



**STANDARD BIDDING DOCUMENT INTERNATIONAL COMPETITIVE
BIDDING**

**INVITATION FOR SUBMISSION OF BIDS FOR THE
PROVISIONING OF A DESKTOP MANAGEMENT SOLUTION**

IFB REFERENCE NO: CPIT/ICB 04/2019

SRILANKAN AIRLINES LIMITED

COMMERCIAL PROCUREEMNT DEPARTMENT (IT PROCUREMENT)

AIRLINE CENTRE, BANDARANAIKE INTERNATIONAL AIRPORT, KATUNAYAKE,

SRI LANKA.

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Dear Sir/Madam,
IFB NO: CPIT/ICB 04/2019

INVITATION FOR BIDS FOR THE PROVISIONING OF A DESKTOP MANAGEMENT SOLUTION FOR SRILANKAN AIRLINES.

SriLankan Airlines hereby invites tenders for the Provisioning of a Desktop Management Solution for SriLankan Airlines. The bid document is attached herewith.

Bid should be submitted in a **sealed envelope** with the IFB number clearly marked on the top left corner of each envelope addressed to **Senior Manager Commercial Procurement, SriLankan Airlines Limited, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka** by 11.00a.m. (Sri Lankan time: GMT +0530) on 29th October 2019.

The Bid Acknowledgement form attached to the document must be completed and returned by fax to +94 (0) 19733 5218 or e-mail to sampath.sudasinghe@srilankan.com and sarath.jayathunga@srilankan.com

All bids shall require a minimum refundable Bid Security amounting to LKR 1,200,000 Bidders shall enclose the Bid security deposit with their bid in the form of an unconditional irrevocable bank guarantee drawn at sight in favor of SriLankan Airlines Limited, valid up to 29th April 2020. Bids without a refundable bid security will not be considered.

A pre-Bid meeting will be organized on 24th September 2019 at 9.00a.m. Sri Lankan time (GMT +5:30 Time Zone) at SriLankan premises, Katunayake, to provide the prospective Bidders with the necessary information related to the project. Proposals of Bidders who do not take part in this pre-Bid will not be accepted, hence participation in the pre-Bid meeting is mandatory for all Bidders. Please provide the following details of the participants for the pre-Bid meeting through email: sampath.sudasinghe@srilankan.com by 9.00a.m. on 23rd September 2019 Sri Lankan time GMT +5:30 Time Zone) in order to organize the Security passes to enter SriLankan premises:

- 1) Company Name:
- 2) Name/NIC No of the participants: (Maximum 02 participants)
- 3) Driver's Name /NIC No (if any):
- 4) Details of the vehicle (if any):
- 5) Details of Brand/Model, Serial number of any electronic equipment such as Laptops etc.

Any inquiry/clarification about the Tender should be e-mailed [to sampath.sudasinghe@srilankan.com](mailto:sampath.sudasinghe@srilankan.com) and sarath.jayathunga@srilankan.com to reach on or before 19th September 2019.

Bids will be opened at 11.15a.m. (Sri Lankan time: GMT +0530) on 29th October 2019 at SriLankan Airlines, Airline Centre, BIA, Katunayake, Sri Lanka. Kindly note that 01 representative per bidding company is permitted to be present at the tender opening. Please contact any of the above, well in advance for the arrangement of Security clearance.

Yours Faithfully,

**SENIOR MANAGER COMMERCIAL PROCUREMENT
SRILANKAN AIRLINES LTD**

BID ACKNOWLEDGEMENT FORM

**ALL BIDDERS SHALL COMPLETE AND RETURN THIS FORM AFTER
DOWNLOADING OF THE BID DOCS**

IFB NO: CPIT/ICB 04/2019

**INVITATION FOR BIDS FOR THE PROVISIONING OF A DESKTOP MANAGEMENT SOLUTION FOR
SRILANKAN AIRLINES.**

Download of your is hereby acknowledged

You may expect to receive our proposal on or
before.....

.....
.....
.....

We do not intend to submit a proposal because

.....
.....
.....
.....

Signed :

Title :

Company :

Date :

Section I. Instructions to Bidders (ITB)

ITB shall be read in conjunction with the section II, Bidding Data Sheet (BDS), which shall take precedence over ITB.

