

Part III – Contract General Provisions

- 14.3 The Contractor shall, except as otherwise provided for in the Contract, make good or, at the option of the Purchaser, pay compensation for all damage occurring to any Purchaser's Facilities occasioned by the Contractor, his servants, agents or Sub-contractors, arising from his or their presence and activities in, and use of, the Purchaser's Facilities; provided that this Condition shall not apply to the extent that the Contractor is able to show that any such damage was not caused or contributed to, by his neglect, or default or the neglect or default of his servants, agents or Sub-contractors, or by any circumstances within his or their control.
- 14.4 All property of the Contractor while at a Purchaser Facility shall be at the risk of the Contractor, and the Purchaser shall accept no liability for any loss or damage, except to the extent that any loss or damage is the result of a wilful act or gross negligence on the part of the Purchaser's employees or agents.

15. HEALTH, SAFETY AND ACCIDENT PREVENTION

- 15.1 If the Purchaser notifies the Contractor in writing of any non-compliance in the performance of this Contract with safety and health rules and requirements prescribed on the date of this Contract by applicable national or local laws, ordinances and codes, and the Contractor fails to take immediate corrective action, the Purchaser may order the Contractor to stop all or part of the Work until satisfactory corrective action has been taken. Such an order shall not entitle the Contractor to an adjustment of the Contract price or other reimbursement for resulting increased costs, or to an adjustment of the delivery or performance schedule.

16. CHANGES

- 16.1 The Purchaser may at any time, by written order of the Contracting Authority designated or indicated to be a change order ("Change Order") make changes within the general scope of this Contract, including, without limitation, in any one or more of the following:
- 16.1.1 Specifications (including drawings and designs);
 - 16.1.2 Method and manner of performance of the work, including engineering standards, quality assurance and configuration management procedures;
 - 16.1.3 Marking and method of shipment and packing;
 - 16.1.4 Place of delivery;
 - 16.1.5 Amount, availability and condition of Purchaser Furnished Property.
- 16.2 The Purchaser shall submit a proposal for Contract amendment describing the change to the Contract.

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- 16.3 If any such Change Order causes an increase in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Contractor shall submit a written proposal for adjustment to the Purchaser describing the general nature and amount of the proposal for adjustment. The Contractor shall submit this proposal for adjustment within thirty (30) days after receipt of a written Change Order under (a) above unless this period is extended by the Purchaser.
- 16.4 If any such Change Order causes a decrease in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Purchaser shall submit a proposal for adjustment within thirty (30) days from the issuance of the Change Order by submitting to the Contractor a written statement describing the general nature and amount of the proposal for adjustment.
- 16.5 Where the cost of property made obsolete or in excess as a result of a change is included in the Contractor's claim for adjustment, the Purchaser shall have the right to prescribe the manner of disposition of such property.
- 16.6 The Purchaser reserves the right to reject the introduction of the change, after the evaluation of the change proposal, even if the Purchaser initiated such change.
- 16.7 Failure to agree to any requested adjustment shall be a dispute within the meaning of the Clause 41 (Disputes). However, nothing in this Clause shall excuse the Contractor from proceeding with the Contract as changed.
- 16.8 No proposal for adjustment by the Contractor for an equitable adjustment shall be allowed if asserted after final payment and acceptance under this Contract.
- 16.9 Any other written or oral order (which, as used in this paragraph includes direction, instruction, interpretation, or determination) from the Purchaser that causes a change shall be treated as a Change Order under this Clause, provided, that the Contractor gives the Purchaser a written notice within thirty (30) Days after receipt of such order stating (i) the date, circumstances, and source of the order; (ii) that the Contractor regards the order as a Change Order; and (iii) a detailed cost and time analysis of the impact of the change, and that the Order is accepted in writing by the Purchaser as a Change Order. The timely written notice requirement, as detailed above, remains in force in all cases, even where, for example, the Purchaser has positive knowledge of the relevant facts.
- 16.10 All tasks and activities carried out by the Contractor in relation to the processing of the Change Order or in relation to this Clause shall form part of the Contractor's routine work and cannot be charged as additional work.

17. STOP WORK ORDER

- 17.1 The Purchaser may, at any time, by written order to the Contractor, require

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the Contractor to stop all, or any part, of the Work called for by this Contract for a period of ninety (90) days after the order is delivered to the Contractor, and for any further period to which the Parties may agree.

- 17.2 Any such stop work order shall be specifically identified as a stop work order issued pursuant to this Clause (the “Stop Work Order”). The Stop Work Order may include a description of the Work to be suspended, instructions concerning the Contractor’s issuance of further orders for material or services, guidance to the Contractor on actions to be taken on any Sub-contracts and any suggestion to the Contractor for minimizing costs.
- 17.3 Upon receipt of such a Stop Work Order, the Contractor shall forthwith comply with its terms and take all reasonable steps to minimise costs incurred allocable to the Work covered by the Stop Work Order during the period of work stoppage. Within a period of ninety (90) days after a Stop Work Order is delivered to the Contractor, or within any extension of that period to which the Parties shall have agreed, the Purchaser shall either:
- 17.3.1 cancel the Stop Work Order; or
 - 17.3.2 terminate the Work covered by such Stop Work Order as provided in Clause 40 (Termination for Convenience of the Purchaser).
- 17.4 If a Stop Work Order issued under this Clause is cancelled or the period of the Stop Work Order or any extension thereof expires, the Contractor shall resume work.
- 17.5 An equitable adjustment shall be made in the delivery schedule or Contract price, or both, and the Contract shall be modified in writing accordingly, if:
- 17.5.1 the Stop Work Order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this Contract, and;
 - 17.5.2 the Contractor asserts a Claim for such adjustment within thirty (30) days after the end of the period of work stoppage; provided that, if the Purchaser decides the facts justify such action, he may receive and act upon any such claim asserted at a later date but prior to final payment under this Contract.
- 17.6 If a Stop Work Order is not cancelled and the Work covered by such Stop Work Order is terminated for the convenience of the Purchaser the reasonable costs resulting from the Stop Work Order shall be allowed in arriving at the termination settlement.

18. CLAIMS

- 18.1 The Contractor shall specifically identify the Contract Clause(s) under which the Claim(s) is/are based.

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- 18.2 Claims shall be specifically identified as such and submitted:
 - 18.2.1 within the time specified in the Clause under which the Contractor alleges to have a Claim. If no time is specified in the Clause under which the Contractor intends to base his Claim, the time limit shall be sixty (60) days from the date the Contractor has knowledge or should have had knowledge of the facts on which he bases his Claim; and
 - 18.2.2 before final payment, pursuant to and with the exceptions specified in Clause 33 entitled "Release of Claims".
 - 18.2.3 Section 18.2.2 above shall only apply to those Claims for which the Contractor could not have had earlier knowledge and were not foreseeable.
- 18.3 The Contractor shall be foreclosed from his Claim unless he presents complete documentary evidence, justification and costs for each of his Claims within ninety (90) calendar days from the assertion date of such Claims. Claims shall be supported by specifically identified evidence (including applicable historical and planned cost and production data from the Contractor's books and records). Opinions, conclusions or judgmental assertions not supported by such evidence will be rejected by the Purchaser.
- 18.4 An individual breakdown of cost is required for each element of Contractor's Claims at the time of claim submission or for any material revision of the Claim.
- 18.5 The Contractor shall present, at the time of submission of a Claim, an attestation as follows:

Ithe responsible senior company official authorised to commit the with respect to its claims dated being duly sworn, do hereby depose and say that: (i) the facts described in the claim are current, complete and accurate; and (ii) the conclusions in the claim accurately reflect the material damages or contract adjustments for which the Purchaser is allegedly liable.

.....

SIGNATURE

Date

- 18.6 Failure to comply with any of the above requirements shall result in automatic foreclosure of the Claim. This foreclosure takes effect in all cases and also where, for example, the Claim is based on additional orders, where the facts are known to the Purchaser, where the Claim is based on defective specifications of the Purchaser or an alleged negligence in the pre-contractual stage.
- 18.7 Claims submitted by the Contractor will be reviewed by the Contracting

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Authority. The Contracting Authority will respond within sixty (60) days with a preliminary decision, based on an assessment and evaluation of the facts presented by the Parties, as to whether the Contracting Authority considers the Claim to have merit for consideration. If the preliminary decision of the Contracting Authority is that the Claim, as submitted is without merit, the Contractor shall have fourteen (14) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within thirty (30) days receipt of the Contractor's request for reconsideration, the Contracting Authority will issue a decision. The time requirements stated herein may be extended by the Contracting Authority in order to accommodate additional preparation efforts and fact finding discussions but the Contracting Authority may not unreasonable extend such a period. A decision that the submitted claim is without merit will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision may only be challenged by the Contractor through the Disputes provisions described herein.

- 18.8 A decision by the Purchaser that the claim has merit will result in a Contracting Authority request to enter into negotiations with the Contractor to arrive at a mutually agreed fair and equitable settlement. The Contracting Authority's decision will contain a target date for the commencement and conclusion of such operations. If the Parties are unable to arrive at an agreement on a fair and reasonable settlement by the target date for conclusion, or any extension thereto made by the Contracting Authority, the latter may declare that negotiations are at an impasse and issue a preliminary decision as to the fair and reasonable settlement and the reasons supporting this decision. The Contractor shall have a period of thirty (30) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within sixty (60) days of receipt of the Contractor's request for reconsideration, the Contracting Authority will issue its decision on the request for reconsideration. This timeframe will be respected unless an authorisation is needed from a NATO or other authority, the schedule for which is beyond the Contracting Authority's control. A decision of the Contracting Authority on the reconsideration of the matter will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision on the reconsideration may only be challenged by the Contractor through the Disputes provisions described herein.
- 18.9 No Claim arising under this Contract may be assigned by the Contractor without prior approval of the Purchaser.
- 18.10 The Contractor shall proceed diligently with performance of this Contract, pending final resolution of any request for relief, claim appeal, or action arising under the Contract, and comply with any decision of the Contracting Authority.

19. PRICING OF CHANGES, AMENDMENTS AND CLAIMS

- 19.1 Contractor's pricing proposals for Changes, amendments and Claims shall be priced in accordance with the Purchaser's Pricing Principles (Annex 1 hereto

Part III – Contract General Provisions and the sample spreadsheet and its “Instructions to Complete” at Appendix 1) or the national government pricing rules and regulations for the Contractor's own country, where in force. The Contractor shall provide cost information accompanied by appropriate substantiation as required by the Purchaser in accordance with Purchaser's Pricing Principles, or such other format as may be agreed between the Contractor and the Purchaser.

- 19.2 With respect to Clause 19.1 above, when the price or price adjustment is based on adequate price competition, established catalogue or market price of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contractor shall be responsible for substantiation of such cases to the satisfaction of the Purchaser.
- 19.3 For the purposes of verifying that the cost or pricing data submitted in conjunction with Clause 19.1 above are accurate, complete and current, the Purchaser or any Purchaser authorised representative shall have the right of access to the Contractor's facilities to examine, until the expiration of three (3) years from the date of final payment of all sums due under the Contract:
- 19.3.1 those books, records, documents and other supporting data which will permit adequate evaluation and verification of the cost or pricing data submitted; and/or
- 19.3.2 the computations and projections which were available to the Contractor as of the date of the Contractor price proposal.
- 19.4 The Contractor, subject to the provisions of this Clause, shall require Sub-contractors to provide to the Purchaser, either directly or indirectly:
- 19.4.1 cost or pricing data;
- 19.4.2 access to Sub-contractor's facilities and records for the purposes of verification of such cost or pricing data; and
- 19.4.3 a Certificate of Current Cost or Pricing Data, when required.
- 19.5 If any price, including profit, negotiated in connection with this Contract was proposed, taking any of the following into account:
- 19.5.1 the Contractor furnished cost or pricing data which was not complete, accurate and current as certified in the Contractor's Certificate of Current Cost or Pricing Data provided in accordance with Clause 19.6 below;
- 19.5.2 a Sub-contractor, pursuant to Clause 19.4 above or any Sub-contract clause therein required, furnished cost or pricing data which was not complete, accurate and current as certified in the Sub-contractor's Certificate of Current Cost or Pricing Data;
- 19.5.3 a Sub-contractor or prospective Sub-contractor furnished cost or pricing data which was required to be complete, accurate and current and to be submitted to support a Sub-contract cost estimate furnished by the Contractor but which was not complete, accurate and current as of the date certified in the

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Contractor's Certificate of Current Cost or Pricing Data; or

- 19.5.4 the Contractor or a Sub-contractor or prospective Sub-contractor furnished any data, not within 19.5.1 through 19.5.3 above, which, as submitted, was not complete, accurate and current;
 - 19.5.5 then the price and/or cost shall be adjusted accordingly and the Contract shall be modified in writing as may be necessary to reflect such.
- 19.6 At the time of negotiating any price, including profit, which is based upon the submission of cost or pricing data by the Contractor, the Contractor shall be required to submit a certificate of current cost or pricing data ("Certificate").
- 19.6.1 Such Certificates will certify that, to the best of the Contractor's knowledge and belief, cost or pricing data submitted to the Purchaser in support of any proposal for a price, price adjustment or claim, are accurate, complete and current, as per the completion of the negotiations or, in the case of a claim, as per the submission date of the claim.
 - 19.6.2 All such Certificates shall be in the format shown below and shall be dated and signed by a responsible officer of the company:

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that cost or pricing data as submitted, either actually or by specific identification in writing to the Purchaser or his representative in support of.....(*Claim, Amendment, ECP#, etc.*) are accurate, complete and current as of(*Date*).

By submitting the price proposal, the Contractor/sub-Contractor or prospective sub-Contractor grant the Purchaser or his authorized representative(s) the right to examine those records, data and supporting information, used as a basis for the pricing submitted.

Name of Company

Signature

Printed Name of Signatory

Title of Signatory

Date of Signature

19.6.3 The Contractor shall insert the substance of this Clause 19.7 in each Sub-contract.

19.7 For all additional or follow-up agreements which are made for Work which are furnished to the Purchaser without competition, the Contractor shall offer prices on a "Preferred Customer" basis, that is offer prices which are as favourable as those extended to any Government, Agency, Company, Organisation or individual purchasing or handling like quantities of equipment and/or Parts covered by the Contract under similar conditions. In the event that prior to completing delivery under this Contract the Contractor offers any of such items in substantially similar quantities to any customer at prices lower than those set forth herein, the Contractor shall so notify the Purchaser and the prices of such items shall be correspondingly reduced by a supplement to this Contract. Price in this sense means "Base Price" prior to applying any bonus, export tax reduction, turn-over tax exemptions and other reductions based on National Policies.

20. **NOTICE OF SHIPMENT AND DELIVERY**

20.1 Except as may be specified in the Contract Special Provisions, delivery of all items under this Contract shall be made by the Contractor on the basis of "Delivery Duty Paid" (DDP) as defined by the INCOTERMS 2000 (International Chamber of Commerce Publication No. 560). It shall be noted, however, that because the Purchaser is exempted from direct taxes and duty as set forth in Clause 26 (Taxes and Duties), there is no duty to be paid by the Contractor.

20.2 "Delivery" of required Work by the Contractor does not constitute "Acceptance" by the Purchaser for purposes of meeting the requirements of the Contract Schedule where Purchaser acceptance is the stated payment or schedule milestone.

20.3 Thirty (30) Days, or such other period as specified in the Contract, prior to the delivery of any shipment of Work, the Contractor shall give prepaid notice of shipment to the Purchaser. The Notice of Shipment shall contain, as appropriate, the request for customs form 302, or equivalent document, which shall enable any carrier to conduct duty free import/export clearance through customs for the Purchaser on behalf of NATO.

20.4 The customs form 302 is an official customs clearance declaration issued in advance of shipment by the Purchaser to provide certified information as to the

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duty free import, export, or transit of NATO consignments between NATO countries.

- 20.5 The Notice of Shipment and request for Form 302 or equivalent document shall contain the following information:
- 20.5.1 Purchaser's Contract number;
 - 20.5.2 Contract item number, designation and quantities;
 - 20.5.3 destination;
 - 20.5.4 number and description of the packages (gross and net weight);
 - 20.5.5 description of the goods and their value (for custom purpose only, not commercial value)
 - 20.5.6 consignor's name and address;
 - 20.5.7 consignee's name and address;
 - 20.5.8 method of shipment (i.e. road, rail, sea, air, etc.);
 - 20.5.9 name and address of freight forwarder.
- 20.6 Forwarding Agents, Carriers or other responsible organisations shall be informed by the Contractor of the availability of Form 302 or equivalent document and how the form shall be utilised to avoid the payment of custom duties. Form 302 or equivalent document shall be incorporated in all shipping documents provided to the carrier.
- 20.7 Upon receipt of the Notice of Shipment from the Contractor, the Purchaser may require the Contractor to send copies of the Notice of Shipment to the receiving parties and the Contractor shall comply with this requirement.

21. INSPECTION AND ACCEPTANCE OF WORK

- 21.1 For the purposes of this Clause, Work does not include documentation which is addressed in Clause 22 (Inspection and Acceptance of Documentation) hereafter.
- 21.2 Unless otherwise specifically provided for in the Contract, all Work and all Parts and equipment incorporated in the Work are to be new and of the most suitable grade of their respective kinds for the purpose, notwithstanding the requirements for testing, inspection and performance as required under this Contract. All workmanship shall be as specified under the Contract or, if no workmanship standards are specified, best commercial or "state of the art" complying with relevant (National and International) standards.
- 21.3 All Work may be subject to inspection and test by the Purchaser or his authorised representative(s) to the extent practicable at all times and places prior to Acceptance, including the period of manufacture, or after delivery or as otherwise specified in the Contract. For the purposes of inspection and testing the Purchaser may delegate as his representative the authorised National Quality Assurance Representative (NQAR) in accordance with STANAG 4107.

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- 21.4 No representative or NQAR appointed by the Purchaser for the purpose of determining the Contractor's compliance with the technical requirements of the Contract shall have the authority to change any of the specifications. Such changes may only be made by the Contracting Authority in writing in accordance with Clause 16 (Changes).
- 21.5 The presence or absence of an NQAR or other Purchaser representative shall not relieve the Contractor from conforming to the requirements of this Contract.
- 21.6 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in the Contract. Failure to timely accept or reject the Work shall neither relieve the Contractor from responsibility for such Work nor impose liability on the Purchaser.
- 21.7 In the event that any Work, or lots thereof, or services are defective in design, material, workmanship or manufacturing quality, or as a result of undue wear and tear or otherwise not in conformity with the requirements of this Contract, including any characteristic or condition which is or becomes at variance to the performance specifications, to the intended function of the Work or the function to which it could reasonably be expected that the Work would perform, the Purchaser shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction or replacement. Work which has been rejected or required to be corrected or replaced shall, at the expense of the Contractor, be removed, or, if permitted or required by the Contracting Authority, corrected in place by the Contractor promptly after notice, and shall not thereafter be tendered for acceptance by the Contractor unless the former rejection or requirement of correction or replacement is withdrawn. If the Contractor fails promptly to remove, replace or correct such Work the Purchaser may either:
- 21.7.1 by contract or otherwise return, replace or correct such Work or services and charge to the Contractor the cost incurred by the Purchaser; and/or
 - 21.7.2 terminate this Contract for default as provided in Clause 39 (Termination for Default).
- 21.8 When NQAR is not applicable based on the scale of the project, the Purchaser reserves the right to perform inspections through his own staff in accordance with the latest ISO standard at the time of inspection.
- 21.9 Unless the Contractor corrects or replaces such Work within the delivery schedule, the Purchaser may require the delivery of such Work at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction of price shall be a dispute within the meaning of Clause 41 (Disputes).
- 21.10 If any inspection or test is made by the Purchaser's representatives on the premises of the Contractor or Sub-contractor, the Contractor, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the Purchaser's representatives in the performance of their duties. The NQAR or other Purchaser representatives shall have the right of access to any area of the Contractor's or his Sub-contractor's premises

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where any part of the contractual work is being performed.

- 21.11 If Purchaser inspection or test is made at a point other than the premises of the Contractor or Sub-contractor, it shall be at the expense of the Purchaser except as otherwise provided in this Contract; provided, that in case of rejection the Purchaser shall not be liable for any reduction in value of samples used in connection with such inspection or test.
- 21.12 All inspections and tests by the Purchaser shall be performed in such a manner as not to unduly delay the Work.
- 21.13 The Purchaser reserves the right to charge to the Contractor any additional cost of Purchaser inspection and test when Work is not ready at the time such inspection and test is requested by the Contractor or when re-inspection or retest is necessitated by prior rejection.
- 21.14 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in this Contract, but failure to inspect and accept or reject Work shall neither relieve the Contractor from responsibility for such Work as are not in accordance with the Contract requirements nor impose liability on the Purchaser thereof.
- 21.15 The inspection and test by the Purchaser of any Work or lots thereof, or services, does not relieve the Contractor from any responsibility regarding defects or other failures to meet the Contract requirements which may be discovered prior to acceptance.
- 21.16 Acceptance of Work shall take place when the Contracting Authority confirms acceptance in writing of the Work in accordance with the procedure specified in the Contract, or if none is so specified then the Contracting Authority shall be deemed to have accepted the Work without prejudice to any other remedies, when and as soon as any of the following events have occurred:
- 21.16.1 the Purchaser has taken the Work into use, except as specifically provided by Clause 23 (Use and Possession Prior to Acceptance);
- 21.16.2 the Purchaser has not exercised its right of rejection of the Work within any period specified for that purpose in the Contract;
- 21.16.3 there being no period for exercising the right of rejection specified in the Contract, a reasonable time, all the circumstances having been taken into account, has elapsed since inspection of the Work was effected in accordance with the Contract.
- 21.17 Except as otherwise provided in this Contract, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.
- 21.18 Unless otherwise specified in this Contract, the Contractor shall have or establish, implement and maintain an effective and economical quality control system necessary to satisfy the Contract requirement. The system shall provide for the early and prompt detection of deficiencies, trends and conditions which could result in unsatisfactory quality and for timely and effective corrective action. Objective evidence that the system is effective shall be readily available to the Purchaser and its authorised representatives.

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Records of all inspection and testing work by the Contractor shall be kept complete and available to the Purchaser's representatives during the performance of this Contract and for such longer periods as may be specified elsewhere in this Contract.

22. **INSPECTION AND ACCEPTANCE OF DOCUMENTATION**

- 22.1 The Contractor shall provide to the Purchaser a draft version of the required documentation as provided by the Contract Schedule and the Statement of Work. Review of draft documentation under this Contract will be made by the Purchaser upon the delivery of these items by the Contractor. The review will be conducted by the Purchaser through duly authorised representatives.
- 22.2 Upon delivery of the draft documentation, the Purchaser will have a period of review as provided by the Statement of Work. At the end of the review period or before if deemed practical by the Purchaser, the Purchaser's comments will be presented to the Contractor in writing. The substance of such comments will pertain to items of error, non-conformity, omission and guidance in relation to the requirements of the Statement of Work.
- 22.3 Purchaser Review of the delivered items will emphasise the conformity with the requirements of the Statement of Work, thoroughness of analysis, logical bases of conclusions and models and coherence and completeness of presentation. The review process will also examine editorial and grammatical correctness and the suitability and accuracy of graphics supporting the text.
- 22.4 The Contractor shall, after receipt of Purchaser comments, incorporate changes, revisions and corrections required by the Purchaser and present the revised documentation in final form to the Purchaser for inspection in accordance with the delivery date specified in the Schedule.
- 22.5 During the review process the Contractor is not required to halt efforts on further tasks as identified in the Statement of Work. The Purchaser, however, shall not be held liable for any work carried out by the Contractor which is based on draft documentation yet to be reviewed.
- 22.6 Upon receipt of the items in final form, the Purchaser will inspect the items for a period not exceeding two weeks (or as otherwise stated in the Statement of Work). At the end of the inspection, the Purchaser will notify the Contractor that:
- 22.6.1 the items have been accepted;
 - 22.6.2 the acceptance of the items is deferred pending further revision;
- or
- 22.6.3 The items are rejected and significantly fail to meet Contract

requirements.

- 22.7 In the case of Clause 22.6.2 above, the Contractor shall only be responsible for those revisions and corrections requested by the Purchaser and the Purchaser may not request additional revisions during inspection after required revisions have been made. However, if the Purchaser determines that a directed revision has not been made or if such directed revision was cause for revision of other portions of content which were not made by the Contractor, the Purchaser may withhold acceptance until such revisions are made by the Contractor.
- 22.8 The Contractor shall provide to the Purchaser on request supporting technical data, computer software, databases and background analyses in order to validate findings contained in the delivered items.
- 22.9 Purchaser acceptance shall be made in writing by the Contracting Authority.

23. USE AND POSSESSION PRIOR TO ACCEPTANCE

- 23.1 Except as otherwise provided in the Contract Special Provisions, the Purchaser shall have the right to take possession of, or use, any completed or partially completed Work under the Contract at any time, when notified by the Contracting Authority, however such possession or use shall not constitute Acceptance by the Purchaser, as defined in the Contract.
- 23.2 While the Purchaser has such use or is in such possession, the Contractor shall be relieved of the responsibility for loss or damage to the Work concerned other than that resulting from the Contractor's fault, negligence or defect to the Work.
- 23.3 If such prior possession or use by the Purchaser delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of delivery will be made, in accordance with the Clause 16 (Changes), and the Contract shall be modified in writing accordingly.

24. OWNERSHIP AND TITLE

- 24.1 Except as may be otherwise stated in the Contract Special Provisions and Clause 23 (Use and Possession prior to Acceptance), ownership and title to all Work will pass to the Purchaser only upon Acceptance by the Contracting Authority in writing. Where the Contract provides for Provisional Acceptance and Final Acceptance, ownership and title will pass to the Purchaser upon written notification of Final Acceptance.

25. INVOICES AND PAYMENT

- 25.1 Unless otherwise specified in the Contract Special Provisions, invoices shall only be submitted after delivery and Acceptance of the Work and for the total prices and currency(ies) as set out under the Schedule of Work.
- 25.2 Invoices in respect of any Work or services shall be prepared and submitted to

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the Purchaser and shall contain all of the elements listed below:

- 25.2.1 Contract number;
 - 25.2.2 Purchaser's Purchase Order number;
 - 25.2.3 accounting codes (as specified in this Contract);
 - 25.2.4 item number (as defined in the Contract);
 - 25.2.5 Contract description of Work or services, sizes, quantities, unit prices, and extended totals (exclusive of taxes and duties for which relief is available); and
 - 25.2.6 extended totals. Details of Bills of Lading or Freight Warrant numbers and weight of shipment shall be identified on each invoice as appropriate.
- 25.3 In addition, documentary evidence of Acceptance including copies of certificates of conformity shall be submitted together with each invoice. Invoices shall not be submitted to the Purchaser without Acceptance having been previously made by the Purchaser.
- 25.4 Each copy of the invoice shall contain the following certificate which shall be signed by a duly authorised company official on the designated original invoice:

"I certify that the above invoice is true and correct, that the delivery of the above described items has been duly carried out and the payment thereof has not been received.

*Order placed for official use. Exemption from VAT Article 42, §3&3*of VAT Code for Belgium or Article 151, §1b of the Council Directive 2006/112/EC dd. 28 November 2006 on intra-community purchases and/or services."*

- 25.5 All invoices shall be addressed to the NCI Agency - Financial Management

Either at the following addresses:

NCI Agency * If used for NCI Agency Brussels

NATO Communications and Information Agency
Finance, Accounting & Operations
Batiment Z
Av du Bourget 140
B-1140 Belgium

OR

shall be addressed to Financial Management at the following electronic address:

["NCIA-CAPDEV-FMU-BEL_E-INVOICES@NCIA.NATO.INT"](mailto:NCIA-CAPDEV-FMU-BEL_E-INVOICES@NCIA.NATO.INT) (note there is an

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underscore between BEL and E-INVOICES)

Note: When used for NCI Agency The Hague or Mons the addresses shall be dictated in the Contract Special Provisions

Once the manner of forwarding the invoice is chosen, the contractor shall keep this manner throughout the contract.

- 25.6 All invoices submitted shall include the address of the bank to which payment shall be made, together with **either** pertinent information concerning the International Bank Account Number (IBAN) and BIC/SWIFT address **or** pertinent information concerning transit number/sort code, account number and SWIFT address. The Purchaser makes payment only by wire transfer and therefore wire transfer particulars shall be included on the invoice.
- 25.7 Invoices will be settled by the Purchaser within sixty (60) days of receipt of a properly prepared and submitted invoice.
- 25.8 The Contractor shall mention on the invoice the payment conditions in line with the Contract.

26. **TAXES AND DUTIES**

- 26.1 The Purchaser, by virtue of his status under the terms of Article IX and X of the Ottawa Agreement, is exempt from all direct taxes (incl. VAT) and all customs duties on merchandise imported or exported. The Contractor, therefore, certifies that the prices stipulated in this Contract do not include amounts to cover such direct taxes or customs duties.
- 26.2 The Contractor shall be responsible for ensuring that his respective Sub-contractors are aware that the Purchaser is exempt from taxes and customs duties. The Contractor (and his respective Sub-contractors) shall be responsible for complying with all applicable national and local legal and administrative procedures to ensure that authorities do not attempt to assess taxes and customs duties on goods and property imported or exported through NATO member nation frontiers under this Contract nor assess direct taxation (VAT) on goods sold to the NCI Agency under this Contract.
- 26.3 The Purchaser shall give reasonable assistance in providing evidence/documents which might be required by the Contractor to ensure that NCI Agency receives tax exemption by virtue of its status under the Ottawa Agreement.
- 26.4 If, after complying with all national and local legal and administrative procedures, the authorities persist in attempting to impose taxes or duties on goods provided under this Contract, the Contractor shall inform the Contracting Authority providing the particulars of the situation, the procedures which have been followed and the point of contact at the national authority which is attempting to impose taxation or duty. The Contracting Authority will examine the situation and attempt to clarify the legal and

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administrative basis of the difficulty. If the Contracting Authority so directs, the Contractor shall pay the required taxes and duties and file for reimbursement or rebate from the national authorities in accordance with national legislative and administrative procedures.

- 26.5 In the event that the petition for reimbursement or rebate is denied by the national authorities concerned and providing that the Contractor and/or his Sub-contractor have complied with the national legislative and administrative procedures, the Purchaser shall reimburse the full amount of the payment(s) upon receipt of the Contractor's invoice indicating such tax or duty as a separate item of cost and fully identified by reference to any governmental law, regulation and/or instruction pursuant to which such tax or duty is enforced. The Contractor shall offer assistance and execute any such document that may be useful or required to ensure that Purchaser obtains the reimbursement of any tax or duty retained by a national authority.
- 26.6 In the event of the Contractor and/or Sub-contractor not complying with national legislative or administrative procedures, taxes and duties paid by the Contractor and/or Sub-contractors shall not be reimbursed by the Purchaser.
- 26.7 Following payment by the Purchaser of the taxes and/or duties pursuant to Clause 26.4 above, should the Contractor subsequently receive a rebate of any amount paid by the Purchaser, the Contractor shall immediately notify the Purchaser and the amount of such rebate shall be credited or reimbursed to the Purchaser, as directed. The Contractor shall be responsible for taking any and all action that could reasonably be required in order to obtain such rebate.
- 26.8 The Contractor shall be liable for all other taxes, assessments, fees, licences, administrative charges or other Government assessments or charges which are applicable to the performance of this Contract. It is the Contractor's responsibility to inform himself of his liability in each country where such liability may arise.

27. WARRANTY OF WORK (Exclusive of Software)

- 27.1 For the purpose of this Clause:
- 27.1.1 “Acceptance” shall mean the act of an authorised representative of the Purchaser by which the Purchaser assumes title and ownership of delivered Work rendered as partial or complete performance of the Contract. “Acceptance” in this regard, unless specifically provided otherwise in the Contract Special Provisions, means final Acceptance where the Contract provides for Provisional or Partial Acceptance;
- 27.1.2 “Correction” shall mean the elimination of a defect;
- 27.1.3 “Work” shall not include software.

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- 27.2 The Contractor shall not be responsible under this Clause for the Correction of Defects in Purchaser Furnished Property, except for Defects in Contractor performed installation, unless the Contractor performs, or is obligated to perform, any modifications or other work on Purchaser Furnished Property. In that event, the Contractor shall be responsible for Correction of Defects that result from the modifications or other Work.
- 27.3 Unless another period of time is indicated in the Contract Special Provisions, the duration of the warranty provided by the Contractor and its Subcontractors shall be twelve (12) months from the date of Acceptance under this Contract as notified in writing by the Contracting Authority.
- 27.4 Any Work or parts thereof corrected or furnished in replacement and any services re-performed shall also be subject to the conditions of this Clause 27 to the same extent as Work initially accepted. The warranty, with respect to these Work, or parts thereof shall be equal in duration to that set forth in Clause 27.3, and shall run from the date of delivery of the corrected or replaced Work.
- 27.5 If the Contractor becomes aware at any time before Acceptance by the Purchaser (whether before or after tender to the Purchaser) or at a later time, that a Defect exists in any Work, the Contractor shall either promptly correct the Defect or promptly notify the Purchaser, in writing, of the Defect, using the same procedures prescribed in Clause 27.8.
- 27.6 The Purchaser will notify in writing the Contractor of the existence of a Failed Component and return to the Contractor the Failed Component within thirty (30) Days of the discovery of such failure. The transport of the Failed Component shall be at the expense of the Purchaser. The notification of the failure will include as much information as practicable about the circumstances and operating environment at the time of the failure. Upon receipt of such notification by the Purchaser (which may precede receipt of the Failed Component), the Contractor shall ship to the location of the Failed Component an identical component for installation by Purchaser personnel. The Contractor shall ship such replacement component(s) Delivery Duty Paid. Such transportation and replenishment charges are included in the cost of line item of the Contract identified as the warranty.
- 27.7 In such rare cases where the Failed Component is either too large to be easily transported or the Failed Component cannot be readily identified and isolated within the larger entity, the Contractor shall be notified by the Purchaser of the failure immediately by telephone, fax or e-mail. The Contractor shall provide technical support to the Purchaser personnel in identifying the Failed Component so as to afford the Purchaser the opportunity to return the Failed Component. In such a case where the Failed Component cannot be identified or is not cost effective or practical to ship to the Contractor's facility, the Contractor may elect to send field service personnel to the site of the failure and repair such equipment on location. In this event, such field service personnel shall be dispatched to the site of the failure within forty-eight (48) hours of initial notification. The expense of the technical support and field service shall be borne by the Contractor.
- 27.8 The Contractor shall conduct analysis of all Failed Components which are

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returned to him by the Purchaser or repaired in the field by Contractor field service personnel to determine the cause of the failure. The Contractor shall issue a report to the Purchaser within thirty (30) days of receipt of a returned item or field repair which contains the results of the analysis. The report shall contain the conclusion of the Contractor as to whether the cause of the failure was due to a Manufacturing Defect or a Design Defect and declare what course of remedial action the Contractor shall implement to prevent further failures of a similar nature. Repetitive failures of the same component may be grounds for a de facto determination by the Purchaser that a Design Defect exists.

- 27.9 If the Purchaser determines that a Design Defect exists in any of the Work accepted by the Purchaser under this Contract, the Purchaser shall promptly notify the Contractor of the Defect, in writing, within ninety (90) days after discovery of the Defect. Upon timely notification of the existence of a Defect, or if the Contractor independently discovers a Design Defect or Manufacturing Defect in accepted Work, the Contractor shall submit to the Purchaser, in writing within thirty (30) days, a recommendation for corrective actions, together with supporting information in sufficient detail for the Purchaser to determine what corrective action, if any, shall be undertaken.
- 27.10 The Contractor shall also prepare and furnish to the Purchaser data and reports applicable to any Correction required under this Clause (including revision and updating of all other affected data and already accepted documentation called for under this Contract) at no increase in the Contract price.
- 27.11 In the event of timely notice of a decision not to correct or only to partially correct, the Contractor shall submit a technical and cost proposal within forty-five (45) days to amend the Contract to permit Acceptance of the affected Work in accordance with the revised requirement, and an equitable reduction in the Contract price shall promptly be negotiated by the Parties and be reflected in a supplemental agreement to this Contract.
- 27.12 Within thirty (30) days after receipt of the Contractor's recommendations for corrective action and adequate supporting information in accordance with Clause 27.9, the Purchaser using sole discretion, shall give the Contractor written notice not to correct any Defect, or to correct or partially correct any Defect within a reasonable time.
- 27.13 The Contractor shall promptly comply with any timely written direction from the Purchaser to correct or partially correct a manufacturing or Design Defect, at no increase in the Contract price.
- 27.14 The Purchaser shall give the Contractor a written notice specifying any failure or refusal of the Contractor to:
- 27.14.1 conduct analyses of Failed components and implement a course of remedial action as required by Clauses 27.7 and 27.8;
 - 27.14.2 provide replacement components, technical support or on-location field repair service in accordance with Clauses 27.6 and 27.7; or
 - 27.14.3 prepare and furnish data and reports as required by Clause 27.10.

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- 27.15 The notice referred to in Clause 27.14 shall specify a period of time following receipt of the notice by the Contractor in which the Contractor must remedy the failure or refusal specified in the notice.
- 27.16 If the Contractor does not comply with the Purchaser's written notice in Clause 27.14, the Purchaser may by Contract or otherwise:
- 27.16.1 Obtain detailed recommendations for corrective action from its own resources or third parties and either:
 - 27.16.2 correct the Work;
 - 27.16.3 replace the Work, and if the Contractor fails to furnish timely disposition instructions, the Purchaser may dispose of the non-confirming Work for the Purchaser's account in a reasonable manner, in which case the Purchaser is entitled to reimbursement from the Contractor, or from the proceeds, for the reasonable expenses of care and disposition, as well as for excess costs incurred or to be incurred;
 - 27.16.3.1 obtain applicable data and reports; and/or
 - 27.16.3.2 charge the Contractor for the costs incurred by the Purchaser.
- 27.17 In no event shall the Purchaser be responsible for any extension or delays in the scheduled deliveries or periods of performance under this Contract as a result of the Contractor's obligations to correct Defects, nor shall there be any adjustment of the delivery schedule or period of performance as a result of the Correction of Defects unless provided by a supplemental agreement with adequate consideration.
- 27.18 The rights and remedies of the Purchaser provided in this Clause shall not be affected in any way by any terms or conditions of this Contract concerning the conclusiveness of inspection and Acceptance and are in addition to, and do not limit, any rights afforded to the Purchaser by any other Clause of this Contract or applicable law.
28. **RIGHT OF ACCESS, EXAMINATION OF RECORDS**
- 28.1 The Contractor shall give to the Purchaser and/or his representative(s) full and free access to his premises as and when required for the purpose of this Contract and shall ensure the same right of access to the premises of his Sub-contractors, by the inclusion in any such Sub-contracts of a provision substantially as set forth in this Clause.
- 28.2 The Purchaser and/or his representative(s) shall continue to have such right of access and examination of records as set forth in Clause 28.1 above until final payment under the Contract or the end of the warranty provisions

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under the Contract, whichever occurs later.

