporting embedded hypervisor or OS
2	Provide control and monitoring tools for power usage.
10	hardware / electrical partitioning
	THE FOLLOWING SERVER MANAGEMENT FEATURES MUST BE ACCOMPLISHED WITHOUT THE USE OF AN OS, OS AGENTS, OR REMOTE MONITORING SYSTEM:
1	Capable of capturing and storing updates to server configuration (eg: addition of DIMM or relocation of DIMM from one slot to another)
1	Capable of capturing and storing system console events

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-
- | | |
|---|--|
| 1 | Capable of applying firmware and configuration policies on component/parts replacements |
| 1 | Capable of maintaining OS (Windows Server 2008 R2, SLES 11, and REL 6) drivers internally for ease of deployment |

SECURITY

- | | |
|------|--|
| 0 | Key lock |
| 0 | Chassis lock |
| 0 | Keyboard password |
| 0 | ROM based Power-on password |
| 0.25 | Lockable front panel |
| 0.25 | Secure remote log-in |
| 0.25 | Lockable power supplies |
| 0.25 | Lockable power switch |
| 0.25 | Capability to disable all USB ports (Yes or No) |
| 1 | System processor with AES-NI (Advanced Encryption Standard New Instructions) support (Yes or No) |

1.4 ENVIRONMENTAL STEWARDSHIP: ATTRIBUTES

- (a) Intertek compiles and verifies the list of features provided for each system. The presence of a weighted item results in a score being assigned, while its absence would procure a 0. The features score is a weighted average of scores for individual items. The weights assigned to each item are listed below. The weighted average is then multiplied by 10 to rescale from 0 to 10.
- (b) **Formula:** Features Score = [Sum of the weighted elements / Sum of the weights]×10

Weight	Item
0	RoHS compliant (IE: Case/Chassis, system board, disk drive controller, disk drive, optical drive, power supply)
0	Member of Electronic Product Stewardship of Canada
0	Contributing Member of "thegreengrid.org"
0	ISO 14001 certified manufacturer
2	Bulk Packaging in Canada (Yes or No)
1 (max 3)	Certified by Green Electronics Council as meeting EPEAT (Bronze criteria = 1, Silver criteria = 2, Gold criteria = 3)
3	Default CPU identified as Low-Voltage (Yes or No)
2	System supports Low-Voltage RAM (Yes or No)
2 (max 10)	Power Supply is 80 PLUS Certified (Bronze - 2pts, Silver - 4pts, Gold - 6pts, Platinum - 8pts, Titanium - 10pts)
2	EPA / Energy Star certified model (Yes or No)
10	EPA / Energy Star certified NMSO system. Applicable only if the EPA configured system meets or exceeds the NMSO benchmarked system (Yes or No)
2	Recycling program in Canada available from the OEM (Yes or No)
2	Member of ASHRAE
5	Adoption of ASHRAE TC9.9

1.5 USABILITY SCORING METHODOLOGY

- (a) The usability of the systems is evaluated by Intertek staff using predefined criteria. The scores assigned to each item are listed below. Scores for each individual category evaluated are assigned as indicated with the maximum score representing excellent and the lowest score representing poor or non-existent. Where the question requires a no or yes response a score of 0 or the respective maximum will be awarded respectively. Items that are listed for information purposes only do not receive a score. The weighted average is then multiplied by 10 to rescale from 0 to 10.
- (b) **Formula:** Usability Score = [Sum of the score earned / Maximum possible score]×10

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(c) Scoring methodology:

- 0 Not Available / Not Present
- 1 Below Average
- 2 Average
- 3 Above Average

Weight Item**COVER REMOVAL/CONFIGURATION/INTERNAL ACCESS**

- 0-3 Rate Access to vital components (ie. CPU/CPU-card, Hard Disk drive, Memory, adapter slots)
- 0-(-2) Any panels have to be removed to connect network, mouse, video, or keyboard
- 0-3 The cover removal is intuitive (no manual required)
- 2 How many screws/latches < 4 are there?
- 0-1 Are guide rails used? Do they extend the time required to replace the cover? (Yes or No)
- 0-1 Can the power switch be accidentally activated when replacing cover? (Yes or No)
- 0-1 Schematic of internal components on inside cover (Yes or No)

HOT SWAP USABILITY

- 0-(-3) Any difficulty in the unseating or reseating of the hot-swap drives
- 2 Hot-plug PCI slot divider support
- 0-(-2) Is the hot-swap drive cage removal simple or complex
- 0-3 Rate the access to all hot-plug devices including PCI devices, fans, power supplies, drives, RAM
- 2 Color coded hot-plug devices
- 0-3 Power to hot-plug slots controlled via Hardware (desirable), Software (desirable), or Either (Both)
- 0-3 Rate Power supply access (ie: Does the case cover have to be removed in order to access power supply? Is a tool required in order to open the case to access the power supply?)