General

1. Scope of Bid

1.1. SriLankan Airlines issues these Bidding Documents for a Provisioning of a Desktop Management Solution for SriLankan Airlines as specified in Section V, Schedule of Requirements. The name and identification number of this procurement are **specified in the BDS**. The name, identification, and number of lots (individual contracts), if any, are **provided in the BDS**.

1.2. Throughout these Bidding Documents:

- (a) The term “in writing” means communicated in written form by e-mail, fax post or hand delivered with proof of receipt;
- (b) If the context so requires, “singular” means “plural” and vice versa; and
- (c) “Day” means calendar day.
- (d) “SLAL” means SriLankan Airlines Ltd.

2. Ethics, Fraud and Corruption

2.1. The attention of the bidders is drawn to the following guide lines published by the National Procurement Commission of Sri Lanka:

- Parties associated with Procurement Actions, namely, suppliers/contractors and officials shall ensure that they maintain strict confidentiality throughout the process;
- Officials shall refrain from receiving any personal gain from any Procurement Action. No gifts or inducement shall be accepted. Suppliers/contractors are liable to be disqualified from the bidding process if found offering any gift or inducement which may have an effect of influencing a decision or impairing the objectivity of an official.

- 2.2. SriLankan Airlines requires the bidders, suppliers, contractors, and consultants to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy:
- (a) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - (b) “fraudulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (c) “collusive practice” means a scheme or arrangement between two or more bidders, with or without the knowledge of SriLankan Airlines to establish bid prices at artificial, noncompetitive levels; and
 - (d) “Coercive practice” means harming or threatening to harm, directly or indirectly, persons of their property to influence their participation in the procurement process or affect the execution of a contract.
- 2.3. If SriLankan Airlines find any unethical practices as stipulated under ITB Clause 2.2, SriLankan Airlines will reject a bid, if it is found that a Bidder directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

3. Eligible Bidders

- 3.1 All bidders shall possess legal rights to supply the services under this contract.
- 3.2 A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have conflict of interest with one or more parties in this bidding process, if they:
- (a) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by SriLankan Airlines to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods/services to be purchased under these Bidding Documents; or
 - (b) submit more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid.
- 3.3 A Bidder that is under a declaration of ineligibility by the National Procurement Agency (NPA), at the date of submission of bids or at the date of contract award, shall be disqualified. The list of debarred firms is available at the website of NPA, www.npa.gov.lk

4. Eligible Goods and Related Services

4.1 All the Goods and Services rendered under this contract shall be complied with applicable standards stipulated by SriLankan Airlines stipulated in Section V, Schedule of Requirements.

Contents of Bidding Documents

5. Sections of Bidding Documents

5.1 The Bidding Documents consists of all the sections indicated below and should be read in conjunction with any addendum issued in accordance with ITB Clause 7.

- Invitation for Bids
- Bid Acknowledgement Form
- Section I - Instructions to Bidders (ITB)
- Section II - Bidding Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Schedule of Requirements
- Section VI - Technical Specifications & Compliance Sheet
- Section VII - Draft Contract and Performance Security

5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

6. Clarification of Bidding Documents

6.1 A prospective Bidder requiring any clarification of the Bidding Documents including the restrictiveness of specifications shall contact SriLankan Airlines in writing at the SriLankan Airlines' e-mail address **specified in the BDS**. SriLankan Airlines will respond in writing to any request for clarification, provided that such request is received no later than ten (10) days prior to the deadline for submission of bids. Should SriLankan Airlines deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 7.

7. Amendment of Bidding Documents

7.1 At any time prior to the deadline for submission of bids, SriLankan Airlines may amend the Bidding Documents by issuing addendum.

7.2 Any addendum issued shall be part of the Bidding Documents and shall be published in newspapers, uploaded to SriLankan Airlines website and will be communicated to prospective bidders who have forwarded the Bid acknowledgement form.

7.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, SriLankan Airlines may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 22.2

Preparation of Bids

8. Cost of Bidding

8.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and SriLankan Airlines shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

9. Language of Bid

9.1 The Bid, as well as all correspondence and documents relating to the bid (including supporting documents and printed literature) exchanged by the Bidder and SriLankan Airlines, shall be written in English language.

10. Documents Comprising the Bid

10.1 The Bid shall comprise the following:

- (a) Bid Submission Form and the applicable Price Schedules, in accordance with **ITB Clauses 11,13 and 14;**
- (b) Bid Security, in accordance with ITB Clause 19;
- (c) documentary evidence in accordance with ITB Clauses 17 and 28, that Goods and Related Services conform to the Bidding Documents;
- (d) documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted; and
- (e) any other document required in the BDS.