- 28.3 The expiration of the Purchaser's rights as set forth in Clause 28.2 is further subject to the provisions of Clause 19 (Pricing of Changes, Amendments and Claims), where a three (3) year right is established following the agreement of contractual amendments or the settlement of claims based upon the submission of cost and pricing data.
- 28.4 The period of access and examination described in Clause 28.1 above for records not related to cost aspects of a dispute or claim but which relate to issues of fact arising under either proceedings under Clause 41 (Disputes) or Clause 42 (Arbitration), or the settlement of claims made by either Party pursuant to the performance of this Contract, shall continue until such appeals, litigation or claims have been disposed of.

29. PATENT AND COPYRIGHT INDEMNITY

- 29.1 The Contractor shall assume all liability against any and all third party claims that the services, Work and/or parts thereof, in whole or in part, infringe(s) an IPR in force in any countries, arising out of the manufacture, import, export, performance of the services or delivery of Work and/or out of the use or disposal by, or for the account of, the Purchaser of such Services and/or Work. The Contractor shall reimburse and/or indemnify the Purchaser, its officers, agents, employees and/or consultants: (i) for all costs, fees, damages, awards, settlement amounts and any other expenses awarded to the third party right holder against Purchaser and/or the final beneficiaries of the Work in relation to said third party claim; and (ii) for the costs and expenses incurred by the Purchaser in relation to said third party claims, including attorney fees. The Contractor shall be responsible for obtaining any licences necessary for the performance of this Contract and for making all other arrangements required to indemnify the Purchaser from any liability for IPR infringement in said countries.
- 29.2 Each Party shall immediately notify the other of any intellectual property infringement claims of which he has knowledge and which pertain to the Work under this Contract.
- 29.3 This indemnity shall not apply under the following circumstances:
- 29.3.1 Patents or copyright which may be withheld from issue by order of the applicable government whether due to security regulations or otherwise;
 - 29.3.2 An infringement resulting from specific written instructions from the Purchaser under this Contract;
 - 29.3.3 An infringement resulting from changes made to the Work by the Purchaser without the Contractor prior written consent;
 - 29.3.4 An infringement resulting from changes or additions to the Work

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subsequent to final delivery and Acceptance under this Contract.

30. INTELLECTUAL PROPERTY

30.1 Purchaser Background IPR

- 30.1.1 The Contractor is licensed to use, non-exclusively and royalty-free any Purchaser Background IPR that is or will be made available for the sole purpose of carrying out the Work.
- 30.1.2 The Contractor shall not use any Purchaser Background IPR other than for the purpose of carrying out the Work without the prior written agreement of the Purchaser. Any such agreement shall include the terms relating to such use.
- 30.1.3 The Purchaser gives no warranty as to the validity of any Purchaser Background IPR. The Contractor shall not do anything or act in any way which is inconsistent with or prejudicial to the ownership by the Purchaser of any Purchaser Background IPR.

30.2 Contractor Background IPR

- 30.2.1 Any use of Contractor Background IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Contractor Background IPR for the purpose of exploiting or otherwise using the Foreground IPR.
- 30.2.2 Any use of Contractor Background IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. The Purchaser reserves the right to use the Contractor Background IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.

30.3 Foreground IPR

- 30.3.1 All Foreground IPR is the property of the Purchaser on behalf of NATO. Consequently, no statement shall be made restricting the rights of the Purchaser in the Foreground IPR.
- 30.3.2 The Contractor shall ensure that suitable arrangements are in place between its employees, agents, consultants and itself regarding Foreground IPR generated by said employees, agents, Subcontractors and consultants to allow the Contractor to fulfil its obligations under Clause 30.3.1 above.
- 30.3.3 The Contractor shall be entitled to use Foreground IPR on a non-exclusive, royalty free basis solely for the purpose of carrying out

the Work.

- 30.3.4 The Contractor shall not use any Foreground IPR other than for the purpose of carrying out the Work without the Purchaser's prior written agreement. Any such agreement shall include terms relating to such use.
- 30.3.5 The Contractor shall provide the Purchaser, at the latest upon delivery of the Work and thereafter for the duration of the warranty and any purchased CLS agreement period, with full documented records of information in relation to the Work, including but not limited to, all drawings, specifications and other data that is necessary or useful to further develop, maintain and operate the Work.
- 30.3.6 The Contractor shall:
- 30.3.6.1 do all things necessary and sign all necessary or useful documents to enable the Purchaser to obtain the registration of the Foreground IPR as the Purchaser may require and select; and
 - 30.3.6.2 to execute any formal assignment or other documents as may be necessary or useful to vest title to any Foreground IPR in the Purchaser.
- 30.3.7 The Contractor undertakes:
- 30.3.7.1 to notify the Purchaser promptly of any invention or improvement to an invention or any design conceived or made by the Contractor; and
 - 30.3.7.2 to provide the Purchaser with such information as the Purchaser may reasonably request in order to:
 - (i) determine the patentability of such invention or improvement; (ii) assess the need for registering such invention or improvement; and (iii) evaluate the potential value to the Purchaser of such a patent or registration if issued.
- 30.3.8 If the Purchaser determines that it wishes to apply for one or more patents for the disclosed invention or improvement or for a registration for the disclosed design, it will prosecute such application(s) at its own expense. The Contractor undertakes to provide the Purchaser, at the Purchaser's expense, with such information and assistance as the Purchaser shall reasonably require to prosecute such application(s).

30.4 Third Party IPR

- 30.4.1 Any use of Third Party IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to the Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Third Party IPR for the purpose of exploiting or otherwise using the Foreground IPR.
- 30.4.2 With the exception of COTS items, any use of Third Party IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. With the exception of COTS items, the Purchaser reserves the right to use the Third Party IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.
- 30.4.3 For COTS items, the Contractor shall be responsible for obtaining licences from the Third Party in line with the requirements of the Statement of Work (including numbers and locations of licences).
- 30.4.4 Where Third Party IPR is the subject of a licence or other agreement between the third party and the Purchaser or the Contractor, the Contractor shall not use any Third Party IPR for the purposes of carrying out work pursuant to the Contract without the prior written approval of the Purchaser. Contractor shall inform Purchaser in advance of any restrictions on the Purchaser's use.
- 30.4.5 If, after the award of the Contract, the Contractor becomes aware of the existence of any Third Party IPR which the Contractor is using or believes is needed for the performance of the Contract, the Contractor shall immediately give the Purchaser a written report identifying such IPR and if they are compliant with the other provisions in the contract. Any Third Party IPR under this clause is subject to the prior written approval by the Purchaser.
- 30.4.6 The Purchaser may consider open source solutions alongside proprietary ones in developments provided that such solutions are fully compliant with the requirements of this Contract. Contractor shall disclose in advance the open source license associated with the contemplated open source solution. The Purchaser reserves the right to refuse the incorporation of open source solutions that are deemed inadequate for incorporation in a NATO application (e.g. post-back obligations).

30.5 Subcontractor IPR

- 30.5.1 When placing a Sub-contract which is concerned with or involves the creation of IPR, the Contractor shall ensure that the Sub-contractor

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31. SOFTWARE WARRANTY

31.1 Statement of the Warranties

31.1.1 The Contractor warrants that each Software delivered under this Contract will conform to all requirements specified in the Contract. This will also include Software design specifications, including software configuration.

31.1.2 Regardless of the Purchaser initiation of or participation in developing Software design or specifications, each Software delivered under this Contract will conform to the essential Performance requirements set forth in this Contract, as those essential Performance requirements measured, tested, and verified by tests and procedures set forth in this Contract.

31.2 Notification Requirement

31.2.1 The Contractor agrees to notify the Purchaser in writing immediately after he first discovers that a defect(s) may exist in Software delivered under this Contract, unless the Purchaser has first notified the Contractor, in writing, of the same defect(s).

31.2.2 The Purchaser shall notify the Contractor upon discovery that a defect(s) may exist in any Software accepted by the Purchaser under this Contract, unless the Contractor has first notified the Purchaser, in writing of the same defect(s).

31.3 Duration of the Warranty

31.3.1 For each Software delivered under this Contract, the Contractor Warranties stated in paragraph 31.1 above shall extend to all defects discovered within 12 months from the date of acceptance of the Software by the Purchaser.

31.4 Purchaser Remedies for Breach

31.4.1 The rights and remedies of the Purchaser under this Software Warranty:

31.4.2 Are in addition to any rights and remedies of the Purchaser under any other provision of this Contract, including, but not limited to, the Purchaser's rights in relation to latent defects, fraud, or gross mistakes that amount to fraud; and

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- 31.4.3 Shall apply notwithstanding inspection, acceptance, or any other clauses or terms of this Contract;
- 31.4.4 In the event of any defect as defined herein with respect to a Software delivered under this Contract, the Purchaser, in its sole discretion may:
 - 31.4.4.1 Require the Contractor to take such action as may be necessary to eliminate the defect, at no additional cost to the Purchaser for materials, labour, transportation, or otherwise;
 - 31.4.4.2 Require the Contractor to supply, at no additional cost to the Purchaser, all materials and instructions necessary for the Purchaser to eliminate the defect and to pay costs reasonably incurred by the Purchaser in taking such action as may be necessary to eliminate the defect, or;
 - 31.4.4.3 Equitably reduce the contract price
- 31.4.5 The Purchaser may elect the remedies provided in paragraph 31.4.4.1 or 31.4.4.2 above notwithstanding any dispute respecting the existence of or responsibility for any alleged defect as defined herein with respect to any Software delivered under this contract, provided that the Contractor will not be required to pay costs incurred by the Purchaser under paragraph 31.4.4.2 until final determination of the defect. In the event that the alleged defect is subsequently determined not to be a defect subject to this warranty but the Contractor has incurred costs under paragraph 31.4.4.1 and 31.4.4.2 as required by the Contract by virtue of this paragraph 31.4.3, the contract price under this contract shall be equitably adjusted.
- 31.4.6 Election by the Purchaser of the remedy provided under paragraph 31.4.4.1 and 31.4.4.2 above shall not preclude subsequent election of a different remedy under paragraph 31.4.4 if the defect is not successfully eliminated under the prior election with one month of the notification under paragraph 31.4.2 above.

31.5 Limitations and Exclusions from Warranty Coverage

- 31.5.1 This Software Warranty shall not apply to alleged defects that the Contractor demonstrates to be in or otherwise attributable to the Purchaser furnished property as determined, tested, and verified by the tests and procedures set forth in this Contract. Notwithstanding this paragraph, a defect is not attributable to Purchaser furnished property if it is the result of installation or modification of Purchaser furnished property by the Contractor or

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of the integration of Purchaser furnished property into any
Software delivered under this Contract.

- 31.5.2 Any Purchaser Furnished Property needs to be checked and approved by the Contractor. Approval is implied once the Contractor starts using the Purchaser Furnished Property.

31.6 Markings

- 31.6.1 All Deliverables under this Contract will identify the owner of the Deliverable and if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in the operating and/or maintenance manuals or instructions accompanying such Software.
- 31.6.2 All Deliverables regardless of the media they are delivered onto and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

32. NATO CODIFICATION

- 32.1 For the purposes of this Clause "Technical Data" means the drawings, specifications and technical documentation of those items designated by the Purchaser to support the equipment covered by the Contract, and required to fully identify the items and, if applicable, draft item identifications to the extent and in the form to be agreed between the Codification Authority and the Contractor.
- 32.2 In order to ensure the orderly identification of equipment, the Contractor shall furnish at the request of the Codification Authority the Technical Data required for the identification of the items of supply to the NATO codification system in the time scale stated in this Contract.
- 32.3 A recommended spare parts list or a similar data carrier prepared in accordance with instructions provided by the Purchaser as the basis for codification shall be supplied by the Contractor by the date established in this Contract.
- 32.4 The Contractor shall supply or require his Sub-contractor(s)/supplier(s) to supply on request for the period of time specified in the Contract the relevant Technical Data for all items and sub-contracted items to the Codification Authority and the Purchaser. The Contractor shall require that

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each Sub-contractor/supplier shall include identical conditions in any subsequent order which he may place.

- 32.5 The drawings, specifications, related documentation and, if applicable, draft item identifications, prepared when possible by the true manufacturer of the item, shall be supplied by the Contractor or his Sub-contractor(s)/supplier(s) direct to the Codification Authority and, if required, to the Purchaser as and when they become available or, at the latest within the time limits specified in the Contract. The Contractor shall inform the Codification Authority and Purchaser within 21 Days of receipt of the request if the required Technical Data are not immediately available, and shall impose a similar obligation upon his Sub-contractor(s)/supplier(s).
- 32.6 Except as hereinafter provided, the Contractor shall require the Sub-contractor(s)/supplier(s) to furnish on request the information direct to the Codification Authority in the Sub-contractor(s)/supplier(s)' country, but the Contractor shall remain responsible for ensuring that the information is so furnished. In the event of a Sub-contract order being placed with a manufacturer in a non-NATO country, the Contractor shall be responsible for obtaining Technical Data from the Sub-contractor/supplier and furnishing it to the Purchaser.
- 32.7 Technical Data relating to any Sub-contractor's/supplier's items shall include but not be limited to the name and address of the true manufacturer(s), his/their true reference number(s), drawing or item Part number(s) and applicable data in addition to any Part or reference number(s) allocated by the Contractor, plus draft item identification(s) if required by the Codification Authority.
- 32.8 The Contractor shall provide the Technical Data required for codification of those items ordered with this Contract and also for the pertaining support items ordered with future contracts, including updating information regarding all agreed modifications, design or drawing changes made to the equipment or detailed Parts.
- 32.9 If the Contractor has previously supplied Technical Data (for the purpose stated in Clause 31.2), the Contractor is to state this fact and indicate to whom they were supplied and the Contractor shall not under normal circumstances be required to make a further supply of the Technical Data already provided. The Technical Data furnished by the Contractor and Sub-contractor(s)/supplier(s) are to be presented in accordance with the requirements for the preparation of item identification(s) as outlined in the Guide for Industry provided by the Codification Authority.
- 32.10 The Contractor should contact the Codification Authority for any information concerning the NATO codification system. This information is to be found at: ["http://www.nato.int/structur/ac/135/ncs_guide/e_guide.htm"](http://www.nato.int/structur/ac/135/ncs_guide/e_guide.htm)

32.11 Markings

- 32.11.1 All Deliverables under this Contract will identify the owner of the Deliverable and, if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in the operating and/or maintenance manuals or instructions accompanying such Software.
- 32.11.2 All Deliverables regardless of the media they are delivered onto and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

33. RELEASE FROM CLAIMS

- 33.1 Prior to final payment under this Contract, the Contractor and each assignee under this Contract shall execute and deliver a release discharging the Purchaser, its officers, agents and employees from all liabilities, obligations and claims arising out of or under this Contract subject only to the following exceptions:
 - 33.1.1 specified claims in stated amounts or in estimated amounts where the amounts are not susceptible to exact statement by the Contractor;
 - 33.1.2 claims for reimbursement of costs (other than expenses of the Contractor by reason of his indemnification of the Purchaser against patent liability) including reasonable expenses incidental thereto, incurred by the Contractor under the provisions of this Contract relating to patents.
 - 33.1.3 a patent infringement resulting from specific written instructions from the Purchaser under this Contract.
 - 33.1.4 a patent infringement resulting from changes or additions to the goods and services subsequent to final delivery and acceptance under this Contract.

34. ASSIGNMENT OF CONTRACT

- 34.1 The Purchaser reserves the right to assign this Contract, in whole or in part, to another NATO body, agency or representative within NATO or NATO Nations. In such a case, the Purchaser shall notify the Contractor accordingly in writing.
- 34.2 NATO shall remain responsible for its obligations under the Contract and for the actions of the body, agency or representative to which this Contract may be assigned.

35. TRANSFER AND SUB-LETTING

35.1 The Contractor shall not give, bargain, sell, assign, sub-let or otherwise dispose of the Contract or any part thereof or the benefit or advantage of the Contract or any part thereof without the prior written consent of the Purchaser.

36. PURCHASER DELAY OF WORK

36.1 If the performance of all or any part of the Work is delayed or interrupted by an act of the Purchaser in the administration of this Contract, which act is not expressly or implicitly authorised by this Contract, or by the Purchaser's failure to act within the time specified in this Contract (or within a reasonable time if no time is specified), an adjustment shall be made for any increase in the cost of performance of this Contract caused by such delay or interruption and the Contract modified in writing accordingly.

36.2 Adjustment shall be made also in the delivery or performance dates and any other contractual provision affected by such delay or interruption. However, no adjustment shall be made under this Clause for any delay or interruption:

36.2.1 to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor; or

36.2.2 for which an adjustment is provided or excluded under any other provision of this Contract.

36.3 No claim under this Clause shall be allowed:

36.3.1 if the Contractor has failed to notify the Purchaser in writing of the act or failure to act, indicating that this act or failure to act will result in a delay or increased costs;

36.3.2 for any costs incurred more than twenty (20) Days before the Contractor shall have notified the Purchaser in writing of the act or failure to act involved; and

36.3.3 unless the monetary claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such delay or interruption, but not later than the date of final payment under the Contract.

37. CONTRACTOR NOTICE OF DELAY

37.1 In the event that the Contractor encounters difficulty in complying with the Contract schedule date(s) for whatever reason, including actual or potential labour disputes, the Contractor shall immediately notify the Contracting Authority in writing, giving pertinent details. This data shall be deemed to be informational in character and shall not be construed as a waiver by the Purchaser of any schedule or date, or of any rights or remedies provided by law or under this Contract.

37.2 Notwithstanding the above the Contractor shall be deemed to be in delay without notice from the Purchaser and only by simple expiry of the due date.

38. LIQUIDATED DAMAGES

38.1 If the Contractor:

38.1.1 fails to meet the delivery schedule of the Work or any performance milestones specified in the Schedule of Work to this Contract, or any extension thereof, or

38.1.2 fails to obtain acceptance of the delivered Work as specified in the Contract, or, if no time for acceptance is specified in the contract within a reasonable time after work is delivered.

the actual damage to the Purchaser for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages the Contractor shall pay to the Purchaser, for each day of delinquency in achieving the deadline or milestone, fixed and agreed liquidated damages of .1% (one tenth of per cent) per day of the associated payment set forth in the Schedule of Payments provided in the Contract Special Provisions. If no Schedule of Payments is specifically set forth in the Contract Special Provisions, the liquidated damages will be assessed against the price of the applicable contract line item (CLIN) of the Schedule of Supplies, Services and Prices.

38.2 In addition to the liquidated damages referred to above, the Purchaser shall have the possibility of terminating this Contract in whole or in part, as provided in Clause 39 (Termination for Default). In the event of such termination, the Contractor shall be liable to pay the excess costs provided in Clause 38.5.

38.3 The Contractor shall not be charged with liquidated damages when the delay arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in Clause 39.6 (Termination for Default). In such event, subject to the provisions of Clause 41 (Disputes), the Purchaser shall ascertain the facts and extent of the delay and shall extend the time for performance of the Contract when in his judgement the findings of the fact justify an extension.

38.4 Liquidated damages shall be payable to the Purchaser from the first day of delinquency and shall accrue at the rate specified in Clause 38.1 to 20% of the value of each line item individually not to exceed 15% of the value of the total Contract. These liquidated damages shall accrue automatically and without any further notice being required.

38.5 The rights and remedies of the Purchaser under this clause are in addition to any other rights and remedies provided by law or under this Contract.

39. TERMINATION FOR DEFAULT

39.1 The Purchaser may, subject to Clause 39.6 below, by written notice of default to the Contractor, terminate the whole or any part of this Contract if the

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Contractor, inclusive but not limited to:

- 39.1.1 fails to make delivery of all or part of the Work within the time specified in the contract or any agreed extension thereof;
 - 39.1.2 fails to make progress as to endanger performance of this Contract in accordance with its terms;
 - 39.1.3 fails to meet the technical requirements or the Specifications of the Contract;
 - 39.1.4 fails to comply with Clause 11 (Security);
 - 39.1.5 transfer this Contract without the Purchaser's prior written consent; or,
 - 39.1.6 breaches any provision of this Contract.
- 39.2 In the case of any of the circumstances set forth in Clause 39.1 above, the Purchaser shall issue a letter to the Contractor stating that an actual or potential default exists and requiring a response from the Contractor within ten (10) Days that identifies:
- 39.2.1 in the case of late delivery of Work, when the Contractor shall deliver the Work and what circumstances exist which may be considered excusable delays under Clause 39.6.
 - 39.2.2 in the case of the other circumstances identified in Clause 39.1 above, what steps the Contractor is taking to cure such failure(s) within a period of ten Days (or such longer period as the Purchaser may authorise in writing) after receipt of notice in writing from the Purchaser specifying such failure and identifying any circumstances which exist which may be considered excusable under Clause 39.6.
- 39.3 The Purchaser shall evaluate the response provided by the Contractor or, in the absence of a reply within the time period mentioned in Clause 39.2, all relevant elements of the case, and make a written determination within a reasonable period of time that:
- 39.3.1 sufficient grounds exist to terminate the Contract in whole or in part in accordance with this Clause and that the Contract is so terminated;
 - 39.3.2 there are mitigating circumstances and the Contract should be amended accordingly; or
 - 39.3.3 the Purchaser will enter a period of forbearance in which the Contractor must show progress, make deliveries, or

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comply with the Contract provisions as specified by the Purchaser. The Purchaser may apply other remedial actions as provided by this Contract during such period of forbearance. This period of forbearance shall in no event constitute a waiver of Purchaser's rights to terminate the Contract for default.

- 39.4 At the end of the period of forbearance, which may be extended at the Purchaser's discretion, the Purchaser may terminate this Contract in whole or in part as provided in Clause 39.1 if the Contractor has not made adequate progress, deliveries or compliance with the Contract provisions which were the terms of the period of forbearance.
- 39.5 In the event the Purchaser terminates this Contract in whole or in part, as provided in Clause 39.1, the Purchaser may procure, upon such terms and in such manner as the Purchaser may deem appropriate, Work similar to those so terminated, and the Contractor shall be liable to the Purchaser for any excess costs for such similar Work; however, the Contractor shall continue the performance of this Contract to the extent not terminated under the provisions of this clause.
- 39.6 Except with respect to the default of Sub-contractors, the Contractor shall not be held liable for a termination of the Contract for default if the failure to perform the Contract arises out of causes beyond the control and without the fault or negligence of the Contractor.
- 39.6.1 Such causes may include, but are not restricted to, acts of God, acts of the public enemy, acts of the Purchaser in its contractual capacity, acts of sovereign governments which the Contractor could not reasonably have anticipated, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor.
- 39.6.2 If the failure to perform is caused by the default of a Sub-contractor, and if such default arises out of causes beyond the control of both the Contractor and Sub-contractor, without the fault or negligence of either of them, the Contractor shall not be held liable for a termination for default for failure to perform unless the Work to be furnished by the Sub-contractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required delivery schedule.
- 39.7 If this Contract is terminated as provided in Clause 39.1, the Purchaser, in addition to any other rights provided in this Clause and the Contract, may require the Contractor to transfer title and deliver to the Purchaser, in the manner and to the extent directed by the Purchaser:
- 39.7.1 any completed Work with associated rights ;

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- 39.7.2 such partially completed Work, materials, Parts, tools, dies, jigs, fixtures, plans, drawings, information, and Contract rights (hereinafter called "Manufacturing materials") with associated rights as the Contractor has specifically produced or specifically acquired for the performance of such part of this Contract as has been terminated;
- 39.8 In addition to Clause 39.7, the Contractor shall, upon direction of the Purchaser, protect and preserve property in the possession of the Contractor in which the Purchaser has an interest.
- 39.9 Payment for completed Work delivered to and accepted by the Purchaser shall be at the Contract price.
- 39.10 Payment for manufacturing materials delivered to and accepted by the Purchaser and for the protection and preservation of property shall be in an amount agreed upon by the Contractor and Purchaser, failure to agree to such amount shall be a dispute within the meaning of Clause 41 (Disputes).
- 39.11 The Purchaser may withhold from amounts otherwise due to the Contractor for such completed Work or manufacturing materials such sum as the Purchaser determines to be necessary to protect the Purchaser against loss because of outstanding liens or claims of former lien holders.
- 39.12 If, after notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause, or that the default was excusable under the provisions of this Clause, the rights and obligations of the Parties shall be the same as if the notice of termination had been issued pursuant to Clause 40 (Termination for the Convenience of the Purchaser).
- 39.13 If after such notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause and that the Parties agree that the Contract should be continued, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly. Failure to agree to any such adjustment shall be a dispute within the meaning of Clause 41 (Disputes).
- 39.14 The rights and remedies of the Purchaser provided in this Clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

40. TERMINATION FOR THE CONVENIENCE OF THE PURCHASER

- 40.1 The performance of Work under this Contract may be terminated by the Purchaser in accordance with this Clause in whole, or from time to time in part, whenever the Purchaser shall determine that such termination is in the best interest of the Purchaser.

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- 40.2 Any such termination shall be effected by delivery to the Contractor of a written notice of termination, signed by the Contracting Authority, specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.
- 40.3 After receipt of a Notice of Termination and except as otherwise directed by the Contracting Authority, the Contractor shall:
- 40.3.1 stop the Work on the date and to the extent specified in the notice of termination;
 - 40.3.2 place no further orders or Sub-contracts for Work, Parts, materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;
 - 40.3.3 terminate all orders and Sub-contracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;
 - 40.3.4 assign to the Purchaser, in the manner, at the times and to the extent directed by the Purchaser, all of the right, title and interest of the Contractor under the orders and Sub-contracts so terminated, in which case the Purchaser shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and Sub-contracts;
 - 40.3.5 settle all outstanding liabilities and all claims arising out of such termination of orders and Sub-contracts, with the approval or ratification of the Purchaser to the extent he may require, which approval or ratification shall be final for all the purposes of this Clause;
 - 40.3.6 transfer title and deliver to the Purchaser in the manner, at the times, and to the extent, if any, directed by the Contracting Authority of:
 - 40.3.6.1 the fabricated parts, work in process, completed work, Work, and other material produced as a part of, or acquired in connection with the performance of the Work terminated by the notice of termination, and
 - 40.3.6.2 the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Purchaser;

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- 40.3.7 use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorised by the Contracting Authority, any property of the types referred to in Clause 40.3.6 above. However, the Contractor:
- 40.3.7.1 shall not be required to extend credit to any Buyer; and
 - 40.3.7.2 may acquire any such property under the conditions prescribed by and at a price or prices approved by the Purchaser; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Purchaser to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work or paid in such manner as the Contracting Authority may direct;
- 40.3.8 complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and
- 40.3.9 take such action as may be necessary, or as the Purchaser may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Purchaser has or may acquire an interest.
- 40.4 The Contractor may submit to the Purchaser a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorised by the Purchaser, and may request the Purchaser to remove such items or enter into a storage agreement covering the same; provided that the list submitted shall be subject to verification by the Purchaser upon removal of the items, or if the items are stored, within forty-five (45) Days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.
- 40.5 After receipt of a notice of termination, the Contractor shall submit to the Purchaser his termination Claim for the Work covered by the notice of termination, in the form and with certification prescribed by the Purchaser. Such claim shall be submitted promptly but in no event later than six (6) months from the effective date of termination, unless one or more extensions are granted in writing by the Purchaser, upon request of the Contractor made in writing within such six-month period or authorised extension thereof. However, if the Purchaser determines that the facts justify such action, the Purchaser may receive and act upon any such termination claim at any time after such six-month period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Purchaser may determine on

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the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

- 40.6 Subject to the provisions of Clause 40.5, the Contractor and the Purchaser may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of Work pursuant to this Clause, which amount or amounts may include a reasonable allowance for profit on work done; provided that such agreed amount or amounts exclusive of settlement costs shall not exceed total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of the Work not terminated. The Contract shall be amended accordingly and the Contractor shall be paid the amount agreed.
- 40.7 In the event of the failure of the Contractor and the Purchaser to agree as provided in Clause 40.6 upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to Clause 40, the Purchaser shall pay to the Contractor the amounts determined by the Purchaser as follows, but without duplication of any amounts agreed upon in accordance with Clause 40.6 the total of:
- 40.7.1 for completed Work accepted by the Purchaser (or sold or acquired as provided in Clause 40.3 above) and not therefore paid for, a sum equivalent to the aggregate price for such Work computed in accordance with the price or prices specified in the Contract, appropriately adjusted for any saving of freight or other charges;
 - 40.7.2 the costs incurred in the performance of the Work terminated including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable to Work paid or to be paid for under Clause 40.7.1;
 - 40.7.3 the cost of settling and paying claims arising out of the termination of work under Sub-contracts or orders, as provided in Clause 40.3.5, which are properly chargeable to the terminated portion of the Contract, exclusive of amounts paid or payable on account of Work or materials delivered or services furnished by Sub-contractors or vendors prior to the effective date of the notice of termination, which amounts shall be included in the costs payable under Clause 40.7.2; and
 - 40.7.4 a sum, as profit on Clause 40.7.1 above, determined by the Purchaser to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Contract, had it been completed, no profit shall be included or allowed and an appropriate adjustment shall be made reducing the

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amount of the settlement to reflect the indicated rate of loss; and

- 40.7.5 the reasonable costs of settlement, including accounting, legal, clerical and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination and settlement of Sub-contracts there under, together with reasonable storage, transportation, and other costs incurred in connection with the protection, or disposition of property allocable to this Contract.
- 40.8 The total sum to be paid to the Contractor under Clause 40.7 shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of Work not terminated.
- 40.9 Except for normal spoilage, and except to the extent that the Purchaser shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor, as provided in Clause 40.7 above, the fair value, as determined by the Purchaser, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Purchaser, or to a buyer pursuant to Clause 40.3.7 above.
- 40.10 The Contractor shall have the right to dispute, under the Clause 41 (Disputes), any determination made by the Purchaser under Clauses 40.5 and 40.7, except that if the Contractor has failed to submit his claim within the time provided in Clause 40.5 and has failed to request extension of such time, the Contractor shall be foreclosed from his right to dispute said determination. In any case where the Purchaser has made a determination of the amount due under Clauses 40.5 and 40.7, the Purchaser shall pay the Contractor the following:
 - 40.10.1 if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Purchaser, or
 - 40.10.2 if an appeal has been taken, the amount finally determined on such appeal.
- 40.11 In arriving at the amount due to the Contractor under this Clause there shall be deducted:
 - 40.11.1 all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract;
 - 40.11.2 any claim which the Purchaser may have against the Contractor in connection with this Contract; and
 - 40.11.3 the agreed price for, or the proceeds of the sale of, any materials,

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Work, or other things acquired by the Contractor or sold, pursuant to the provisions of this Clause, and not otherwise recovered by or credited to the Purchaser.

- 40.12 If the termination hereunder is partial, prior to the settlement of the terminated portion of this Contract, the Contractor may file with the Purchaser, in accordance with Clause 16 (Changes), a request in writing for an equitable adjustment of the price or prices relating to the continued portion of the Contract (the portion not terminated by the notice of termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices.
- 40.13 The Purchaser may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever in the opinion of the Purchaser the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payment is in excess of the amount finally agreed or determined to be due under this Clause, such excess shall be payable by the Contractor to the Purchaser upon demand, together with interest calculated using the average of the official base rate(s) per annum of the deposit facility rate as notified by the European Central Bank or such other official source as may be determined by the Purchaser, for the period from the date the excess is received by the Contractor to the date such excess is repaid to the Purchaser, provided, however, that no interest shall be charged with respect to any such excess payment attributed to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition or such later date as determined by the Purchaser by reason of the circumstances.
- 40.14 Unless otherwise provided for in this Contract, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the Purchaser at all reasonable times at the office of the Contractor, but without direct charge to the Purchaser, all his books, records, documents, computer files and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the work terminated hereunder, or, to the extent approved by the Purchaser, photographs, micro-photographs, or other authentic reproductions thereof.

41. DISPUTES

- 41.1 Except to the extent to which special provision is made elsewhere in the Contract, all disputes, differences or questions which are not disposed of by agreement between the Parties to the Contract with respect to any matter arising out of or relating to the Contract, other than a matter as to which the decision of the Contracting Authority under the Contract is said to be final and conclusive, shall be decided by the Contracting Authority. The Contracting Authority shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor.

- 41.2 The Contracting Authority shall not proceed with the evaluation and decision in respect of any claim until and unless the Contractor has submitted the attestation as foreseen in Clause 18 (Claims), as well as the complete proof and evidence of the claim (either by submission or by identification of the relevant documentation).
- 41.3 The Contracting Authority's decision shall be final and conclusive unless, within 30 Days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Authority his decision to open arbitration proceedings in accordance with the Clause 42 (Arbitration). The burden of proof for both receipt and delivery of such documentation shall be by signed and dated registered mail receipt or by hand receipt as acknowledged and signed by the Contracting Authority.
- 41.4 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

42. ARBITRATION

- 42.1 Within a period of thirty days from the date of receipt of the notification referred to in Clause 41.3 above, the Parties shall jointly appoint an arbitrator. In the event of failure to appoint an arbitrator, the dispute or disputes shall be submitted to an Arbitration Tribunal consisting of three arbitrators, one being appointed by the Purchaser, another by the other contracting party and the third, who shall act as President of the Tribunal, by these two arbitrators. Should one of the Parties fail to appoint an arbitrator during the fifteen days following the expiration of the first period of thirty days, or should the two arbitrators be unable to agree on the choice of the third member of the Arbitration Tribunal within thirty days following the expiration of the said first period, the appointment shall be made, within twenty-one days, at the request of the Party instituting the proceedings, by the Secretary General of the Permanent Court of Arbitration at The Hague.
- 42.2 Regardless of the procedure concerning the appointment of this Arbitration Tribunal, the third arbitrator will have to be of a nationality different from the nationality of the other two members of the Tribunal.
- 42.3 Any arbitrator must be of the nationality of any one of the member states of NATO and shall be bound by the rules of security in force within NATO.
- 42.4 Any person appearing before the Arbitration Tribunal in the capacity of an expert witness shall, if he is of the nationality of one of the member states of NATO, be bound by the rules of security in force within NATO. If he is of another nationality, no NATO classified documents or information shall be communicated to him.
- 42.5 An arbitrator, who, for any reason whatsoever, ceases to act as an arbitrator, shall be replaced under the procedure laid down in Clause 42.1 above.

- 42.6 The Contractor agrees to submit to the Arbitration Tribunal only such issues, facts, evidence and proof which the Contractor had beforehand identified and submitted to the Contracting Authority for decision in accordance with Clause 41 (Disputes). The jurisdictional authority of the Arbitration Tribunal shall be restricted to consider only those identical issues, facts, evidence and proof so identified and submitted to the Contracting Authority.
- 42.7 The Purchaser likewise agrees to restrict its submissions only to the information on which the Contracting Authority based its decision and not to introduce new information and arguments which cannot reasonably be deduced or inferred from the written decision of the Contracting Authority in response to the original dispute.
- 42.8 The Arbitration Tribunal will take its decisions by a majority vote. It shall decide where it will meet and, unless it decides otherwise, shall follow the arbitration procedures of the International Chamber of Commerce in force at the date of signature of the present Contract.
- 42.9 The awards of the arbitrator or of the Arbitration Tribunal shall be final and there shall be no right of appeal or recourse of any kind. These awards shall determine the apportionment of the arbitration expenses.
- 42.10 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

43. SEVERABILITY

- 43.1 If one or more of the provisions of this Contract is declared to be invalid, illegal or unenforceable in any respect under any applicable law, the validity, legality and enforceability of the remaining provisions shall not be affected. Each of the Parties shall use its best efforts to immediately and in good faith negotiate a legally valid replacement provision.

44. APPLICABLE LAW

- 44.1 This Contract shall be governed, interpreted and construed in accordance with the private contract law of the Kingdom of Belgium.

* *

ANNEX 1 TO GENERAL PROVISIONS: PURCHASER'S PRICING PRINCIPLESA. General

1. With regard to all actions included in Clause 19," Pricing of Changes, Amendments and Claims", the Parties agree that the Purchaser's Pricing Principles contained herein shall govern.
2. As may be requested by the Purchaser, the Contractor shall provide documentation that the standards or principles employed in the submission of cost or pricing data are in conformance with governing national policies and regulation. The Contractor, when submitting a price proposal based upon national standards and regulations, shall provide a point of contact within the national body governing such standards and regulations in order to allow Purchaser verification and audit.
3. Where such conformance cannot be demonstrated to the satisfaction of the Purchaser, the Purchaser's Pricing Principles will govern.
4. The Contractor shall clearly state whether national standards and rules or the Purchaser's Pricing Principles and formats are the basis for the price proposal.
5. Whether national standards or Purchaser pricing principles are applied, all cost and pricing data shall be verifiable, factual and include information reasonably required to explain the estimating process.
6. The Contractor shall also incorporate provisions corresponding to those mentioned herein in all sub-contracts, and shall require price and cost analysis provisions be included therein.

B. Purchaser's Pricing Principles

1. Allowable cost

A cost is allowable for consideration by the Purchaser if the following conditions are fulfilled:

- (a) it is incurred specifically for the Contract or benefits both the Contract and other work or is necessary to the overall operation of the business although a direct relationship to any particular product or service cannot be established and is allocated to them in respective proportion according to the benefit received;

i. Direct Costs

A direct cost is any cost which can be identified specifically with a particular cost objective as generally accepted. Direct costs are not limited to items which are incorporated in the end product as material or labour.

ii. Indirect Costs

An indirect cost is one which is not readily subject to treatment as a direct cost. When presented these costs shall be accumulated in logical cost groupings in accordance with sound accounting principles and the Contractor's established practices. An indirect

cost may be allocated to more than one final cost objective. An indirect cost shall not be allocated to a final cost objective if other costs incurred for the same purpose, in like circumstances, have been included as a direct cost of that or any other final cost objective. Such costs shall be presented as overhead rates and be applied to each related direct cost grouping.