CPU & RAM INSTALLATION

- 0-3 How many component(s) need to be removed to access memory banks and how are they removed?
- 0-1 Is the installation procedure well documented? (Yes or No)
- 0-1 Is setup required to be run after upgrade? (Yes or No)
- 0-3 Ease of processor replacement

END USER DOCUMENTATION

- 0-3 comprehensive technical detail to assist in configuration (specifications, etc.)
- 0-3 quality of pre-NOS configuration assistance (Controller config., driver(s) setup)
- 0-3 quality and detail of illustrations (internal and external)
- 0-3 extent of trouble shooting and diagnostics section
- 0-3 continuity: fewest number of manuals used to document all components bid
- 0-3 continuity: fewest number of manuals used to assist in pre-NOS configuration
- 0-3 extent of table of contents and indexes
- 0-3 quality of presentation and manual(s) jacket
- 0-(-3) inaccuracies and/or omissions in table of contents
- 0-(-3) inaccuracies and/or omissions with illustrations
- 0-(-3) inaccuracies and/or omissions in body of manual if applicable section is indicated in table of contents or indexes
- 0-(-3) inaccuracies and/or omissions in technical detail (specifications, etc.)

SERVER SETUP/CONFIGURATION

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0-3	Is there a toolbar or online help for options and changing CMOS values?
0-3	Rate the RAID array setup/configuration/rebuild (0 if non-existent in rack mount configurations).
0-3	Rate the ease of Out-of-Box OS/Network/Driver configuration
0-3	Rate the Server Management Utility (local)
0-3	Server has a Management Display (LCD) panel to assist in the diagnosis/service of the unit
0-1	Are keystrokes to Controller utility displayed on boot-up (Yes or No)

HARD DRIVE INSTALLATION

2	How many screws secure the hard disk in place > 4? (non-hot swap)
0-3	How many component(s) are required to be removed to access drive bays and how?
0-1	Does the power supply wiring or data cables obstruct drive bays?
0-1	Is the Hard Disk installation procedure well documented?
3	Is setup required to be run after change? (no = highest score)

MISC. PROBLEMS

0-(-5)	Obstructions to the adapter slots (heat sync, RAM, cpu fans, etc.).
0-(-5)	List any other potential problems -

MISC. EASE OF SERVICE

0-1	Are the I/O ports labeled with words or symbols?
0-3	List any other feature which enhances usability
0-3	Is a bilingual website offered for client access?
0-4	Rate level of detail

1.6 PROBLEM DETERMINATION

- (a) The System Problem Index is calculated based problems, which occurred and were solved during testing. The problems were divided into three main categories - Compatibility Alerts, Software Technical and Hardware Technical. The Software Technical and Hardware Technical are problems which were awarded a Technical fault during the course of the Benchmark and the solution provided was Software based and Hardware based, respectively. The Compatibility Alerts are those problems, which can be fixed by introducing parameters, which modify the system environment. These categories of problems do not require vendor intervention to achieve a solution, because the introduction of these parameters are typical end user activities. The aggregate of the individual weights of the subcategories produces the final Index. The following table indicates the weights assigned to each subcategory:

Subcategory	Weight
Hardware	3
Software	2
Compatibility Alert	1

- (b) The System's Problem Index is determined by using the following table to find the corresponding score for the total individual problem weight obtained.

Total Problem Weight	Score
0	10
1	8.34
2	6.67
3	5.01
4	3.34
5	1.68
6	0

ANNEX J: INTERTEK/OFFEROR AGREEMENT

Note to Offerors: INTERTEK is an independent third party and is not part of the Government of Canada. INTERTEK may require Offerors with equipment to be benchmarked to enter into an agreement. The Government of Canada is not a party to, and is not involved in the negotiation of, any such agreement. The following is a sample agreement, provided for information purposes only.

Intertek Testing Services NA Ltd.

AGREEMENT, dated _____, 20__ by and between Intertek Testing Services NA Ltd., with offices located at 11 Laurier Street, Place du Portage 4C2 Hull, PQ. K1A 0S5 (“Intertek”) and _____ with offices located at _____ (“Offeror”).

WHEREAS, INTERTEK has been retained by Public Works and Government Services Canada (“PWGSC”) to test computer hardware and software products submitted by Offerors in response to PWGSC Request for Standing Offer(s) dated _____ (“RFSOs”), to determine whether such products meet PWGSC requirements.

WHEREAS, PWGSC has required that any Offeror responding to the RFSOs submit hardware and/or software products, including reference manuals and other materials, to INTERTEK for testing.

WHEREAS, Offeror has submitted a bid in response to the RFSOs, and,

WHEREAS, Offeror desires that INTERTEK test the hardware and/or software products of Offeror, including but not limited to reference materials, relating to Offeror’s bid (herein referred to collectively as “Offeror’s Products” or “Products”) to determine whether Offeror’s Products satisfy PWGSC requirements.

NOW THEREFORE the parties hereto agree as follows:

1.0 SERVICES PERFORMED FOR PWGSC

- (a) Offeror expressly understands that INTERTEK is testing Offeror’s Products on behalf of and for PWGSC. Accordingly, it is understood that PWGSC, and not the Offeror, is the beneficiary of the testing services to be performed by INTERTEK hereunder (“Testing Services”).
- (b) INTERTEK shall deliver the results of the testing services to be performed hereunder in a report (the “Report”). INTERTEK shall provide a copy of the Report to Offeror after it is accepted by PWGSC.

2.0 PAYMENT

- (a) Offerors shall pay and provide to INTERTEK the payment and documents described in under the terms described in the benchmark instruction letter therein.

3.0 MATERIALS

- (a) Offeror shall provide to INTERTEK sufficient quantities of Offeror’s Product that will be the subject of the Testing Services, including but not limited to, hardware, software, disks, reference manuals and other materials.
- (b) Upon completion of the Services, PWGSC shall dispose of Offeror’s Products as set forth in the RFSOs.