11. Bid Submission Form and Price Schedules

11.1 The Bidder shall submit the Bid Submission Form using the form furnished in Section IV, Bidding Forms. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

12. Alternative Bids

12.1 Alternative bids shall not be considered.

13. Bid Prices and Discounts

13.1 The Bidder shall indicate on the Price Schedule (Annex B) the unit prices of the goods/services it proposes to supply under the Contract.

13.2 Any discount offered against any single item in the price schedule shall be included in the unit price of the item. However, a Bidder wishes to offer discount as a lot the bidder may do so by indicating such amounts appropriately.

13.3 If so, indicated in ITB Sub-Clause 1.1, bids are being invited for individual contracts (lots) or for any combination of contracts (packages). Unless otherwise indicated in the **BDS**, prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price reduction (discount) for the award more than one Contract shall specify the applicable price reduction separately.

13.4 Prices indicated on the Price Schedule shall include all duties and sales and other taxes already paid or payable by the Supplier:

(a) on components and raw material used in the manufacture or assembly of goods quoted; or

(b) on the previously imported goods of foreign origin

(i) However, VAT shall not be included in the price but shall be indicated separately;

(ii) the price for inland transportation, insurance and other related services to deliver the goods to their destination;

(iii) the price of other incidental services

13.5 The Prices quoted by the bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 30.

13.6 All lots, if any, and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items.

14. Currencies of Bid

14.1 The Bidders shall quote in USD or in Sri Lanka Rupees.

15. Documents Establishing the Eligibility of the Bidder

15.1 To establish their eligibility in accordance with ITB Clause 3, Bidders shall complete the Bid Submission Form, included in Section IV, Bidding Forms.

16. Documents Establishing the Conformity of the Goods and Related Services

16.1 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods confirm to the technical specifications and standards specified in Section V, Schedule of Requirements and in Section VI, Technical Specifications.

16.2 The documentary evidence may be in the form of literature, drawings or data, and shall consist of samples, a detailed item by item description (given in Section V, Schedule of Requirements and in Section VI, Technical Specifications) of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Schedule of Requirements.

17. Documents Establishing the Qualifications of the Bidder

17.1 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to SriLankan Airlines' satisfaction:

(a) A Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods;

(b) and, that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

18. Period of Validity of Bids

- 18.1 Bids shall remain valid until the date **specified in the BDS**. A bid valid for a shorter date shall be rejected by SriLankan Airlines as non-responsive.
- 18.2 In exceptional circumstances, prior to the expiration of the bid validity date, SriLankan Airlines may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid.

19. Bid Security/Bank Guarantee

- 19.1 The bidder shall furnish as a part of its bid, a Bid Security/Bank Guarantee, using the Bank Guarantee form included in Section IV - Annex C.
- 19.2 Any bid not accompanied by a substantially responsive Bid Security/Bank Guarantee in accordance with 1TB Sub-clause 19.1, Shall be rejected by Sri Lankan Airlines as non-responsive.
- 19.3 Bid Security/Bank Guarantee may be executed:
- (a) If a Bidder withdraw its bids during the period of Bid validity specified by the Bidder on the Bid Submission form, except as provided in 1TS Sub-Clause 24.1 or
 - (b) If a Bidder does not agree to correctable of arithmetical errors in pursuant to 1TS Sub-Clause 27.1
 - (c) If the successful Bidder fails to:
 - (i) Sign the contract in accordance security with 1TS Sub-Clause 40;
 - (ii) Furnish a performance Security in accordance with 1TS Clause 41;

20. Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB Clause 10 and clearly mark it as "ORIGINAL". In addition, the Bidder shall submit a copy of the bid and clearly mark it as "COPY". In the event of any discrepancy between the original and the copy, the original shall prevail.
- 20.2 The original & copy of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder.
- 20.3 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