- (b) The Contractor shall specify the allocation of costs to either of the cost groupings. The method by which costs are accumulated and distributed as part of direct or indirect costs cannot be modified during the duration of the Contract.
- (c) It is reasonable and expedient in its nature and amount and does not exceed that which would be incurred by an ordinary prudent person in the conduct of competitive business;
- (d) It is not liable to any limitations or exclusion as to types or amounts of cost items as set forth herein.
- (e) The Purchaser will review other costs presented against the contract and will determine if they would be allowable.

2. Unallowable Costs

In general all costs which cannot be shown by the contractor to be directly or indirectly of benefit to the Contract are totally unallowable. Examples of such costs are, among others:

- (a) Advertising costs
- (b) Costs of remuneration, having the nature of profit sharing.
- (c) Costs of maintaining, repairing and housing idle and excess facilities.
- (d) Fines and penalties as well as legal and administrative expenses resulting from a violation of laws and regulations.
- (e) Losses on other contracts or on expected follow-on contracts
- (f) Costs incurred for the creation of reserves for general contingencies or other reserves (e.g. for bad debts, including losses).
- (g) Losses on bad debts, including legal expenses and collection costs in connection with bad debts.
- (h) Costs incurred to raise capital.
- (i) Gains and losses of any nature arising from the sale or exchange of capital assets other than depreciable property.
- (j) Taxes on profits.
- (k) Contractual penalties incurred.

(l) Commissions and gratuities.

(m) Interest on borrowings.

3. Rates and Factors

(a) The Contractor shall inform the Purchaser of his rates and factors the basis upon which they were computed.

(b) If the Contractor's rates and factors for similar contracts placed with national or international public services have not been established or approved by a government agency or an agency accepted by his government, the Contractor shall provide the necessary data to support the proposed rates.

(c) The term "provisional " used in the title of a rate or factor means a tentative rate established for interim billing purposes pending negotiation and agreement to the final rate or factor.

(d) A rate or factor is pre-determined if it is fixed before or during a certain period and based on (estimated) costs to be incurred during this period. A rate or factor is post-determined if it is fixed after a certain period and based on costs actually incurred during this period. Pre-determined rates or factors shall be agreed upon as final rates whenever possible; otherwise the provisions of paragraph 3c above shall apply pending agreement to post-determined rates or factors.

(e) Such rates or factors shall be determined on the basis of Contractor's properly supported actual cost experience.

(f) If the rates or factors of the Contractor for similar contracts placed by national or international public services have been established or approved by a government agency or an agency accepted by his government and the Contractor proposes the application of these rates, he shall state the name and address of the agency which has accepted or approved the rates and the period for which they were established. If he proposes rates which vary from the rates mentioned above, he shall furthermore provide a justification for the difference.

4. Profit/Benefit

(a) Over the entire life cycle of a given acquisition, Profit and/or Benefit may be subject to negotiation.

(b) Subcontracting profit/benefit amounts are dependent upon the size, nature and oversight needs of the subcontract(s) the prime contractor will use for work performance period.

(c) Profit/benefit is considered by the Purchaser to be directly related to the anticipated risk of the Contractor during the performance of the Contract.

CO-115735-NAGSF: NAGSF relocation

Book 2 – Part 4: Statement of Work

1 Introduction

1.1 Purpose

This procurement concerns the provision of NATO Communication and Information Systems (CIS) services for the Alliance Ground Surveillance (AGS) Main Operational Base (MOB) in Sigonella Italy, in support to the relocation from their transitional to permanent installations.

1.2 Background information

The AGS MOB was established in 2014, and its initial CIS capability provided by two successive NATO projects called Advanced Echelon (ADVON) and CIS Transitional Capability (CTC). It still occupies the containers-based temporary facilities that NATO put in place at the time, while the construction of a dedicated permanent installation was being commissioned.

With the completion of this installation, the NATO AGS Force (NAGSF) staff is expected to move as soon as possible to this new infrastructure, which spans over 12 buildings spread across two main zones on the Sigonella Air Force base. One of these buildings is the future command facility and hosts most of the users and all backend assets.

NAGSF operates on 3 networks operating at the NATO S3CRET (NS), NATO R3STRICTED (NR), and NATO Unclassified (NU) security domains, connected to the core NATO backend, with a Peacetime Establishment (PE) of circa 500 users.

The network point of presence and WAN connection to the NATO core backbone will also be relocated under separate contracts, with which effective coordination will be sought.

The current facility hosting the NAGSF staff will continue to operate until other systems not covered by this contract also complete their relocation. The user migration roadmap will be developed with the headquarters as the project reaches its milestones.

Due to a timeline constraint, the Purchaser will install early 2023 a provisional site for around 100 users in the new NAGSF facility to allow some initial staff expansion. The Contractor will be expected to finalize this installation with the equipment purchased through this contract, and the associated documentation and configuration management project artefacts.

1.3 Scope overview

The statement of works caters for the following activities:

- Procurement of selected COTS hardware, software, and ancillaries based on the specifications provided in this statement of work.
- Installation, imaging, and configuration of the contractor-furnished and selected purchaser-furnished end-user devices on the users' desks, and connection to the offices LAN sockets.
- Fiber-optics active distribution LAN design, installation, and configuration of the contractor-furnished and selected purchaser-furnished NS network switches, and connection to the network point of presence, IT backend, and local passive distribution infrastructure.
- Wireless and copper-twisted-pairs active distribution LAN design, installation, and configuration of the contractor-furnished NU wireless access points and network switches, and connection to the network point of presence, IT backend, and local passive distribution infrastructure.
- Design, installation and configuration of a state-of-the-art 50-people conference room with spatial audio and video teleconferencing (VTC).

- Installation, baseline configuration, and virtualization of contractor-furnished backend infrastructure for the NS data-center.
- Installation, and baseline configuration of contractor-furnished backend infrastructure for the cyber security infrastructure.
- Relocation, and connection to the distribution of the existing purchaser-furnished NU backend infrastructure from the transitional to permanent facility.
- System Testing focused on verification of the functional and non-design contained, installation testing and activation testing.

The overall physical scope for the contract is represented in Figure 1.

The installation sites for this project are represented in yellow:

- Ops area: 7 buildings. Includes server rooms and ~80% of the staff.
- Flight line: 5 buildings.

The current NAGSF staff buildings and CIS capability are represented in orange:

- Temporary facility: 2 buildings.
- Building 177: network point of presence and WAN connection.

The notional camp CIS ducting system is represented in red.

- Additional CIS ducts exist within the zones to connect buildings that are not represented here.

The Ops area and flight line are fenced areas with dedicated access control.

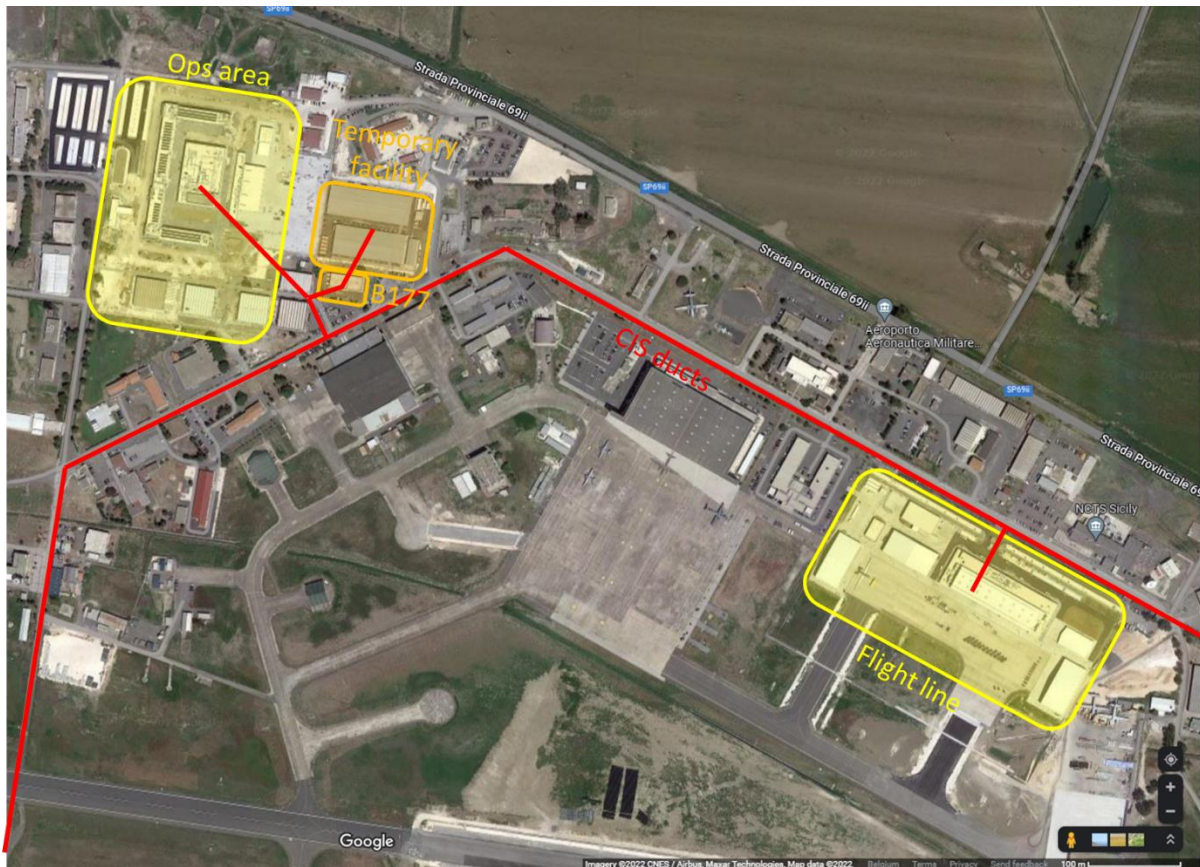


Figure 1: NAGSF relocation site overview

The present contract main deliverables will be:

- Technical scope as described in this statement of work.
- Site survey including report.
- Shipment including customs clearance when applicable.
- As-built drawings, documentation, and configuration management artefacts.
- Meetings, reports, and other management products.
- Testing and acceptance plan, execution, and reports.

1.4 Main milestones

The main milestones for this contract will be:

1. Kick-off meeting.
2. Project implementation plan.
3. Site survey.
4. Configuration guidance meeting.
5. System installation and configuration.
6. Test documentation.
7. Configuration management and documentation delivery.
8. Testing.

9. Acceptance.
10. Warranty completion.

1.5 Interactions with other contracts

During the execution of this contract, the Contractor will interact with other teams providing complementary capabilities for NAGSF.

In the cases there is a technical dependency between these contracts, the contractor will be responsible to coordinate the execution.

The NAGSF relocation project will include the following contracts:

- The relocation of the existing Wide Area Network (WAN) point of presence from the transitional to the permanent facility.
- The relocation of the network point of presence from the transitional to the permanent facility to which the NAGSF CIS will be connected.
- The configuration of the Cyber capability delivered through this contract (§5.6) that will occur after partial or full handover of the NAGSF CIS capability.

1.6 Standards for interpretation of this document

Requirements are formulated using the term “shall”. Context information supporting the requirements definition is provided using the term “will”. “Shall” statements are contractually binding, “Will” statements are non-mandatory, or they imply intent on the part of the Purchaser.

As a convenience for contractual coverage traceability, testing and communication between Contractor and Purchaser, these “shall” statements have been numbered with the [RQ] prefix.

Whenever requirements are stated herein to “include” a group of items, parameters, or other considerations, “include” means “include but not limited to”.

Whenever reference is made to a section, tasks, or paragraph, the reference includes all subordinate and referenced paragraphs.

The order of the SoW requirements is not intended to specify the order in which they must be carried out unless explicitly stated. The SoW defines the activities the Contractor’s process shall cover, *i.e.* the Contractor’s implementation plans determine the timing of Contractor detailed activities.

For purposes of the SoW:

- The term “the Purchaser” means the NATO Communications and Information Agency (NCI Agency) or its authorized representatives.
- The term “the User” means the NATO AGS Force (NAGSF) or its authorized representatives.
- The term “the Host Nation (HN)” means the Ministry of National Defense of Italy or its authorized representatives.

1.7 Applicable documents, standards and definitions

This SoW refers to well-known technical standards and protocols. The applicable standard document references for these technical standards and protocols are used in the following two formats:

- Abbreviations of well-known protocols: such an abbreviation is referred to as a “Short Name”. An example of a short name is [RJ45], which refers to IEC60603-7-1, “Connectors for electronic equipment”. One Short Name may refer to multiple standards, in which case all referred standards apply when referring to such a Short Name.

- Formal References: Formal references are identified as [Reference]. An example of a formal reference is [IEEE 802.1Q:2011], which refers to IEEE 802.1Q “Multiple Spanning Trees” published in 2011.

The latest version for these standards is always the one applicable unless specifically stated otherwise in this statement of work.

2 Project management

2.1 Project management approach

[RQ1] The Project shall be managed by the Contractor and be subject to review by the Purchaser.

The Purchaser’s Project Manager (NCIA PM) will act as the Purchaser’s representative and will be the primary interface between the Contractor and Purchaser beginning from the Effective Date of Contract (EDC) through the end of the contract.

The Purchaser’s Project Manager can be supported by specialists in certain areas who may, from time to time, be delegated to act on the Project Manager’s behalf in their area of expertise.

[RQ2] The Contractor shall designate a Project Manager (PM), who shall direct and coordinate the activities of the Contractor’s project team.

[RQ3] The Project Manager shall be the Contractor’s primary contact for the Purchaser’s Project Manager and shall conduct all major project design, test, and status reviews.

[RQ4] The Contractor’s Project Manager shall be prepared at all times to present and discuss the status of Contract activities with the Purchaser’s Project Manager, Contracting Officer, or Technical Lead.

[RQ5] The Contractor’s Project Manager shall be responsible for:

- Setting up and coordinating a kick-off meeting.
- Project management, performance and completion of tasks and delivery orders.
- Establishing and monitoring the project plan and schedule.
- Allocating resources to ensure that the established and agreed upon plans and schedules are met.
- Managing costs, technical work, project risks, quality, and corporate performance.
- Establishing and maintaining contact with the Purchaser, Subcontractors, and project team members.
- Ensuring the system configuration and testing efforts are completed.
- Ensuring that all activities conform to the terms and conditions of the Contract procedures.

2.2 Kick-off meeting

[RQ6] The Contractor shall propose dates for a contract kick-off meeting with at the Purchaser’s facilities in The Hague (The Netherlands) within 2 weeks of contract signature.

[RQ7] The Contractor shall inform the Purchaser at least one week in advance to allow for the access control and room booking procedures.

The Contractor will attend in person the kick-off meeting with its key personnel:

- Project manager.
- Commercial manager.
- Technical lead.

The Contractor may also have some other members of its team attend the kick-off meeting online.

The overall agenda for the kick-off meeting will be:

- Introductions to the Contractor and Purchaser teams.
- Preliminary technical discussion to enable the site survey.

2.3 Project implementation plan

The PIP serves as project implementation documentation, including all technical aspects, and as final record of the installed NAGSF design, installation and configuration. The PIP evolves over time starting as a plan to the definitive as-is documentation.

- [RQ8] The Contractor shall submit a Project Implementation Plan (PIP) before the start of the installation activities.
- [RQ9] The PIP shall describe how the Contractor shall implement project/contract administration.
- [RQ10] The PIP shall consider all project implementation aspects, which include management provisions, facilities, schedules, personnel assignments, external relationships and project control.
- [RQ11] The PIP shall be concise and yet provide sufficient detail, where needed, to allow the Purchaser to assess the Contractor's plans and capabilities in implementing the entire project in conformance with the requirements specified.
- [RQ12] The PIP shall cover the following and provide the major plans required under this Contract:
- Project Overview, which shall provide an executive summary of the offered equipment and services.
 - A Project Management Plan (PMP) defining in detail how the Contractor intends to manage this project from Effective Date of Contract (EDC) until the end of the O&M period including the management of the Warranty period and Contractor Logistical Support (CLS) delivery
 - A Project Master Schedule, provided as a Gantt chart with supporting text.
 - A list of project key personnel with curriculum vitae.
 - The Project Master Test Plan (PMTP) as described in Section 8.4.
 - Integrated Product Support in accordance with section 10.
 - Configuration Management in accordance with section 11.
 - System Engineering and Design.
 - Quality Assurance in accordance with section 14.
 - Security organization and clearances in accordance with section 15.
 - Documentation.
 - Training.
 - Warranty Support.
 - Site Installations and Civil Works.
 - A Site Installation Plan (SIP), containing the dates and milestones for the installation of the equipment.
- [RQ13] After approval by the Purchaser, any new version of the PIP shall constitute the unique Contractor's reference for the project implementation. The Purchaser can approve the PIP as a whole or in parts.

2.4 Project review meetings

[RQ14] Until FSA has been achieved, the Purchaser shall hold regular Project Review Meetings (PRM) at a location suitable to that particular stage of the project, at a monthly interval.

The location of the meetings will ordinarily be at NCI Agency, The Hague, Netherlands. Other NATO locations, or at the Contractor's premises may be used if Purchaser and Contractor both consent.

Video-Teleconference (VTC) may be used for PRM in circumstances where it may be difficult to otherwise ensure attendance by the required personnel.

- Such VTC shall then be organized by the Contractor over Microsoft Teams or Cisco Webex, at the NU level.
- In the case the Contractor already has access to the NR Reach network, VTC can be organized over NR Reach Skype for Business, at the NR level.
- In either case the Contractor will ensure that all online attendants are clearly identified and ensure operational security during the meeting.

[RQ15] The Contractor shall submit an agenda not later than 10 working days before each PRM.

[RQ16] The Contractor shall submit the Minutes of Meeting (MoM) not later than 10 working days after each meeting, accompanied by all presentation material (slides, spreadsheets, charts...) and the updated Risks, Actions, Issues, Decisions (RAID) Items List used during the PRM.

2.5 Project highlight reports

[RQ17] The Contractor shall prepare and submit a Project Highlight Report (PHR) to the Purchaser within the first week of every month.

[RQ18] This PHR shall summarize the progress since the previous PRM or since the last PHR, any accomplishments, schedule of deliveries against progress, difficulties encountered and resolution of any issues raised in previous PHRs.

The Highlight Reports shall include:

- Overall project progress: the activities performed and works completed during the preceding period including major milestones achieved as applicable.
- Description of issues/problems/risks that have occurred in the preceding period and the identified/proposed solution.
- A list of Change Proposals with the current status.
- The progress of work related to the schedule in the current Project Implementation Plan.
- Status of the equipment (equipment order, in Contractor's office, packing, transfer to site, deploy and test).
- Any foreseen or possible changes to project performance or schedule. In case of changes, the Contractor shall give the updated performance or schedule.
- Description of any identified problems and high risk areas and the proposed solutions and corrective actions.
- Activities planned for the next period.
- Supplies to be delivered by the Contractor and those to be provided by the Purchaser.
- Update on the status of Action Items List (AIL).

3 System implementation

3.1 Site survey

- [RQ19] The Contractor shall conduct a Site Survey to capture:
- All the information relevant to the physical installation of the new equipment at the site.
 - All the information relevant to the connectivity between the equipment provided and the PFE.
 - A complete WiFi coverage analysis to confirm the Purchaser assumptions on the number and distribution of WAPs.
 - A validation of the VTC room design, to ensure adequate audio and video coverage of the room.
 - Any CIS security implications of the AGS CIS.
 - Omissions in the PFE Cabling plant and the requirements for amendment or augmentation of that plant.
 - Key installation-related areas such as electrical installation, cabling, environmental aspects, including air conditioning and EMI/EMC, information security zoning.
 - Civil works requirements, if and where applicable.
- [RQ20] The Contractor shall validate during the Site Survey the assumptions presented by the Purchaser in the statement of work, in the areas of:
- Horizontal cabling density from the patch panels to the offices.
 - Wireless access points density in all buildings.
- [RQ21] The Contractor shall produce a Site Survey Report (SSR), which shall be subject to review by the Purchaser.
- [RQ22] The SSR shall contain at least the following information:
- Floor plan layouts of installation spaces (equipment rooms, corridors, offices).
 - Temporary equipment storage spaces.
 - Cabling (switching, WiFi, configuration and wiring assignment).
 - Wireless heatmap for all buildings.
 - Availability of electrical power and electrical power conditioning.
 - Existing environmental conditioning.
 - Host nation applicable standards.
 - Points of contact at the site.
 - Scope of the required civil works, if any.
 - Description of any existing arrangements between the Host nation and any local commercial partners for any of the areas above, where applicable.
- [RQ23] The Contractor shall provide recommendations in the SSR in the case the Purchaser assumptions for horizontal cabling and wireless are observed to have deficiencies.
- In particular, should the wireless heatmap show bad coverage for certain building areas, the Purchaser will decide with the Contractor's advice how to resolve the issue and what additional equipment is required to do so.
- [RQ24] The SSR shall itemize all the information required to feed the Site Installation Data Package (SIDP). Therefore, the contractor shall plan the site survey dates to ensure the timely delivery of SIDP.

- [RQ25] The SSR shall describe the foreseen impact of not obtaining the information above, or the information not having the required quality or accuracy.
- [RQ26] The SSR shall be delivered for Purchaser's review not later than 2 weeks after the Site Survey.
Where readily available to the Purchaser, the Purchaser will provide the Contractor with existing site information, drawings, wiring assignments and referenced documents.
- [RQ27] During the Site Survey the Contractor shall verify the accuracy of any site information, drawings, wiring assignments and referenced documents provided by the Purchaser, and make any updates, as necessary.
- [RQ28] The Contractor shall update, change, or produce new site information, drawings, wiring assignments and referenced documents to reflect any changes that occur as a result of this contract.
- [RQ29] In support of the site survey activities, the Contractor shall be responsible to request access to the site with enough time to follow the site access procedure and meet the agreed planned date for the visit.

3.2 Configuration guidance

Through the Configuration Guidance Stage the Purchaser will provide the Contractor with the detailed configuration details, which are necessary for the Contractor to complete the installation and activation of the system to a point where the Purchaser can take over the control and remote (re-) configuration of the CIS elements.

The Configuration Guidance Stage will consist of two sessions:

- An introductory session, during the kick-off meeting.
- A more in depth session, including handover of configuration templates for switches, wireless access points, servers and cyber equipment, to be provided following approval of the Site Survey report.

- [RQ30] The Contractor shall install the delivered AGS CIS components, integrate all the associated cabling, and load the baseline configuration derived from the Configuration Guidance stage.
- [RQ31] The technical requirements presented by the Purchaser during the configuration guidance shall be incorporated as requirements for this contract by the Contractor, in its SIDP and test plan coverage.

3.3 Site installation data package

- [RQ32] Following completion the Configuration Guidance and Site Survey activities, the Contractor shall factor all the collected information into installation specifications in a SIDP. The SIDP shall provide:
- Full as-to-be-built details of how all of the major assemblies of the equipment are to be physically installed.
 - How assemblies are mechanically, electrically and logically integrated with the existing facilities, systems and services and how the systems installed on the site are configured.
 - How the different components are configured.
- [RQ33] In terms of infrastructure description, the SIDP shall cover:
- The description of the hardware to be installed.
 - The list of the PFE applicable to the site.
 - The internal and the external interfaces.
 - Interface, cabling and patching list documenting connected elements, external systems including connected element/system locations, identification of cable and interface labelling.
 - The internal and external connectivity network diagrams.

[RQ34] In terms of installation planning, the SIDP shall cover:

- The site installation calendar, with the intended installation, activation, testing and acceptance dates.
- List of civil works.
- List of Contractors identified for implementing the works.
- Transitional/Cutover facilities, if required.
- Implementation calendar.
- The list of PoCs, both on the Purchaser side, Contractors (including Subcontractors).
- Manpower/resource requirements.
- Power provisioning requirements.
- All applicable floor and wall plans including:
 - Cable penetrations, cable routing, rack positions, rack layout.
 - Details regarding the positions and distances from adjacent equipment, cabling and other metallic objects.
 - Placements and sizes of access and if applicable safety doors, ceiling heights and clearance distances needed to ensure continued access and safety.
- Physical details of all equipment, apparatus and devices.
- Locations diagram with complete details of all cross-connection frames and patch panels.
- Location diagram of all ancillary equipment, terminations and/or connections.
- A diagram showing the descriptions of all grounding conductors, electrodes and joints and where they are connected to the existing grounding system.
- Physical details of all cable racking and cable runs with cable numbers and cable functions to include as appropriate all connections, connectors and sockets.
- Details covering all wiring termination points including wire numbers and color coding.
- The functions of all inter-connecting cables with their codes, color code and the function of each separate conductor.
- The physical details covering all the cable runs between communication equipment/appliances being part of this contract.
- Naming convention and IP Addressing scheme.

Following the Purchaser's review of the SIDP package, the Purchaser will approve or submit requests for changes to the SIDP during a PRM, Ad-hoc meeting, or a formal written communication to the Contractor.

[RQ35] Following formal communication and receipt of the request for changes to the draft SIDP, the Contractor shall implement the requested corrections and shall seek the Purchaser's approval of the updated SIDP within two (2) weeks.

[RQ36] Approval of the SIDP by the Purchaser shall in no way relieve the Contractor of its responsibilities to achieve the contractual requirements of this Contract.

[RQ37] The schedule for submission of proposed and approved SIDP, including the time for the Contractor to implement potential corrections requested by the Purchaser, shall be incorporated in the Project Implementation Plan.

The system delivery phase will start after the approval of the SIDP.

3.4 System delivery

[RQ38] Following the Purchaser acceptance of the SIDP, the Contractor shall proceed with the delivery of the AGS CIS system as per the requirements stated in this Statement of Work.

[RQ39] The Contractor shall deliver the AGS CIS as a turn-key solution with the Contractor being responsible for the installation.

Whenever some of the Contractor's activities have to be executed in synchronization with other parties, the Purchaser will have the responsibility to coordinate these.

[RQ40] These synchronized activities shall be clearly presented in the Project Implementation Plan.

4 System acceptance

4.1 General

[RQ41] The Contractor shall present the progress of the project delivery in its Project Highlight Reports until the Purchaser decides that the system is ready for acceptance.

[RQ42] System Acceptance shall involve two milestones:

- Following the installation and the Provisional System Test (PST) of the AGS CIS, referred to as Provisional System Acceptance (PSA).
- The Final System Acceptance, or FSA.

System Acceptance is a process through which discrepancies resulting from the evaluation of the PST results are assessed and categorized by the Purchaser, as follows:

- Class 1 discrepancies: the Purchaser will assign this category to those discrepancies or deviations that need to be cleared before PSA can be declared.
- Class 2 discrepancies: the Purchaser will assign this category to those discrepancies or deviations that are not critical enough to hold PSA, but need to be cleared before declaring FSA.

4.2 Provisional System Acceptance (PSA)

PSA will be declared by the contractor (for the Purchaser's approval) following:

- The successful completion of Provisional System Test (PST).
- The successful review and approval of the PST report.
- When the PSA Conditions listed below have been met.

[RQ43] To achieve PSA the Contractor shall demonstrate:

- The delivery and the installation of equipment as specified in this SoW have been successfully executed and verified through PST.
- All software licenses relevant for the CIS installation have been delivered.
- All training specified in this SOW has been completed for this site.
- The as-built documentation and configuration management artefacts pertaining to the site have been delivered to the Purchaser.
- The list of discrepancies/defects, their classification, resolution and status have been delivered and accepted.

PSA will be declared at a meeting convened between the Contractor and the Purchaser for that purpose.

- [RQ44] The Contractor shall call and participate in the PSA Meeting with the Purchaser.
- [RQ45] At the PSA meeting, the Contractor shall present to the Purchaser evidence that all conditions listed in for PSA have been met. For that purpose the Contractor shall provide a PSA declaration form, listing the conditions above and containing the PSA Observations Sheet (see below).
- [RQ46] The PSA Discrepancies Sheet shall be the log of all discrepancies raised during the PSA meeting, classified in the two categories above, with a statement on their required resolution and resolution timeline.

After successful resolution of any Class 1 discrepancies the Purchaser, together with the Contractor, will sign the PSA declaration form.

PSA may be withheld upon any of the following conditions:

- Failing to meet one or more of the conditions above.
- Unresolved Class 1 discrepancies.
- High number of Class 2 discrepancies, leading to a severity condition equivalent to one or more unresolved Class 1 discrepancies.

PSA will mark the end of the investment phase and the start of the operations and maintenance phase for the site concerned.

PSA is the milestone at which the following events take place:

- The Purchaser takes ownership of the equipment.
- The users start operating the equipment.
- The warranty for the equipment starts.
- The software licenses and OEM support are activated.

For equipment that cannot be operated at PSA, for which deficiencies has been recorded with a resolution deferred to FSA, the events above will take place at FSA.

4.3 Final System Acceptance (FSA)

The Purchaser will declare Final System Acceptance (FSA) in the FSA Meeting, after the CIS installations at AGS MOB have been completed with a PSA declared and when the FSA conditions below have been met.

- [RQ47] To achieve FSA the Contractor shall demonstrate:
- That the AGS CIS has passed PSA.
 - That the Purchaser has received and accepted all Contractual deliverables.
 - A deliverables inventory has been provided and verified by the Purchaser, which details all the deliverables to be supplied under the terms of the Contract.
 - That the AGS MOB Node operates at the levels of performance and availability specified in this SOW.
 - That the Contractor has provided a Certificate of Conformity (CoC) that the equipment and system conform to the contractual standards.

FSA will be established at a meeting convened between the Contractor and the Purchaser for that purpose.

- [RQ48] The Contractor shall participate in the FSA Meeting, which shall be held at the Purchaser's Premises in either The Hague or Sigonella at the Purchaser's discretion.

[RQ49] The Contractor shall demonstrate at the FSA Meeting to the Purchaser that:

- All the conditions for FSA have been met.
- The Purchaser has received and verified the accuracy of the deliveries inventory, which details all the deliverables to be supplied under the terms of the Contract.
- The Purchaser has received and verified the accuracy of the As-Built Documentation.
- The Contractor has provided a Certificate of Conformity (CoC) that the equipment conforms to the contractual standards.
- The Purchaser has received all Contract deliverables.

5 System requirements

Equipment specifications for the equipment purchased through this contract are included in the Appendix A: equipment specifications of this statement of work.

Equipment specifications for the purchaser furnished equipment that will have to be integrated by the Contractor are included in the Appendix B: purchaser furnished equipment specifications of this statement of work.

The equipment specification table is structured as follows:

- The first column is a category (EUD, CYB, NS, NU, DC...), to which references are made in this statement of work.
- The second column is a prescriptive description allowing the Contractor to search for the exact product.
- The second column is an OEM part number or OEM configuration code, when known to the Purchaser.
- The third column is the quantity of items. When empty, it does not represent a header column or configuration description rather than a part.
- The fourth column is the quantity of spares.

[RQ50] The Contractor shall purchase the total of items including spares (column 4 + column 5), but integration activities shall only cover the amount of equipment in column Quantity (column 4).

[RQ51] Should the equipment not be available for the Contractor to purchase, the Contractor shall offer a replacement model of the same manufacturer and offering at least the same performance and functionalities, licenses, and same levels of support for the same duration.

5.1 End-user devices installation and configuration

5.1.1 Equipment

[RQ52] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category EUD.

[RQ53] The Purchaser will provide some PFE workstations in complement of the contract furnished workstations, in the specifications and quantities presented in Appendix B, Category EUD.

5.1.2 Installation workstations

The Purchaser will have installed an initial 100 workstations as part of the advanced capability described in §7.3.

No retrofit is expected on these PFE workstations.

- [RQ54] The activities described below shall apply to all contract-furnished workstations and 62 PFE workstations.
- [RQ55] The Contractor shall assemble the workstations and their ancillaries, and position them on the designated user's desks, as communicated by the Purchaser.
- [RQ56] The Contractor shall connect the workstations to the building power outlets in the end-user rooms with a power cord meeting the electrical outlets standards in Italy, without any electrical transformer.
- [RQ57] The Contractor shall provide and install flexible drop cables to interconnect the Contractor provided NS workstations to the PFE Telecom Outlets within the end-user rooms.
- [RQ58] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).
- [RQ59] The required cable lengths shall be identified during the Contractor's Site Survey.
- The Purchaser will provide the ISO image of the "NATO Desktop" that is the base image for the user workstations, including the operating system and baseline software.
- [RQ60] The Contractor shall verify that the image is installable and functional on the contract-delivered workstations, and augment it with the right drivers if necessary.
- [RQ61] The Contractor shall image each of the contract-delivered workstations with this image, and perform all pre-configuration steps until it is ready to join a Microsoft Active Directory enterprise domain.
- [RQ62] The Contractor shall handover each workstation to the Purchaser's technical representative on site, who will join it to the AD domain and start propagating GPO and other enterprise configurations.
- The Purchaser's technical representative will manage user accounts after PST.

5.1.3 Installation desktop VTC

- [RQ63] The Contractor shall assemble the desktop VTC and their ancillaries, and position them on the designated user's desks, as communicated by the Purchaser.
- [RQ64] The Contractor shall connect the desktop VTC to the building power outlets in the end-user rooms with a power cord meeting the electrical outlets standards in Italy, without any electrical transformer.
- [RQ65] The Contractor shall provide and install flexible drop cables to interconnect the Contractor provided desktop VTC to the PFE Telecom Outlets within the end-user rooms.
- [RQ66] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).
- [RQ67] The required cable lengths shall be identified during the Contractor's Site Survey.

5.2 NATO S3CRET active distribution design, installation and configuration

5.2.1 Equipment

- [RQ68] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category NS.

The Purchaser will provide some PFE fiber switches in complement of the contract furnished workstations, in the specifications and quantities presented in Appendix B, Category NS.

5.2.2 Installation

The NS LAN design is based on fiber optics cabling and switches.

A LAN core is established by the Core switches. These interconnect all other switches within one security domain with 10Gbit/s Ethernet and 1Gbit/s Ethernet trunks.

The Management (MGNT) switches will connect management systems to be installed by the Purchaser at a later stage.

The LAN is segregated in Virtual Local Area Networks (VLAN), which are interconnected by the firewall in the NS domain. Further details will be provided to the Contractor during the Configuration Guidance stage, after contract signature.

[RQ69] The Contractor shall replace the advanced capability switches described in §7.3 in the NS LAN with the contract-provided and purchaser-provided switches.

[RQ70] The Contractor shall plan for a transition that limits the downtime to users.

[RQ71] The contractor shall install the Ethernet switches in the purchaser Furnished racks in the buildings communications rooms, already hosting the building passive distribution patch panels.

[RQ72] The Contractor shall use the existing fiber passive distribution and patch panels to extend the LAN to all denominated user offices.

[RQ73] The Contractor shall configure VLAN trunks between the LAN switches and establish VLANs across the LAN switches as per the configuration guidance, segregating the LAN in:

- User NS workstations.
- Phones and VTC.
- Servers.
- Management.

[RQ74] The Contractor shall install the transceivers and configure the switches to enable the connectivity.

[RQ75] The Contractor shall provide and install flexible drop cables to interconnect the devices within each rack, and the racks within each room.

[RQ76] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).

[RQ77] The required cable lengths shall be identified during the Contractor's Site Survey.

The PFE switches presented in Appendix B require MPO connector type fiber cables to be used between the TOR switches and spine switches.

As indicated in §7.3, the Purchaser will have installed and configured an initial NS LAN at the time of delivery of this contract.

[RQ78] The Contractor shall reconnect the PFE equipment to the LAN.

[RQ79] The Contractor shall document the cabling for the PFE equipment in accordance with §11.4.

5.2.3 Inter-zones extension

The Ops area and Flight line are part of a single logical LAN extended through the existing camp distribution, based on single-mode fiber optics.

The camp distribution is not suitable for clear NS traffic, thus requires the use of Purchaser-furnished type 3 IP cryptos between the two areas. These cryptos are Thales TCE 621C, and will be provided, configured and keyed by the Purchaser.

[RQ80] The contractor shall install the routers in the purchaser furnished racks in the buildings communications rooms, already hosting the building passive distribution patch panels.

[RQ81] The Contractor shall configure the routers to allow a single logical LAN to be managed centrally across the two zones, based on the specifications provided during the configuration guidance.

[RQ82] The Contractor shall use the existing camp fiber passive distribution and patch panels to extend the LAN between the 2 zones.

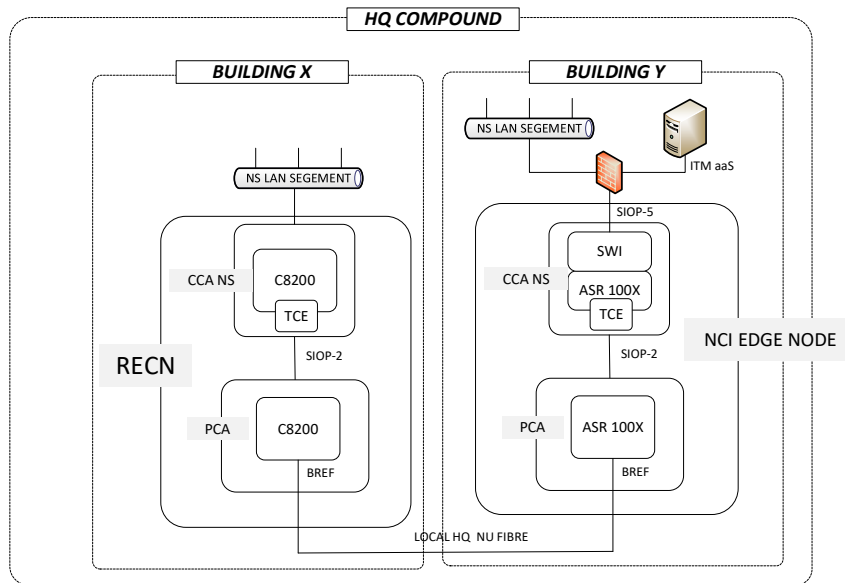


Figure 2: NS inter-zones extension

5.3 NATO UNCLASSIFIED active distribution design, installation and configuration

5.3.1 Equipment

[RQ83] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category NU.