4.0 INSURANCE

- (a) INTERTEK shall not be obligated to obtain insurance on Offeror’s Products; accordingly, if Offeror’s Products or a part thereof is lost and/or destroyed for any reason whatsoever, INTERTEK should not be liable to Offeror.

5.0 TERMS AND TERMINATION

- (a) The term of this Agreement shall commence on the date hereof and shall continue until INTERTEK completes the Testing Services as required by PWGSC. In the event that PWGSC terminates the

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benchmark prior to completion, INTERTEK shall be entitled to retain any fees paid by the Offeror to INTERTEK pursuant to this Agreement.

6.0 REPRESENTATION AND DISCLAIMERS

- (a) It is acknowledged and agreed that any determinations and/or statements made by INTERTEK including but not limited to the Report (collectively called "Determinations") with respect to Offeror's Products shall be based upon INTERTEK's testing activities and analysis; accordingly, and Determinations shall be considered by the parties to be opinions. Notwithstanding the foregoing, Client acknowledges and agrees that: (i) INTERTEK does not employ attorneys to test, evaluate or determine whether products infringe upon the patents of other parties and, if Client should require such services, Client should retain appropriate patent legal counsel; (ii) INTERTEK has not tested or evaluated Client's Products to determine whether they infringe upon the patent of any third party; and (iii) any Determinations shall not be considered to be legal opinions and Offeror shall not be entitled to rely upon any Determinations as legal opinions.
- (b) INTERTEK shall use reasonable efforts consistent with standards in the industry to provide accurate information hereunder. However, INTERTEK does not guarantee the accuracy, adequacy or completeness of the Services provided in connection with Offeror's product. INTERTEK MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY PERSON OR ENTITY FROM USE OF THE SERVICES OR THE RESULTS THEREOF, OR ANY INFORMATION OR DATA INCLUDED THEREIN. INTERTEK MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE SERVICES AND/OR RESULTS THEREOF, OR ANY INFORMATION OR DATA INCLUDED THEREIN.
- (c) IN NO EVENT SHALL INTERTEK BE LIABLE TO OFFEROR FOR ANY LOST PROFITS OR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.
- (d) INTERTEK makes no guarantees, representations or warranties regarding the ability of Offeror's Products to meet PWGSC requirements, or of Offeror's ability to sell its Products to the Government of Canada. Additionally, INTERTEK shall in no way be responsible for any purchasing decisions made by PWGSC or the Government of Canada regarding Offeror's Products.
- (e) In no event shall the total liability of INTERTEK under this agreement exceed the total amount actually paid to INTERTEK pursuant to Section 2.

7.0 OWNERSHIP AND TRADEMARKS

- (a) Nothing herein grants or is intended to grant Offeror any right whatsoever to use the name or any trademark, trade name or service mark of INTERTEK or any INTERTEK affiliate for any purpose whatsoever, including but not limited to advertising, in connection with Offeror's Products without INTERTEK's prior written consent.
- (b) Nothing herein grants or is intended to grant to Offeror any rights whatsoever to use any INTERTEK testing methodology. Offeror expressly agrees that INTERTEK owns all proprietary rights in and to all INTERTEK testing methodologies, including those developed or produced as a result of this Agreement.

8.0 INDEMNIFICATION

- (a) Offeror agrees to indemnify and hold harmless INTERTEK from and against any and all claims, losses, damages, costs or expenses (including but not limited to attorneys' fees) suffered or incurred by INTERTEK as the result of or in connections with any third party claim arising from Offeror's distribution, publications or other dissemination or the results of the Services and/or Determinations, and/or the use, distribution, lease or sale of any of Offeror's Products. (b) Offeror agrees that: (i) under no circumstances will Offeror subpoena INTERTEK and/or, with or without INTERTEK's consent, introduce the Services and/or Determination in any litigation or other proceeding involving Offeror, and (ii) if INTERTEK is subpoenaed by a third party in connection with a litigation or other proceeding instituted against Offeror, Offeror shall reimburse INTERTEK for all attorneys' fees and

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other fees incurred by INTERTEK and pay INTERTEK a reasonable fee for the time and effort expended by INTERTEK in connection with any such subpoena.

9.0 NO RESTRICTIONS ON INTERTEK'S ACTIVITIES

- (a) Notwithstanding anything herein to the contrary, the parties agree that INTERTEK, shall not be prohibited or restricted in any manner from providing testing services to any third party in connection with any product, including but not limited to Offeror's Products.

10.0 GENERAL

- (a) This Agreement is not assignable by Offeror without the prior written consent of INTERTEK. Any attempt to assign and transfer this Agreement without INTERTEK's prior written consent shall be null and void.
- (b) The waiver by either party of a breach or violation of any provision of this Agreement shall not constitute a waiver of any subsequent breach or violation thereof.
- (c) This Agreement shall be interpreted, construed and enforced in accordance with the laws of the Province of Ontario.
- (d) This Agreement replaces any and all understandings which may have existed between the parties, and may not be amended, changed or supplemented in any way except by written agreements signed by both parties.
- (e) Neither party shall be responsible for delays or failures in performance resulting from acts beyond the reasonable control of such party.
- (f) All notices and other communications under this agreement shall be in writing and shall be deemed to have been delivered by hand or sent by First Class mail to the respective address of the parties as set forth above.
- (g) All Exhibits attached hereto are hereby incorporated into this Agreement.