Submission and Opening of Bids

21. Submission, Sealing and Marking of Bids

21.1 Bidders may always submit their bids by post/ courier or by hand.

- (a) Bidders submitting bids by post/ courier or by hand, shall enclose the original and the copy of the Bid in separate sealed envelopes, duly marking the envelope as “ORIGINAL” and “COPY”. These envelopes containing the original and the copy shall then be enclosed in one single envelope.
- (b) Completed Technical (un-priced) and Financial (priced) proposal should be submitted in two separate sealed envelopes with the IFB reference no. CPIT/ICB 04/2019 and the Bidding Company’s name and the type of proposal (Technical or Financial) clearly marked on the top left corner of the envelope. Also, a soft copy of the Technical proposal including all brochures & supporting documents should be submitted in the form of a CD/DVD/Pen Drive, along with the printed Technical proposal.
- (c) The bidder shall submit the proposals for the following two financial options separately in the price schedule forms attached at Annex B-I & B-II.
 - 1) Financial Option I - Fully Managed Service model for a period of 5 years. Price schedule form attached at Annex B-I.
 - 2) Financial Option II - Outright purchase model with 5-year warranty and end to end support with Service Level Agreement for 5 years. Price Schedule form attached at **Annex B-II**.

The bidders must submit their proposals for both options, if not the proposal shall be rejected.

21.2 The inner and outer envelopes shall:

- (a) Bear the name and the address of the Bidder;
- (b) Be addressed to SriLankan Airlines in accordance with ITB Sub-Clause 22.1;
- (c) bear the specific identification of this bidding process as indicated in the BDS; and
- (d) bear a warning not to open before the time and date for bid opening, in accordance with ITB Sub-Clause 25.1.

If all envelopes are not sealed and marked as required, SriLankan Airlines will assume no responsibility for the misplacement or premature opening of the bid.

22. Deadline for Submission of Bids

- 22.1 Bids must be received by SriLankan Airlines at the address and no later than the date and time specified in the BDS.
- 22.2 SriLankan Airlines may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 7, in which case all rights and obligations of SriLankan Airlines and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

- 23.1 SriLankan Airlines shall not consider any bid that arrives after the deadline for the submission of bids, in accordance with ITB Clause 22. Any Bid received by SriLankan Airlines after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, and Modification of Bids

- 24.1 A Bidder may withdraw, or modify its Bid after it has been submitted by sending a written notice in accordance with ITB Clause 21, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB Sub-Clause 20.2, (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice, All notices must be;
 - (a) submitted in accordance with ITB Clauses 20 and 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", or "MODIFICATION", and
 - (b) received by SriLankan Airlines prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 22.
- 24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall be returned to the Bidders only upon notification of contract award to the successful bidder in accordance with sub clause 39.1.
- 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.

25. Bid Opening

- 25.1 SriLankan Airlines shall conduct the bid opening in public at the address, date and time specified in the BDS.
- 25.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding bid may be opened at the discretion of SriLankan Airlines. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening, Envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.
- 25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Prices, including any discounts and alternative offers; the presence of a Bid Security or Bid-Securing Declaration, if required; and any other details as SriLankan Airlines may consider appropriate. Only discounts and alternative offers read out at Bid opening shall be considered for evaluation. No Bid shall be rejected at Bid opening except for late bids, in accordance with ITB Sub Clause 23.1.
- 25.4 SriLankan Airlines shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; the Bid price, per lot if applicable, including any discounts, and the presence or absence of a Bid Security. The Bidders’ representatives who are present shall be requested to sign the attendance sheet.

Evaluation and Comparison of Bids

26. Confidentiality

- 26.1 Information relating to the examination, evaluation, comparison, and post-qualification (if applicable) of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 26.2 Any effort by a Bidder to influence SriLankan Airlines in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB Sub-Clause 26.2, if any Bidder wishes to contact SriLankan Airlines on any matter related to the bidding process, from the time of bid opening to the time of Contract Award, it should do so in writing.

27. Clarification of Bids

- 27.1 To assist in the examination, evaluation, comparison and post-qualification of the bids, SriLankan Airlines may, at its discretion, request any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to request by SriLankan Airlines shall not be considered for purpose of evaluation. SriLankan Airlines' request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by SriLankan Airlines in the Evaluation of the bids, in accordance with ITB Clause 29.

28. Responsiveness of Bids

- 28.1 SriLankan Airlines' determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 28.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
 - (a) affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (b) limits in any substantial way, inconsistent with the Bidding Documents, SriLankan Airlines' rights or the Bidder's obligations under the Contract; or
 - (c) if rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

28.3 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by SriLankan Airlines and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

29. Non-conformities, Errors, and Omissions

29.1 Provided that a Bid is substantially responsive, SriLankan Airlines may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

29.2 Provided that a bid is substantially responsive, SriLankan Airlines may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

29.3 Provided that the Bid is substantially responsive, SriLankan Airlines shall correct arithmetical errors on the following basis:

- (a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of SriLankan Airlines there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected; and
- (c) If there is discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

29.4 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified, and its Bid Security shall be forfeited, or its Bid-Securing Declaration shall be executed.