[RQ84] The Purchaser will provide some PFE fiber switches in complement of the contract furnished workstations, in the specifications and quantities presented in Appendix B, Category NU.

5.3.2 Installation

The NU LAN design is based on:

- Copper twisted pair cabling horizontal cabling inside buildings.
- Fiber optics cabling between buildings and zones.
- Wireless LAN for most end-users devices.
- Cable LAN for selected appliances (e.g. printers, VTC).
- POE distribution switches.
- POE Wireless Access Points.
- Wireless Controllers.

A LAN core is established by the Core switches. These interconnect all other switches within one security domain with 10Gbit/s Ethernet and 1Gbit/s Ethernet trunks.

The Management (MGNT) switches will connect management systems to be installed by the Purchaser at a later stage.

The LAN is segregated in Virtual Local Area Networks (VLAN), which are interconnected by the firewall in the NU domain. Further details will be provided to the Contractor during the Configuration Guidance stage, after contract signature.

- [RQ85] The Contractor shall replace the advanced capability switches described in §7.3 in the NU LAN with the contract-provided and purchaser-provided switches.
- [RQ86] The Contractor shall plan for a transition that limits the downtime to users.
- [RQ87] The contractor shall install the Ethernet switches in the purchaser Furnished racks in the buildings communications rooms, already hosting the building passive distribution patch panels.
- [RQ88] The Contractor shall configure VLAN trunks between the LAN switches and establish VLANs across the LAN switches as per the configuration guidance, segregating the LAN in:
- User NU workstations.
 - Servers.
 - Management.
- [RQ89] The Contractor shall install the transceivers and configure the switches to enable the connectivity.
- [RQ90] The Contractor shall provide and install flexible drop cables to interconnect the devices within each rack, and the racks within each room.
- [RQ91] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).
- [RQ92] The required cable lengths shall be identified during the Contractor's Site Survey.
- NU Voice and VTC (V2) is not in scope for this contract. However, the NU voice and VTC will be connected to the NU LAN data switches.
- [RQ93] The Contractor shall reconnect the PFE equipment to the LAN.
- [RQ94] The Contractor shall document the cabling for the PFE equipment in accordance with §11.4.

5.3.3 Inter-zones extension

The Ops area and Flight line are part of a single logical LAN extended through the existing camp distribution, based on single-mode fiber optics.

There is no requirement for traffic encryption for NU, and the extension will therefore be managed with core switches only as part of the NU LAN installation.

- [RQ95] The Contractor shall configure the switches to allow a single logical LAN to be managed centrally across the two zones, based on the specifications provided during the configuration guidance.
- [RQ96] The Contractor shall use the existing camp fiber passive distribution and patch panels to extend the LAN between the 2 zones.

5.3.4 Wireless LAN

A wireless access LAN will be established in all office areas of the NAGSF MOB using the core switches configured for the NU LAN, wireless controllers in the main communications room, and wireless access points in the technical ceilings of the NAGSF facilities.

The wireless LAN is segregated in wireless Virtual Local Area Networks (WVLAN), which are interconnected by the firewall in the NU domain. Further details will be provided to the Contractor during the Configuration Guidance stage, after contract signature.

The Purchaser will have installed existing WAP to support the advanced capability. These WAP however are installed directly in the offices using the existing building passive distribution and will be entirely replaced by the Contractor WLAN.

- [RQ97] The Contractor shall install the wireless controllers in the purchaser Furnished racks in the buildings network rooms.
- [RQ98] The Contractor shall configure the wireless controllers to create together a redundant, resilient and load-balancing cluster as per the instructions of the configuration guidance.
- [RQ99] The Contractor shall ensure that the WAP-s establish a CAPWAP tunnel to the Wireless LAN Controller.
- [RQ100] The WAPs shall establish a CAPWAP tunnel to the Wireless LAN controller.
- [RQ101] The Contractor shall configure WVLAN between the LAN switches and WAP and establish WVLANs across the LAN switches as per the configuration guidance, segregating the VLAN in:
- User NU laptops.
 - User NR laptops.
 - Guest NU laptops.

The VLAN overall remains NU as he NR WVLAN is encrypted at the end-user device interface.

- [RQ102] The Contractor shall securely install the Power-over-Internet (PoE) wireless access points in the building technical ceilings, using fixed points as described in Figure 3.

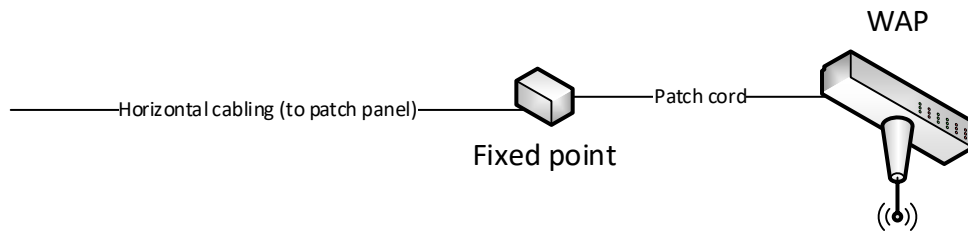


Figure 3: WAP installation

- [RQ103] The Contractor shall procure and install twisted pair CAT6 horizontal cabling between the communications cabinets and the wireless access points, through the existing technical trays in place in the facility.
- [RQ104] The Contractor shall use fully shielded or insulated (STP or SFTP) metallic wire circuits (minimum CAT 6 and with a gauge of conductor is at least 24 AWG) with Low Smoke Zero Halogen (LSZH) or equivalent jacketing (subject to Purchased approval).
- [RQ105] The shield(s) shall provide a minimum of 85% coverage.
- [RQ106] Termination of the cable shield at the cable connector shell shall be made in a manner covering the full 360 degrees where possible.

5.3.4.1 WAP Installation

- [RQ107] The Contractor shall install, test and verify all installation works, all wireless access points at site locations as indicated.
- [RQ108] The Contractor shall install equipment using site approved anchoring systems, and restore any damage to any other existing infrastructure elements.
- [RQ109] On completion of each installation activity, the Contractor shall label, or verify, all wireless access points for site unique identification purposes.

NCIA will provide the templates to be used for labels with this unique ID.

[RQ110] On completion of each installation activity, the Contractor shall verify, or label, all wireless access point with NCIA Asset Tags.

NCIA will provide Asset Tags labels in case of not existing on or not correct.

[RQ111] On completion of each installation, the Contractor shall document WAPs using electronic copies of NCIA provided templates; and provide to NCIA a precise update of any changes of location through the provision of an electronic copy of site heat map(s). Other information must be updated, as indicated, on NCIA's provided templates.

[RQ112] The Contractor shall perform a software update on wireless access point if indicated by NCIA. NCIA will inform which software package to be used.

5.3.4.2 WAP to Technical Room Cabling Installation

[RQ113] The Contractor shall install, test and verify, or test and verify, structured cabling from the wireless access point to the designated technical room, and terminated into a patch panel which must be installed on designated racks, unless patch panel is already available from previous ITM installation.

[RQ114] The Contractor shall perform testing of the installed structured cabling, assuring that cabling meet TIA/ISO requirements, and provide evidence of successful end to end connectivity and digital transmission from WAP to PoE switch. Cabling test results and connectivity reports must be provided to NCIA as proof of installation and test, prior to site acceptance being approved by the Purchaser.

[RQ115] The Contractor shall document all wireless infrastructure cabling, design, including all cables, conducts, patch panels, racks, which capture the final wireless design and installation information and shall provide the NCIA with editable electronic copies of the documentation (*i.e.* Excel, Visio, Word, AutoCad) at least one week before the acceptance for each site.

[RQ116] This documentation shall include, as a minimum, the cable routing, cable types/quantities, cable labelling.

[RQ117] The Contractor shall provide identifiers (*i.e.* labelling, or marking) on all the cables, ducts, and exit/entry points to enable the easy identification between the installation and design documentation and the actual physical equipment installation.

[RQ118] The Contractor shall label all cabling infrastructure using labelling standard provided by NCIA on each site and applicable to patch panels, patch panel ports, patch cords, WAP cabling (patch panel to WAP).

5.3.4.3 Technical Room Installation

[RQ119] At designated technical rooms, the Contractor shall install switches and wireless controllers, wire them to power feeds (rack PDU), and wire cable ports to patch panels connecting WAPs and to identified uplinks (to other path panel or core switch).

[RQ120] The Contractor shall label and mark all patch panel, Power over Ethernet (PoE) access switches and patch cords.

[RQ121] The Contractor shall perform all actions required to address adjustments to equipment into racks and for all cabling installed, to provide a neat and professional installation.

[RQ122] The Contractor shall document technical room wireless infrastructure implementation; including racks elevations with patch panels, PoE switches and core switches; cabling path from WAP, to path panel, to patch cord, to PoE switch, to uplink cord, to patch panel/core, to core switch.

5.3.4.4 Lights-ON Testing.

[RQ123] The Contractor shall perform lights-on testing, powering on all WAPs and PoE switches and provide a report of faulty elements.

The objective of this report is to provide a verification of hardware failures, deficient patch cords and connectivity from WAPs to PoE switches.

5.3.4.5 RF Plan

The APs and relevant cabling placement were subjected to an RF predictive placement.

Receive Signal Strength Indicator (RSSI) minimum value is -65 dBm.

Secondary coverage (RSSI) minimum value is -67 dbm.

Signal to Noise Ratio (SNR) has to be above 25dB.

5.4 Video teleconferencing room design, installation and configuration

5.4.1 Overview

- [RQ124] The contractor shall provide, install and configure a fully integrated conference room with local presentation, audioconference and videoconference (single domain NATO S3CRET) and “bring-your-own-meeting” functions for twenty-four 24 active users.
- [RQ125] The Contractor shall provide a detailed design for the VTC room in its System Engineering and Design, both in the preliminary and final versions of the PIP, with clear diagrams.
- [RQ126] The conference solution shall be controllable from a 12” touch panel.
- [RQ127] The solution shall feature 5 ceiling-mounted PTZ cameras, 16 displays and 2 laptop connection points.
- [RQ128] The contractor shall provide and install a ceiling array microphone and ceiling loudspeakers.
- [RQ129] The contractor shall deliver no less than a fully working solution that is adequately dimensioned to the foreseen space and with enough room for comfortable seating.
- [RQ130] The contractor shall ensure that the entire installation meets all security requirements such as TEMPEST and network isolation.

A room layout for the NAGSF VTC is provided in Appendix C.

5.4.2 Specifications

5.4.2.1 Touch panel

- [RQ131] A 12” touch screen shall be installed to control all provided table functions.
- [RQ132] The touch panel shall be used to turn on all required devices.

5.4.2.2 VTC Codec

- [RQ133] The contractor shall provide, install and configure a Poly G7500 as videoconference codec for NATO S3CRET VTC.

5.4.2.3 Monitors

- [RQ134] 12 of the 55” UHD Monitors shall be installed inside the conference table, on the ground directed towards the opposite edge of the conference table as per Figure 4.

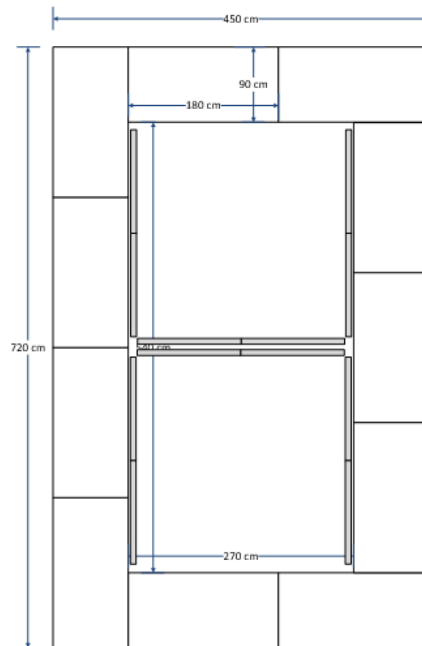


Figure 4: conferencing table

[RQ135] The last 55" UHD monitors shall be wall-mounted in the room.

[RQ136] The monitors shall be installed in such a manner that a perfect viewing angle is achieved and reflection from external light sources is avoided.

5.4.2.4 Audio System

[RQ137] The number of the ceiling microphone arrays shall match the number of built-in UHD Monitors.

[RQ138] High quality (HiFi) speakers and microphones shall be installed in the ceiling.

5.4.2.5 Cameras

[RQ139] 4 of the cameras shall be ceiling-mounted to cover all participants on each side of the table.

[RQ140] The last camera shall be used for a room shot.

5.4.2.6 Internal AV infrastructure

[RQ141] The internal video infrastructure shall support 4K 60fps 4:4:4 video transport.

[RQ142] One (1) HDMI connection with embedded audio shall be provided inside the table to connect the customer provided Secure PC.

[RQ143] One (1) Poly G7500 video conferencing codex shall be provided, installed and integrated in the equipment rack.

5.4.2.7 Connection Modules

[RQ144] The table shall be equipped with 2 connection modules, seamlessly integrated underneath the table surface and accessible through tilt-up lids made from the same material as the table surface.

[RQ145] Each connection module shall have:

- One (1) 230 VAC universal power socket.

- One (1) USB-C connection point (power delivery, data and audio/video).
- One (1) Connection for 12" Touch Panel (to allow flexible positioning on either side of the table).

5.4.3 Solution Functions

5.4.3.1 Presentation

- [RQ146] For presenting, the touch panel shall be used to select the presentation source (Connection Points or built-in PC).
- [RQ147] All sources shall be scaled to 1080p to be displayed on the 24" Full HD Monitors.
- [RQ148] Switching between available sources shall be instant and seamless.
- [RQ149] By default, all displays shall show the same source, but it shall be possible to select a different source for each display.
- [RQ150] Volume control shall be made available through the touch panel.

5.4.3.2 Audioconferencing

- [RQ151] For audioconferencing, the ceiling array microphones shall be used for input.
- [RQ152] The far end audio shall be heard through the ceiling speakers.
- [RQ153] Volume control shall be made available on the touch panel.
- [RQ154] The contractor shall also install a digital audio signal processor DSP with an echo canceler on each input, digital noise suppression, automatic level control (NOM, Number of Open Microphones).
- [RQ155] The audio DSP shall support TELCO and SIP for telephony.
- [RQ156] Numbering or choosing a counterpart shall be made possible on the Touch Panel dial-pad with integrated address book.
- [RQ157] Incoming calls shall be made visible on the touch panel (pop-up) so they can be accepted or rejected.
- [RQ158] Audioconferencing shall not be possible when the table is setup for videoconferencing using the integrated VTC Codec.

5.4.3.3 Videoconferencing

- [RQ159] Switching between active cameras shall be automated through speech detection.
- [RQ160] Switching shall be "glitch-free" and seamless.
- [RQ161] The system shall be configured so it avoids camera switches when they are not required. This function is key as, when wrongly implemented, to many unwanted camera switches will break the natural videoconferencing feeling.
- [RQ162] It shall be possible to manually select cameras from the touch panel and disable automation when required.
- [RQ163] It shall be possible to select and control the cameras manually from the touchpanel.
- [RQ164] It shall be possible to save and recall camera presets from the touchpanel.
- [RQ165] The touch panel shall also allow for full user-friendly access to all required Codec settings.
- [RQ166] Dialing shall be made available through the touch panels' pop-up dial-pad and QWERTY keyboard or through the built-in address book.
- [RQ167] The address book shall be pulled from the Codec as this is dynamically provisioned.

- [RQ168] The far-end shall be visible on the built-in monitors, the local source shall be seen in PiP. It shall be possible to change the PiP position through the touch panel.
- [RQ169] During a videoconference, all presentation sources shall be available for content sharing.
- [RQ170] Screen layout changes shall be possible and made available on the touch panel. They shall be made available in a user-friendly menu.
- [RQ171] Options shall include:
- Full screen presentation.
 - Disable PiP.
 - Disable far-end video during presentation.
 - Manual source selection.
- [RQ172] Far end audio shall be heard through the integrated speakers and volume control shall be made available on the touch panel.
- [RQ173] During Videoconference mode, the same microphones and audio mixer shall be used.
- [RQ174] It shall be possible to add an audioconference to the videoconference.
- [RQ175] All parties shall be able to hear each other and echo cancellation shall be implemented properly so it is not generated by the system.

5.4.3.4 Bring-Your-Own-Meeting (BYOM)

- [RQ176] The table should allow for BYOM video conferencing by connecting an external lap-top with through USB-C in the connection points.
- [RQ177] This capability shall be seamlessly integrated with the installed AV hardware.
- BYOM shall not be possible when the table is setup for videoconferencing using the integrated VTC Codec.

5.5 NS backend infrastructure installation

5.5.1 Equipment

- [RQ178] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category DC.

5.5.2 Installation

- [RQ179] The Contractor shall install the NS backend equipment inside the PFE racks in the data-center.
- [RQ180] The Contractor shall connect the NS backend equipment to the TOR switches, and the TOR switches to the NS LAN via the firewall as per the Configuration Guidance.
- [RQ181] The Contractor shall provide all cabling necessary to connect racked equipment to the TOR switches, and the TOR switches to the distribution.
- [RQ182] The Contractor shall provide and install flexible drop cables to interconnect the devices within each rack, and the racks within each room.
- [RQ183] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).
- [RQ184] The required cable lengths shall be identified during the Contractor's Site Survey.

The Purchaser will take over the NS backend infrastructure following these activities and proceed with the software installation, configuration and data migration.

5.6 Cyber security infrastructure installation

5.6.1 Equipment

- [RQ185] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category CYB.
- [RQ186] The Purchaser will provide some PFE appliances in complement of the contract furnished workstations, in the specifications and quantities presented in Appendix B, Category CYB.

5.6.2 Installation

- [RQ187] The NS and NU cyber equipment shall be installed in separate racks inside the data-center.
The equipment marked as [Tier 2 uplift] is an exception, and will be installed by the purchaser in a different site.
- [RQ188] The activities described below shall apply to all contract-furnished equipment and PFE appliances.
- [RQ189] The Contractor shall install the cyber equipment inside the PFE racks in the data-center.
- [RQ190] The Contractor shall connect the cyber equipment to the TOR switches, and the TOR switches to the NS LAN via the firewall.
- [RQ191] The Contractor shall provide all cabling necessary to connect racked equipment to the TOR switches, and the TOR switches to the distribution and firewall.
- [RQ192] The Contractor shall provide and install flexible drop cables to interconnect the devices within each rack, and the racks within each room.
- [RQ193] Drop cables shall be provided in standard lengths and provided with a slack of 1m to 1.5m (with the cable adequately following the walls and ducts in desks, not crossing walking paths).
- [RQ194] The required cable lengths shall be identified during the Contractor's Site Survey.
The Purchaser will take over the cyber infrastructure following these activities and proceed with the software installation, configuration and data migration.

5.7 NU backend infrastructure relocation

5.7.1 Equipment

The Purchaser has upgraded its existing NU backend infrastructure, for which no new equipment is foreseen to be procured in this contract.

5.7.2 Installation

Details of the NU backend relocation will be provided to the Contractor during the Configuration Guidance.

- [RQ195] The Contractor shall disconnect the NU backend infrastructure from its current location in the NAGSF temporary facility, disassemble it as necessary, transport it to the new data-center in B101 including its racks, reassemble it, and reconnect it to the NU LAN via the firewall.
- [RQ196] The Contractor shall provide all cabling necessary to connect the TOR switches to the distribution.
- [RQ197] The Contractor shall perform the NU backend infrastructure move after the completion of the NU LAN, and within a planned service outage of a maximum of 48h.
The Purchaser will take responsibly for data backup prior to this move.

5.8 Option: Additional NS IT backend capacity

5.8.1 Equipment

- [RQ198] The Contractor shall purchase the equipment in the specifications and quantities presented in Appendix A, Category GIS.

5.8.2 Installation

Additional capacity on the NS backend might be required for a NATO project, augmenting the existing installation with additional servers and storage.

This additional capacity is expected by the Purchaser to fit inside the same rack provided for §5.4.1.

- [RQ199] The Contractor shall install and connect the cyber equipment inside the PFE racks in the data-center, as an augmentation of the capacity already procured in this contract, as per §5.5.2.

5.9 Option: Complementary inter-buildings fiber cabling

Complementary cabling might be required to augment the capacity of the camp fiber distribution for a NATO project.

Should this option be validated, the Contractor will be asked to validate the Purchaser estimations during the site survey.

- [RQ200] The Contractor shall deliver 500m of 96 cores multimode fiber cabling.

- [RQ201] The Contractor shall lay down the fiber between buildings B101 and T101, following the cable trays inside both buildings and the pits-and-ducts system in the camp.

6 Non-functional requirements

6.1 EMI Requirements

- [RQ202] The Contractor shall install the AGS CIS such that the radio disturbance characteristics of equipment and systems adheres to [EN55022:2010/AC:2011] or equivalent.

- [RQ203] The Contractor shall install the AGS CIS such that the immunity to electromagnetic interference of equipment and systems adheres to [EN55024:2010] or equivalent.

- [RQ204] The Contractor shall install the AGS CIS such that the harmonic current emissions remains within the limits specify by [IEC61000-3-2:2014] or equivalent.

6.2 Safety Requirements

- [RQ205] The Contractor shall ensure that all components, as far as those are not explicitly named with bands or models by the Purchaser, are compliant with national legislation on Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

- [RQ206] The Contractor shall follow the process required by the safety normative and deliver all the required associated documentation.

- [RQ207] The Contractor shall install the system such to allow for safe and ergonomic replacement of hardware components.

Contractor installed cabling shall be low smoke, low toxicity, halogen free and PVC free. No mercury, CFC/HCFC, flammable materials, nor material which could constitute a health hazard shall be included.

- [RQ208] Contractor installed single cables shall comply with [IEC60332-1:2004].

- [RQ209] Contractor installed cable bundles shall comply with [IEC60332 3 10:2000+A1:2008].

- [RQ210] The Contractor shall install the system that the system complies with the European Commission Directive [2006/42/EC] on Machinery and national implementing legislation.
- [RQ211] The Contractor shall ensure that all the labels and information, as far as relevant for safety, on any of the equipment is presented in English.
- [RQ212] The Contractor shall install the system such that all necessary safeguards are incorporated to ensure the safety of users and operating and maintenance personnel from electrical, thermal, and mechanical hazards.
- [RQ213] Where applicable, the Contractor shall place appropriate notices and markings on equipment special reference to points where hot surfaces or dangerous voltages may be encountered and where precautions are to be taken against radiation hazards.

6.3 DUVRI

Italian law stipulates that contractors must comply with an administrative safety procedure called *Documento Unico per la Valutazione dei Rischi da Interferenze* (DUVRI) prior to accessing sites for infrastructure works, which this contract is considered as.

The Purchaser will provide a point of contact in the NAGSF staff to advise and facilitate the delivery of the DUVRI documents.

- [RQ214] The contractor shall provide all DUVRI-related documentation to the Purchaser point of contact in compliance with the law.
- [RQ215] The contractor shall factor in its schedule the administrative time necessary for Italian authorities to validate the documentation and issue the authorization.

7 Purchaser-furnished equipment and services

7.1 Infrastructure

7.1.1 Power

Power distribution, including Uninterrupted Power Supplies (UPS) is provided by the Purchaser. UPS are implemented at the level of each individual building rather than for each device.

7.1.2 Environmental control

Environment control, including Heating, Ventilation and Air Conditioning (HVAC) is provided by the Purchaser.

7.1.3 Campus cabling

The Campus cabling interconnects Building Distribution Switches and Campus switches within one site.

The connection between switches in different buildings across the campus is done using single mode [OS1] fiber optic cabling.

For connection between buildings single mode fiber is used compliant with the 10GBASE-LX specifications as contained in [IEEE 802.3:2012].

The campus fiber optic cabling is terminated using [LC] connectors on patch panels.

7.1.4 Vertical Cabling

Vertical Cabling refers to the cabling between LAN switches.

The connection between End-user Access and Building Distribution switches, within a building, is implemented with multi-mode 50/125 µm OM3 fibre optic cabling.

The connection between switches is compliant with the 10GBASE-LX and occasionally 10GBASE-SR specifications as contained in [IEEE 802.3:2012].

Vertical fibre optic cabling is implemented terminating with [LC] connectors on patch panels.

7.1.5 Horizontal Cabling

The horizontal cabling refers to the cabling between access switches and end-user-devices.

Depending on the actually available cabling at each work position, the Contractor shall anticipate the following cabling options for each work position:

- Option A: The NU LAN relies on CAT-6 copper cabling and the NS LAN relies on 50/125µm OM3 fibre optic cabling.
- Option B: Both the NU and the NS LAN rely on 50/125µm OM3 fiber optic cabling.

Option A is the default for most connections in NAGSF.

7.1.6 Warehouse storage

Secure storage will be made available for the Contractor to stage its equipment between the shipment delivery and the integration works.

The access list to the storage areas will be controlled by the Purchaser CIS Support Unit (CSU).

7.2 ICT equipment

7.2.1 Networking and end-user equipment

The Purchaser has procured some of the equipment necessary for the installation of the NAGSF CIS.

The list and specifications of PFE equipment is in Appendix B of this statement of work.

Explicit mentions of this equipment and what the Contractor is expected to do with it are made in §5.

7.2.2 NS Voice over Secure IP phones

Need current specs with Dietrich.

7.2.3 Licenses

Some of the Licenses necessary for the NAGSF CIS are provided by the Purchaser as part of its Enterprise Agreement with the following OEM: Microsoft, McAfee, VMWare, and Splunk.

The NATO desktop, bundling the Microsoft end-user-device OS and Office baseline with cyber-security external components will be handed over to the Contractor for integration.

In most other cases, the Purchaser will install these licenses itself as part of its post-integration activities.

7.2.4 Cryptographic equipment

The cryptographic equipment necessary for the connection between OPS and FL areas will be provided separately by the Purchaser.

These cryptos are Thales TCE 621C.

The Contractor shall include the cryptos in its network design, however all keying and GRE tunnels configuration will be performed by the Purchaser.

7.2.5 Distribution and core switches racks

Each building has a number of network distribution rooms at each floor, hosting the patch panels and other passive equipment.

The rooms already contain racks that shall be used for the installation of the distribution and core switches.

7.2.6 Data-center racks

The Purchaser provides the racks for the data-center, cyber capability, and TOR switches installation. These racks are fitted with the ancillaries (cable management, KVM) necessary for the AGS CIS integration, are already on site and will be inspectable by the Contractor during its site survey.

7.3 Advanced capability

The Purchaser is installing early 2023 an advanced capability for a subset of the users in the new NAGSF facility.

This advanced capability is based on:

- An NS LAN based on fiber optics switches extended from the current point of presence.
- Workstations.
- An NU LAN based on wireless access points extended from the current point of presence.
- An NU LAN based on copper twisted pair switches for voice extended from the current point of presence.
- Workstations on the users desks connected to the LAN.

8 System testing

8.1 Process

The System Testing and acceptance stage entails the verification of the functional and non-functional requirements contained in the SoW.

[RQ216] Following system installation, the Contractor shall conduct the subsystem-level verification, at the site (physical installation aspects, hardware integrity).

As part of the Provisional System Test (PST), and following the Security Accreditation of the AGS CIS, the Purchaser will conduct network-level verification tests against selected NGCS nodes.

The Purchaser reserves the right to approve or reject the Contractor's test activities, including test documentation, test procedures, test conduct, analysis performed and test results.

[RQ217] The Contractor shall execute the SAT and shall provide the appropriate personnel and tools and equipment to successfully complete the tests.

The Purchaser will witness the execution of SAT and lead those tests involving the verification of NGCS connectivity to other nodes.

8.2 Responsibilities

[RQ218] All the NAGSF CIS testing shall be the responsibility of the Contractor who shall provide all the personnel, documentation, equipment, test data and facilities required for installation, commissioning and execution of the tests.

[RQ219] The Contractor shall support Purchaser led Validation activities to confirm that the solution is fit for purpose.

[RQ220] The Contractor shall be entirely responsible for the co-ordination and performance of the tests, and shall ensure that an adequate number of Contractor's engineers and technicians are present to ensure the timely completion of all tests.

[RQ221] The Contractor shall provide the necessary duly calibrated test equipment, tools and any other items required for the satisfactory completion of the tests and the recording of their results. This shall include but not be limited to the following:

- Performance measurement instruments.
- Protocol analyzers.
- Installation tools.
- Test Plans and Procedures.
- Any transmission services/resources required to achieve test configuration.

[RQ222] Software tools supporting requirements coverage, defect management and test management shall be selected and hosted by the Purchaser and used by the Contractor. For any internal work, the Contractor may use their own internal tools, but the tools used for the Contractor's internal work shall be able to natively interface with the tools selected and hosted by the Purchaser in order to keep all TV&V related data for the project in the Purchaser tools.

[RQ223] The Contractor shall assign and provide a Test Director and Test Operators and the Purchaser and/or his designated Representative will attend and witness the Formal Test Phases.

During Formal Test Phases, the Purchaser will have the right to demand repetition of failed tests, proof of the validity of the test equipment calibration, and performance of reasonable additional tests in order to clarify doubtful or marginal results.

[RQ224] The Contractor shall make available to the Purchaser, all facilities, information and assistance necessary to permit a valid interpretation of the test results.

[RQ225] For the formal test phases, the Test Environment shall be under the configuration control of the Purchaser during the testing period. That means, that every change that is to be implemented needs to be approved by the Purchaser. Prior to the commencement of the tests, the Test Environment shall be baselined and no changes to hardware, software, firmware and/or configuration shall be introduced by the Contractor unless explicitly authorized in writing by the Purchaser. Failure to do so by the Contractor shall render the complete testing null and void.

[RQ226] The Contractor shall identify the Contractor's requirements for configuration and support of the Purchaser's test facility, reference environments and/or required interconnections. The Contractor shall also configure the Test Environment and the System under Test to allow for the identified support.

8.3 Principles

[RQ227] All deliverables to include hardware, software and firmware supplied by the Contractor under this contract shall be verified or validated to meet the requirements of this contract.

[RQ228] The Contractor shall define in the Test and Acceptance Plan how, where and when the verification and validation for all the CIS and non-CIS will be executed, including reference to the delivery batches. This shall reference the verification and validation Approach and Phases as defined in this document.

[RQ229] The verification and validation schedule shall meet the requirements driven by project milestones. The initial schedule shall be defined in the Project Master Schedule and the definition of capability batches and test phases shall be defined in the Test and Acceptance Plan.

[RQ230] The Contractor shall integrate the PFE into his test programme to the extent that PFE is an integral part of the system, sub-system or network.

[RQ231] The Contractor shall not proceed to a formal test until authorized by the Purchaser.

[RQ232] The Contractor shall deliver all test, verification and validation material developed and used under the Contract to the Purchaser.

[RQ233] Formal acceptance testing, including installation testing, shall be performed always on an environment with the up to date security settings, latest approved patches and antivirus applied and on a solution that has followed the security guidelines and policies.

[RQ234] If the verification method per requirement is not provided beforehand by the Purchaser, the verification method shall either be test or demonstration. Any deviation to this requirement is subject to Purchaser approval.

The Purchaser has the right to request substitution of planned tests with unplanned tests, providing the unplanned tests can be executed within the agreed test schedule or other arrangements can be agreed.

8.4 Project Master Test Plan

[RQ235] The Contractor shall provide, as part of the PIP, a comprehensive Project Master Test Plan (PMTP) that details the requirements of this statement of work, and applies the given approach to the project. The plan shall also indicate the stage at which FSA shall be held.

[RQ236] The Contractor shall provide a flow diagram that identifies the overall sequence of tests, the location, and Contractor and Purchaser equipment and personnel involved in each test, and the relationship of test events to project milestones.

[RQ237] The Contractor shall describe in the PMTP the global organization, including relationships between the different actors involved (that shall cover all testing stages).

[RQ238] -----

[RQ239] The Contractor shall provide to the Purchaser's Independent Validation and Verification (IV&V) representative a test plan composed of:

- Requirement Traceability Matrix (RTM) for the contract requirements.
- Test Cases (business test cases and system test cases) and procedures.
- Test Readiness Review checklist.
- Waiver request.
- Test configuration.

[RQ240] The Contractor shall describe in the PMTP how the following objectives will be met:

- Compliance with the requirements of the Contract.
- Verification that the design produces the capability required.
- Compatibility among internal system components.
- Compliance with the statement of work requirements.
- Compliance with external system interfaces and/or systems.
- Confidence that system defects are detected early and tracked through to correction, including re-test and regression approach.
- Compliance with Purchaser policy and guidance (i.e. security regulations, etc.).
- Product Quality Criteria (Functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, portability).

[RQ241] The PMTP shall include the Contractor's approach to Test Reviews, including for each TV&V event, Test Readiness Reviews and Event Review Meetings.

[RQ242] The Contractor shall create an Event Test Plan (ETP) per each event detailing all the information required for that event.

[RQ243] Other specific content required in the plan is defined throughout this statement of work. Any deviation shall be managed as a formal change request.

8.4.1 RTM

[RQ244] The RTM shall include all functional and non-functional requirements, to track the TV&V status of all requirements throughout the Contract execution (especially during the TV&V activities).

[RQ245] The RTM shall also trace the requirements to the design and define how the requirements will be validated or verified at each of the TV&V activities.

[RQ246] The RTM shall guarantee the two-way link between requirements (SRS) and technical specifications.

8.4.2 Test cases and procedures

[RQ247] The Contractor shall translate each requirement in the statement of work, in an acceptance criteria that will clearly detail how the requirement will be fully met (clear pass/fail or yes/no outcome)

[RQ248] The Contractor shall address the Purchaser's comments and update the Acceptance Criteria accordingly.

[RQ249] The Acceptance Criteria shall be agreed by both contractor and purchaser prior to the creation of the Test Cases/ Scripts.

[RQ250] The agreed Acceptance Criteria shall be translated into Test Cases to provide details of full requirements coverage.

8.4.3 Security testing

[RQ251] The Contractor shall support the execution Purchaser furnished System Test and Validation Plan (STVP) delivered during the Configuration Guidance, to ensure that the Security testing, including verification of compliance with NATO CIS Security Regulations is applied. This is an integral part of the TV&V process.

The STVP will support the accreditation of the System Platform. This document will be approved by NATO Office of Security.”

8.5 Provisional system testing

[RQ252] Provisional System Testing (PST) shall cover the verification of all requirements specified in this SoW.

[RQ253] PST shall only start after the Purchaser acceptance of the test plan.

[RQ254] The Contractor shall execute a dry run test intended for the Contractor for verify test readiness for testing.

[RQ255] Following successful dry run, the Contractor shall notify the Purchaser of its readiness to test, after which he shall schedule and execute the PST.

[RQ256] The Contractor shall propose dates for PST at least 4 weeks in advance, to ensure availability of the Purchaser IV&V staff on the testing site.

[RQ257] The PST Entry Conditions shall include:

- Completed the installation and configuration of the AGS CIS as specified in this SoW.
- Successful dry-run test.

[RQ258] The PST Exit Conditions shall include:

- Successful completion of the verification of the specifications, functions and implementation specified in this SoW.
- Resolution of potential discrepancies.

8.6 Test Report

[RQ259] Following the PST, the Contractor shall submit the PST Report.

A successful PST followed by the Purchaser's approval of the PST report is one of the conditions for the Provisional System Acceptance (PSA).

[RQ260] The PST test report shall be generated and provided to the Purchaser as a compilation of the test sheets used and filled during the execution of the tests, with the signatures of the Contractor and the Purchaser representatives attending the test.

[RQ261] The Contractor shall label the Test Sheet after each test indicating a PASS, CONDITIONAL, FAIL or NOT-RUN result.

[RQ262] The Contractor shall declare a test as PASS if the entirety of the expected results were obtained when running the test.

[RQ263] The Contractor shall describe more background detail and reasoning when the test result is declared CONDITIONAL, FAIL or NOT-RUN.

[RQ264] The test report shall be augmented with any additional information the Contractor considers of interest to be recorded and presented in support of the PSA.

[RQ265] For the PST report, the following process shall apply:

- The Contractor delivers the test report two weeks after the completion of the tests.
- The Purchaser reviews and gives its approval two weeks after receipt of the test report.

[RQ266] The PST Report shall include the following:

- Time and location of the test.
- A red-lined copy of the Test Procedures used, including any deviations approved by the Purchaser.
- The names and signatures of test personnel, plus witnesses.
- Block diagram of the actual test arrangements (if different from the one in the Test Procedure), with a list of test equipment used and calibration date.
- Discrepancies observed and remedial action taken, including the disposition of any written observation entered on the test results sheets by the Purchaser.

[RQ267] The Contractor shall sign all completed Test Sheets, while the execution of the tests unfolds, witnessed by the Purchaser, who shall countersign them to certify agreement with the content.

8.7 Final system testing

[RQ268] In the case PSA has been granted by the Purchaser despite Class 2 deficiencies exposed in the PST report, the Contractor shall organize a final system acceptance test (FST).

The FST is built on the same principles than the PST, but its scope is limited to the CONDITIONAL, FAIL or NOT-RUN results of PST.

[RQ269] Following the FST, the Contractor shall submit the final test report.

In the case FST was necessary, a successful FST followed by the Purchaser's approval of the FST report is one of the conditions for the Final System Acceptance (FSA).

9 Security accreditation

9.1 Introduction

The intention of CIS Security is to properly protecting a CIS and the information handled by it through the application of various CIS Security measures.

System Accreditation to achieve Authorization to Operate (ATO) will be carried out by the Purchaser and involves the development of Security Accreditation documentation by the Purchaser.

9.2 Minimum Security Standards

All of the installations shall be compliant with the “Facility Design Criteria and Installation of Equipment for the Processing of Classified Information” (SDIP-29/3).

Security measures such as the proper distance between the equipment and red & black cable separation shall be implemented in accordance with SDIP-29/1. The system implementation needs to be security-conscious from the onset, and remain flexible to incorporate additional security measures in a scalable and manageable fashion, as required.

The AGS CIS adheres to:

- [AC/322-D/0048-REV2].
- [AC/322-D/0030-REV5].
- [AC/322-D/0047-REV2].
- “Enclosure F” of [C-M(2002)49].
- [AC/35-D/2004-REV3].
- [AC/35-D/2005-REV2].

The AGS CIS implements [NCSA Directive Number 5].

The AGS CIS implements configuration hardening for the equipment.