WHEREAS, intending to be legally bound, the parties have executed this Agreement the day and year written above.

OFFEROR: _____
 Signature: _____
 Printed Name: _____
 Title: _____ Date: _____

INTERTEK CANADA INC.
 Signature: _____
 Printed Name: _____
 Title: _____ Date: _____

ANNEX K: TECHNICAL OFFER**1.1** A complete technical offer consists of the following:

- (a) **Table of Contents (Requested at bid closing)**
- (b) **List of Products, without Pricing (Mandatory at bid closing):** The Technical Offer must include a complete list of Products with part numbers, quantities, etc., which is identical to that provided in the Financial Offer, but without pricing. Offerors are requested to use the Annex entitled "List of Products" to provide this information.

If an Offeror offers two Systems for the same Category, it can do so in the same offer. The Systems must be clearly labeled as different Systems (e.g., System A and System B).
- (c) **Substantiation of Compliance to Technical Specifications (Mandatory at bid closing):** The Technical Offer must substantiate the compliance of the Offeror and its Products to the requirements described in every subparagraph in the Annex entitled "Technical Specifications". To do this, Offerors are requested to use Form 4 – Substantiation of Compliance Matrix to provide this information (therefore, while providing the information is mandatory, use of this form is not). The substantiation must not simply be a repetition of Canada's requirement, but must explain and demonstrate how the Offeror's Products will meet all the requirements of the referenced subparagraph. Simply stating that the Offeror or its Product complies is not sufficient. Also, where any given subparagraph includes more than one requirement, the substantiation must address all of them. Where Canada determines that the substantiation for any given Product is not complete, the offer for that Category will be considered non-responsive and disqualified. The substantiation may refer to additional documentation submitted with the offer – this information can be referenced in the "Reference" column of Form 4, where Offerors are requested to include the precise location of the reference material, including the title of the document, and the page and paragraph numbers; where a reference is not sufficiently precise, Canada may request that the Offeror direct Canada to the appropriate location in the documentation submitted with the offer.
- (d) **Declaration of Conformity (Requested at bid closing, information mandatory on request):** All system units must comply with the emission limits and labeling requirements set out in the Interference Causing Standard ICES-003, "Digital Apparatus", published by Industry Canada. If requested, the Offeror must supply an original copy of the entire certification report from an approved laboratory referencing the system's model number complete with all component brand names, detailing speed of processor, motherboard / system board tested and original photographs of the system unit showing front and rear views of the device.
- (e) **List of User Documentation and Technical Manuals (Requested at bid closing, information mandatory on request):** Each System must include an operator/user manual(s) available in both official languages. These manuals must be comprehensive guides that contain instructions for setting up, installing and configuring all components of the default system. CD/DVD-ROM media is acceptable.
- (f) **Proof of ISO Registration (Mandatory at bid closing):** The Technical Offer must include proof that, in respect of each System being offered, the Manufacturer(s), whether this is the Offeror or a third party, is registered under ISO 9001: 2008 by an accredited registrar under the ISO 9001: 2008 Program for the manufacturing facility where each specific System being offered is manufactured. The Offeror must identify the facility location by providing the complete address where each proposed System is manufactured/ assembled. The scope of the registration must also be specified. The registration must be verifiable as current, valid and accurate. ISO registration of a facility after the closing date for this solicitation does NOT satisfy this requirement.
- (g) **Proof of Canadian Electrical Code, Part 1, certification (Mandatory at bid closing):** The Technical Offer must include proof that all electrical equipment being offered is certified or approved for use in accordance with the Canadian Electrical Code, Part 1, by a certification organization accredited by the Standards Council of Canada (SCC) and bears the certification logo that is applicable to the accredited agency. NOTE: Offerors may obtain further information by contacting the SCC at 613-238-3222.
- (h) **Proof of FCC Class A certification (Mandatory at bid closing):** The Technical Offer must include proof that for each Product being offered that includes a digital apparatus, an accredited agency has

certified that it does not exceed the FCC Class A limits for radio noise emissions set out in the Radio Interference Regulations and the Products must bear the certification logo of the appropriate accredited agency.