30. Preliminary Examination of Bids

30.1 SriLankan Airlines shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 10 have been provided, and to determine the completeness of each document submitted.

30.2 SriLankan Airlines shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the Bid shall be rejected.

- (a) Bid Submission Form, in accordance with ITB Sub-Clause 11.1;
- (b) Price Schedules, in accordance with ITB Sub-Clause 11;
- (c) Bid Security Declaration in accordance with ITB Clause 19.

31. Examination of terms and Conditions; Technical Evaluation

- 31.1 SriLankan Airlines shall examine the Bid submitted to confirm that all terms and conditions specified in schedule of requirement have been accepted by the Bidder without any material deviation or reservation.
- 31.2 SriLankan Airlines shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 16, to confirm that all requirements specified in section V, Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.
- 31.3 If, after the examination of the terms and conditions and the technical evaluation, SriLankan Airlines determines that the Bid is not substantially responsive in accordance with ITB Clause 28, SriLankan Airlines shall reject the Bid.

32. Conversion to Single Currency (if applicable)

- 32.1 For evaluation and comparison purposes, SriLankan Airlines shall convert all bid prices expressed in foreign currencies into Sri Lankan Rupees using the selling rates prevailed at the date of closing of bids as published by the Central Bank of Sri Lanka. If this date falls on a public holiday the earliest working day prior to the date shall be applicable.

33. Evaluation of Bids

- 33.1 SriLankan Airlines shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 33.2 To evaluate a Bid, SriLankan Airlines shall only use all the factors, methodologies and criteria defined in this ITB Clause 33.
- 33.3 To evaluate a Bid, SriLankan Airlines shall consider the following:
 - (a) the Bid Price as quoted in accordance with clause 13;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB Sub-Clause 29.3;
 - (c) price adjustments due to discounts offered in accordance with ITB Sub-Clause 13.2; and 13.3

33.4 SriLankan Airlines' evaluation of a bid may require the consideration of other factors, in addition to the factors stated in ITB Sub-Clause 33.3, if specified in BDS. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and related Services.

33.5 If so, specified in the BDS, these Bidding Documents shall allow Bidders to quote for one or more lots, and shall allow SriLankan Airlines to award one or multiple lots to more than one Bidder. The methodology of evaluation to determine the lowest-evaluated lot combinations, is specified in Section III, Evaluation and Qualification Criteria.

34. Comparison of Bids

34.1 SriLankan Airlines shall compare all substantially responsive bids to determine the lowest-evaluated bid, in accordance with ITB Clause 33.

SriLankan Airlines reserves rights to negotiate with the lowest evaluated Bidder(s), in the unlikely event of tie, even after negotiation with the lowest Bidder(s), SriLankan Airlines reserves rights to request the tied Bidders to jointly supply, giving preference to the lower quoted Bidder

35. Post qualification of the Bidder

35.1 SriLankan Airlines shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid is qualified to perform the Contract satisfactorily.

35.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 17.

35.3 After determining the lowest-evaluated bid in accordance with ITB Sub-Clause 34.1, SriLankan Airlines shall carry out the post-qualification of the Bidder in accordance with post qualification of the Bidder, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

(a) Financial Capability

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

Audited financial statements for the last 03 years

(b) Experience and Technical Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

Partnership Agreement or such other relevant documents.

Current clientele for the similar services offered with reference letters and reference contacts.

35.4 An affirmative determination shall be prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event SriLankan Airlines shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

36. SriLankan Airlines' Right to accept Any Bid, and to reject any or all Bids

36.1 SriLankan Airlines reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

Award of Contract

37. Award Criteria

37.1 SriLankan Airlines shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

38. SriLankan Airlines' Right to Vary Quantities at Time of Award

38.1 At the time the Contract is awarded, SriLankan Airlines reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section V, Schedule of Requirements, provided this does not exceed twenty five percent (25%) or one unit whichever is higher and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

39. Notification of Award

39.1 Prior to the expiration of the period of bid validity, SriLankan Airlines shall notify the successful Bidder, in writing, that its Bid has been accepted.

39.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

39.3 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 41, SriLankan Airlines will promptly notify each unsuccessful Bidder.