9.3 TEMPEST requirements

[RQ270] Whenever equipment is requested to be delivered with a TEMPEST B or C specification in this contract, a certificate of compliance with the prescribed test limits contained within SDIP-27/1 for Level B and C equipment shall be required from the Contractor.

[RQ271] The certificate shall apply to the exact manufacturer’s part number.

[RQ272] The certificate shall be issued by:

- Either the contractor’s National Security Authority.
- Or an accredited testing body, in which case documentation shall be provided with the technical proposal proving that the testing body (the Contractor or a clearly identified subcontractor) has the authority from its National Security Authority to provide this specific TEMPEST level B or C certification.

9.4 Responsibilities

The Purchaser will prepare the Security Accreditation Plan.

[RQ273] The Contractor shall ensure that the installations and testing are carried out in accordance with the relevant minimum security standards.

[RQ274] In support of the Purchaser's Security Accreditation efforts, the Contractor shall provide the necessary installation drawings and configuration details, as far as implemented by the Contractor, upon request from the Purchaser.

10 Integrated product support

10.1 Integrated support concept

[RQ275] All repairs beyond the capability of the Operating Unit shall be carried out by the Contractor under the terms of the applicable warranty either in the Contractor factory depot if the faulty equipment is returned to the Contractor facility.

10.2 Material Data Sheet

The Material Data Sheet (MDS) will be the main document used for communication between the Contractor and Purchaser on equipment and supplies delivery.

[RQ276] The MDS shall be used to support:

- Shipments manifests.
- Customs.
- Configuration Tree.
- Inventory.

[RQ277] The MDS shall include the following data elements:

- Contract Line Item Identification Number (CLIN).
- NATO Stock Number (NSN, if known).
- Item Name.
- Expendable or Non-Expendable Code.
- True Manufacturer Part Identification.
- True Manufacturer code or complete name and address.
- Vendor/Contractor Code or complete name and address.
- Vendor/Contractor part number.
- Quantity ordered.
- Order Unit.
- Serialized item tag.
- Serial Number.
- Software Revision Level.
- Hardware Revision Level.
- Serial Number Attributes.
- Accountable Item Flag.
- Currency.
- Price.
- Warranty Expiration Date.
- Extended Line Item Description (if applicable).
- Part Number of Next Higher Assembly.
- Quantity in Next Higher Assembly.

[RQ278] Software licenses shall also be handed over to the Purchaser accompanied with an MDS form.

MDS forms are communicated in the form of Microsoft Excel Spreadsheets. When used for inventories they will be converted to pdf documents and signed.

10.3 Packaging

- [RQ279] The Contractor shall, for the purpose of transportation, package, crate, or otherwise prepare items in accordance with the best commercial practices for the types of supplies involved, giving due consideration to shipping and other hazards associated with the transportation of consignments overseas.
- [RQ280] Any special packaging materials required for the shipment of items shall be provided by the Contractor at no extra cost to the Purchaser.
- [RQ281] The packages, pallets and/or containers in which supplies are transported shall, in addition to normal mercantile marking, show on a separate nameplate the name of this project, contract number and shipping address.
- [RQ282] Packing lists shall accompany each shipment, which shall include the following:
- The Purchaser's contract number.
 - The NATO project number.
 - Names and addresses of the Contractor and the Purchaser.
 - Names and addresses of the Carrier, Consignor and Consignee (if different from Contractor or Purchaser).
 - Final destination address and POC.
 - Method of shipment.
 - MDS form for the whole shipment of for each box.
 - When applicable, EU Customs Form 302.
- [RQ283] Two copies of the packing lists shall be fastened in a weather-proof, sealed envelope on the outside of each box, pallet and/ or container, and one packing list shall be put inside each container/box.

10.4 Handling and storage

- [RQ284] The Contractor shall be responsible for all handling and storage of equipment, packages, boxes and containers during the project. The Contractor shall also be responsible for organizing and operating any handling equipment and storage facilities required.
- The Purchaser is responsible for arranging all that is necessary to access the sites where equipment is handled or stored.
- [RQ285] All equipment, materials and tools shall be stored in containers provided by the Contractor during the installation period. These containers shall be located on site and shall be equipped with system security lock, which shall be locked when the containers are not under the direct supervision of the Contractor.
- [RQ286] In the case of goods requiring export licenses the Contractor shall ensure that all required forms and certificates are provided and that all procedures for such goods are followed.

10.5 Transportation

- [RQ287] The Contractor shall be responsible for transportation of all equipment furnished under this Contract from its site in a NATO nation to final destination. The Contractor shall be responsible for any insurance covering these shipments.
- [RQ288] The Contractor shall also be responsible for transportation of repaired/ replacement items under warranty or CLS arrangements to the original location. Return of unserviceable equipment to Contractor facility for (warranty) repair/replacement is the responsibility of the Purchaser.

[RQ289] The Contractor shall provide the Purchaser POC with a Notice of Shipment one week before each shipment. One additional copy of the packing list shall be attached to this notice. All equipment under this project shall be transported in close co-ordination with the Purchaser's POC.

All packages, boxes and containers will be inspected visually by the Purchaser's POC at final destination to ensure that no damage has occurred during transport and that all packages, boxes and containers detailed in the packing list have been accounted for. The Purchaser will in no case open any packages, boxes or containers.

[RQ290] The Contractor shall provide a Transportation Report within two weeks after each shipment has arrived at final destination. The Transportation Report shall include:

- A copy of the packing list.
- Date of arrival at final destination.
- Date of delivery acceptance by the Purchaser's POC at final destination.
- Signature of delivery acceptance by the Purchaser's POC at final destination.

10.6 Customs clearance

[RQ291] The Contractor shall be responsible for customs clearance of all shipments into the destination countries. It is the Contractor's responsibility to take into account delays at customs. It shall therefore consider eventual delays and arrange for shipment in time. Under no circumstances can the Purchaser be held responsible for delays incurred, even when utilizing Purchaser provided EU Custom Forms 302.

[RQ292] Prior to a shipment by the Contractor, the Purchaser shall upon request issue an EU Custom Form 302 which in some cases is required for the duty free import/export of goods. The Contractor shall be responsible for requesting the issue of a form 302 ten days prior to shipment. The request for a form 302 shall be accompanied by one additional packing list. The request is normally processed by the Purchaser within three working days. The requested 302 form will be sent by courier. The original 302 forms shall accompany the shipment and therefore no fax or electronic copy will be used, nor provided to the Contractor.

[RQ293] If a country refuses to accept the Form 302 and requires the payment of customs duties, the Contractor shall pay these customs duties and the Purchaser shall reimburse the Contractor at actual cost against presentation of pertinent supporting documents. Should such an event occur, the Contractor shall immediately inform the Purchaser by the fastest means available and before paying, obtain from the Customs Officer a written statement establishing that this Country refuses to accept the Form 302.

10.7 Warranty

[RQ294] The Contractor shall warrant that all equipment and software furnished under this Contract and all installation work performed under this Contract conform to the requirements and is free of any defect in material, code or workmanship for a period starting at date of FSA plus 1 year.

[RQ295] The Contractor shall fix/repair/replace all items received as per its internal procedures with the highest priority allocated.

[RQ296] If the Contractor becomes aware at any time before acceptance by the Purchaser that a defect exists in any supplies, the Contractor shall coordinate with the Purchaser and promptly correct the defect.

[RQ297] Defect magnetic and electronic media storage devices (e.g. hard drives) shall remain NATO property, at no additional cost, and not be returned to the Contractor when being replaced. Any such defect storage devices shall be replaced by the Contractor with new storage devices at no additional cost to the Purchaser.

- [RQ298] The Contractor shall be responsible for the provision of any alternative or superseding items, should the original part be no longer available, ensuring compliance with the original design provided by this Contract.
- [RQ299] During the warranty period, the Contractor shall be responsible for supplying all COTS hardware and software upgrades and updates. The availability of COTS hardware and software upgrades and updates shall be made known to the Purchaser and, if proposed for introduction by the Contractor for whatever reason, including any corrective action for an identified fault, shall always be subject to Purchaser approval.
- [RQ300] The Contractor shall not be responsible for the correction of defects in Purchaser furnished property, except for defects in installation, unless the Contractor performs, or is obligated to perform, any modifications or other work on such property. In that event, the Contractor shall be responsible for correction of defects that result from the modifications or other work.
- [RQ301] The Contractor shall provide a priced option for the Purchaser to request additional warranty under the same conditions on a yearly basis.

10.8 Inventory

- [RQ302] The Contractor shall prepare a system inventory which shall be provided prior to shipment to the Purchaser in electronic format as an Excel Spreadsheet. This shall be furnished as equipment inventories as part of the SIDP.
- [RQ303] The inventories shall include each item delivered and will be compiled under the following categories:
- Equipment (with breakdown to LRU).
 - Tools, Test Equipment, and Accessories.
 - Spare Parts.
 - Manuals and Drawings (as-built drawings, cable and wiring diagrams, and installation drawings and plans).
 - Software.
- [RQ304] The inventory information shall be provided to the Purchaser prior to shipment to each site with an MDS form.

10.9 Marking of Items and Components

The marking of items and components, with the true manufacturer part is to ensure proper and quick identification of major equipment assembly, sub-assembly, module, down to the LRU level.

This information is also necessary for positive identification to support deployment activities, for maintenance purposes, and to prevent loss of items that have been separated from their original packages or containers.

- [RQ305] Marking shall be accomplished in a manner that will not adversely affect the life, utility and control with easy access when installed.

11 Configuration Management

11.1 Introduction

- [RQ306] The Contractor shall be responsible for establishing and maintaining an effective CM organization to implement the CM programme and manage the CM functions (configuration identification and documentation, configuration control, configuration status accounting, configuration audits).

[RQ307] The Contractor shall be responsible for the application of all necessary Configuration Management (CM) procedures until Final System Acceptance, in accordance with the Contract and the requirements detailed below.

[RQ308] The Contractor shall ensure that all manufacturing integration and testing of all hardware and software items designated for delivery in the Schedule of Supplies and Services are fully controlled by the Configuration Management processes in accordance with ACMP-2009.

11.2 Configuration Management Plan

[RQ309] The Contractor shall submit as part of the PIP, a Configuration Management Plan (CMP) documenting the Configuration Management system and procedures that shall be employed during the period of this Contract.

11.3 Physical configuration audit

[RQ310] The Contractor shall provide as part of the documentation a physical configuration audit ensuring the compliance of the installation with the as-built-drawings.

11.4 Cable & Asset Management

NATO uses the “Patch Manager” Cable & Asset Management Software Solution to document end to end connectivity from core switches to all end-user devices through the passive distribution.

The NATO Patch Manager system is available only from an internal NATO network that the Contractor is not expected to reach, however Patch Manager is able to import Microsoft Excel templates.

[RQ311] The Contractor shall deliver full documentation based on the Purchaser provided templates for each horizontal and vertical cable segment between switches, wireless access points, and end-user-devices installed under this contract.

[RQ312] Both contract-provided and purchaser-provided switches shall be documented by the Contractor in Patch Manager importable format.

12 Documentation

12.1 Documentation formats and exchanges

[RQ313] The Contractor shall submit all documentation and management products to the Purchaser in electronic format whenever possible.

The acceptable means for the Contractor to send these products to the Purchaser are:

- Use of an Internet-based cloud, either part of the Contractor's customer-facing corporate environment, or through a commercial cloud provider (e.g. Microsoft OneDrive, Google Drive, DropBox) reachable by the NCI Agency staff, in line with corporate, national and NATO security guidelines.
- In the case the Contractor already has already access to the Purchaser NR Reach network, a dedicated OneDrive for Business folder can be created on the Contractor's Reach account to distribute files.
- Email, keeping in mind attachment size limitations.
- Exceptionally through physical media (e.g. DVD).

The acceptable formats for the Contractor to send all documentation products to the Purchaser are:

- For drafts and working documents: all Microsoft Office formats, PDF.
- For final documents: PDF whenever possible, except for technical products (e.g. Visio diagrams, Excel MDS forms...).

The NCI Agency is not able to validate digital signatures against commercial certificates providers, and uses an internal certificate server for its own purposes that is not reachable from external parties.

NR and above documentation will have to be sent in accordance with applicable national legislations and the Project Security Instructions §15.

[RQ314] The Contractor shall use a consistent naming scheme for the project files, which shall be presented in the PIP.

12.2 Documentation reproduction and reuse rights

[RQ315] Non-COTS documentation shall neither be marked with corporate logos nor contain warnings limiting the rights to use or reproduction. Every page shall include a header and footer indicating the highest NATO classification of content on that page.

[RQ316] In addition, the training material delivered through this contract shall permit further training sessions to be delivered directly by the User in the future.

12.3 Structure and content

This paragraph is applicable to the documentation produced by the Contractor.

[RQ317] All documentation shall contain the following information:

- Title.
- Document Number.
- Amendment Sheet.
- Issue Number and Date of Issue.
- List of Effective Pages.
- Table of Contents - this shall be broken down to list sections / chapters, major paragraphs, sub-paragraphs together with title and page.
- List and titles of drawings, illustrations, tables and abbreviations.
- Main text.
- Glossary and symbols legend.

[RQ318] The pages of the documentation shall be consecutively numbered.

[RQ319] All documentation shall be in the English language.

[RQ320] Each page shall contain the appropriate classification of the documentation stamped or typewritten in the center at the top and bottom of each page.

[RQ321] All Contractor developed drawings and schematic diagrams shall be of the same length as other pages of the manuals.

[RQ322] The appropriate NATO classification shall be the top and bottom of each drawing and, in addition, each drawing shall also contain the security classification in the identification block of the drawing.

12.4 COTS documentation

[RQ323] The Contractor shall provide Original Equipment Manufacturer (OEM) manuals for all commercial off the shelf (COTS) hardware and software installed.

[RQ324] The documentation shall cover, for all installed components, the following topics:

- Installation instructions.
- Physical, power and environmental data.

- Functional descriptions.
- Performance data.
- Descriptions of all indicators, switches, switch positions, displays etc.
- Operating instructions.
- Interfaces to external systems.
- Corrective and preventive maintenance instructions.
- Fault isolation and fault finding techniques.
- Support equipment/tools description.

[RQ325] OEM COTS manuals shall be supplemented to make them fully acceptable for Purchaser use if an OEM COTS manual does not cover the topics required above.

12.5 Maintenance Manuals

This paragraph concerns maintenance manuals produced by the Contractor or COTS manufacturers.

[RQ326] The Contractor shall create, update, maintain and deliver the Maintenance Manual, where possible based on the existing COTS-vendor OEM manuals and documentation, supplemented with adaptations and additions relevant to the products furnished under this Contract.

[RQ327] The Maintenance Manual shall define the required maintenance tools and test equipment.

[RQ328] The Maintenance Manuals shall include:

- Overview of the complete system, describing all maintenance significant items and their interdependencies.
- All information, illustrations and procedures required for the installation, configuration, provisioning, testing, repairing, replacing and troubleshooting of a CI.
- Performance data, environmental conditions, physical data, and power requirements.
- References to the OEM COTS manuals.
- Backup and restore instructions.
- Preventive maintenance schedules.

The structure and contents of the Maintenance Manual shall address all corrective and preventive maintenance tasks.

12.6 As-built documentation

This paragraph concerns the documentation, created by the Contractor, of the system as built by the contractor reflecting the installation at FSA.

[RQ329] The Contractor shall provide as-built installation documentation which reflects the complete installation conducted by the Contractor.

[RQ330] The as-built documentation provided shall include:

- A Building Layout Plan showing the location of all Contractor installed assets.
- A Cable Distribution Plan showing cable distribution for all Contractor installed cabling, per security classification.
- A Rack Layout Plan for all AGS CIS racks.
- A Cable Management Plan, clearly identifying the location and labelling of each cable, together with the terminations at both ends and the use of the cable. Labelling standards will be provided by the Purchaser during the configuration guidance session.

- A Physical and Logical Element Interconnection plan, identifying all components that make up the AGS CIS and their interconnections.
- Configurations, as far as these are implemented by the Contractor, or provided by the Purchaser for inclusion in the documentation.

13 Training

13.1 VTC room system training

- [RQ331] The Contractor shall provide training to the User on the VTC room system.
- [RQ332] The training shall cover all operations of the training room system, for users and conference organizers.
- [RQ333] The training shall be delivered to 20 users in 4 groups of 5.
- [RQ334] The training shall last half a day per group.
- [RQ335] Electronic copies of the training material shall be provided to the Purchaser in advance to the training sessions.

14 Quality assurance

14.1 Introduction

The purpose of the quality assurance requirements is twofold.

- The first objective is to ensure that the Contractor provides all deliverables at the required level of quality by utilizing a professional, best practice quality assurance framework and through internal quality control independent from the Contractor's project organization.
- The second objective of these requirements is to minimize the duration of the review cycles and decrease the review workload by ensuring that the Contractor provides mature deliverables only.

- [RQ336] The Contractor shall adhere to its company Quality Management System (QMS) for the execution of this contract.

14.2 Government Quality Assurance (GQA) plan

The GQA multilateral agreement, existing between NATO countries and NATO organizations, is laid down in the NATO Standardization Agreement [STANAG 4107], "Mutual Acceptance of Government Quality Assurance". The Contractor shall recognize and accept the application of [STANAG 4107] for this contract and sub-contracts thereof.

- [RQ337] The Contractor shall comply with the requirements of [STANAG 4107]. In addition, the Contractor shall use [AQAP 2070] as guidance to the delegation of GQA.

14.3 QA Plan

- [RQ338] As part of the Project Implementation Plan, the Contractor shall establish, document and maintain a Quality Assurance Plan (QAP).
- [RQ339] The QAP shall assure the quality of all deliverables and non-deliverable items throughout the duration of the contract and provide assurance that all activities are performed in accordance with the requirements of this contract. The QAP shall not exceed 5 pages.
- [RQ340] The Contractor's QAP shall be compliant with [STANAG 4107] and AQAP-2110 and AQAP-2210.
- [RQ341] The QAP may be tailored by the Contractor for adaption to the Contractor's own QAP or any other QAP, only if the resulting QAP is equivalent to a QAP as mandated by the above referenced AQAPs. This tailoring by the Contractor shall be subject to acceptance by the Purchaser.

- [RQ342] The QAP shall apply to all hardware, software, documentation, activities, services and supplies that are designed, developed, acquired, maintained or used, including deliverable and non-deliverable items.
- [RQ343] The QAP shall ensure that procedures are developed, implemented and maintained to adequately control the development, design, production, testing and configuration of all deliverables.
- [RQ344] The QAP shall also ensure that the exchange of deliverables from the Contractor to the Purchaser shall be adequately controlled, and that no deliverables shall be presented by the Contractor without adequate quality control and sign-off by the Contractor's QA Manager.

The QAP proposed by the Contractor is subject to approval by the Purchaser.

14.4 QA Organization

- [RQ345] The Contractor shall implement an effective QA organization to implement the QAP and manage the QA functions.
- [RQ346] QA personnel shall have sufficient responsibility, authority, organizational freedom and organizational independence to review and evaluate activities, identify problems and initiate or recommend corrective actions.

14.5 QA Planning

- [RQ347] The QAP implemented by the Contractor shall be described in the QAP (QAP). The Contractor shall provide the QAP as part of the PIP.
- [RQ348] The QAP shall identify, document and justify the organizational structure, roles and responsibilities, quality gates, tasks, milestones and procedures to be used by the Contractor to implement the QAP and fulfil the requirements of this Contract.
- [RQ349] All Contractor and Purchaser activities and milestones related to QA shall be identified and included in the project's master schedule.

14.6 QA Reporting

- [RQ350] The Contractor shall maintain a QA log during the lifetime of the project in which records are kept accounting for all QA-activities, most notably all QA reviews. All accounting shall be done through dating and sign off by the responsible QA person.
- [RQ351] The QA log shall enable the Purchaser to verify if and when a deliverable has been QA reviewed and by whom and with what result.

15 Project Security Instructions

15.1 Security Aspects Letter

In the performance of this contract, the prime Contractor and any Sub-contractor(s) are required to comply with NATO security regulations under the responsibility of the NATO Security Accreditation Authority (SAA) and National Security Agency (NSA) of the nation in which the work is performed or in the contracts involving NS.

- [RQ352] All classified information and material shall be protected in accordance with the NATO security regulations.
- [RQ353] In particular, the Contractor shall:
- Appoint an officer to be responsible for supervising and directing security measures in relation to the Request for Proposals (RFP), contract or sub-contract.

- Submit in due time to the NSA the personal particulars of the persons the contractor wishes to employ on the project with a view to obtaining PSCs at the required level where NC information and above is involved.
- Maintain, under the responsibility of the appointed security officer, a continuing relationship with the NSA and / or the Contracting Authority in order to ensure that all NATO classified information involved in the bid, contract or sub-contract is properly safeguarded.
- Limit the copying of any classified materiel (including documents) to the absolute minimum to perform the contract.
- Supply the NSA, when so requested by the latter, with any information on the persons who will be required to have access to NATO classified information.
- Maintain a record of all employees, including subcontractors, taking part in the project and who have been cleared for access to NATO classified information. This record must show the period of validity and the level of the clearances.
- Deny access to NATO classified information to any persons other than those authorized to have access by the NSA and in the case of NS information as determined by their Security Clearance and need-to-know.
- Limit the dissemination of NATO classified information to the smallest number of persons as is consistent with the proper execution of the contract or sub- contract.
- Comply with any request that persons to be entrusted with NATO classified information sign a statement undertaking to safeguard that information and signifying their understanding of their obligations under national legislation on the safeguarding of classified information, and that they recognize that they may have comparable obligations under the laws of the other NATO nations in which they may have access to classified information.
- Report to the Security Officer and to its NSA any breaches or suspected breaches of security, suspected sabotage or subversive activity, any breach giving rise to doubts as to the trustworthiness of an employee, any changes in the ownership, supervisory or managerial staff of the facility or any changes that affect the security arrangements and security status of the facility, and any other information which may be required by the NSA, such as reports on holdings of NATO classified information or materiel.
- Obtain the approval of the project office and NSA before beginning negotiations with a view to sub-contracting any part of the work which would involve the Sub-contractor having possible access to NATO classified information, and to place the Sub-contractor under appropriate security obligations which in no case may be less stringent than those provided for its own contract.
- Undertake not to utilize, other than for the specific purpose of the bid, contract or sub-contract, without the written permission of the project office or the prime Contractor, any NATO classified information supplied to him, and return to the project office all classified information referred to above, as well as that developed in connection with the contract or sub-contract unless such information has been destroyed, or its retention has been duly authorized by the contracting office or the sub-contracting officer. Such NATO classified information shall be returned at such time as the contracting office may direct. and
- Comply with any procedure established with respect to the dissemination of NATO classified information in connection with the contract or sub-contract.

[RQ354] Any person taking part in the performance of work shall possess the appropriate NATO security clearance issued by their NSA. The level of this clearance must be at least equal to the security category of the materiel, the related information and specifications being accessed. Any person provided

administrative credentials to a system will require a clearance of a higher level than the classification level of the system itself.

- [RQ355] Unless specifically authorized to do so by the project office, the Contractor shall not pass on any NATO classified information to any third party to whom a request to supply goods or services has been submitted.
- [RQ356] No change in level of classification or de-classification of documentation or materiel shall be carried out unless written authority in this respect is obtained from the project office.
- [RQ357] No CIS shall be used for processing classified information without prior accreditation by the responsible authorities.
- [RQ358] Failure to implement these provisions shall result in termination of the contract under the non-financial termination clause.
- [RQ359] The contractor shall destroy or return any classified information provided or generated under the contract unless the contracting authority has given written approval to retain such classified information, e.g. for warranty purposes.
- [RQ360] The Contractor shall be required to acknowledge receipt of an accompanying SAL and Project Security Instruction (PSI) that is made part of the applicable contract and confirm that it understands the security aspects defined. With respect to contracts involving only NS information the Contractor shall also be required to confirm that it will comply with the provisions of the Contract Security Clause and specifically that any company CIS used to handle or process NS classified information has been appropriately security accredited.

15.2 Security Classification Guide

The security classification guide indicates the degree of classification of the data and materiel (equipment, information, technical manuals, specifications...) which may be handled in the performance of work under this contract and which must be safeguarded in accordance with the provisions of this letter.

This guidance establishes the mapping of NATO classification categorization associated to CIS architecture, engineering, and NATO sites information. It must be used to determine the minimum sensitivity of material and the protection of such. This guide shall be used by all NATO, Project Management Team (PMT), Concept Design Team (CDT), and Contractor personnel, including consultants, (both retained and prospective) involved with the project.

Classified material is categorized at four levels indicating the magnitude of potential harm to NATO/national security, if the information is subject to unauthorized disclosure:

- NATO R3TRICTED (NR) would be detrimental to the interest or effectiveness of NATO.
- NATO CONFID3NTIAL (NC) would cause damage to NATO.
- NATO S3CRET (NS) would cause grave damage to NATO.
- COSMIC TOP S3CRET (CTS) would cause exceptionally grave damage NATO.

NATO UNCLASSIFIED (NU) is used to indicate that the information is related to official NATO business.

The codes NR, NC, NS, CTS and NU, are used in the guideline to reference its corresponding classification category.

The classification identifying the overall effort, goal, mission and purpose of this project design phase is NATO UNCLASSIFIED (NU).

Technical manuals generated, obtained, or developed in support of classified end items will be classified at the highest level of classification of the end item.

The guideline applies to all forms of information and information sharing (hardcopy, electronic, audio, video, digital, telephonic and photographic) used to develop criteria and designs and construct or renovate the subject facilities. These may include, but not be limited to:

- As-Built documents
- Bids
- Lists of Material
- Budget documents
- Calculations
- Construction Security Plans (CSPs)
- Contracts
- Cost Estimates
- Design Guidelines
- Designs
- Evacuation Plans
- Facsimiles
- Generic Designs
- Inspection Reports
- Maintenance Plans, Manuals and Studies
- Operating Manuals
- Planning papers & reports
- Plans
- Photography
- Programming documents
- Proposals
- Repair Manuals
- Requests for Proposals
- Review Comments
- Shop Drawings
- Signage
- Specifications
- Standardized designs
- Statements of work (SOWs)
- Studies
- Submittals
- Submittal Registers
- Survey Reports
- Tests Procedures and Test Results

The Classification Guidance Matrix shall be used to identify the minimum Security Classification Level. In addition Originators of information shall review the Security Classification based on potential harm to NATO in case of unauthorized disclosure.

Document	Minimum Expected Security Classification	Comment
The Project Implementation Plan	NU	
The Project Implementation Plan	NU	
Project Status Reports	NU	
Minutes of Project Progress Review Meetings	NU NR	NU in general. NR or higher when sensitive information disclosed (see also Constraining Information)
The Risk Management Plan	NU	
The Quality Assurance Plan	NU	
QA Log	NU	
The Configuration Management Plan	NU	
The Functional Configuration Audit	NU	
The Physical Configuration Audit	NU	
The Design Document	NU NR	NU when not containing sensitive information. NR or higher when sensitive information are identified. See also Constraining Information
The Total Cost of Ownership Assessment Report	NU	
The Security Test and Verification Plan-template	NU	Template without results NR for template containing test linked to security sensitive systems
The Security Test and Verification Plan - completed	NR NS	NR when completed NS when identifying critical vulnerabilities.
CIS Description	NR	It is expected to contain security sensitive information.
SAP	NU	

SRA	NR	NS for sensitive systems
CSRS	NR	
SecOps	NU	NR when developed for sensitive systems (<i>i.e.</i> specific admin systems...)
SSRS	NR	
SISRS	NR	
Migration Strategy	NU	
The Transition and Migration Plan	NU	
Site Survey Reports	NU	NR when sensitive information identifying a named location or security assessment
Requirements Traceability Matrix	NU	
The Test and Acceptance Plan-template	NU	template only
The Test and Acceptance Plan-completed	NR	NR when sensitive information identifying a named location or security assessment
Test Failure Report	NR	
Off-specification Report	NU	NR for security related issues
System Version Definition Document	NU	
Test Reports-template	NU	
Test Reports-results	NR	
The Integrated Support Plan	NU	
The Transportation Report	NU	
The Logistics Support Analysis Plan	NU	
The Support Case	NU	
The In Service Support Plan	NU	
The CLS Plan (part of the In Service Support Plan)	NU	

The Monthly CLS Report	NU	
The Training Plan (part of the Integrated Support Plan)	NU	
The Issue Management Plan	NU	
The Operations Manual	NU	NU by default but classification subject to the information contained in the guide (see also Constraining Information)
COTS Manuals	NU	
The Maintenance Manual	NU	NU by default but classification subject to the information contained in the guide (see also Constraining Information)
The Software Distribution List	NU	
The Recommended Items Lists (part of the Support Case)	NU	
As built drawings	NU NR/NC	NR/NC based on sensitive information (see also Constraining Information)
Site Inventories	NU	See also Constraining Information
Documentation Plan (part of the Integrated Support Plan)	NU	
Constraining Information (higher precedence than document classification guidance) - non-exhaustive	Minimum Expected Security Classification	Comment
IP addresses identifying specific components.	NR NC	At least NR except for publicly exposed IP addresses resolvable from internet (<i>i.e.</i> external Mail Transfer Agent). NC for as built document containing IP addresses and locations.
PACS or LACS system location(s) are defined (<i>i.e.</i> diagram of the site with the location of the mechanism)	NR	

<p>Component Security vulnerability identification including: Vulnerability reports, Inference of vulnerabilities (when components are detailed in an exhaustive manner allowing to infer existing vulnerabilities, <i>i.e.</i> firmware version + hardware + OS version + application version + usage of the solution...)</p>	<p>NR NC NS</p>	<p>NR for non-critical vulnerabilities of system and services. NC for critical vulnerabilities. NS for critical vulnerabilities of critical system (exposed services, BPS, network Infrastructure components, Site physical access security systems...)</p>
<p>Credentials</p>	<p>NR NS</p>	<p>Any documented credential information of any services/system will be at least NR.</p>
<p>Sensitive information linked to a Named location</p>	<p>NR</p>	



NATO UNCLASSIFIED

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Book 2 – Statement of Work

NATO UNCLASSIFIED

Cat	Item	Part number	Qty	Spare
EUD	End user devices (EUD) - All TEMPEST C			
EUD	NS Workstation Standard			
EUD	Dell Optiplex 5000 - TEMPEST C		306	20
EUD	Form Factor SFF			
EUD	Microsoft Licences Windows 10 Pro (Includes Windows 11 Pro License) English, Dutch, French, German, Italian			
EUD	Processor 12th Generation Intel Core i5-12500 (6 Cores 3.0GHz to 4.6GHz/65W)			
EUD	Graphics Intel UHD Graphics 630, Performance: at least 917@ 1024x600 in ComputeMark v2.14, Triple Display Capable (1920x1200@60Hz on each display minimum); Compatible with DirectX 12 (Feature Level12.0) and OpenGL 4.5; HDMI 1.4 and Displayport			
EUD	Memory 8GB (1x8GB) DDR4 Non-ECC Memory			
EUD	Storage M.2 2230 256GB PCIe NVMe Class 35 Opal 2.0 Self Encrypting Solid State Drive //up to 2344 MB/s Seq. reads – 1366 MB/s Seq. Writes			
EUD	I/O Ports Front: USB 2.0 Type-A port with PowerShare USB 2.0 Type-A port USB 3.2 Gen 1 Type-A port USB 3.2 Gen 2x1 Type-C® port Universal audio port Rear: (4) USB 3.2 Gen 1 Type-A ports (2) USB 2.0 Type-A ports with Smart Power On (2) DisplayPort 1.4a ports			
EUD	Network 1000Base-SX, LC connector, Wake-On-LAN, PXE			
EUD	Expansion Slots 1x PCIe x16 & 1x PCIe x4			

Cat	Item	Part number	Qty	Spare
EUD	Security Trusted Platform Module (TPM) 2.0 chip on the motherboard// 27600 bytes non-volatile memory located in the TPM module; AES New Instructions (AES-NI) SecureKey, BIOS Guard, OS Guard or equivalent; PnP and BIOS setup/boot password/system configuration protection			
EUD	Lock Kensington lock slot included			
EUD	NS Workstation High Performance			
EUD	Dell Precision 3660 - TEMPEST C		7	1
EUD	Form Factor Tower			
EUD	Microsoft Licences Windows 10 Pro (Includes Windows 11 Pro License)			
EUD	Processor Intel® Core™ i5-12500 processor (18MB Cache, 6 Core (6P+0E), 3.0GHz to 4.6GHz (65W)) TDP			
EUD	Security SafeID including Trusted Platform Module (TPM) 2.0 (FIPs 140-2-Certificate), Smartcard keyboard (FIPS), Microsoft Windows 10 Device Guard and Credential Guard (Enterprise SKU), Microsoft Windows Bitlocker, Local hard disk data erasure via BIOS (secure erase), Self-encrypting storage drives (Opal, FIPS), SafeBIOS: includes Dell off-host BIOS check, BIOS failsafe, BIOS recovery and additional BIOS controls			
EUD	Remote management UEFI Enabled, Intel vPro Out of Band Management Technology			
EUD	Memory 16GB, 2x8GB, DDR5 up to 4400MHz expandable at least 128 GB, 4 x 32 GB, DDR5, 3600 MHz			
EUD	Local storage C1 M.2 SSD 512-GB-SSD, PCIe, NVMe™, Calss 40 (Read: 6770 MB/s // Write: 4389 MB/s)			
EUD	GPU Nvidia GeForce RTX 3060, Base Clock 1320 MHz, Floating-point performance: 12.74 TFLOPS Bus Interface: PCIe 4.0 x16, Recommended Resolutions: 1920x1080 2560x1440 3840x2160 Outputs: 1x HDMI 2.1 3x DisplayPort 1.4a			
EUD	NIC 1000Base-SX, LC connector, Wake-On-LAN, PXE			

Cat	Item	Part number	Qty	Spare
EUD	Ports Front: USB 3.2 Gen 1-Port (5 Gbit/s) with PowerShare USB 3.2-Gen 1-Port (5 Gbit/s) USB 3.2-Gen 2-Port (Typ-C, 10 Gbit/s) USB 3.2-Gen 2x2-Port (Typ-C, 20 Gbit/s) with PowerShare SD Card Reader 4.0 Rear: USB 2.0-Ports (480 Mbit/s) with Smart Power On USB 3.2-Gen 2-Ports (10 Gbit/s) USB 3.2 Gen 2-Ports (Typ C, 10 Gbit/s)			
EUD	Sound Audio-Controller Realtek ALC3246-CG, Audio out (3.5mm jack), Audio-mic combo (3.5mm) jack			
EUD	Power supply and cords 500W Platinum PSU and cord (according to local requirements)			
EUD	Lock Kensington lock socket			
EUD	NS Workstation GIS			
EUD	Dell Precision 5820 1000Base-SX - TEMPEST C		5	1
EUD	Form Factor Tower			
EUD	Microsoft Licences MS Windows 10 Pro OEM 64bit no-media			
EUD	Processor Intel Core i9-10900X			
EUD	Security Trusted Platform Module (TPM) 2.0 (or later) chip on the motherboard AES New Instructions (AES-NI), SecureKey, BIOS Guard, OS Guard or equivalent PnP and BIOS setup/boot password/system configuration protection			
EUD	Memory 32GB			
EUD	Primary Storage Solid State capacity: 512 GB, performance: 560MB/sec sequential read and 530MB/sec sequential write, durability: 600 TBW, in removable flex bay, supported functions: TCG Opal, IEEE-1667, FDE AES-256			
EUD	Secondary storage 8 TB Solid State capacity, performance: 560MB/sec sequential read and 530MB/sec sequential write, durability: 600 TBW, in removable flex bay, supported functions: TCG Opal, IEEE-1667, FDE AES-256			

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Cat	Item	Part number	Qty	Spare
EUD	GPU NVIDIA Quadro P2200 4x Display Port			
EUD	NIC 1000Base-SX, LC connector, Wake-On-LAN, PXE			
EUD	Sound Integrated full duplex sound card			
EUD	Power supply and cords 1x Power adapter and cord (according to local requirements)			
EUD	Ports 1x USB 3.2 Gen 1 Type C 1x USB 3.2 Gen 1 Type C port (DP/PowerDelivery) 6x USB 3.2 Gen 1 Type A ports 2x USB 3.2 Gen 1 Type A port (DP/PowerDelivery)			
EUD	Lock Kensington lock socket			
EUD	NS Workstation monitor			
EUD	24" Monitor Dell P2422H - TEMPEST C	7025SB0067589	323	25
EUD	NS Workstation ancillaries			
EUD	Dell KB216 Multimedia Keyboard - TEMPEST C	7050SB0045085	318	22
EUD	Dell 6 button Laser Mouse - TEMPEST C	7050SB0045086	318	22
EUD	Plantronics Blackwire 3220 - 209745-101 - TEMPEST C	5965SB0065030	318	22
EUD	CAMERA, WEB, POLYCOM STUDIO P5, 1920X1080, 1XUSB 2.0 - TEMPEST C	7050SB0070358	318	22
EUD	Kensington MicroSaver 2.0 Chassis Lock	5340SB0063389	318	22
EUD	Kensington MicroSaver 2.0 Lock Master Key	5999SB0041916	318	22
EUD	Desktop VTC			
EUD	POLY Studio X30 - TAA, No Radios - TEMPEST C	G2200-86615-001	2	
EUD	MONITOR, 24", DELL P2418HT LED, DP/HDMI/USB3.0/VGA, 1920X1080, TOUCHSCREEN, TEMPEST C		2	
CYB	Cyber			
CYB	Gateway Security solution NS			
CYB	SFP+ form factor, LR 10 Gb optical transceiver, long reach 10 km, SMF, duplex LC, IEEE 802.3ae 10GBASE-LR compliant	PAN-SFP-PLUS-LR	10	
CYB	Gateway Security software NS			
CYB	Firemon ANN-SPFM-SMLO: Annual Subscription Software License and Support		2	
CYB	Firemon ANN-SPFM-SMLO-HA: Annual Subscription Software License and Support		2	
CYB	Monitoring solution NS			
CYB	IXIA Vision E10S System AC Chassis with fixed (48) 1G/10G; Includes license for (16) 1G/10G ports and 20Gbps of PacketStack. (991-0180)	SYS-E10S-16P-AC	1	