- (i) **Microsoft Windows Server logo (Mandatory for all categories except for Categories 4.0B and 4.1B):** Certified for Windows Server 2008 R2 and Certified for Windows Server 2008. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets. Proof of certification for each system must be provided in the form of a copy of the certification report or in the form of a printout from the Microsoft Windows Server Catalog website. See URL <http://www.windowsservercatalog.com/results.aspx?bCatID=1333&cpID=0&avc=10&OR=1>
- (j) **Linux certification (Mandatory for all categories except for Categories 4.0B and 4.1B):** Systems must have the following Linux certification: Red Hat Enterprise Linux 6 or SUSE Linux Enterprise Server 11 and SLES 11 with XEN certifications (logo level). This certification must be performed on the entire system and must fall under what a certified system is as defined by Red Hat and SUSE. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets. Proof of certification for each system must be provided in the form of a copy of the certification report or in the form of a printout from the Red Hat Certified Hardware website or NOVELL YES Certified Bulletin website. See <https://hardware.redhat.com/> and <http://developer.novell.com/yessearch/Search.jsp>
- (k) **VMWare Certification (Mandatory for all categories except for Categories 1.0V, 4.0B and 4.1B):** Systems must have the following VMWare certification: Certified for vSphere 4.X and 5.X server level. Certifications must be performed at the specified operating frequencies identified in Annex A, 2.0 Configurations and populated with the maximum number of processor sockets. Proof of certification for each system must be provided in the form of a copy of the certification report or in the form of a printout from the VMWare Compatibility Guide. See <http://www.vmware.com/resources/compatibility/search.php?deviceCategory=server>
- (l) **VMWare I/O device certification (Mandatory for all categories except for categories 1.0V, 4.0B, and 4.1B):** Systems must have vSphere 4.X and 5.X I/O level certified devices. . . Proof of certification for each system I/O must be provided in the form of a copy of the certification report or in the form of a printout from the VMWare Compatibility Guide. See <http://www.vmware.com/resources/compatibility/search.p?deviceCategory=ioio>
- (m) **Personnel Support:** The Offeror must demonstrate that the technical support personnel identified to fulfill the requirements have the supporting certifications.
- (n) **Environmental Stewardship (Mandatory at bid closing):** The Technical Offer must include the following:
 - (i) Proof that the OEM is committed to a comprehensive, nationally recognised environmental standard as per Annex A, 4.0 (a).
 - (ii) All systems must be RoHS Certified.
 - (iii) The OEM must be a member in good standing of EPSC – Electronic Product Stewardship of Canada..
 - (iv) The OEM must be ISO 14001 certified.
 - (v) The OEM must have a “Contributor Membership” level to www.thegreengrid.org in good standing.
 - (vi) The OEM must have a plan or strategy in place for achieving EPA’s evolving Energy Star compliancy requirements for all systems.
 - (vii) The OEM must have a plan or strategy in place for achieving 80 PLUS compliancy requirements for all systems.

Note to Offerors: To supplement the written Technical Offer, proposed Systems in Categories 1.0S, 2.0sS, 2.1S

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3.0S, 4.0S, 1.0B, 2.0B 2.1B, 3.0B and 3.1B will be subject to Benchmark Testing, as described in this solicitation. The Offeror is responsible for all costs associated with the benchmark testing, including delivery, installation, and removal of the equipment and testing fees. All costs associated with the benchmark testing are nonrefundable and nonnegotiable. All proposed Systems, including bilingual documentation, must be delivered to the Intertek Benchmark lab (4C2, Place du Portage, Phase III, contact point of entry: Jon Drummond at 819-956-8355 or Michel Poirier at 819- 956-7720) for benchmark testing, no later than three (3) days following bid closing.

Note to Offerors: For existing Offerors who are proposing the exact same systems that have already qualified for the NMSO and meet the mandatory technical specifications of this solicitation, the Technical Offer will not required to be submitted. As it has already been done, benchmark testing will not be required for these systems.

ANNEX L: FINANCIAL OFFER

1.1 A complete financial offer consists of the following:

(a) **Table of Contents (Requested at bid closing)**

(b) **Forms (Requested at bid closing, information mandatory on request):**

- (i) **Offer Submission Form:** Offerors are requested to include the Offer Submission Form with their offers. It provides a common form in which Offerors can provide information required for evaluation and contract award, such as a contact name, the Offeror's Procurement Business Number, the Offeror's status under the Federal Contractors Program for Employment Equity, etc. Using the form to provide this information is not mandatory, but it is recommended.
- (ii) **All the Certification Forms described in Part 5** (including the Manufacturer Certifications Form)
- (iii) **Joint Venture Offer Form**, if applicable
- (iv) If an Offeror has made errors or omissions in any of Forms 1, 2 or 3, these matters will be treated as a matter of form, rather than substance. If PWGSC identifies any errors or omissions, Offerors will be given an opportunity to submit the missing information or make corrections. The time limits that apply to clarifications will apply to the correction and completion of the Forms.

(c) **Complete List of Offered Products with Pricing (Mandatory at bid closing):** For the Categories for which the Offeror is submitting an Offer, the Financial Offer must include the Annex entitled "List of Products". The completed List of Products must include a price for every item in the table. An Offeror only needs to submit information for the Categories for which it is providing an Offer.

- (i) **Multiple Systems:** If an Offeror offers two Systems for the same Category, it can do so in the same offer. However, the Systems must be clearly labeled as separate Systems (e.g., System A and System B).
- (ii) **Prices All-inclusive:** The Financial Offer must identify all costs for the requirement described in this solicitation for the entire Standing Offer Period for a given Category including the Extension Periods (as defined in the Resulting Standing Offer clauses and the Resulting Call-up clauses). Failure to meet or adequately address these requirements will render the Offeror's Offer non-responsive. The unit prices must include all the items detailed in the Article of the Resulting Call-up clauses entitled "Delivery and Installation of Products", as well as the Warranty Services throughout the Warranty Period.
- (iii) **Canadian Dollars, FOB Destination, GST/HST Extra:** All prices must be in Canadian dollars, FOB destination if applicable, include all shipping and handling charges to destination (Canadian Customs duties and excise taxes included if applicable), Goods and Services Tax (GST) and Harmonized Sales Tax (HST) extra.
- (iv) **Pricing for System Upgrades:** When filling out Annex B (List of Products) for the System Upgrades, Offerors must provide an upgrade price. That is, if a 320 GB HDD (priced at \$100) may be upgraded to 500 GB (priced at \$250) then the upgrade price would be \$150 (i.e. \$250-\$100).
- (v) **Provincial Disposal Fees:** All unit prices are exclusive of any disposal surcharge. Any provincial disposal surcharge is extra to the price and will be paid by Canada.
- (vi) **Consistent Pricing across Categories:** An Offeror who is offering the same Product in multiple Categories is required to have a consistent price across all of those Categories (i.e., the same System or Product) cannot be priced differently in two separate Categories. If the Offeror offers different prices for the same Product in different Categories, the Standing Offer Authority will contact the Offeror to confirm that the lowest of these prices applies to all Categories. If the Offeror does not confirm this, the Offeror will be required to withdraw the Product from all Categories for which it is not prepared to honour the lowest price offered for that Product in any of its Offers.