40. Signing of Contract

40.1 After notification, SriLankan Airlines shall complete the Agreement, and inform the successful Bidder to sign it.

40.2 Upon receipt of such information, the successful Bidder shall sign the Agreement.

41. Performance Security

41.1 Within fourteen (14) days of the receipt of notification of award from SriLankan Airlines, the successful Bidder, if required by SriLankan Airlines, may furnish the Performance Security amounting to a minimum amount of 10% of the agreement, using the form included in Section VII - Annex S. SriLankan Airlines reserves the rights to request for a higher valued Performance Security If required.

41.2 Failure of the successful Bidder to submit the above-mentioned Performance Security when requested or sign the Contract may constitute sufficient grounds for the annulment of the award and execution of the Bid- Securing Declaration. In that event, SriLankan Airlines may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by SriLankan Airlines to be qualified to perform the Contract satisfactorily.

Section II. Bidding Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	The name and identification number of the Contract are - Provisioning of a Desktop Management Solution for SriLankan Airlines. (IFB No. CPIT/ICB 04/2019)
	B. Contents of Bidding Documents
ITB 6.1	<p>For <u>Clarification of bid purposes</u> only:</p> <p><u>SriLankan Airlines contact details</u></p> <p>Mailing address: SriLankan Airlines Limited Commercial Procurement Department (IT Procurement) Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka</p> <p>Tel : +94 (0) 197332777</p> <p>Fax : +94 (0) 197335218</p> <p>A prospective Bidder requiring any clarification of the Bidding Documents shall contact SriLankan Airlines in writing at the e-mail address specified below:</p> <p>E-mail : sarath.jayathunga@srilankan.com sampath.sudasinghe@srilankan.com</p>
	C. Preparation of Bids
ITB 10.1 (e)	The Bidder shall submit the following additional documents: Company profile Client references - Section VI - Annex R Audited financial statements for the last 03 years
ITB 11.1 (e)	The Bidder shall fill and submit the following Compulsory Forms in Section IV . <ol style="list-style-type: none"> 1. Bid Submission Form - Annex A 2. Price Schedule - Annex B (B-I, B-II, B-III, B-IV) 3. Bid Security/Bank Guarantee - Section IV - Annex C
ITB 18.1	The bid shall be valid up to 29 th April 2020

ITB 19.1	Bid shall include Bid Security (issued by bank) using the Bank Guarantee form included in Section IV - Annex C.
ITB 19.2	The amount of the Bid security shall be LKR 1,200,000. The Bid security shall be valid up to 29 th April 2020.
	D. Submission and Opening of Bids
ITB 21.2(c)	The inner and outer envelopes shall bear the following identification marks: - Provisioning of a Desktop Management Solution for SriLankan Airlines. IFB No. CPIT/ICB 04/2019
ITB 22.1	For bid submission purposes, SriLankan Airlines' address is: Attention : Senior Manager Commercial Procurement Address : Commercial Procurement Department, SriLankan Airlines Ltd, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka. The following details of the bidder who wishes to hand deliver bids or participate for bid opening should be submitted to the e-mail address : sampath.sudasinghe@srilankan.com one day in advance to arrange security clearance: 1) Company Name : 2) Name/NIC No of the participants : (Maximum 02 participants) 3) Driver's Name /NIC No (if any) : 4) Details of the vehicle (if any): 5) Details of Brand/Model, Serial number of any electronic equipment such as Laptops etc.
	The deadline for the submission of bids is: Date : 29 th October 2019 Time: 11.00 a.m. Sri Lankan time (GMT +5:30 Time Zone)
ITB 25.1	The bid opening shall take place at: Address: SriLankan Airlines ltd, Airline Centre, BIA, Katunayake, Sri Lanka Date: 29th October 2019 Time: 11.15 a.m. Sri Lankan time (GMT +5:30 Time Zone)
	E. Evaluation and Comparison of Bids
ITB 33.4	The following factors and methodology will be used for evaluation: Minimum Eligibility Criteria and Evaluation criteria stipulated in Section III.