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Cat	Item	Part number	Qty	Spare
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, enables PacketStack Deduplication feature, perpetual licensed per system (993-0185)	LIC-E10S-DDUP	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, enables PacketStack Header stripping feature, perpetual licensed per system (993-0187)	LIC-E10S-STRP	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, enables PacketStack Tunneling feature, perpetual licensed per system (993-0188)	LIC-E10S-TUNL	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, perpetual Port license for an additional (16) 1G/10G ports (993-0183)	LIC-E10S-16P	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia, SFP+ 10GBASE SR pluggable optical transceiver, MMF (multimode fiber), 850nm, 300m reach, LC (995-8044)	SFP-PLUS-SR-XCVR	16	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	16	
CYB	IXIA Vision 1G SFP copper transceiver (995-0003)	CGI	0	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	0	
CYB	IXIA Rack Mount Chassis for Flex Taps, 24 Slots, with Slot ID Labels. (955-8186)	RK-FLEX-ID-24	1	
CYB	Ixia Flex Tap, fiber, multi-mode 1G/10G/25G/50G, SR, 50um, LC, 70/30 (955-0165)	TPX-10-SR-50-70	4	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	4	
CYB	Ixia PS-Ixia NVS Solution Services (972-4025) (in Europe, 2 days)	972-4025	1	
CYB	IXIA Cable Assembly Kit, LC/LC, 1G/10G, MM, 50um	705-0012-001	4	
CYB	Full Packet Capture solution NS			
CYB	Warranty for Net Witness S6 (per month)	NW S6 SED Core TP Appl EnhMnt 1Mo	36	
CYB	Net Witness Decoder Storage PV HD 96TB	NW-PVHDE96	1	
CYB	Warranty for Net Witness Decoder Storage (per month)	NW-PV-A-E1	36	
CYB	Net Witness Concentrator Storage PV HP 78TB	NW-PVHPE78	1	
CYB	Warranty for Concentrator (per month)	NW S6 SED Core TP Appl EnhMnt 1Mo	36	
CYB	Warranty for Concentrator storage (per month)	NW-PV-D-E1	36	
CYB	Net Witness T2, 11-50TB/day NetM perTB Perp lic	SA-NETMON-P-T2	1	
CYB	Net Witness T2, 11-50TB/day NetM perTB 1Mo	SA-NETMON-P-T2-E1	36	
CYB	NCDP Networking NS			
CYB	Catalyst 9300 24-port data only, Network Advantage	C9300-24T-A	2	
CYB	SOLN SUPP 8X5XNBD Catalyst 9300 24-port data only, Network	CON-SSSNT-C930024A	2	
CYB	C9300 Network Advantage, 24-port license	C9300-NW-A-24	2	
CYB	Cisco Catalyst 9300 XE 16.12 UNIVERSAL	S9300UK9-1612	2	
CYB	350W AC 80+ platinum Config 1 Power Supply	PWR-C1-350WAC-P	2	
CYB	350W AC 80+ platinum Config 1 Secondary Power Supply	PWR-C1-350WAC-P/2	2	

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Cat	Item	Part number	Qty	Spare
CYB	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	2	
CYB	50CM Type 1 Stacking Cable	STACK-T1-50CM	2	
CYB	Catalyst Stack Power Cable 30 CM	CAB-SPWR-30CM	2	
CYB	C9300 DNA Advantage, 24-Port Term Licenses	C9300-DNA-A-24	2	
CYB	C9300 DNA Advantage, 24-port - 3 Year Term License	C9300-DNA-A-24-3Y	2	
CYB	Catalyst 9300 8 x 10GE Network Module	C9300-NM-8X	2	
CYB	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
CYB	CISCO OPTICAL 10 Gb optical SFP+ SR	SFP-10G-SR	32	
CYB	VPN router NS			
CYB	Juniper SRX-380 VPN Service Gateway (including JUNOS 36 month Licence)	SRX380-P-SYSJB-AC	2	
CYB	Juniper SRX-380 VPN Service Gateway 36 months support	SVC-ND-SRX380JB	2	
CYB	600W AC-source power supply for SRX 380	JPSU-600-AC-AFO	2	
CYB	J-Series Power Cable, EU	CBL-JX-PWR-EU	2	
CYB	Small Form Factor Pluggable 1000Base-SX Gigabit Ethernet Optics	SRX-SFP-1GE-SX	10	
CYB	Juniper compliant optical 10 Gb optical SFP+ SR	SFP-10GE-SR	8	
CYB	Juniper compliant optical 10 Gb optical SFP+ LR	SFP-10GE-LR	8	
	SRX380 rack mount kit	EX-4PST-RMK	2	
CYB	NCDP Server Hardware NS			
CYB	Dell VSAN-RN R7515		2	
CYB	Chassis with up to 24x2.5" Drives	379-BDTF	2	
CYB	NVMe Backplane	379-BDSX	2	
CYB	Dell VSAN-RN R7515	210-AWXP	2	
CYB	All Flash IDM, VSAN-RN R7515	350-BCBB, 350-BCBG	2	
CYB	Trusted Platform Module 2.0	461-AAEM	2	
CYB	2.5" Chassis with up to 24 NVMe Drives	321-BERW	2	
CYB	AMD EPYC 7742 2.25GHz, 64C/128T, 256M Cache (225W) DDR4-3200	338-BSWN	2	
CYB	Standard Heatsink	412-AASE	2	
CYB	Performance Optimized	370-AAIP	2	
CYB	3200MT/s RDIMMs	370-AEVR	2	
CYB	64GB RDIMM, 3200MT/s, Dual Rank	370-AEVP	24	
CYB	BOSS controller card + with 2 M.2 Sticks 240G (RAID 1),FH	403-BCHP	2	
CYB	C30, No RAID for NVME chassis	780-BCDO	2	
CYB	No Controller	405-AACD	2	
CYB	No Hard Drive	400-ABHL	2	
CYB	800GB, Enterprise, NVMe, Write Intensive, U2, G4, Intel Optane P5800X with carrier	400-BMUL	2	
CYB	6.4TB Enterprise NVMe Mixed Use AG Drive U.2 Gen4 with carrier	400-BKGI	24	
CYB	UEFI BIOS Boot Mode with GPT Partition	800-BBDM	2	

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Cat	Item	Part number	Qty	Spare
CYB	No Additional Mid Fan	384-BBSO	2	
CYB	Dual, Hot-plug, Redundant Power Supply (1+1), 1100W	450-ADWM	2	
CYB	European Power Cord 220V	450-AAXU	4	
CYB	Riser Config 2, 2 x 16 FH + 2 x 16 LP PCIe slot	330-BBNL	2	
CYB	PowerEdge R7515 Motherboard, with 2 x 1Gb Onboard LOM (BCM5720)MLK	384-BCUN	2	
CYB	OpenManage Enterprise Advanced	528-BIYY	2	
CYB	iDRAC9, Enterprise 15G	385-BBOT	2	
CYB	Broadcom 57416 Dual Port 10 GbE SFP+ Network LOM Mezz Card	540-BBZE	2	
CYB	Broadcom 57414 Dual Port 10/25GbE SFP28 Adapter, PCIe Low Profile	540-BBVK	2	
CYB	Emulex LPE 31002 Dual Port 16Gb Fibre Channel HBA, PCIe Low Profile	403-BBMB	2	
CYB	PowerEdge 2U Standard Bezel	350-BBWP	2	
CYB	No Quick Sync	350-BBKU	2	
CYB	iDRAC,Legacy Password	379-BCSG	2	
CYB	iDRAC Group Manager, Enabled	379-BCQV	2	
CYB	No Operating System	611-BBBF	2	
CYB	No Media Required	605-BBFN	2	
CYB	OpenManage Integration for VMware vCenter - 1 host increment, 3 year license digitally fulfilled	634-BJBD	2	
CYB	ReadyRails™ Sliding Rails With Cable Management Arm	770-BBBR	2	
CYB	No Systems Documentation, No OpenManage DVD Kit	631-AACK	2	
CYB	PowerEdge R7515 Ship Material	343-BBMU	2	
CYB	PowerEdge R7515 CE,CCC Marking	389-DURZ	2	
CYB	PowerEdge R7515 Shipping EMEA1 (English/French/German/Spanish/Russian/Hebrew)	340-CNWP	2	
CYB	Platinum PSU Configuration	389-EFJU	2	
CYB	No Internal Optical Drive for x10 or greater HDD Chassis	429-AAIQ	2	
CYB	INFO-VSAN READY NODE	821-18369	2	
CYB	Basic Next Business Day 36 Months, 36 Month(s)	709-BBIL	2	
CYB	ProSupport and Next Business Day Onsite Service, 36 Month(s)	865-BBMY	2	
CYB	Keep Your Hard Drive For Enterprise, 36 Month(s)	711-BBIY	2	
CYB	No Installation Service Selected (Contact Sales rep for more details)	683-11870	2	
CYB	Dell compatible OPTICAL 10 Gb optical SFP+ SR	SFP-10GE-SR	12	
CYB	NCDP KVM NS			
CYB	Dell Digital 16 Port KVM Switch	[A7485893] / A7485893	1	
CYB	DMPUIQ-VMCHS Server Interface Pod for VGA,USB keyboard,mouse supporting virtual media,CAC,USB2.0	[A7485901] / A7485901	16	
CYB	DMPUIQ-SRL: Serial Interface Pod for digital switches	[A7485902] / A7485902	1	
CYB	Dell OU mounting bracket for the DMPU and DAV KVMs mounted vertically using square hole racks.	[A7485899] / A7485899	1	
CYB	3 Year Gold DMPU2016 Hardware Maintenance by Avocent	[A7547290] / A7547290	1	
CYB	Dell LED KMM, 18.5", 1U, International English Keyboard - DKMMLED185 - 001	DKMMLED185 - 001	1	

Cat	Item	Part number	Qty	Spare
CYB	Tier 3 Analyst Workstation NS			
CYB	Dell Optiplex 7080 SFF - TEMPEST C		1	
CYB	OptiPlex 7000 Small Form Factor			
CYB	12th Gen Intel® Core™ i5-12500 (18 MB cache, 6 cores, 12 threads, 3.00 GHz to 4.60 GHz Turbo, 65 W)			
CYB	Windows 10 Pro (Windows 11 Pro license included), English, French, Spanish			
CYB	8 GB, 1 x 8 GB, DDR4			
CYB	256 GB, M.2 2230, PCIe NVMe, SSD, Class 35			
CYB	No Additional Hard Drive			
CYB	Intel® Integrated Graphics			
CYB	No Optical Drive			
CYB	No Media Card Reader			
CYB	No Wireless LAN Card (no WiFi enablement)			
CYB	No wireless driver			
CYB	Optional Serial Port			
CYB	240 W internal power supply unit (PSU), 85% Efficient, 80 Plus Bronze			
CYB	Dell KB216 Wired Keyboard English, US			
CYB	Dell Optical Mouse - MS116 (Black)			
CYB	No Cable Cover			
CYB	No Additional Cable			
CYB	No External Speaker			
CYB	No Stand or Mount			
CYB	Dell Applications Windows 10 & 11 DGR with Dell Optimizer, IRST			
CYB	OS-Windows Media Not Included			
CYB	ENERGY STAR Qualified			
CYB	NO RAID			
CYB	System Power Cord (EU)			
CYB	Safety/Environment and Regulatory Guide (English/French Multi-language)			
CYB	Dell Watchdog Timer			
CYB	Quick Start Guide			
CYB	Print on Demand Label			
CYB	Trusted Platform Module (Discrete TPM Enabled)			
CYB	Shipping Material			
CYB	PowerDVD Software not included			
CYB	Regulatory Label for OptiPlex 7000 SFF 240W			
CYB	M.2 Caddy			
CYB	Intel Core i5 vPro Enterprise Processor Label			
CYB	BTS/BTP Shipment			

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Cat	Item	Part number	Qty	Spare
CYB	7000SFF_1H23_004D/US/BTS			
CYB	Internal Speaker			
CYB	No Additional Network Card Selected (Integrated NIC included)			
CYB	No Additional Video Ports			
CYB	No Additional Add In Cards			
CYB	EPEAT 2018 Registered (Gold)			
CYB	Intel vPro® Enterprise			
CYB	No AutoPilot			
CYB	3 Years Hardware Service with Onsite/In-Home Service After Remote Diagnosis			
CYB	No Microsoft Office License included			
CYB	No anti-virus software			
CYB	Dell SFF server rack mount			
CYB	NCDP Virtualization Software NS			
CYB	Red Hat Enterprise Linux Server, Standard (1 Physical Per Socket Pair or 2 Virtual Nodes) 3 year		11	
CYB	Gateway Security solution NU			
CYB	Palo Alto Networks PA-5410 with redundant AC power supplies	PAN-PA-5410-AC	2	
CYB	SFP+ form factor, 10Gb direct attach twin-ax passive cable with 2 transceiver ends and 5m of cable permanently bonded as an assembly, IEEE 802.3ae 10GBASE-CR compliant	PAN-SFP-PLUS-CU-5M	2	
CYB	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	PAN-SFP-PLUS-SR	24	
CYB	Palo Alto Networks PA-5450 4 post rack mount kit, spare only (1 is included with base system)	PAN-PA-5450-RACK4	2	
CYB	Premium support 3 year, PA-5410	PAN-SVC-PREM-5410-3YR	2	
CYB	PA-5410, Threat prevention subscription, for one (1) device in an HA pair, 3 year (36 months) term. Recommended for air gapped/closed environments.	PAN-PA-5410-TP-HA2	2	
CYB	SFP+ form factor, LR 10 Gb optical transceiver, long reach 10 km, SMF, duplex LC, IEEE 802.3ae 10GBASE-LR compliant	PAN-SFP-PLUS-LR	10	
CYB	Gateway Security software NU			
CYB	Firemon ANN-SPFM-SMLO: Annual Subscription Software License and Support		2	
CYB	Firemon ANN-SPFM-SMLO-HA: Annual Subscription Software License and Support		2	
CYB	Monitoring solution NU			
CYB	IXIA Vision E10S System AC Chassis with fixed (48) 1G/10G; Includes license for (16) 1G/10G ports and 20Gbps of PacketStack. (991-0180)	SYS-E10S-16P-AC	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, enables PacketStack Deduplication feature, perpetual licensed per system (993-0185)	LIC-E10S-DDUP	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, enables PacketStack Header stripping feature, perpetual licensed per system (993-0187)	LIC-E10S-STRP	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	

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Cat	Item	Part number	Qty	Spare
CYB	Ixia Vision E10S, enables PacketStack Tunneling feature, perpetual licensed per system (993-0188)	LIC-E10S-TUNL	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia Vision E10S, perpetual Port license for an additional (16) 1G/10G ports (993-0183)	LIC-E10S-16P	1	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	1	
CYB	Ixia, SFP+ 10GBASE SR pluggable optical transceiver, MMF (multimode fiber), 850nm, 300m reach, LC (995-8044)	SFP-PLUS-SR-XCVR	16	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	16	
CYB	IXIA Vision 1G SFP copper transceiver (995-0003)	CGI	8	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	8	
CYB	IXIA Rack Mount Chassis for Flex Taps, 24 Slots, with Slot ID Labels. (955-8186)	RK-FLEX-ID-24	1	
CYB	Ixia Flex Tap, fiber, multi-mode 1G/10G/25G/50G, SR, 50um, LC, 70/30 (955-0165)	TPX-10-SR-50-70	4	
CYB	Ixia NVS Basic to Essential Upgrade-EMEA/APAC/LAR (909-0764)	909-0764	4	
CYB	Ixia PS-Ixia NVS Solution Services (972-4025) (in Europe, 2 days)	972-4025	1	
CYB	IXIA Cable Assembly Kit, LC/LC, 1G/10G, MM, 50um	705-0012-001	4	
CYB	Full Packet Capture solution NU			
CYB	Net Witness S6 Network Decoder	NW-S6E-CORE_NL	1	
CYB	Warranty for S6 (per month)	NW S6 SED Core TP Appl EnhMnt 1Mo	36	
CYB	Net Witness Decoder Storage PV HD 96TB	NW-PVHDE96	1	
CYB	Warranty for Decoder Storage (per month)	NW-PV-A-E1	36	
CYB	NW S6 Ntwk Concentrator	NW-S6E-CORE_NL	1	
CYB	Warranty for Concentrator (per month)	NW S6 SED Core TP Appl EnhMnt 1Mo	36	
CYB	Net Witness Concentrator Storage PV HP 78TB	NW-PVHPE78	1	
CYB	Warranty for Concentrator storage (per month)	NW-PV-D-E1	36	
CYB	NW T2, 11-50TB/day NetM perTB Perp lic	SA-NETMON-P-T2	1	
CYB	NW T2, 11-50TB/day NetM perTB 1Mo	SA-NETMON-P-T2-E1	36	
CYB	NCDP Networking NU			
CYB	Catalyst 9300 24-port data only, Network Advantage	C9300-24T-A	2	
CYB	SOLN SUPP 8X5XNBD Catalyst 9300 24-port data only, Network	CON-SSSNT-C930024A	2	
CYB	C9300 Network Advantage, 24-port license	C9300-NW-A-24	2	
CYB	Cisco Catalyst 9300 XE 16.12 UNIVERSAL	S9300UK9-1612	2	
CYB	350W AC 80+ platinum Config 1 Power Supply	PWR-C1-350WAC-P	2	
CYB	350W AC 80+ platinum Config 1 Secondary Power Supply	PWR-C1-350WAC-P/2	2	
CYB	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	2	
CYB	50CM Type 1 Stacking Cable	STACK-T1-50CM	2	
CYB	Catalyst Stack Power Cable 30 CM	CAB-SPWR-30CM	2	

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Cat	Item	Part number	Qty	Spare
CYB	C9300 DNA Advantage, 24-Port Term Licenses	C9300-DNA-A-24	2	
CYB	C9300 DNA Advantage, 24-port - 3 Year Term License	C9300-DNA-A-24-3Y	2	
CYB	Catalyst 9300 8 x 10GE Network Module	C9300-NM-8X	2	
CYB	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
CYB	CISCO OPTICAL 10 Gb optical SFP+ SR	SFP-10G-SR	16	
CYB	VPN router NU			
CYB	Juniper SRX-380 VPN Service Gateway (including JUNOS 36 month Licence)	SRX380-P-SYSJB-AC	2	
CYB	Juniper SRX-380 VPN Service Gateway 36 months support	SVC-ND-SRX380JB	2	
CYB	600W AC-source power supply for SRX 380	JPSU-600-AC-AFO	2	
CYB	J-Series Power Cable, EU	CBL-JX-PWR-EU	2	
CYB	Small Form Factor Pluggable 1000Base-SX Gigabit Ethernet Optics	SRX-SFP-1GE-SX	10	
CYB	Juniper compliant optical 10 Gb optical SFP+ SR	SFP-10GE-SR	8	
CYB	Juniper compliant optical 10 Gb optical SFP+ LR	SFP-10GE-LR	8	
	SRX380 rack mount kit	EX-4PST-RMK	2	
CYB	NCDP Server Hardware NU			
CYB	Dell VSAN-RN R7515		2	
CYB	Chassis with up to 24x2.5" Drives	379-BDTF	2	
CYB	NVMe Backplane	379-BDSX	2	
CYB	Dell VSAN-RN R7515	210-AWXP	2	
CYB	All Flash IDM, VSAN-RN R7515	350-BCBB, 350-BCBG	2	
CYB	Trusted Platform Module 2.0	461-AAEM	2	
CYB	2.5" Chassis with up to 24 NVMe Drives	321-BERW	2	
CYB	AMD EPYC 7742 2.25GHz, 64C/128T, 256M Cache (225W) DDR4-3200	338-BSWN	2	
CYB	Standard Heatsink	412-AASE	2	
CYB	Performance Optimized	370-AAIP	2	
CYB	3200MT/s RDIMMs	370-AEVR	2	
CYB	64GB RDIMM, 3200MT/s, Dual Rank, 16Gb	370-AEVP	24	
CYB	BOSS controller card + with 2 M.2 Sticks 240G (RAID 1),FH	403-BCHP	2	
CYB	C30, No RAID for NVME chassis	780-BCDO	2	
CYB	No Controller	405-AACD	2	
CYB	No Hard Drive	400-ABHL	2	
CYB	800GB, Enterprise, NVMe, Write Intensive, U2, G4, Intel Optane P5800X with carrier	400-BMUL	4	
CYB	6.4TB Enterprise NVMe Mixed Use AG Drive U.2 Gen4 with carrier	400-BKGI	24	
CYB	UEFI BIOS Boot Mode with GPT Partition	800-BBDM	2	
CYB	No Additional Mid Fan	384-BBSO	2	
CYB	Dual, Hot-plug, Redundant Power Supply (1+1), 1100W	450-ADWM	2	
CYB	European Power Cord 220V	450-AAXU	4	

Cat	Item	Part number	Qty	Spare
CYB	Riser Config 2, 2 x 16 FH + 2 x 16 LP PCIe slot	330-BBNL		2
CYB	PowerEdge R7515 Motherboard, with 2 x 1Gb Onboard LOM (BCM5720)MLK	384-BCUN		2
CYB	OpenManage Enterprise Advanced	528-BIYY		2
CYB	iDRAC9, Enterprise 15G	385-BBOT		2
CYB	Broadcom 57416 Dual Port 10 GbE SFP+ Network LOM Mezz Card	540-BBZE		2
CYB	Broadcom 57414 Dual Port 10/25GbE SFP28 Adapter, PCIe Low Profile	540-BBVK		2
CYB	Emulex LPE 31002 Dual Port 16Gb Fibre Channel HBA, PCIe Low Profile	403-BBMB		2
CYB	PowerEdge 2U Standard Bezel	350-BBWP		2
CYB	No Quick Sync	350-BBKU		2
CYB	iDRAC,Legacy Password	379-BCSG		2
CYB	iDRAC Group Manager, Enabled	379-BCQV		2
CYB	No Operating System	611-BBBF		2
CYB	No Media Required	605-BBFN		2
CYB	OpenManage Integration for VMware vCenter - 1 host increment, 3 year license digitally fulfilled	634-BJBD		2
CYB	ReadyRails™ Sliding Rails With Cable Management Arm	770-BBBR		2
CYB	No Systems Documentation, No OpenManage DVD Kit	631-AACK		2
CYB	PowerEdge R7515 Ship Material	343-BBMU		2
CYB	PowerEdge R7515 CE,CCC Marking	389-DURZ		2
CYB	PowerEdge R7515 Shipping EMEA1 (English/French/German/Spanish/Russian/Hebrew)	340-CNWP		2
CYB	Platinum PSU Configuration	389-EFJU		2
CYB	No Internal Optical Drive for x10 or greater HDD Chassis	429-AAIQ		2
CYB	INFO-VSAN READY NODE	821-18369		2
CYB	Basic Next Business Day 36 Months, 36 Month(s)	709-BBIL		2
CYB	ProSupport and Next Business Day Onsite Service, 36 Month(s)	865-BBMY		2
CYB	Keep Your Hard Drive For Enterprise, 36 Month(s)	711-BBIY		2
CYB	No Installation Service Selected (Contact Sales rep for more details)	683-11870		2
CYB	Dell compatible OPTICAL 10 Gb optical SFP+ SR	SFP-10GE-SR		12
CYB	NCDP KVM NU			
CYB	Dell Digital 16 Port KVM Switch	[A7485893] / A7485893		1
CYB	DMPUIQ-VMCHS Server Interface Pod for VGA,USB keyboard,mouse supporting virtual media,CAC,USB2.0	[A7485901] / A7485901		16
CYB	DMPUIQ-SRL: Serial Interface Pod for digital switches	[A7485902] / A7485902		1
CYB	Dell 0U mounting bracket for the DMPU and DAV KVMs mounted vertically using square hole racks.	[A7485899] / A7485899		1
CYB	3 Year Gold DMPU2016 Hardware Maintenance by Avocent	[A7547290] / A7547290		1
CYB	Dell LED KMM, 18.5", 1U, International English Keyboard - DKMMLED185 - 001	DKMMLED185 - 001		1
CYB	Tier 3 Analyst Workstation NU			
CYB	Dell Optiplex 7080 SFF			1
CYB	OptiPlex 7000 Small Form Factor			

Cat	Item	Part number	Qty	Spare
CYB	12th Gen Intel® Core™ i5-12500 (18 MB cache, 6 cores, 12 threads, 3.00 GHz to 4.60 GHz Turbo, 65 W)			
CYB	Windows 10 Pro (Windows 11 Pro license included), English, French, Spanish			
CYB	8 GB, 1 x 8 GB, DDR4			
CYB	256 GB, M.2 2230, PCIe NVMe, SSD, Class 35			
CYB	No Additional Hard Drive			
CYB	Intel® Integrated Graphics			
CYB	No Optical Drive			
CYB	No Media Card Reader			
CYB	Intel Wi-Fi-6E 2x2 AX211 Bluetooth 5.2 Wireless Card with Internal Antenna			
CYB	Wireless Driver, Intel AX211			
CYB	Optional Serial Port			
CYB	240 W internal power supply unit (PSU), 85% Efficient, 80 Plus Bronze			
CYB	Dell KB216 Wired Keyboard English, US			
CYB	Dell Optical Mouse - MS116 (Black)			
CYB	No Cable Cover			
CYB	No Additional Cable			
CYB	No External Speaker			
CYB	No Stand or Mount			
CYB	Dell Applications Windows 10 & 11 DGR with Dell Optimizer, IRST			
CYB	OS-Windows Media Not Included			
CYB	ENERGY STAR Qualified			
CYB	NO RAID			
CYB	System Power Cord (EU)			
CYB	Safety/Environment and Regulatory Guide (English/French Multi-language)			
CYB	Dell Watchdog Timer			
CYB	Quick Start Guide			
CYB	Print on Demand Label			
CYB	Trusted Platform Module (Discrete TPM Enabled)			
CYB	Shipping Material			
CYB	PowerDVD Software not included			
CYB	Regulatory Label for OptiPlex 7000 SFF 240W			
CYB	M.2 Caddy			
CYB	Intel Core i5 vPro Enterprise Processor Label			
CYB	BTS/BTP Shipment			
CYB	7000SFF_1H23_004D/US/BTS			
CYB	Internal Speaker			
CYB	No Additional Network Card Selected (Integrated NIC included)			

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Cat	Item	Part number	Qty	Spare
CYB	No Additional Video Ports			
CYB	No Additional Add In Cards			
CYB	EPEAT 2018 Registered (Gold)			
CYB	Intel vPro® Enterprise			
CYB	No AutoPilot			
CYB	3 Years Hardware Service with Onsite/In-Home Service After Remote Diagnosis			
CYB	No Microsoft Office License included			
CYB	No anti-virus software			
CYB	Dell SFF server rack mount			
CYB	NCDP Virtualization Software NS			
CYB	Red Hat Enterprise Linux Server, Standard (1 Physical Per Socket Pair or 2 Virtual Nodes) 3 year		11	
CYB	Tier 2 uplift			
CYB	Dell Controller DD6900 NFS CIFS[PowerProtect DD6900]		1	
CYB	<i>Components</i>			
CYB	SYSTEM DD6900 NFS CIFS	321-BEYX	1	
CYB	DD 1.92TB internal Cache SSD	400-BHKT	2	
CYB	DD 10GBASE-T IO MODULE 4PORT NDC	406-BBPC	1	
CYB	DD 12G 4 port SAS HBA	406-BBPF	2	
CYB	DD 10GSFP IO MODULE 4Port Full Height	406-BBPD	2	
CYB	XCVR 10GbE SR SFP	407-BCHR	4	
CYB	DD 3M SAS HD FLEX	470-ADZE	1	
CYB	ProSupport Plus Mission Critical Operating Environment Software Support Maintenance, 60 Month(s)	487-BBNY	1	
CYB	Education Services - Dell EMC Proven Professional Exam Voucher Expire1YR	423-10139	1	
CYB	DD6900 Field Install kit	750-ABNU	1	
CYB	LICENSE BASE DD OE =IA	528-BYIF	1	
CYB	<i>Software</i>			
CYB	DD OS 7.2=IA	619-APHZ	1	
CYB	<i>Service</i>			
CYB	ProDeploy Plus for PowerProtect Data Domain 6XXX 9XXX	683-23696	1	
CYB	<i>ProDeploy Plus for PowerProtect Data Domain 6XXX 9XXX Deployment Verification</i>	683-23697	1	
CYB	Education Services - PowerProtect DD Systems Admin Instructor Led Training	423-10095	1	
CYB	Parts Only Warranty 12 Months, 12 Month(s)	709-BBNH	1	
CYB	<i>ProSupport Plus and 4Hr Mission Critical Initial, 12 Month(s)</i>	199-BBBF	1	
CYB	ProSupport Plus and 4Hr Mission Critical Extension, 48 Month(s)	199-BBBG	1	
CYB	DD DS60 SHELF Field[PowerProtect DD 4TB DS60 - 120TB]		1	
CYB	<i>Components</i>			
CYB	HDD 12G DISK PK 15X4TB SAS FL DS60	400-BMDQ	1	

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Cat	Item	Part number	Qty	Spare
CYB	ProSupport Plus Mission Critical DD New 1TB Software Support Maintenance, 60 months	487-BBNI	60	
CYB	ProSupport Plus Mission Critical DD Boost 1TB Software Support Maintenance, 60 months	487-BBMZ	60	
CYB	ProSupport Plus Mission Critical DD Replication 1TB Software Support, Maintenance, 60 Month(s)	487-BBNE	60	
CYB	DD New Software 1TB Raw=CB	528-BYIR	60	
CYB	DS60 4TB Active 1TB Raw=CB	528-CQOF	60	
CYB	DD Boost Software 1TB Raw=CB	528-BYIS	60	
CYB	DD Replication Software 1TB Raw=CB	528-BYIT	60	
CYB	Service			
CYB	<i>ProSupport PLUS Mission Critical DD Raw DS60 4TB Active 1TB Sftwr Spt-Maint, 60 Month(s)</i>	487-BHRY	60	
CYB	ProDeploy Plus for DSXX	683-23660	1	
CYB	ProDeploy Plus for DSXX Deployment Verification	683-23661	1	
CYB	Parts Only Warranty 12 Months, 12 Month(s)	709-BBNH	1	
CYB	ProSupport Plus and 4Hr Mission Critical Initial, 12 Month(s)	199-BBBF	1	
CYB	ProSupport Plus and 4Hr Mission Critical Extension, 48 Month(s)	199-BBBG	1	
CYB	DD Spare Base[DD6900 FC Card]	210-BCLU	1	
CYB	UPG 16GBIT FC IO Module 4PORT	406-BBQH	1	
CYB	XCVR 16GFC SFP	407-BCHS	4	
NS	NS distribution			
NS	NS DC Layer			
NS	Nexus 9300 with 28p 100G and 8p 400G	N9K-C93600CD-GX	2	
NS	SNTC-24X7X4 Nexus 9300 with 28p 100G and 8p 400G	CON-SNTP-N9KC936G	2	
NS	Dummy PID for Airflow Selection Port-side Exhaust	NXK-AF-PE	2	
NS	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	NXK-ACC-KIT-1RU	2	
NS	Nexus Fan, 35CFM, port side exhaust airflow	NXA-FAN-35CFM-PE	12	
NS	Nexus AC 1100W PSU - Port Side Exhaust	NXA-PAC-1100W-PE2	4	
NS	Cabinet Jumper Power Cord, 250 VAC 10A, C14-C13 Connectors	CAB-C13-CBN	4	
NS	OPT OUT FOR "Default" DCN Subscription Selection	C1-SUBS-OPTOUT	2	
NS	Dummy PID for mode selection	MODE-NXOS	2	
NS	Nexus 9500, 9300 Base NX-OS Software Rel 10.2.1(64-bit)	NXOS-64-10.2.1F	2	
NS	10GBASE-SR SFP Module	SFP-10G-SR=	20	
NS	10GBASE-LR SFP Module	SFP-10G-LR=	12	
NS	NS Core Layer			
NS	Catalyst 9500 48-port x 1/10/25G + 4-port 40/100G, Advantage	C9500-48Y4C-A	2	
NS	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK	2	
NS	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY	4	
NS	C9500 Network Stack, Advantage	C9500-NW-A	2	
NS	Cisco Catalyst 9500H XE.17.5 UNIVERSAL	SC9500HUK9-175	2	

Cat	Item	Part number	Qty	Spare
NS	No SSD Card Selected	C9500-SSD-NONE	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2	2	
NS	Power Cord Jumper, C13-C14 Connectors, 2 Meter Length	CAB-C13-C14-2M	4	
NS	C9500 DNA Advantage, Term License	C9500-DNA-48Y4C-A	2	
NS	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	6	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NS	10GBASE-SR SFP Module	SFP-10G-SR=	16	
NS	10GBASE-LR SFP Module	SFP-10G-LR=	12	
NS	SOLN SUPP 8X5XNBD Catalyst 9500 48-port 25/100G only, Adv	CON-SSSNT-C9504YA4	2	
NS	SOLN SUPP SW SUBC9500 DNA Advantage	CON-SSTCM-C9524QA	2	
NS	Cisco Catalyst 9500 DNA Advantage 3 Year License	C9500-DNA-A-3Y	2	
NS	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	6	
NS	NS Distribution layer			
NS	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	C9500-24Y4C-A	2	
NS	SNTC-24X7X4 Catalyst 9500 24-port 25/100G only, Adv	CON-SNTP-C95024YA	2	
NS	C9500 Network Stack, Advantage	C9500-NW-A	2	
NS	UNIVERSAL	S9500UK9-169	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2	2	
NS	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	CAB-9K10A-EU	4	
NS	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK	2	
NS	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY	4	
NS	C9500 DNA Premier, 24Y4C Port , Term License	C9500-DNA-24Y4C-P	2	
NS	C9500 DNA Premier 12Q/16X / 24Y4C 3Year Term License	C9500-DNA-L-P-3Y	2	
NS	ISE BASE Term License	ISE-BASE-T	50	
NS	ISE BASE Tracker Term 3Y	ISE-BASE-TRK-3Y	50	
NS	ISE PLS Term License	ISE-PLS-T	50	
NS	ISE PLS Tracker Term 3Y	ISE-PLS-TRK-3Y	50	
NS	StealthWatch 1 FPS Term License	SWATCH-T	200	
NS	ISE BASE Tracker Term 3Y	SWATCH-TRK-3Y	200	
NS	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	6	
NS	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	6	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NS	10GBASE-SR SFP Module	SFP-10G-SR=	0	
NS	10GBASE-LR SFP Module	SFP-10G-LR=	8	
NS	NS Access Layer			

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Cat	Item	Part number	Qty	Spare
NS	Catalyst 9300 48 GE SFP Ports, modular uplink Switch	C9300-48S-A	24	
NS	C9300 Network Advantage, 48-port license	C9300-NW-A-48	24	
NS	Cisco Catalyst 9300 XE 16.12 UNIVERSAL	S9300UK9-1612	24	
NS	715W AC 80+ platinum Config 1 Power Supply	PWR-C1-715WAC-P	24	
NS	715W AC 80+ platinum Config 1 SecondaryPower Supply	PWR-C1-715WAC-P/2	24	
NS	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	48	
NS	Catalyst 9300 8 x 10GE Network Module	C9300-NM-8X	24	
NS	50CM Type 1 Stacking Cable	STACK-T1-50CM	24	
NS	1M Type 1 Stacking Cable	STACK-T1-1M	12	
NS	Catalyst Stack Power Cable 30 CM	CAB-SPWR-30CM	0	
NS	Catalyst Stack Power Cable 150 CM	CAB-SPWR-150CM	0	
NS	C9300 DNA Advantage, 48-Port Fiber Term Licenses	C9300-DNA-A-48S	24	
NS	Cisco ThousandEyes Enterprise Agent IBN Embedded	TE-EMBEDDED-T	24	
NS	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	24	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	24	
NS	1000BASE-T SFP transceiver module for Category 5 copper wire	GLC-TE=	8	
NS	100BASE-FX SFP for GE SFP port on 3750,3560.2970,2960	GLC-GE-100FX=	0	
NS	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD=	550	
NS	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD=	8	
NS	10GBASE-SR SFP Module	SFP-10G-SR=	0	
NS	10GBASE-LR SFP Module	SFP-10G-LR=	40	
NS	SOLN SUPP 8X5XNBD Catalyst 9300 48 GE SFP Ports, modular u	CON-SSSNT-C93004SA	24	
NS	SOLN SUPP SW SUBC9300 DNA Advantage	CON-SSTCM-C93A48S	24	
NS	C9300 DNA Advantage, 48-Port Fiber, 3 Year Term License	C9300-DNA-A-48S-3Y	24	
NS	ThousandEyes - Enterprise Agents	TE-EMBEDDED-T-3Y	24	
NS	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	24	
NS	NS External SW			
NS	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	C9500-24Y4C-A	2	
NS	SNTC-24X7X4 Catalyst 9500 24-port 25/100G only, Adva	CON-SNTP-C95024YA	2	
NS	C9500 Network Stack, Advantage	C9500-NW-A	2	
NS	UNIVERSAL	S9500UK9-169	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R	2	
NS	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2	2	
NS	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	CAB-9K10A-EU	4	
NS	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK	2	
NS	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY	4	
NS	C9500 DNA Premier, 24Y4C Port , Term License	C9500-DNA-24Y4C-P	2	