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- (vii) **Volume Discounts:** Orders exceeding predetermined dollar values are subject to a volume discount (based on a percentage of the call-up value) for Elevated Call-ups as described in the Annex entitled "Call-up Limitations". Offerors should bear in mind these volume discounts when offering their unit prices.
- (viii) **Blank Prices:** Prices must be specified for all Items. Offerors are requested to insert "\$0.00" for any item for which it does not intend to charge or for items that are already included in other prices. If the Offeror leaves any price blank, Canada will treat the price as "\$0.00" for evaluation purposes and may request that the Offeror confirm that the price is, in fact, \$0.00. No Offeror will be permitted to add or change a price as part of this confirmation. Any Offeror who does not confirm that the price for a blank item is \$0.00 will be declared non-responsive.
- (d) **List of Authorized Resellers and Service Outlets (Mandatory at bid closing):** The Offer must contain a list of Authorized Resellers and Service Outlets. It should be submitted in both spreadsheet format (.xls or .123 format) on a CD-ROM disk and hardcopy format, in both English and French as separate files. The format of the list should be as shown in the Annex entitled "Authorized Resellers and Service Outlets". Upon request the Offeror will provide PWGSC with copies of its service level agreements with its authorized resellers and service outlets, and/or identify which service outlets are capable of meeting the required response times at various service locations.
- (e) **Escalation Plan for Service/Maintenance Issues (Mandatory at bid closing):** The Offer must include an escalation plan for service/maintenance issues that details the specific steps that are to be taken, including contact name and numbers for each subsequent level, when a service issue is not being resolved to Canada's satisfaction. This plan will be used in order to resolve all service issues for Products supplied under Call-ups.
- In addition to the above requirement, at Canada's request, the account team must be prepared to meet to conduct a broad review of all the IT goods and related services. Also, at Canada's request, the Offeror must supply an organizational chart that includes the Offerors team members, their responsibilities and contact information, as well as upper-level management support.
- (f) **Acceptance of Government Acquisition Card for Payment (Requested at bid closing):** Offerors are requested to indicate, in their Offer Submission Forms, whether they will accept Government of Canada Acquisition Cards (credit cards) for payments under Call-ups. Whether or not an Offeror will accept Acquisitions Cards will not be evaluated.

1.2 Financial Capability: SACC Manual clause M9033T (2012-07-16) Financial Capability, applies to this solicitation; except that subsection 3 is deleted and replaced with the following: "If the Offeror is a subsidiary of another company, then any financial information required by the Contracting Authority in 1(a) to (f) must be provided by each level of parent company, up to and including the ultimate parent company. The financial information of a parent company does not satisfy the requirement for the provision of the financial information of the Offeror; however, if the Offeror is a subsidiary of a company and, in the normal course of business, the required financial information is not generated separately for the subsidiary, the financial information of the parent company must be provided. If Canada determines that the Offeror is not financially capable but the parent company is, or if Canada is unable to perform a separate assessment of the Offeror's financial capability because its financial information has been combined with its parent's, Canada may, in its sole discretion, award the Standing Offer to the Offeror on the condition that the parent company grant a performance guarantee to Canada." In the case of a joint venture offer, each member of the joint venture must meet the financial capability requirements.

Note to Offerors: For existing Offerors who are proposing the exact same systems that have already qualified for the NMSO and meet the mandatory technical specifications of this solicitation, the Financial Offer is still required to be submitted. Unless they have changed from the Offeror's previous successful submission, the requirements of (d) (List of Authorized Resellers and Service Outlets), (e) (Escalation Plan for Service/Maintenance Issues) and (f) (Acceptance of Government Acquisition Card for Payment) are not required to be submitted.