Section III. Evaluation and Qualification Criteria

Minimum Eligibility Criteria

- I. Bidder should have relevant experience in implementing and managing similar complex environments within last 5 years period.
- II. Bidder should have completed minimum two other large-scale information technology infrastructure projects for reputed companies and organizations of Sri Lanka.
- III. Bidders' fields of experience should be in following areas but not limited to.
 - a. End User Devices & End Device Management
 - b. Virtual Desktops, User profile Management
 - c. Application Packaging and Delivery
 - d. Digital Workspace
 - e. Data Storage Solutions & Backups
 - f. Internet & Network Services
 - g. Information Security Controls
 - h. Technological Service Management
- IV. Bidder shall have adequate Skilled Human Resource availability to successfully complete the implementations within agreed time line and deliver services.
- V. Providing the proposal covering all the major components of this RFP in English Language get with completed compliance sheet as in **Section VI -Annex P**
- VI. Provide signed NDA attached in **Section VI -Annex O**
- VII. Solution Compliance with ISO/IEC 27001:2013, PCI DSS, Data retention policies, GDPR and other applicable legislative and regulatory requirement
- IX. All the major components of the Solution must be recognized as leaders in respective field by leading independent market research organizations such as Gartner Magic Quadrant®, IDC, Forrester etc. in their most recent publication.

Evaluation Criteria

- I. Total final cost of the project for 5 years period
- II. Additional cost that would incur to SriLankan Airline for supporting infrastructure & services
- III. Credit terms better than specified
- IV. Service levels better than specified
- V. Performance better than specified
- VI. Compliance for all requirements under this RFP
- VII. Implementation lead time 04 months or better
- VIII. Positive Customer feedback in relation to 2 on-going customers on similar system implemented at enterprise level (Local or international)
- IX. On-site demonstration & site visits to verify specifications & performance.
- X. Solution with user friendly features
- XI. Technical competencies of the staff supporting the system and availability of the required equipment and facilities including capital for 5 years.
- XII. Integration with existing systems (Ex: Office 365/Security Solutions) already deployed at SriLankan Airlines
- XIII. Possibility of providing optional requirements
- XIV. Having ISO implemented operational procedures & Service Management System and with ITIL best practices in similar services
- XV. Ability to provide services for up to 8 years on year by year and cost of such service extensions.

Section IV. Bidding Forms

Table of Forms

Bid Submission Form - Annex A	Page 26
Price Schedule/Rate Sheet - Annex B (B-I, B-II, B-III, B-IV)	Page 28
Bid Security/Bank Guarantee - Annex C	Page 39

Section IV - Annex A

THIS IS A COMPULSORY FORM. IF YOU DO NOT FILL & SUBMIT THIS FORM YOUR BID SHALL BE REJECTED

Bid Submission Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: [Insert date (as day, month and year) of Bid Submission]

No: [insert number of bidding process]

To: SriLankan Airlines Ltd

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: *[insert the number and issuing date of each Addenda]*;
- (b) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the Goods and Related Services.
- (c) The total price of our Bid without VAT, including any discounts offered for 05 years is: *[insert the total bid price in words and figures]*;
- (d) The total price of our Bid including VAT, and any discounts offered for 05 years is: *[insert the total bid price in words and figures]*;
- (e) Our bid shall be valid for the period specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 41 for the due performance of the Contract;
- (g) We have no conflict of interest in accordance with ITB Sub-Clause 3.2;
- (h) Our firm, its affiliates or subsidiaries-including any subcontractors or suppliers for any part of the contract-has not been declared blacklisted by the National Procurement Agency;
- (i) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

(j) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed: *[insert signature of person whose name and capacity are shown]*

In the capacity of *[insert legal capacity of person signing the Bid submission Form]*

Name: *[insert complete name of person signing the Bid Submission Form]*

Duly authorized to sign the bid for and on behalf of: *[insert complete name of bidder]*

Dated on _____ day of _____, _____ *[insert the date of signing]*

Section IV - Annex B-I: Price Schedule Form for Option I

Reference No: CPIT/ICB 04/2019

Proposals for **Provisioning of a Desktop Management Solution for SriLankan Airlines.**

Fully Managed Service model including Installation, Commissioning, Warranty, Maintenance & Support and insurance cover with end to end support for 5 years through a Service Level Agreement.