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Cat	Item	Part number	Qty	Spare
NS	C9500 DNA Premier 12Q/16X / 24Y4C 3Year Term License	C9500-DNA-L-P-3Y	2	
NS	ISE BASE Term License	ISE-BASE-T	50	
NS	ISE BASE Tracker Term 3Y	ISE-BASE-TRK-3Y	50	
NS	ISE PLS Term License	ISE-PLS-T	50	
NS	ISE PLS Tracker Term 3Y	ISE-PLS-TRK-3Y	50	
NS	StealthWatch 1 FPS Term License	SWATCH-T	200	
NS	ISE BASE Tracker Term 3Y	SWATCH-TRK-3Y	200	
NS	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	6	
NS	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	6	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NS	10GBASE-SR SFP Module	SFP-10G-SR=	20	
NS	10GBASE-LR SFP Module	SFP-10G-LR=	20	
NS	NS DSMS			
NS	Catalyst 9300 24-port data only, Network Advantage	C9300-24T-A	3	
NS	C9300 Network Advantage, 24-port license	C9300-NW-A-24	3	
NS	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	SC9300UK9-175	3	
NS	350W AC 80+ platinum Config 1 Power Supply	PWR-C1-350WAC-P	3	
NS	350W AC 80+ platinum Config 1 Secondary Power Supply	PWR-C1-350WAC-P/2	3	
NS	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	6	
NS	No SSD Card Selected	C9300-SSD-NONE	3	
NS	No Stack Cable Selected	C9300-STACK-NONE	3	
NS	No Stack Power Cable Selected	C9300-SPWR-NONE	3	
NS	TE agent for IOSXE on C9K	TE-C9K-SW	3	
NS	C9300 DNA Advantage, 24-port Term Licenses	C9300-DNA-A-24	3	
NS	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	3	
NS	Cisco DNA Spaces Extend Term License for Catalyst Switches	D-DNAS-EXT-S-T	3	
NS	Cisco ThousandEyes Enterprise Agent IBN Embedded	TE-EMBEDDED-T	3	
NS	Catalyst 9300 4 x 1GE Network Module	C9300-NM-4G	3	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	3	
NS	SOLN SUPP 8X5XNBD Catalyst 9300 24-port data only, Network	CON-SSSNT-C93002TA	3	
NS	SOLN SUPP SW SUBC9300 DNA Advantage	CON-SSTCM-C93A24	3	
NS	C9300 DNA Advantage, 24-Port, 3 Year Term License	C9300-DNA-A-24-3Y	3	
NS	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	3	
NS	Cisco DNA Spaces Extend for Catalyst Switching - 3Year	D-DNAS-EXT-S-3Y	3	
NS	ThousandEyes - Enterprise Agents	TE-EMBEDDED-T-3Y	3	
NS	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD=	3	
NS	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD=	3	

Cat	Item	Part number	Qty	Spare
NS	RECN-NS			
NS	Cisco Catalyst C8200-1N-4T Router	C8200-1N-4T	3	
NS	Cisco Catalyst 8200 Edge 16GB memory	MEM-C8200-16GB	3	
NS	Cisco Catalyst 8000 Edge M.2 USB 16GB	M2USB-16G	3	
NS	AC Power Cord (Europe), C13, CEE 7, 1.5M	CAB-ACE	3	
NS	Cisco Catalyst 8000 Edge RFID - 1RU	C-RFID-1R	3	
NS	U.S. Export Restriction Compliance license for C8000 series	C8000-HSEC	3	
NS	Cisco Catalyst 8200 Rack mount kit - 19" 1R	C8200-RM-19-1R	3	
NS	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	3	
NS	Cisco Catalyst 8200 Edge NIM Blank	C8200-NIM-BLANK	3	
NS	Cisco Catalyst 8200 Edge PIM Blank	C8200-PIM-BLANK	3	
NS	TE agent for IOSXE on Enterprise Routing	TE-R-SW	3	
NS	IOS XE Autonomous boot up mode for Unified image	IOSXE-AUTO-MODE	3	
NS	UNIVERSAL	SC8KBEUK9-176	3	
NS	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD	12	
NS	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD	12	
NS	Cisco DNA Advantage On-Prem Lic 3Y - upto 1G (Aggr, 2G)	DNA-P-T2-A-3Y	3	
NS	Solution Support for SW - DNA Advantage OnPrem Lic, T2, 3Y	SVS-PDNA-T2-A3Y	3	
NS	Cisco DNA Advantage Stack - upto 1G (Aggr, 2G)	DSTACK-T2-A	3	
NS	Cisco Network Advantage Stack - upto 1G (Aggr, 2G)	NWSTACK-T2-A	3	
NS	Cisco Umbrella for DNA Advantage	SDWAN-UMB-ADV	3	
NS	Cisco DNA Center On Prem Deployment Option for WAN	DNAC-ONPREM-PF	3	
NS	SOLN SUPP 24X7X4 Cisco Catalyst C8200	CON-SSSNP-C82001N4	3	
NU	NU distribution			
NU	NU DC Layer			
NU	Nexus 9300 with 28p 100G and 8p 400G	N9K-C93600CD-GX	2	
NU	SNTC-24X7X4 Nexus 9300 with 28p 100G and 8p 400G	CON-SNTP-N9KC936G	2	
NU	Dummy PID for Airflow Selection Port-side Exhaust	NXK-AF-PE	2	
NU	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	NXK-ACC-KIT-1RU	2	
NU	Nexus Fan, 35CFM, port side exhaust airflow	NXA-FAN-35CFM-PE	12	
NU	Nexus AC 1100W PSU - Port Side Exhaust	NXA-PAC-1100W-PE2	4	
NU	Cabinet Jumper Power Cord, 250 VAC 10A, C14-C13 Connectors	CAB-C13-CBN	4	
NU	OPT OUT FOR "Default" DCN Subscription Selection	C1-SUBS-OPTOUT	2	
NU	Dummy PID for mode selection	MODE-NXOS	2	
NU	Nexus 9500, 9300 Base NX-OS Software Rel 10.2.1(64-bit)	NXOS-64-10.2.1F	2	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	20	
NU	10GBASE-LR SFP Module	SFP-10G-LR=	12	

Cat	Item	Part number	Qty	Spare
NU	10GBASE-SR SFP Module	SFP-10G-SR=	24	
NU	40GBASE-CR4 Passive Copper Cable, 1m	QSFP-H40G-CU1M	12	
NU	NU Core Layer			
NU	Catalyst 9500 48-port x 1/10/25G + 4-port 40/100G, Advantage	C9500-48Y4C-A	2	
NU	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK	2	
NU	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY	4	
NU	C9500 Network Stack, Advantage	C9500-NW-A	2	
NU	Cisco Catalyst 9500H XE.17.5 UNIVERSAL	SC9500HUK9-175	2	
NU	No SSD Card Selected	C9500-SSD-NONE	2	
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R	2	
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2	2	
NU	Power Cord Jumper, C13-C14 Connectors, 2 Meter Length	CAB-C13-C14-2M	4	
NU	C9500 DNA Advantage, Term License	C9500-DNA-48Y4C-A	2	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	6	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	16	
NU	10GBASE-LR SFP Module	SFP-10G-LR=	12	
NU	SOLN SUPP 8X5XNBD Catalyst 9500 48-port 25/100G only, Adva	CON-SSSNT-C9504YA4	2	
NU	SOLN SUPP SW SUBC9500 DNA Advantage	CON-SSTCM-C9524QA	2	
NU	Cisco Catalyst 9500 DNA Advantage 3 Year License	C9500-DNA-A-3Y	2	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	6	
NU	NU Distribution layer			
NU	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	C9500-24Y4C-A	2	
NU	SNTC-24X7X4 Catalyst 9500 24-port 25/100G only, Adva	CON-SNTP-C95024YA	2	
NU	C9500 Network Stack, Advantage	C9500-NW-A	2	
NU	UNIVERSAL	S9500UK9-169	2	
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R	2	
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2	2	
NU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	CAB-9K10A-EU	4	
NU	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK	2	
NU	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY	4	
NU	C9500 DNA Premier, 24Y4C Port , Term License	C9500-DNA-24Y4C-P	2	
NU	C9500 DNA Premier 12Q/16X / 24Y4C 3Year Term License	C9500-DNA-L-P-3Y	2	
NU	ISE BASE Term License	ISE-BASE-T	50	
NU	ISE BASE Tracker Term 3Y	ISE-BASE-TRK-3Y	50	
NU	ISE PLS Term License	ISE-PLS-T	50	
NU	ISE PLS Tracker Term 3Y	ISE-PLS-TRK-3Y	50	

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Cat	Item	Part number	Qty	Spare
NU	StealthWatch 1 FPS Term License	SWATCH-T	200	
NU	ISE BASE Tracker Term 3Y	SWATCH-TRK-3Y	200	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	6	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	6	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	0	
NU	10GBASE-LR SFP Module	SFP-10G-LR=	8	
NU	NU Access Layer			
NU	Catalyst 9300 48-port PoE+, Network Advantage	C9300-48P-A	32	
NU	C9300 Network Advantage, 48-port license	C9300-NW-A-48	32	
NU	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	SC9300UK9-175	32	
NU	715W AC 80+ platinum Config 1 Power Supply	PWR-C1-715WAC-P	32	
NU	715W AC 80+ platinum Config 1 SecondaryPower Supply	PWR-C1-715WAC-P/2	32	
NU	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	64	
NU	No SSD Card Selected	C9300-SSD-NONE	32	
NU	50CM Type 1 Stacking Cable	STACK-T1-50CM	28	
NU	100CM Type 1 Stacking Cable	STACK-T1-1M	6	
NU	No Stack Power Cable Selected	C9300-SPWR-NONE	32	
NU	TE agent for IOSXE on C9K	TE-C9K-SW	32	
NU	C9300 DNA Advantage, 48-Port Term Licenses	C9300-DNA-A-48	32	
NU	Cisco DNA Premier Add-On Session Opt Out (No Fulfillment)	C1-ADD-OPTOUT	32	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	32	
NU	Cisco DNA Spaces Extend Term License for Catalyst Switches	D-DNAS-EXT-S-T	32	
NU	Cisco ThousandEyes Enterprise Agent IBN Embedded	TE-EMBEDDED-T	32	
NU	Catalyst 9300 8 x 10GE Network Module	C9300-NM-8X	32	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	32	
NU	1000BASE-T SFP transceiver module for Category 5 copper wire	GLC-TE=	0	
NU	100BASE-FX SFP for GE SFP port on 3750,3560.2970,2960	GLC-GE-100FX=	0	
NU	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD=	24	
NU	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD=	10	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	18	
NU	10GBASE-LR SFP Module	SFP-10G-LR=	42	
NU	SOLN SUPP 8X5XNBD Catalyst 9300 48-port PoE+, Network Adva	CON-SSSNT-C93004PA	32	
NU	SOLN SUPP SW SUBC9300 DNA Advantage	CON-SSTCM-C93A48	32	
NU	C9300 DNA Advantage, 48-Port, 3 Year Term License	C9300-DNA-A-48-3Y	32	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	32	
NU	Cisco DNA Spaces Extend for Catalyst Switching - 3Year	D-DNAS-EXT-S-3Y	32	

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Cat	Item	Part number	Qty	Spare
NU	ThousandEyes - Enterprise Agents	TE-EMBEDDED-T-3Y		32
NU	NU External SW			
NU	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	C9500-24Y4C-A		2
NU	SNTC-24X7X4 Catalyst 9500 24-port 25/100G only, Adva	CON-SNTP-C95024YA		2
NU	C9500 Network Stack, Advantage	C9500-NW-A		2
NU	UNIVERSAL	S9500UK9-169		2
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R		2
NU	650W AC Config 4 Power Supply front to back cooling	C9K-PWR-650WAC-R/2		2
NU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	CAB-9K10A-EU		4
NU	Cisco pluggable SSD storage	C9K-F1-SSD-BLANK		2
NU	Catalyst 9500 Type 4 front to back cooling Fan	C9K-T1-FANTRAY		4
NU	C9500 DNA Premier, 24Y4C Port , Term License	C9500-DNA-24Y4C-P		2
NU	C9500 DNA Premier 12Q/16X / 24Y4C 3Year Term License	C9500-DNA-L-P-3Y		2
NU	ISE BASE Term License	ISE-BASE-T		50
NU	ISE BASE Tracker Term 3Y	ISE-BASE-TRK-3Y		50
NU	ISE PLS Term License	ISE-PLS-T		50
NU	ISE PLS Tracker Term 3Y	ISE-PLS-TRK-3Y		50
NU	StealthWatch 1 FPS Term License	SWATCH-T		200
NU	ISE BASE Tracker Term 3Y	SWATCH-TRK-3Y		200
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T		6
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y		6
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC		2
NU	10GBASE-SR SFP Module	SFP-10G-SR=		20
NU	10GBASE-LR SFP Module	SFP-10G-LR=		20
NU	T10x NU Distribution			
NU	Catalyst 9300 48-port PoE+, Network Advantage	C9300-48P-A		2
NU	C9300 Network Advantage, 48-port license	C9300-NW-A-48		2
NU	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	SC9300UK9-175		2
NU	715W AC 80+ platinum Config 1 Power Supply	PWR-C1-715WAC-P		2
NU	715W AC 80+ platinum Config 1 SecondaryPower Supply	PWR-C1-715WAC-P/2		2
NU	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN		4
NU	No SSD Card Selected	C9300-SSD-NONE		2
NU	50CM Type 1 Stacking Cable	STACK-T1-50CM		2
NU	100CM Type 1 Stacking Cable	STACK-T1-1M		0
NU	No Stack Power Cable Selected	C9300-SPWR-NONE		2
NU	TE agent for IOSXE on C9K	TE-C9K-SW		2
NU	C9300 DNA Advantage, 48-Port Term Licenses	C9300-DNA-A-48		2

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Cat	Item	Part number	Qty	Spare
NU	Cisco DNA Premier Add-On Session Opt Out (No Fulfillment)	C1-ADD-OPTOUT	2	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	2	
NU	Cisco DNA Spaces Extend Term License for Catalyst Switches	D-DNAS-EXT-S-T	2	
NU	Cisco ThousandEyes Enterprise Agent IBN Embedded	TE-EMBEDDED-T	2	
NU	Catalyst 9300 8 x 10GE Network Module	C9300-NM-8X	2	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NU	1000BASE-T SFP transceiver module for Category 5 copper wire	GLC-TE=	20	
NU	100BASE-FX SFP for GE SFP port on 3750,3560.2970,2960	GLC-GE-100FX=	0	
NU	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD=	2	
NU	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD=	10	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	0	
NU	10GBASE-LR SFP Module	SFP-10G-LR=	4	
NU	SOLN SUPP 8X5XNBD Catalyst 9300 48-port PoE+, Network Adva	CON-SSSNT-C93004PA	2	
NU	SOLN SUPP SW SUBC9300 DNA Advantage	CON-SSTCM-C93A48	2	
NU	C9300 DNA Advantage, 48-Port, 3 Year Term License	C9300-DNA-A-48-3Y	2	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	2	
NU	Cisco DNA Spaces Extend for Catalyst Switching - 3Year	D-DNAS-EXT-S-3Y	2	
NU	ThousandEyes - Enterprise Agents	TE-EMBEDDED-T-3Y	2	
NU	NU DSMS			
NU	Catalyst 9300 24-port data only, Network Advantage	C9300-24T-A	3	
NU	C9300 Network Advantage, 24-port license	C9300-NW-A-24	3	
NU	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	SC9300UK9-175	3	
NU	350W AC 80+ platinum Config 1 Power Supply	PWR-C1-350WAC-P	3	
NU	350W AC 80+ platinum Config 1 Secondary Power Supply	PWR-C1-350WAC-P/2	3	
NU	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	CAB-C15-CBN	6	
NU	No SSD Card Selected	C9300-SSD-NONE	3	
NU	No Stack Cable Selected	C9300-STACK-NONE	3	
NU	No Stack Power Cable Selected	C9300-SPWR-NONE	3	
NU	TE agent for IOSXE on C9K	TE-C9K-SW	3	
NU	C9300 DNA Advantage, 24-port Term Licenses	C9300-DNA-A-24	3	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	3	
NU	Cisco DNA Spaces Extend Term License for Catalyst Switches	D-DNAS-EXT-S-T	3	
NU	Cisco ThousandEyes Enterprise Agent IBN Embedded	TE-EMBEDDED-T	3	
NU	Catalyst 9300 4 x 1GE Network Module	C9300-NM-4G	3	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	3	
NU	SOLN SUPP 8X5XNBD Catalyst 9300 24-port data only, Network	CON-SSSNT-C93002TA	3	
NU	SOLN SUPP SW SUBC9300 DNA Advantage	CON-SSTCM-C93A24	3	

Cat	Item	Part number	Qty	Spare
NU	C9300 DNA Advantage, 24-Port, 3 Year Term License	C9300-DNA-A-24-3Y	3	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	3	
NU	Cisco DNA Spaces Extend for Catalyst Switching - 3Year	D-DNAS-EXT-S-3Y	3	
NU	ThousandEyes - Enterprise Agents	TE-EMBEDDED-T-3Y	3	
NU	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM	GLC-LH-SMD=	3	
NU	1000BASE-SX SFP transceiver module, MMF, 850nm, DOM	GLC-SX-MMD=	3	
NU	NU WLC			
NU	Cisco Catalyst 9800-L Wireless Controller_Fiber Uplink	C9800-L-F-K9	2	
NU	Cisco Catalyst 9800 Series Wireless Controller DTLs License	LIC-C9800-DTLS-K9	2	
NU	C9800L UNIVERSAL (NETWORK ESSENTIALS)	SC9800LK9-1612	2	
NU	C9800 Wireless Controller Rack Mount Tray	C9800L-RMNT	2	
NU	Cisco Catalyst 9800 L Wireless Controller Power Supply	C9800-AC-110W	2	
NU	AC Power Cord, Type C5, Europe	CAB-AC-C5-EUR	2	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	2	
NU	10GBASE-SR SFP Module	SFP-10G-SR=	12	
NU	SOLN SUPP 24X7X4 Cisco Catalyst 9800-L Wireless Controlle	CON-SSSNP-C9800FL	2	
NU	NU WAP			
NU	Cisco Catalyst 9136I Series, Internal Antennas,-E Regulator	C9136I-E	200	
NU	SOLN SUPP 8X5XNBD Cisco Catalyst 9136I Series, Internal A	CON-SSSNT-C9136IEX	200	
NU	SNTC-24X7X4 Cisco Catalyst 9136I Series	CON-SNTP-C9136I	200	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	200	
NU	Wireless Cisco DNA On-Prem Advantage,	CDNA-A-C9136	200	
NU	C9136I Cisco DNA On-Prem Advantage 3Y Term,Trk Lic	DNA-A-3Y-C9136	200	
NU	Ceiling Grid Clip for APs & Cellular Gateways-Recessed	AIR-AP-T-RAIL-R	200	
NU	802.11 AP Low Profile Mounting Bracket (Default)	AIR-AP-BRACKET-1	200	
NU	Wireless Cisco DNA On-Prem Advantage, Term Lic	AIR-DNA-A	200	
NU	Wireless Cisco DNA On-Prem Advantage, 3Y Term Lic	AIR-DNA-A-3Y	200	
NU	Prime AP Term Licenses	PI-LFAS-AP-T	200	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	200	
NU	Wireless Cisco DNA On-Prem Advantage, Term, Tracker Lic	AIR-DNA-A-T	200	
NU	Wireless Cisco DNA On-Prem Advantage, 3Y Term, Tracker Lic	AIR-DNA-A-T-3Y	200	
NU	AIR CISCO DNA Perpetual Network Stack	AIR-DNA-NWSTACK-A	200	
NU	Cisco DNA Spaces Extend Option for Cisco DNA 1Yr Term	D-DNAS-EXT-T	200	
NU	Cisco DNA Spaces Extend Option for Cisco DNA 3Y	D-DNAS-EXT-3Y	200	
NU	NU Hangar Ext			
NU	Catalyst 9000 Compact Switch 8 port PoE+, 240W, Adv	C9200CX-8P-2X2G-A	4	
NU	SOLN SUPP 24X7X4 Catalyst 9000 Compact Switch 8 port PoE+	CON-SSSNP-C920CXYZ	4	

Cat	Item	Part number	Qty	Spare
NU	C9200CX Network Advantage, 8-port license	C9200CX-NW-A-8	4	
NU	Europe AC Type A Power Cable	CAB-TA-EU	4	
NU	UNIVERSAL	SCAT9200CXUK9-178	4	
NU	C9200CX Cisco DNA Advantage, 8-Port Term Licenses	C9200CX-DNA-A-8	4	
NU	C9200CX Cisco DNA Advantage, 3Y Term License, 8P	C9200CX-DNAA8-3Y	4	
NU	SOLN SUPP SW SUB C9200CX Cisco DNA Advantage, 8-Port Term	CON-SSTCM-C9201CCD	4	
NU	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	PI-LFAS-T	4	
NU	PI Dev Lic for Lifecycle & Assurance Term 3Y	PI-LFAS-AP-T-3Y	4	
NU	Network Plug-n-Play Connect for zero-touch device deployment	NETWORK-PNP-LIC	4	
NU	19 in Rackmount for 9200CX switches	RACKMNT-19-CMPACT	4	
VTC	Video teleconferencing room - All TEMPEST C			
VTC	Core - AV Control			
VTC	Extron - IPCP Pro 255Q xi w/LinkLicense - TEMPEST C	IPCP Pro 255Q xi	1	
VTC	Extron - Four IEC Outlets	IPL EXP PDU4H	1	
VTC	Extron - Entry Level Version for 16 Endpoints	NAVigator	1	
VTC	Extron - NAVigator 96 Endpoints Upgrade	LinkLicense	1	
VTC	Core - AV Network			
VTC	Cisco - Catalyst 9300 48-port PoE+, Network Essentials - TEMPEST C	C9300-48P-E	1	
VTC	Cisco - Upgrade option 1100W AC 80+ platinum Config 1 Power Supply	PWR-C1-1100WAC-UP	1	
VTC	Cisco - 1100W AC 80+ platinum Config 1 Secondary Power Supply	PWR-C1-1100WAC-P/2	1	
VTC	Cisco - C9300 DNA Essentials, 48-port - 3 Year Term License	C9300-DNA-E-48-3Y	1	
VTC	Core - Audio			
VTC	Extron - Dante Digital Matrix Processor w/ 12 AEC - TEMPEST C	DMP 128 FlexPlus C AT	1	
VTC	Extron - Four Channel Dante Amp, 100 watts at 70 volts	NetPA U 1004-70V	1	
VTC	Core - Camera Routing			
VTC	Blackmagic - Smart Videohub CleanSwitch 12x12 - TEMPEST C	VHUBSMTCS6G1212	1	
VTC	Blackmagic - Teranex Mini SDI to HDMI 8K HDR	CONVN8TRM/AA/SDIH	1	
VTC	Core - AV Bridge			
VTC	Extron - 4K HDMI and Audio to USB Scaling Bridge - TEMPEST C	MediaPort 300	1	
VTC	Extron - Four Input USB 10G Switcher	SW4 USB Pro	1	
VTC	Core - AVoIP			
VTC	Extron - 1G HDMI Scaling Decoder - TEMPEST C	NAV SD 101	2	
VTC	Extron - 1G HDMI Encoder	NAV E 101	2	
VTC	Core - VTC Codec			
VTC	Poly - Poly G7500 4k Base Unit TAA No-Radio - TEMPEST C	G7200-87340-125	1	
VTC	Core - Rack			
VTC	Trip Lite - Tripp Lite 18U Soundproof Rack Enclosure - TEMPEST C	SRQ18U	1	

Cat	Item	Part number	Qty	Spare
VTC	Room - Control			
VTC	Extron - 12" Ultra-wide Tabletop TouchLink Pro Touchpanel (White) - TEMPEST C	TLP Pro 1230WTG	1	
VTC	Room - Displays			
VTC	NEC - MultiSync MA551 - TEMPEST C	MA551	16	1
VTC	Extron - 1G Pro AV over IP Scaling Decoder - HDMI	NAV SD 101	16	1
VTC	Urben - Floor Mount	TBD	12	1
VTC	Various - Ceiling Mount for 55" Display	NA	4	1
VTC	Room - Connection Points (Lectern/Table/ContentPC)			
VTC	Extron - 1G Pro AV over IP Scaling Encoder - HDMI - TEMPEST C	NAV E 101	3	
VTC	Blackbox - KVS4-HX - Secure KVM Peripheral Defender - HDMI, CAC	KVS4-8001HX	2	
VTC	StarTech - Hybrid Universal Laptop Docking Station with 100W Power Delivery	DK30C2DPEP	2	
VTC	Extron - SuperSpeed USB Extender Kit	UCS FTR 900 Kit	1	
VTC	Room - Audio			
VTC	Extron - 6.5" 2-Way Ceiling Spkrs, 70/100V, Complete Pair - TEMPEST C	SF 26CT	8	
VTC	Room - PTZ Cameras			
VTC	Panasonic - Panasonic 4K30 SDI/HDMI PTZ Camera with 24x Optical Zoom (White) - TEMPEST C	AW-UE50WEJ	5	
VTC	Room - Microphone			
VTC	Sennheiser - TeamConnect Ceiling 2 (white) - TEMPEST C	507488	1	
VTC	Cabling and Small Material			
VTC	Various - Network, Audio, Video cabling, accessoires and small material - TEMPEST C		1	
DC	Data centre			
DC	HCI Node			
DC	HPE ProLiant DL325 Gen10 Plus v2 8SFF Configure-to-order Server	P38471-B21	5	
DC	HPE ProLiant DL325 Gen10 Plus v2 8SFF Configure-to-order Server	P38471-B21 B19	5	
DC	HPE ProLiant DL325 Gen10 Plus v2 vSAN WW FIO Tracking	P52170-B21	5	
DC	Processors			
DC	AMD EPYC 7543P 2.8GHz 32-core 225W Processor for HPE	P38717-B21	5	
DC	Factory Integrated	P38717-B21 OD1	5	
DC	HPE ProLiant DL325 Gen10 Plus v2 High Performance Heat Sink Kit	P41197-B21	5	
DC	Memory			
DC	HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07646-B21	40	
DC	Factory Integrated	P07646-B21 OD1	40	
DC	PCI Risers			
DC	HPE DL325 Gen10 Standard x8/x16 FIO Primary Riser	-	5	
DC	HPE DL325 Gen10 Plus x16 Low Profile PCIe Riser Kit	P17264-B21	5	
DC	Factory Integrated	P17264-B21 OD1	5	
DC	Boot Disk			

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Cat	Item	Part number	Qty	Spare
DC	HPE ProLiant DL325 Gen10 Plus v2 2SFF U.3 Enablement Kit	P38386-B21	5	
DC	Factory Integrated	P38386-B21 OD1	5	
DC	HPE ProLiant DL325 Gen10 Plus v2 2SFF NVMe Tri-Mode Cable Kit	P39168-B21	5	
DC	Factory Integrated	P39168-B21 OD1	5	
DC	Broadcom MegaRAID MR216i-a x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26325-B21	5	
DC	Factory Integrated	P26325-B21 OD1	5	
DC	HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21	10	
DC	Factory Integrated	P40496-B21 OD1	10	
DC	vSAN NVMe Readiness			
DC	HPE ProLiant DL325 Gen10 Plus v2 8SFF U.3 BC Backplane Kit	P38476-B21	5	
DC	HPE ProLiant DL325 Gen10 Plus v2 8SFF NVMe Direct Attach Cable Kit	P39174-B21	5	
DC	Network Adapters			
DC	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21	5	
DC	Factory Integrated	P10115-B21 OD1	5	
DC	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21	10	
DC	Factory Integrated	P26262-B21 OD1	10	
DC	Security option			
DC	HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit	P13771-B21	5	
DC	Factory Integrated	P13771-B21 OD1	5	
DC	HPE Gen10 Plus Chassis Intrusion Detection Kit	P14604-B21	5	
DC	Factory Integrated	P14604-B21 OD1	5	
DC	Power and Cooling			
DC	HPE ProLiant DL325 Gen10 Plus v2 Max Performance Fan Kit	P38506-B21	5	
DC	Factory Integrated	P38506-B21 OD1	5	
DC	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21	10	
DC	Factory Integrated	P38995-B21 OD1	10	
DC	Racking			
DC	HPE ProLiant DL300 Gen10 Plus 1U SFF Easy Install Rail Kit	P26485-B21	5	
DC	Factory Integrated	P26485-B21 OD1	5	
DC	HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21	5	
DC	Factory Integrated	P26489-B21 OD1	5	
DC	Licenses			
DC	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	5	
DC	Factory Integrated	BD505A OD1	5	
DC	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	5	
DC	Support			
DC	HPE 3Y Complete Care Addon Essential with Comprehensive Defective Material Retention Service	HU4D7A3	5	

Cat	Item	Part number	Qty	Spare
DC	HPE ProLiant DL325 Gen10 Plus V2 Support	HU4D7A3 ZSC	5	
DC	HPE iLO Advanced Non Blade Support	HU4D7A3 R2M	5	
DC	HPE One View w/o Ilo Support	HU4D7A3 SVP	5	
DC	SFP			
DC	MODULE, TRANSCEIVER, SFP, RJ45, 1000BASE-T, CAT5, CISCO GLC-TE		6	
DC	Cabling			
DC	SFP-H25G-CU2M= 25GBASE-CU SFP28 Cable 2 Meter		70	
DC	SFP-H25G-CU3M= 25GBASE-CU SFP28 Cable 3 Meter		70	
DC	HCI Node drives			
DC	Cache disk			
DC	1x 800GB NVME Gen 4 High Performance Disk HPE Basic Carrier	P40569-B21	10	1
DC	Capacity disk			
DC	1x 6.4 TB NVME Gen 4 Mainstream Disk HPE Basic Carrier	P47840-B21	60	5
DC	Management server			
DC	HPE ProLiant DL360 Gen10 Plus 8SFF NC Configure-to-order Server	P28948-B21	1	1
DC	DL360 Gen10 Plus 8SFF CTO Server	P28948-B21 B19	1	1
DC	Processors			
DC	Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W Processor for HPE	P36920-B21	1	1
DC	Factory Integrated	P36920-B21 OD1	1	1
DC	HPE ProLiant DL360 Gen10 Plus Standard Heat Sink Kit	P37863-B21	1	1
DC	Factory Integrated	P37863-B21 OD1	1	1
DC	Memory			
DC	HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06031-B21	2	2
DC	Factory Integrated	P06031-B21 OD1	2	2
DC	HPE DDR4 DIMM Blank Kit	P07818-B21	1	1
DC	Factory Integrated	P07818-B21 OD1	1	1
DC	PCI Risers			
DC	HPE DL360 Gen10 Plus Standard FIO x8/x16 FIO Primary Riser	-	1	1
DC	Boot Disk			
DC	HPE ProLiant DL360 Gen10 Plus 8SFF x1 Tri-Mode 24G U.3 BC Backplane Kit	P26431-B21	1	1
DC	Factory Integrated	P26431-B21 OD1	1	1
DC	Broadcom MegaRAID MR416i-a x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26279-B21	1	1
DC	Factory Integrated	P26279-B21 OD1	1	1
DC	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	1
DC	Factory Integrated	P01366-B21 OD1	1	1
DC	HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21	2	2
DC	Factory Integrated	P40497-B21 OD1	2	2

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Cat	Item	Part number	Qty	Spare
DC	HPE RAID 1 Drive 1 FIO Setting	339778-B21	1	1
DC	Network Adapters			
DC	Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21	1	1
DC	Factory Integrated	P08449-B21 OD1	1	1
DC	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21	1	1
DC	Factory Integrated	P26262-B21 OD1	1	1
DC	Security option			
DC	HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit	P13771-B21	1	1
DC	Factory Integrated	P13771-B21 OD1	1	1
DC	HPE Gen10 Plus Chassis Intrusion Detection Kit	P14604-B21	1	1
DC	Factory Integrated	P14604-B21 OD1	1	1
DC	Power and Cooling			
DC	HPE ProLiant DL36X Gen10 Plus High Performance Fan Kit	P26477-B21	1	1
DC	Factory Integrated	P26477-B21 OD1	1	1
DC	HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21	2	2
DC	Factory Integrated	865408-B21 OD1	2	2
DC	Racking			
DC	HPE ProLiant DL300 Gen10 Plus 1U SFF Easy Install Rail Kit	P26485-B21	1	1
DC	Factory Integrated	P26485-B21 OD1	1	1
DC	HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21	1	1
DC	Factory Integrated	P26489-B21 OD1	1	1
DC	Licenses			
DC	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	1	1
DC	Factory Integrated	BD505A OD1	1	1
DC	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	1	1
DC	Support			
DC	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	1
DC	HPE ProLiant DL360 Gen10+ Support	HU4D4A3 ZSA	1	1
DC	HPE iLO Advanced Non Blade Support	HU4D4A3 R2M	1	1
DC	HPE One View w/o Ilo Support	HU4D4A3 SVP	1	1
DC	Backup server			
DC	HPE ProLiant DL380 Gen10 12LFF NC Configure-to-order Server	P19718-B21	1	
DC	HPE DL380 G10 CTO Mod-X 12LFF WO NIC	P19718-B21 B19	1	
DC	Processors			
DC	Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P23550-L21	1	
DC	Memory			
DC	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21	4	

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Cat	Item	Part number	Qty	Spare
DC	Factory Integrated	P00924-B21 OD1	4	
DC	PCI Risers			
DC	HPE DL380 Gen10 Standard x8/x16/x8 FIO Primary Riser	-	1	
DC	Boot Disk			
DC	HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit	826687-B21	1	
DC	Factory Integrated	826687-B21 OD1	1	
DC	HPE 300GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	870753-B21	2	
DC	Factory Integrated	870753-B21 OD1	2	
DC	Data Disks			
DC	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21	1	
DC	Factory Integrated	804338-B21 OD1	1	
DC	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	
DC	Factory Integrated	P01366-B21 OD1	1	
DC	HPE 12TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	881779-B21	12	
DC	Factory Integrated	881779-B21 OD1	12	
DC	Network Adapters			
DC	HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21	1	
DC	Factory Integrated	817709-B21 OD1	1	
DC	HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21	2	
DC	Factory Integrated	817718-B21 OD1	2	
DC	Security option			
DC	HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21	1	
DC	Factory Integrated	864279-B21 OD1	1	
DC	HPE Gen10 Chassis Intrusion Detection Kit	867824-B21	1	
DC	Factory Integrated	867824-B21 OD1	1	
DC	Power and Cooling			
DC	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21	2	
DC	Factory Integrated	865414-B21 OD1	2	
DC	Racking			
DC	HPE 2U Cable Management Arm for Easy Install Rail Kit	733664-B21	1	
DC	Factory Integrated	733664-B21 OD1	1	
DC	HPE 2U Large Form Factor Easy Install Rail Kit	733662-B21	1	
DC	Factory Integrated	733662-B21 OD1	1	
DC	Licenses			
DC	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	1	
DC	Factory Integrated	BD505A OD1	1	
DC	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	1	

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Cat	Item	Part number	Qty	Spare
DC	Support			
DC	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	
DC	HPE DL38x Gen10 Support	HU4D4A3 WAH	1	
DC	HPE iLO Advanced Non Blade Support	HU4D4A3 R2M	1	
DC	HPE One View w/o Ilo Support	HU4D4A3 SVP	1	
DC	Apollo SAN			
DC	HPE Apollo 4510 Gen10 Configure-to-Order Chassis	864668-B21	1	
DC	HPE Apollo 4510 Gen10 Chassis	864668-B21 B19	1	
DC	Compute Node			
DC	HPE XL450 Gen10 1x Node Svr	864625-B21 B19	1	
DC	HPE ProLiant XL450 Gen10 Configure-to-order Server Node for Apollo 4510 Gen10 Chassis	864625-B21	1	
DC	Factory Integrated	864625-B21 OD1	1	
DC	Processors			
DC	Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE ProLiant XL450 Gen10.	P10772-L21	1	
DC	Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE ProLiant XL450 Gen10	P10772-B21	1	
DC	Factory Integrated	P10772-B21 OD1	1	
DC	Memory			
DC	HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-K21	12	
DC	Factory Integrated	P00920-K21 OD1	12	
DC	PCIe Risers			
DC	HPE Apollo 4500 Gen10 CPU0 x2/CPU1 x2 FIO I/O Module	882020-B21	1	
DC	Boot Disks			
DC	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21	1	
DC	Factory Integrated	804331-B21 OD1	1	
DC	HPE Apollo 4500 Gen10 Smart Array E208i-a/P408i-a SAS Cable Kit	874779-B21	1	
DC	Factory Integrated	874779-B21 OD1	1	
DC	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	
DC	Factory Integrated	P01366-B21 OD1	1	
DC	HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-K21	2	
DC	Factory Integrated	P18432-K21 OD1	2	
DC	Data Disks			
DC	HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21	1	
DC	Factory Integrated	830824-B21 OD1	1	
DC	HPE Apollo 4500 Gen10 Smart Array E208i-p/P408i-p SAS Cable Kit	874777-B21	1	
DC	Factory Integrated	874777-B21 OD1	1	
DC	HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P37669-K21	60	
DC	Factory Integrated	P37669-K21 OD1	60	

Cat	Item	Part number	Qty	Spare
DC	Network Adapters			
DC	HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21	1	
DC	Factory Integrated	817709-B21 OD1	1	
DC	HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21	2	
DC	Factory Integrated	817718-B21 OD1	2	
DC	Security option			
DC	HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21	1	
DC	Factory Integrated	864279-B21 OD1	1	
DC	Power and Cooling			
DC	HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21	4	
DC	Factory Integrated	830272-B21 OD1	4	
DC	Racking			
DC	HPE 4U Server Rail Kit	878571-B21	1	
DC	Factory Integrated	878571-B21 OD1	1	
DC	HPE s6500 Chassis Handles Kit	608477-B21	1	
DC	Factory Integrated	608477-B21 OD1	1	
DC	Licenses			
DC	HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A	1	
DC	Support			
DC	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	
DC	HPE Apollo 4510 Gen10 Support	HU4D4A3 ZBH	1	
DC	HPE One View w/Ilo Support	HU4D4A3 SVN	1	
GIS	Option: Additional NS IT backend capacity			
GIS	HCI Node			
GIS	HPE ProLiant DL325 Gen10 Plus v2 8SFF Configure-to-order Server	P38471-B21	5	
GIS	HPE ProLiant DL325 Gen10 Plus v2 8SFF Configure-to-order Server	P38471-B21 B19	5	
GIS	HPE ProLiant DL325 Gen10 Plus v2 vSAN WW FIO Tracking	P52170-B21	5	
GIS	Processors			
GIS	AMD EPYC 7543P 2.8GHz 32-core 225W Processor for HPE	P38717-B21	5	
GIS	Factory Integrated	P38717-B21 OD1	5	
GIS	HPE ProLiant DL325 Gen10 Plus v2 High Performance Heat Sink Kit	P41197-B21	5	
GIS	Memory			
GIS	HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07646-B21	40	
GIS	Factory Integrated	P07646-B21 OD1	40	
GIS	PCI Risers			
GIS	HPE DL325 Gen10 Standard x8/x16 FIO Primary Riser	-	5	
GIS	HPE DL325 Gen10 Plus x16 Low Profile PCIe Riser Kit	P17264-B21	5	