ANNEX M: BASIS OF SELECTION
1.1 EVALUATION AND SELECTION PROCESS

- (a) **Phases of Evaluation:** There are several phases in the evaluation and selection process, which are described below. Even though the evaluation and selection process will be conducted in phases, the fact that Canada has proceeded to a later phase will not mean that Canada has conclusively determined that the Offeror has successfully passed all the previous phases. Canada reserves the right to conduct phases of the evaluation and selection process concurrently.
- (b) **Phase 1 – Technical Evaluation:**
- (i) Confirmation of Compliance to Mandatory Requirements:
- (A) Each Offer will be reviewed for compliance with the mandatory requirements of the solicitation. All elements of the solicitation that are mandatory requirements are identified specifically with the words “must” or “mandatory”. Offers that do not comply with each and every mandatory requirement will be considered non-responsive and be disqualified.
- (B) Claims in an offer that a future upgrade or release of any of product included in the offer will meet the mandatory requirements of the solicitation, where the upgrade or release is not available at closing, will not be considered.
- (c) **Phase 2 – Evaluation of Financial Offer:**
- (i) **Price Score:** For each System, the Evaluated Price (EP) will be determined for evaluation purposes in accordance with the following formula:
- (A) **For Servers:** $EP = \text{Default System} \times 45\% + \text{Upgrades} \times 10\% + \text{Components} \times 45\%$
- (B) **For Blade Servers:** $EP = [\text{Default Blade System} + (\text{Default Chassis} + \text{Chassis Upgrades} + \text{Chassis Components}) / \text{Maximum Number Blade Systems per Chassis}] \times 45\% + \text{Blade System Upgrades} \times 10\% + \text{Blade System Components} \times 45\%$
- (ii) **Other Related Items:** Offerors should note that Other Related Items may be offered. These Products will not be financially evaluated. PWGSC reserves the right to approve or refuse any particular Item, at its sole discretion, if PWGSC considers the technical information submitted in respect of that Item to be incomplete, or determines that the Item does not relate directly to the System. PWGSC may also refuse to approve an Item if PWGSC, in its sole discretion, does not consider the Item to offer good value when compared to the list price and average discount offered in the Category.
- (iii) **Same System:** If the Same System is offered more than once in a given Category by one or more Offerors (regardless of the Components included in the System), only the System with the lowest EP will be considered for evaluation. If that System is disqualified, the next lowest EP System will be considered. The EP of Systems that are non-responsive (or are not evaluated, because there are several of the same System being offered) will not be used for the other steps.
- (iv) **Same Offeror:** Each Offeror is limited to a maximum of 2 Systems per Category. If any Offeror submits offers for more than 2 Systems in any Category, Canada may choose (in its complete discretion) which Systems to consider.
- (v) **Same Manufacturer:** If, in any Category, the Systems offered by one or more Offerors are manufactured by the same Manufacturer (as defined in this RFSO), then only the 2 distinct Systems with the lowest 2 EP offered will be considered for NMSO issuance. The EP of Systems eliminated at this step will not be used for the next steps.
- (d) **Phase 3 – Benchmark Testing:**
- (i) The Offeror is responsible for all costs associated with benchmark testing including delivery, installation, and removal of the equipment.

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- (ii) Systems not set up by the deadline for testing will be eliminated from further consideration.
 - (iii) Despite the written offer, if Canada determines as a result of examining the benchmark results that any offered Product does not meet the mandatory requirements of this solicitation, the Offeror's Offer in respect of those Products will be declared non-compliant.

Note: Only Categories 1.0S, 2.0S, 2.1S, 3.0S, 4.0S, 1.0B, 2.0B, 2.1B, 3.0B and 3.1B (with 1.0B chassis) will be benchmarked.
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(e) **Phase 4 – Offeror Selection:**

- (i) For all Categories, Offerors offering Systems that meet all mandatory requirements and have a EP no greater than the mean plus one standard deviation of the sum of the EP of the Systems offered in the Category by the Offerors will be recommended for Standing Offer issuance, up to a maximum of 8 per Category, subject to the provisions of this solicitation. If there are more than 8 responsive Systems, PWGSC will select the 8 with the lowest EPs, subject to the rules regarding the Same System, Same Offeror and Same Manufacturer described above.
- (ii) The mean is calculated using the “AVERAGE” function in Microsoft Excel 2000 SR-1. The standard deviation is calculated using the “STDEVP” function in Microsoft Excel 2000 SR-1. The lowest EP System in each Category and the EP of any System deemed non-compliant will NOT be used for purposes of calculating the mean plus one standard deviation.
- (iii) For all Categories, if fewer than 8 Systems are recommended for Standing Offer issuance, Canada may, in its sole discretion, recommend up to 2 additional Systems for Standing Offer issuance. The recommended Systems will be those Systems that meet all the mandatory requirements and have next-lowest EP not qualifying under (i). Systems qualifying under this provision will not be listed on the CAG and will be unable to accept Call-ups for 4 refresh periods from the date the Standing Offer is issued or until the Offeror revises the price to fall within the mean plus one standard deviation calculation described in (a), whichever occurs later.
- (iv) Offerors should note that the issuance of all Standing Offers is subject to Canada's internal approvals process. Even though an Offeror may have been recommended for issuance of a Standing Offer, issuance of any Standing Offer will be contingent upon internal approval in accordance with Canada's policies. If that approval is not given, some or all Standing Offers will not be issued.

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ANNEX N: OFFER FORMS

FORM 1 - OFFER SUBMISSION FORM			
Offeror's full legal name			
Authorized Representative of Offeror for evaluation purposes (e.g., clarifications)	Name		
	Title		
	Address		
	Telephone #		
	Fax #		
	Email		
Offeror's Procurement Business Number (PBN)			
Offeror's Toll-Free Hotline Telephone Number			
Offeror's website address for Internet-Based Technical Support			
<p>If the Federal Contractors Program for Employment Equity (FCP EE) applies to the Offeror, please include your Certificate Number.</p> <p>If the Offeror is exempt, please indicate the basis for the exemption.</p> <p>If the Offeror does not fall within the exceptions enumerated to the right, the Program requirements do apply, and as such, the Offeror is required either to:</p> <p>(a) submit to the Department of HRSD form LAB 1168, Certificate of Commitment to Implement Employment Equity, DULY SIGNED; or</p> <p>(b) submit a valid Certificate number confirming its adherence to the FCP-EE.</p> <p>Offerors are requested to include their FCP EE Certification or signed LAB 1168 with their Offer; if this information is not provided in the Offer, it must be provided upon request by the Standing Offer Authority during evaluation. [see the Article entitled <i>Federal Contractors Program for Employment Equity - Certification</i>]</p>	On behalf of the Offeror, by signing below, I further confirm that the Offeror [check the box that applies]:		
	(a) is not subject to Federal Contractors Program for Employment Equity (FCP-EE), because it has a workforce of less than 100 permanent full or part-time employees in Canada;		
	(b) is not subject to FCP-EE, because it is a regulated employer under the <i>Employment Equity Act</i> ;		
	(c) is subject to the requirements of FCP-EE, because it has a workforce of 100 or more permanent full or part-time employees in Canada, but has not previously obtained a certificate number from the Department of Human Resources and Skills Development (HRSD) (having not bid on requirements of \$200,000 or more), in which case a duly signed certificate of commitment is attached; OR		
	(d) is subject to FCP-EE, and has a valid certification number as follows: _____ (i.e., has not been declared an Ineligible Contractor by HRSD).		
Authorized Representative of Offeror who will act as the key contact for any resulting standing offer	Name		
	Title		
	Address		
	Telephone #		
	Fax #		
	Email		
Province in Canada the Offeror wishes to be the legal jurisdiction applicable to any resulting Standing Offer and Call-ups (if other than as specified in solicitation)			
Government of Canada Acquisition Card Payment	Government of Canada Acquisition Cards (credit cards) will be accepted for payment of call-ups against the standing offer	Yes	No
<p>On behalf of the Offeror, by signing below, I further confirm that I have read the entire RFSO including the documents incorporated by reference into the RFSO and:</p> <p>1. The Offeror considers itself and its Products able to meet all the mandatory requirements described in the RFSO;</p> <p>2. This Offer is valid for the period requested in the RFSO; and</p> <p>3. If the Offeror is issued a Standing Offer, it will accept all the terms and conditions set out in the Resulting Standing Offer Clauses and the Resulting Call-up Clauses included in the RFSO.</p>			

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Signature of Authorized Representative of Offeror	
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FORM 2 – MANUFACTURER CERTIFICATIONS

As part of the evaluation, Canada requires Manufacturer Certifications for all the Systems being offered in response to this RFSO.

If the Offeror is itself the Manufacturer, it must provide the certification entitled “Manufacturer Certification – Offeror Manufacturer of Products Offered”. If the Offeror is not the Manufacturer, it must provide the certification entitled “Manufacturer Certification – Offeror Not Manufacturer of Products Offered”.

If the Offeror is offering Products from multiple Manufacturers, a separate certification must be provided from each Manufacturer.

Note for Joint Venture Offerors: Certifications made by the Manufacturer must name (as the Offeror) ALL members of the joint venture Offeror that will be involved in delivering or servicing that Manufacturer’s equipment in the performance of the Work, or the joint venture itself must be named (if the joint venture has been given a name).

MANUFACTURER CERTIFICATION – OFFEROR MANUFACTURER OF PRODUCTS OFFERED	
On behalf of the Offeror, I certify that the Offeror is itself the Manufacturer of the Products being offered in response to the solicitation identified below.	
Solicitation Number	
Name of Offeror	
Authorized Signatory of Offeror	
Date Signed	
If this Certification is limited to specific Products or specific services, please provide details	

MANUFACTURER CERTIFICATION – OFFEROR NOT MANUFACTURER OF PRODUCTS OFFERED	
The Manufacturer identified below authorizes the Offeror named below to provide its Products and provide warranty service in relation to those Products under any Call-ups resulting from Standing Offers issued as a result of the solicitation identified below.	
Name of Manufacturer	
Address of Manufacturer	
Name of Manufacturer’s Authorized Representative	
Title of Manufacturer’s Authorized Representative	
Telephone Number of Manufacturer’s Authorized Representative	
Fax Number of Manufacturer’s Authorized Representative	
Signature of Authorized Signatory of Manufacturer	
Date Signed	
Solicitation Number	
Name of Offeror	
If this Certification is limited to specific Products or specific services, please provide details	

FORM 3 – JOINT VENTURE OFFER FORM

(submit only if the Offer is being made by a Joint Venture)

JOINT VENTURE OFFER FORM	
This Offer is being submitted by a joint venture.	
Name of joint venture	_____
Legal name of representative member of joint venture	_____
Legal name of each other member(s) of joint venture	_____

	<i>[adjust number of lines, as applicable]</i>
As the authorized signatory of the representative member of the joint venture, I confirm that all the members of the joint venture identified above have appointed the representative member as their agent for the purposes of responding to this bid solicitation and for all matters relating to any resulting Standing Offer or Call-up.	
Signature of representative member	_____
Name of authorized signatory of lead member	_____
Date Signed	_____

FORM 4 – SUBSTANTIATION OF COMPLIANCE MATRIX

Reference to paragraph in Annex A – Technical Specification	Substantiation of Compliance <i>(explain how the Product meets the mandatory technical specifications)</i>	Reference <i>(refer here to any additional technical documentation <u>included with your offer</u> by indicating the document, page number and paragraph number where the information can be found)</i>