Cat	Item	Part number	Qty	Spare
GIS	Factory Integrated	P17264-B21 OD1	5	
GIS	Boot Disk			
GIS	HPE ProLiant DL325 Gen10 Plus v2 2SFF U.3 Enablement Kit	P38386-B21	5	
GIS	Factory Integrated	P38386-B21 OD1	5	
GIS	HPE ProLiant DL325 Gen10 Plus v2 2SFF NVMe Tri-Mode Cable Kit	P39168-B21	5	
GIS	Factory Integrated	P39168-B21 OD1	5	
GIS	Broadcom MegaRAID MR216i-a x16 Lanes without Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26325-B21	5	
GIS	Factory Integrated	P26325-B21 OD1	5	
GIS	HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21	10	
GIS	Factory Integrated	P40496-B21 OD1	10	
GIS	vSAN NVMe Readiness			
GIS	HPE ProLiant DL325 Gen10 Plus v2 8SFF U.3 BC Backplane Kit	P38476-B21	5	
GIS	HPE ProLiant DL325 Gen10 Plus v2 8SFF NVMe Direct Attach Cable Kit	P39174-B21	5	
GIS	Network Adapters			
GIS	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21	5	
GIS	Factory Integrated	P10115-B21 OD1	5	
GIS	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21	10	
GIS	Factory Integrated	P26262-B21 OD1	10	
GIS	Security option			
GIS	HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit	P13771-B21	5	
GIS	Factory Integrated	P13771-B21 OD1	5	
GIS	HPE Gen10 Plus Chassis Intrusion Detection Kit	P14604-B21	5	
GIS	Factory Integrated	P14604-B21 OD1	5	
GIS	Power and Cooling			
GIS	HPE ProLiant DL325 Gen10 Plus v2 Max Performance Fan Kit	P38506-B21	5	
GIS	Factory Integrated	P38506-B21 OD1	5	
GIS	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21	10	
GIS	Factory Integrated	P38995-B21 OD1	10	
GIS	Racking			
GIS	HPE ProLiant DL300 Gen10 Plus 1U SFF Easy Install Rail Kit	P26485-B21	5	
GIS	Factory Integrated	P26485-B21 OD1	5	
GIS	HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21	5	
GIS	Factory Integrated	P26489-B21 OD1	5	
GIS	Licenses			
GIS	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	5	
GIS	Factory Integrated	BD505A OD1	5	
GIS	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	5	

Cat	Item	Part number	Qty	Spare
GIS	Support			
GIS	HPE 3Y Complete Care Addon Essential with Comprehensive Defective Material Retention Service	HU4D7A3	5	
GIS	HPE ProLiant DL325 Gen10 Plus V2 Support	HU4D7A3 ZSC	5	
GIS	HPE iLO Advanced Non Blade Support	HU4D7A3 R2M	5	
GIS	HPE One View w/o Ilo Support	HU4D7A3 SVP	5	
GIS	SFP			
GIS	MODULE, TRANSCEIVER, SFP, RJ45, 1000BASE-T, CAT5, CISCO GLC-TE		6	
GIS	Cabling			
GIS	SFP-H25G-CU2M= 25GBASE-CU SFP28 Cable 2 Meter		70	
GIS	SFP-H25G-CU3M= 25GBASE-CU SFP28 Cable 3 Meter		70	
GIS	HCI Node drives			
GIS	Cache disk			
GIS	1x 800GB NVME Gen 4 High Performance Disk HPE Basic Carrier	P40569-B21	10	
GIS	Capacity disk			
GIS	1x 6.4 TB NVME Gen 4 Mainstream Disk HPE Basic Carrier	P47840-B21	60	
GIS	Management server			
GIS	HPE ProLiant DL360 Gen10 Plus 8SFF NC Configure-to-order Server	P28948-B21	1	
GIS	DL360 Gen10 Plus 8SFF CTO Server	P28948-B21 B19	1	
GIS	Processors			
GIS	Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W Processor for HPE	P36920-B21	1	
GIS	Factory Integrated	P36920-B21 OD1	1	
GIS	HPE ProLiant DL360 Gen10 Plus Standard Heat Sink Kit	P37863-B21	1	
GIS	Factory Integrated	P37863-B21 OD1	1	
GIS	Memory			
GIS	HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06031-B21	2	
GIS	Factory Integrated	P06031-B21 OD1	2	
GIS	HPE DDR4 DIMM Blank Kit	P07818-B21	1	
GIS	Factory Integrated	P07818-B21 OD1	1	
GIS	PCI Risers			
GIS	HPE DL360 Gen10 Plus Standard FIO x8/x16 FIO Primary Riser	-	1	
GIS	Boot Disk			
GIS	HPE ProLiant DL360 Gen10 Plus 8SFF x1 Tri-Mode 24G U.3 BC Backplane Kit	P26431-B21	1	
GIS	Factory Integrated	P26431-B21 OD1	1	
GIS	Broadcom MegaRAID MR416i-a x16 Lanes 4GB Cache NVMe/SAS 12G Controller for HPE Gen10 Plus	P26279-B21	1	
GIS	Factory Integrated	P26279-B21 OD1	1	
GIS	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	
GIS	Factory Integrated	P01366-B21 OD1	1	

Cat	Item	Part number	Qty	Spare
GIS	HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21	2	
GIS	Factory Integrated	P40497-B21 OD1	2	
GIS	HPE RAID 1 Drive 1 FIO Setting	339778-B21	1	
GIS	Network Adapters			
GIS	Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21	1	
GIS	Factory Integrated	P08449-B21 OD1	1	
GIS	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21	1	
GIS	Factory Integrated	P26262-B21 OD1	1	
GIS	Security option			
GIS	HPE Trusted Platform Module 2.0 Gen10 Plus Black Rivets Kit	P13771-B21	1	
GIS	Factory Integrated	P13771-B21 OD1	1	
GIS	HPE Gen10 Plus Chassis Intrusion Detection Kit	P14604-B21	1	
GIS	Factory Integrated	P14604-B21 OD1	1	
GIS	Power and Cooling			
GIS	HPE ProLiant DL36X Gen10 Plus High Performance Fan Kit	P26477-B21	1	
GIS	Factory Integrated	P26477-B21 OD1	1	
GIS	HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21	2	
GIS	Factory Integrated	865408-B21 OD1	2	
GIS	Racking			
GIS	HPE ProLiant DL300 Gen10 Plus 1U SFF Easy Install Rail Kit	P26485-B21	1	
GIS	Factory Integrated	P26485-B21 OD1	1	
GIS	HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21	1	
GIS	Factory Integrated	P26489-B21 OD1	1	
GIS	Licenses			
GIS	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	1	
GIS	Factory Integrated	BD505A OD1	1	
GIS	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	1	
GIS	Support			
GIS	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	
GIS	HPE ProLiant DL360 Gen10+ Support	HU4D4A3 ZSA	1	
GIS	HPE iLO Advanced Non Blade Support	HU4D4A3 R2M	1	
GIS	HPE One View w/o Ilo Support	HU4D4A3 SVP	1	
GIS	Backup server			
GIS	HPE ProLiant DL380 Gen10 12LFF NC Configure-to-order Server	P19718-B21	1	
GIS	HPE DL380 G10 CTO Mod-X 12LFF WO NIC	P19718-B21 B19	1	
GIS	Processors			
GIS	Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P23550-L21	1	

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Cat	Item	Part number	Qty	Spare
GIS	Memory			
GIS	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21	4	
GIS	Factory Integrated	P00924-B21 OD1	4	
GIS	PCI Risers			
GIS	HPE DL380 Gen10 Standard x8/x16/x8 FIO Primary Riser	-	1	
GIS	Boot Disk			
GIS	HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit	826687-B21	1	
GIS	Factory Integrated	826687-B21 OD1	1	
GIS	HPE 300GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	870753-B21	2	
GIS	Factory Integrated	870753-B21 OD1	2	
GIS	Data Disks			
GIS	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21	1	
GIS	Factory Integrated	804338-B21 OD1	1	
GIS	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	
GIS	Factory Integrated	P01366-B21 OD1	1	
GIS	HPE 12TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	881779-B21	12	
GIS	Factory Integrated	881779-B21 OD1	12	
GIS	Network Adapters			
GIS	HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21	1	
GIS	Factory Integrated	817709-B21 OD1	1	
GIS	HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21	2	
GIS	Factory Integrated	817718-B21 OD1	2	
GIS	Security option			
GIS	HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21	1	
GIS	Factory Integrated	864279-B21 OD1	1	
GIS	HPE Gen10 Chassis Intrusion Detection Kit	867824-B21	1	
GIS	Factory Integrated	867824-B21 OD1	1	
GIS	Power and Cooling			
GIS	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21	2	
GIS	Factory Integrated	865414-B21 OD1	2	
GIS	Racking			
GIS	HPE 2U Cable Management Arm for Easy Install Rail Kit	733664-B21	1	
GIS	Factory Integrated	733664-B21 OD1	1	
GIS	HPE 2U Large Form Factor Easy Install Rail Kit	733662-B21	1	
GIS	Factory Integrated	733662-B21 OD1	1	
GIS	Licenses			
GIS	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A	1	

Cat	Item	Part number	Qty	Spare
GIS	Factory Integrated	BD505A OD1	1	
GIS	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A	1	
GIS	Support			
GIS	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	
GIS	HPE DL38x Gen10 Support	HU4D4A3 WAH	1	
GIS	HPE iLO Advanced Non Blade Support	HU4D4A3 R2M	1	
GIS	HPE One View w/o Ilo Support	HU4D4A3 SVP	1	
GIS	Apollo SAN			
GIS	HPE Apollo 4510 Gen10 Configure-to-Order Chassis	864668-B21	1	
GIS	HPE Apollo 4510 Gen10 Chassis	864668-B21 B19	1	
GIS	Compute Node			
GIS	HPE XL450 Gen10 1x Node Svr	864625-B21 B19	1	
GIS	HPE ProLiant XL450 Gen10 Configure-to-order Server Node for Apollo 4510 Gen10 Chassis	864625-B21	1	
GIS	Factory Integrated	864625-B21 OD1	1	
GIS	Processors			
GIS	Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE ProLiant XL450 Gen10.	P10772-L21	1	
GIS	Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE ProLiant XL450 Gen10	P10772-B21	1	
GIS	Factory Integrated	P10772-B21 OD1	1	
GIS	Memory			
GIS	HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-K21	12	
GIS	Factory Integrated	P00920-K21 OD1	12	
GIS	PCIe Risers			
GIS	HPE Apollo 4500 Gen10 CPU0 x2/CPU1 x2 FIO I/O Module	882020-B21	1	
GIS	Boot Disks			
GIS	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21	1	
GIS	Factory Integrated	804331-B21 OD1	1	
GIS	HPE Apollo 4500 Gen10 Smart Array E208i-a/P408i-a SAS Cable Kit	874779-B21	1	
GIS	Factory Integrated	874779-B21 OD1	1	
GIS	HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21	1	
GIS	Factory Integrated	P01366-B21 OD1	1	
GIS	HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-K21	2	
GIS	Factory Integrated	P18432-K21 OD1	2	
GIS	Data Disks			
GIS	HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21	1	
GIS	Factory Integrated	830824-B21 OD1	1	
GIS	HPE Apollo 4500 Gen10 Smart Array E208i-p/P408i-p SAS Cable Kit	874777-B21	1	
GIS	Factory Integrated	874777-B21 OD1	1	

Cat	Item	Part number	Qty	Spare
GIS	HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P37669-K21	60	
GIS	Factory Integrated	P37669-K21 OD1	60	
GIS	Network Adapters			
GIS	HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21	1	
GIS	Factory Integrated	817709-B21 OD1	1	
GIS	HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21	2	
GIS	Factory Integrated	817718-B21 OD1	2	
GIS	Security option			
GIS	HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21	1	
GIS	Factory Integrated	864279-B21 OD1	1	
GIS	Power and Cooling			
GIS	HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21	4	
GIS	Factory Integrated	830272-B21 OD1	4	
GIS	Racking			
GIS	HPE 4U Server Rail Kit	878571-B21	1	
GIS	Factory Integrated	878571-B21 OD1	1	
GIS	HPE s6500 Chassis Handles Kit	608477-B21	1	
GIS	Factory Integrated	608477-B21 OD1	1	
GIS	Licenses			
GIS	HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A	1	
GIS	Support			
GIS	HPE 3Y Complete Care Addon Critical with Comprehensive Defective Material Retention Service	HU4D4A3	1	
GIS	HPE Apollo 4510 Gen10 Support	HU4D4A3 ZBH	1	
GIS	HPE One View w/Ilo Support	HU4D4A3 SVN	1	
CAB	Option: Additional NS IT backend capacity			
CAB	Cabling			
CAB	500m multimode 96 cores fiber optics		1	

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Cat	Item	Part number	#
EUD	End user devices (EUD)		
EUD	NS Workstation Standard		
EUD	Dell Optiplex 5090 SFF Dual NICS - LC Connector - 1 TB SSD - TEMPEST C	7021SB0067582	162
EUD	NS Workstation monitor		
EUD	24" Monitor Dell P2422H - TEMPEST C	7025SB0067589	162
EUD	NS Workstation ancillaries		
EUD	Dell KB216 Multimedia Keyboard - TEMPEST C	7050SB0045085	162
EUD	Dell 6 button Laser Mouse	7050SB0045086	162
EUD	Plantronics Blackwire 3220 - 209745-101	5965SB0065030	162
EUD	CAMERA, WEB, POLYCOM STUDIO P5, 1920X1080, 1XUSB 2.0 - TEMPEST C	7050SB0070358	162
EUD	Kensington MicroSaver 2.0 Chassis Lock	5340SB0063389	162
EUD	Kensington MicroSaver 2.0 Lock Master Key	5999SB0041916	162
EUD	Fibre optic patch cord		162
NS	NS Distribution		
NS	NS Switch 9300		
NS	Catalyst 9300 48 GE SFP Ports, modular uplink Switch	C9300-48S-A	16
NS	Terminal Cryptographic Equipment		
NS	TCE 621/C Optical Configuration LC	3AQ 23430 AFAA	2
NS	Fill Device Cable (DTD/KOI-18)	3AQ 12235 AAAA	2
NS	Smart Card White Gen3	3AQ 22207 AAAA	2
NS	Smart Card with CCI print (CIK)	3AQ 12278 CAAA	2
NS	Fiber Adaptor 1 Gbit/s LC (TMC)	3AQ 22600 BBAA	2
NS	Power supply (220/110V) including cable	3AQ 22230 AAAA	2
NU	NU Distribution		
NU	NU Switch data		
NU	Catalyst 9300 48-port PoE+, Network Advantage	C9300-48P-A	3
NU	NU Switch voice		
NU	Catalyst 9200 48-port PoE+, Network Advantage	C9200-48P-A	16
CYB	Cyber		
CYB	Gateway Security solution NS		
CYB	Palo Alto Networks PA-5410 with redundant AC power supplies	PAN-PA-5410-AC	2
CYB	SFP+ form factor, 10Gb direct attach twin-ax passive cable with 2 transceiver ends and 5m of cable permanently bonded as an assembly, IEEE 802.3ae 10GBASE-CR compliant	PAN-SFP-PLUS-CU-5M	2
CYB	SFP+ form factor, SR 10Gb optical transceiver, short reach 300m, OM3 MMF, duplex LC, IEEE 802.3ae 10GBASE-SR compliant	PAN-SFP-PLUS-SR	2
CYB	Palo Alto Networks PA-5450 4 post rack mount kit, spare only (1 is included with base system)	PAN-PA-5450-RACK4	2
CYB	Full Packet Capture solution NS		
CYB	Net Witness S6 Network Decoder	NW-S6E-CORE_NL	1

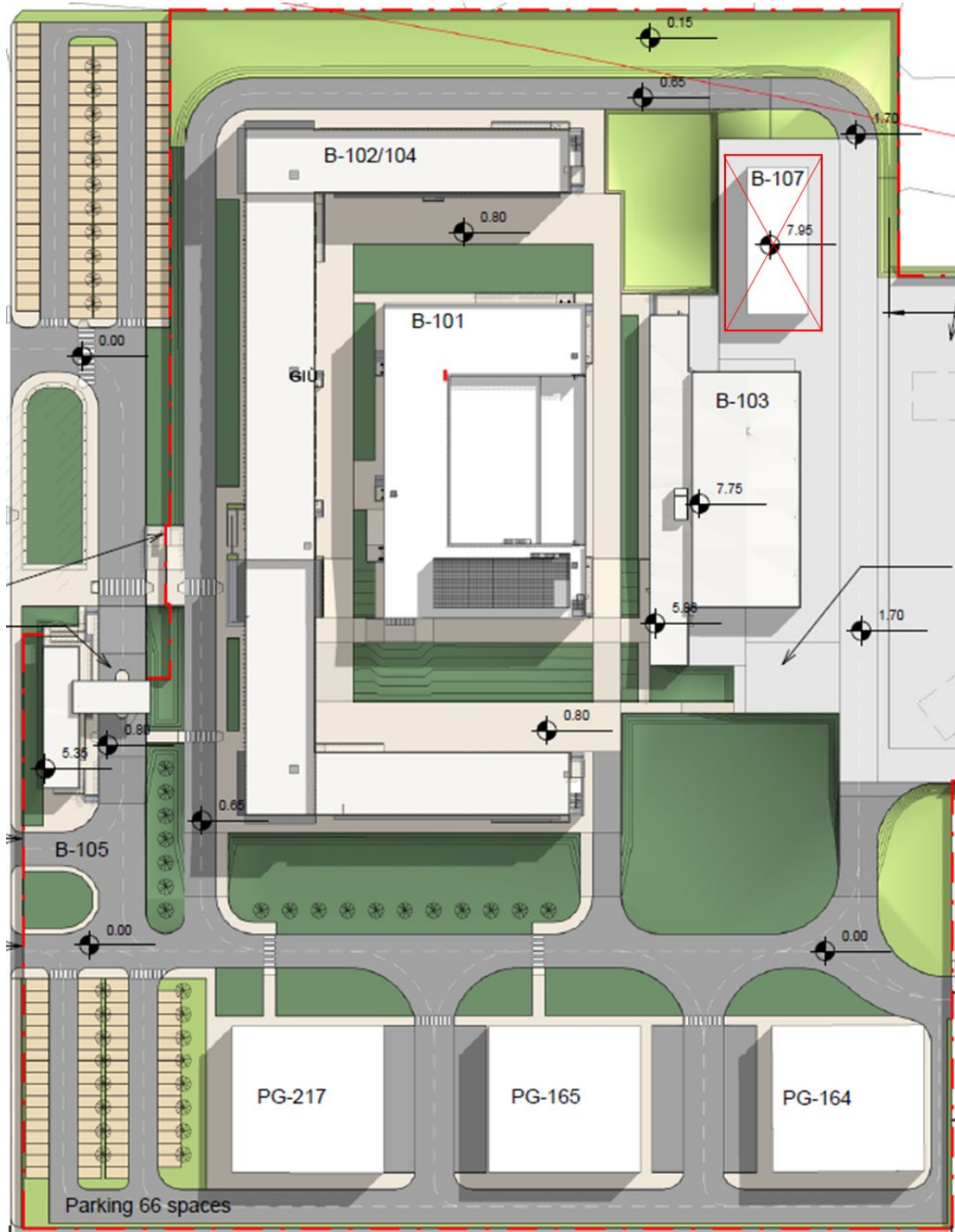
CYB	NW S6 Ntwk Concentrator	NW-S6E-CORE_NL	1
DC	Data-center		
DC	TOR switch		
DC	N9K-C93180YC-FX3 – Nexus Leaf (TOR fiber) 48 x 1/10/25 Gbps and 6 x 40 / 100 Gbps (NX-OS mode)	N9K-C93180YC-FX3	4

CO-115735-NAGSF: NAGSF relocation
Book 2 – Part 4: Statement of Work – Appendix C: facilities plans

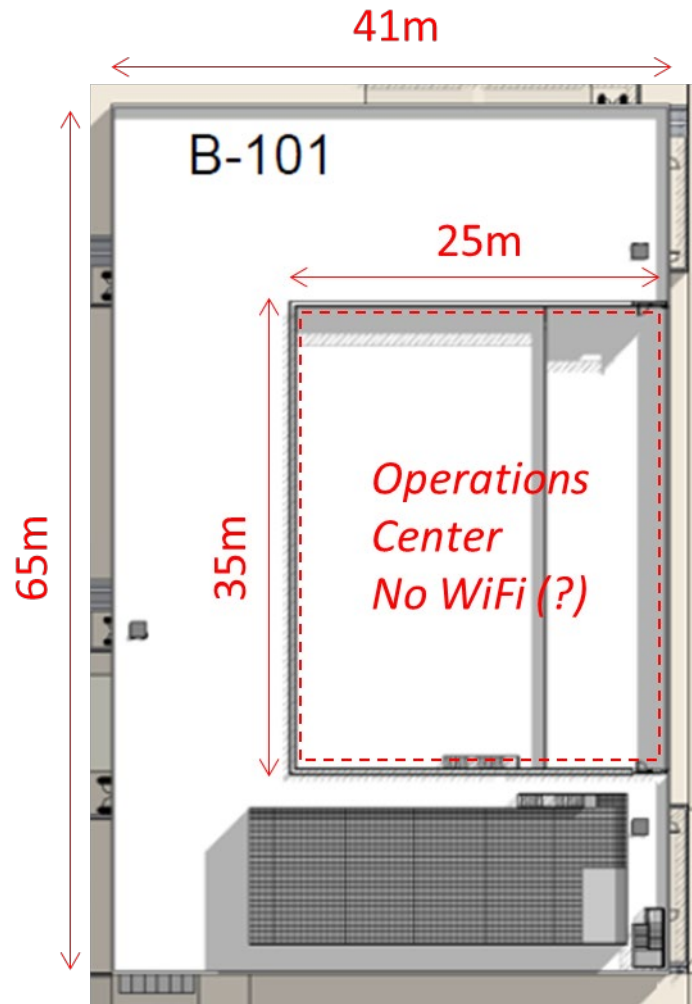
The following plans are notional, to help the Contractor estimate the efforts and distances for this contract.

1 Ops Area facilities

1.1 General



1.2 B101

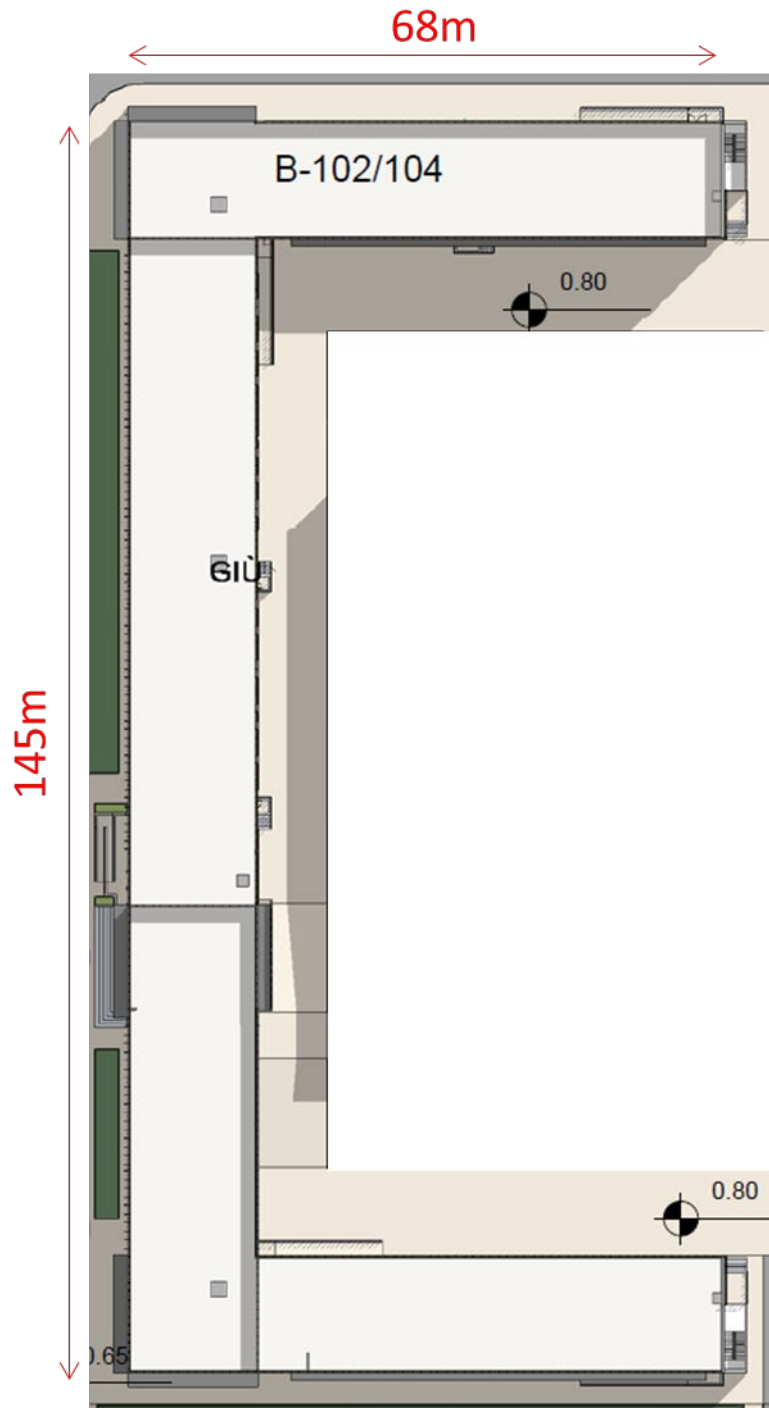


B105 is the main operations building, with a U-shaped corridor (facing E) surrounded by offices, and an operations center.

B101 has 2 floors for the office area.

B101 has 1 floor (covering the entire height of the building) for the operations center.

1.3 B102-104

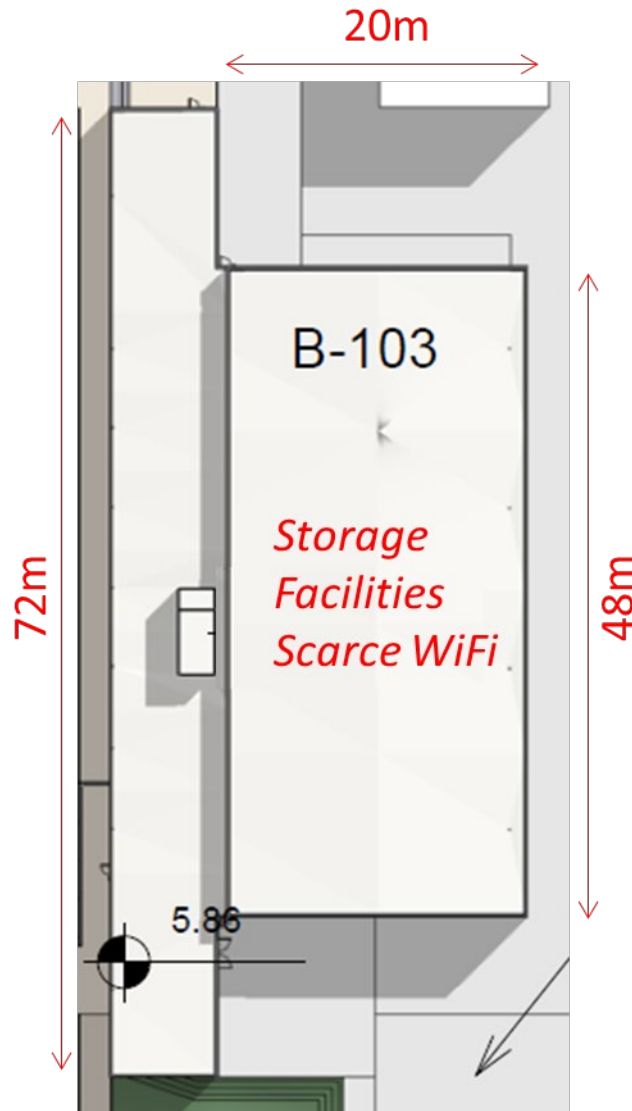


B102-104 is the main command building, with a U-shaped corridor (facing E) surrounded by offices.

B102-104 has 2 floors.

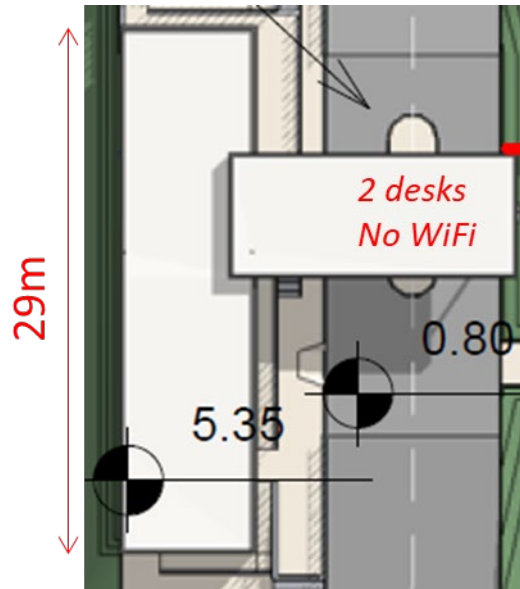
B102-104 north wing / ground floor is the conferencing and training area, therefore to be considered as high density area from WLAN perspective.

1.4 B103



B103 is composed of a single corridor with offices (facing E), and 4 large storage areas (E).
B103 has 1 floor.

1.5 B105



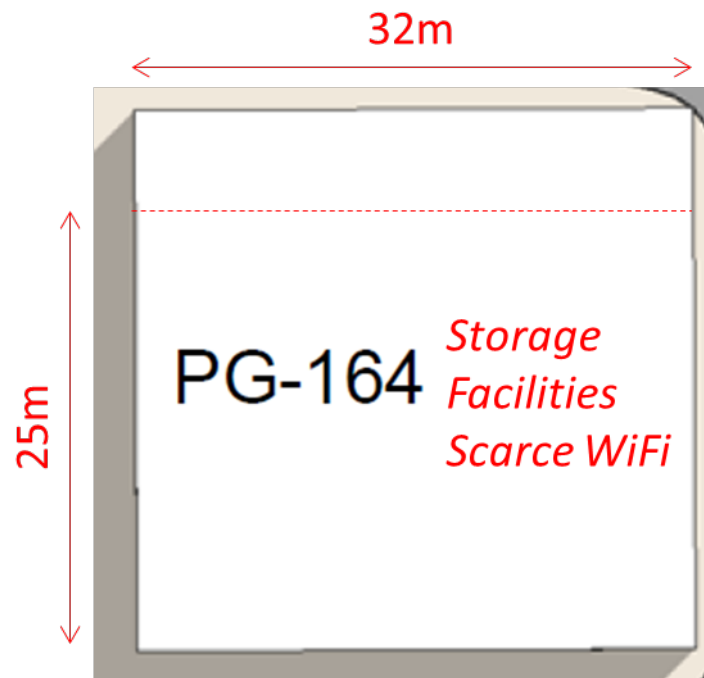
B105 has an office building (W) and a vehicles access control gate (E).

B105 has 1 floor.

1.6 B107

B107 is out of scope for this contract.

1.7 B164, B165, PG217



B164, B164 and PG217 have a similar layout.

B164, B164 and PG217 are composed of a single corridor with offices (N) and a large storage area (S).

B164, B164 and PG217 have 1 floor.

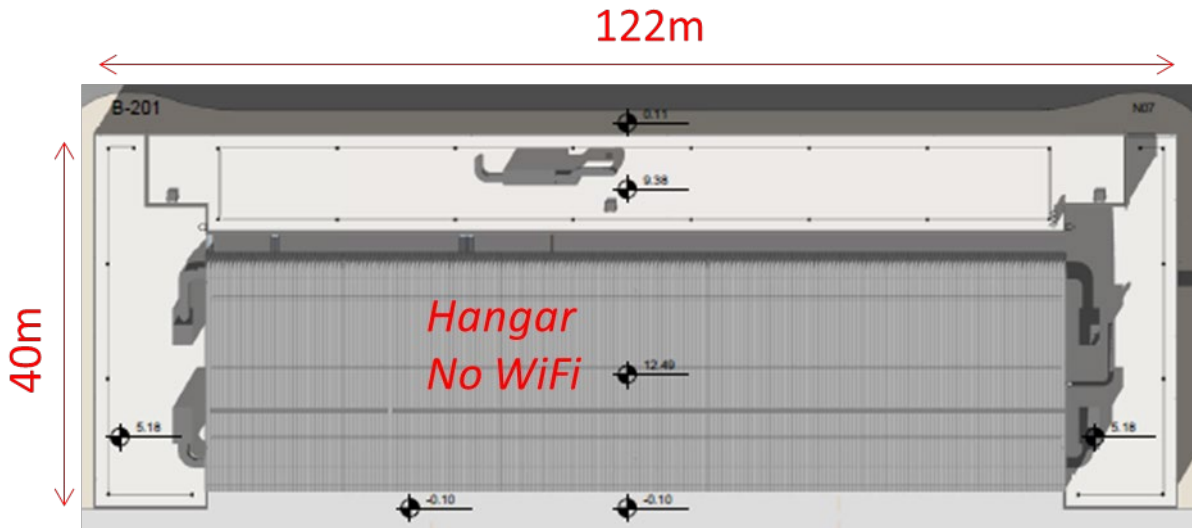
2 Flight Line facilities

2.1 General



The Flight Line map was rotated by 90° right for the sake of legibility.

2.2 B201

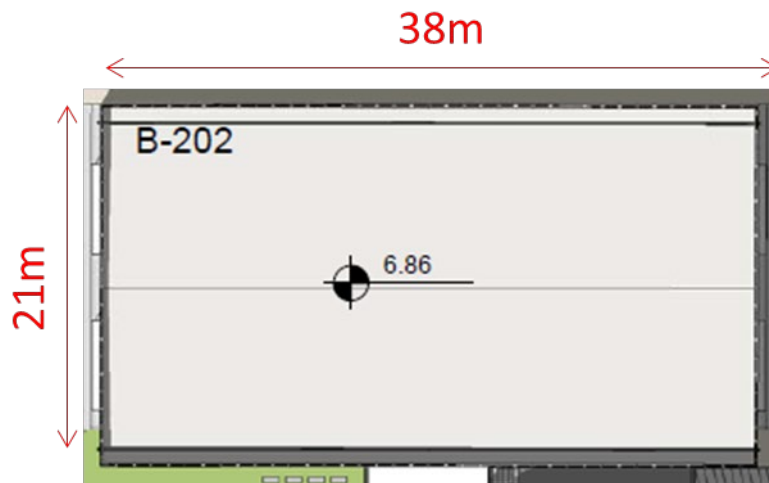


B201 is the main flight-line building, with a U-shaped corridor (facing S) surrounded by offices, and a platforms hangar.

B201 has 2 floors for the office area.

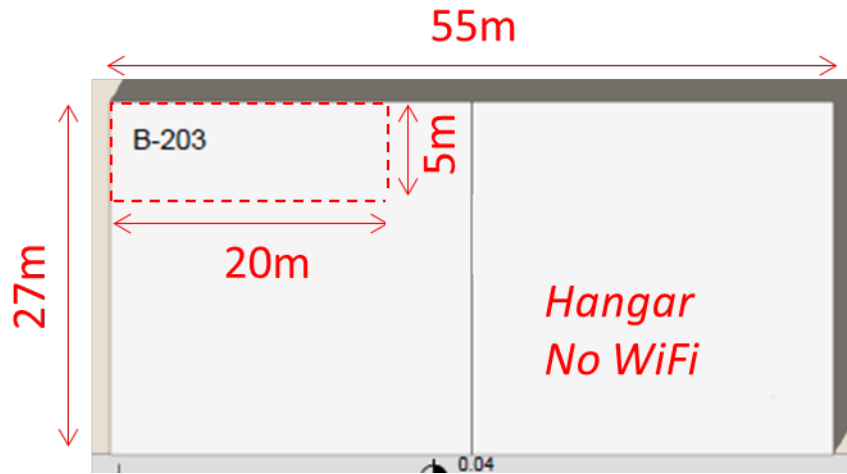
B201 has 1 floor (covering the entire height of the building) for the hangar.

2.3 B202



B202 has 1 floor.

2.4 B203, B204, B205



B203, B204, B205 have a similar layout.

B203, B204, B205 are hangars with a small office space.

B203, B204, B205 do not have dedicated CIS patch panels.

B203, B204, B205 have 1 floor.

2.5 B206, B207

B206 and B207 are out-of-scope for this contract.

3 VTC room

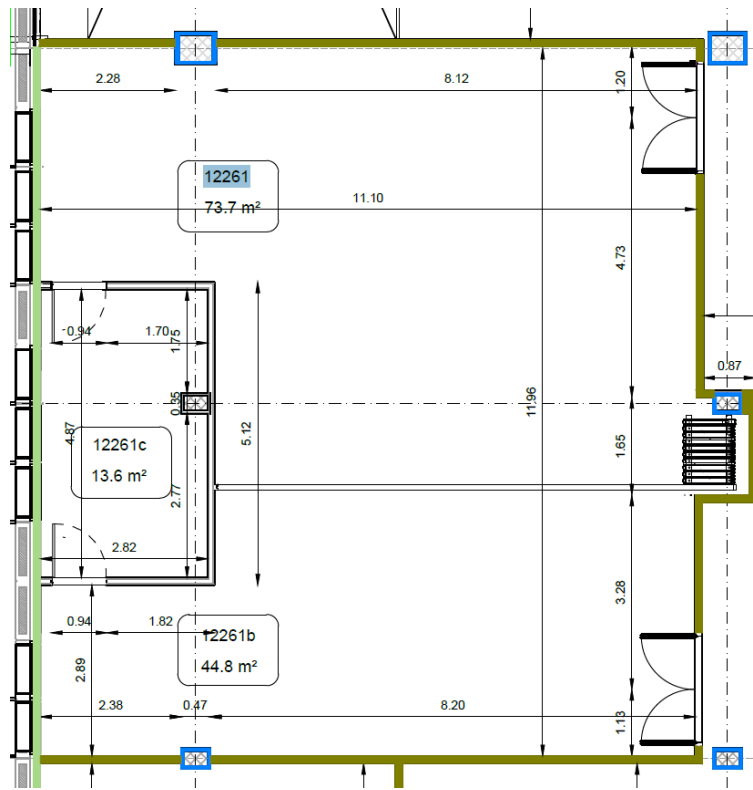


Table dimensions and monitors setting