Name of the Bidder :

Name of the Principal :

Name of the Manufacturer :

Line Item N°	Description of items	Brand/ Model	Unit of Measure	Qty	Rental cost per month	Total Rental for 60 months	Remarks
1	End User Devices & Virtual Desktops						
1.1	Desktop Computers as per specification provided		Devices	1,070			
1.2	Enterprise Standard Laptops/Notebooks as per specification provided		Devices	580			
1.3	Enterprise High-end Laptops/Notebooks as per specification provided		Devices	20			
1.4	Virtual Computers as per specification provided		Devices	1,000			
1.5	Zero Clients (ZC)/ Thin Clients (TC)		Devices	1,000			
1.6	Mini PCs		Devices	30			
1.7	Kiosks		Devices	50			
1.8	Microsoft VDA Licenses		Devices	1,000			
			
2	End Device Management						
2.1	Software Maintenance and Service Support for Endpoints & VDs		Devices	2.750			
2.2	Licenses for Device Management System		Devices	2.750			
			

3	Application Packaging and Delivery						
3.1	Application Virtualization and porting in Internal Network		Devices	2,150			
3.2	Digital Workspace		Users	600			
3.3	Remote Application Access		Users	100			
			
4	Storage & Backup						
4.1	User Network Share of 25 GB		Users	6000			
4.2	Backup & Data Retention for DR & Compliance		To be included by the Bidder				
		
5	Internet Access & Network Services						
5.1	Firewall - Min 2 Devices with FT		Concurrent Users	2,750			
5.2	Proxy- Min 2 Devices with FT		Concurrent Users	2,750			
5.3	Load Balancers- (If required for the solution)		To be included by the Bidder				
5.4	Core Switch/Switches/Routers		To be included by the Bidder				
5.5	Resources for connectivity to the proposed solution's public cloud components including internet links for 5 years		To be included by the Bidder				
			
6	Information Security for Endpoints						
6.1	DLP (Data Leakage Prevention) & Endpoint Protection		Devices	2,750			
6.2	Encryption		Devices	600			
3.3	Next Gen End Point Security		Devices	2,750			
			
7	Any other requirements to provision the Solution which covers the mandatory requirements (To be included by the Bidder)						
7.1	Other requirements (to be included by Bidder)		To be included by the Bidder				

7.2	.....			.....
7.3	.....			.....
8.	All other related services (Staff, Technology Support & Implementation)						
8.1	Cost of installing & commissioning the system with all required accessories and labour		To be included by the Bidder				
8.2	Maintenance & Support of the system including spares through a Service Level Agreement for 5 years to meet the service levels stated in the Bid document		To be included by the Bidder				
			
9.	Insurance						
9.1	Cost of Insurance covering all equipment on natural or accidental damages during the 5-year contractual period		To be included by the Bidder				
		
	All-inclusive total project cost for 60 months (5 years)						

Note: Please submit your Best and Final Offer (BAFO) since no further price negotiations will be carried out and your BAFO will be considered as the final price for evaluation

Payment term: Option I - Managed Service model for a period of 5 years - Quarterly in arrears over the 5-year period

Advance payment is not acceptable. 45 days credit from the date of invoice

A bank guarantee (unconditional, irrevocable and on first written demand) of 10% of the total order value shall provide to cover both the warranty period and contract period)

Bid Validity:.....

Bid Security: Yes/ No (to be attached with Technical bid)

Acceptance on 10% performance security:.....

Implementation lead time:

Available locations for inspection of the proposed solution/service -

Method of payment :

Bank details :

Head Office :

Account Name :

Period of Agreement : __ years commencing from __ until __

Price shall be fixed for the Term of the Agreement

..... *[signature of person signing the Bid]*

.....*[designation of person signing the Bid with frank]*

Date : *[insert date]*

Section IV - Annex B-II: Price Schedule Form for Option II

Reference No: CPIT/ICB 04/2019

Proposals for **Provisioning of a Desktop Management Solution for SriLankan Airlines.**

Outright purchase model including Installation, Commissioning, Warranty, Maintenance & Support and insurance cover with end to end support for 5 years through a Service Level Agreement

Name of the Bidder :

Name of the Principal :

Name of the Manufacturer :

Line Item Nº	Description of items	Brand/ Model	Unit of Measure	Qty	Unit Price CFR Colombo Port with 5-year warranty	Total Price CFR Colombo Port with 5-year warranty	Remarks
1	End User Devices & Virtual Desktops						
1.1	Desktop Computers as per specification provided		Devices	1,070			
1.2	Enterprise Standard Laptops/Notebooks as per specification provided		Devices	580			
1.3	Enterprise High-end Laptops/Notebooks as per specification provided		Devices	20			
1.4	Virtual Computers as per specification provided		Devices	1,000			
1.5	Zero Clients (ZC)/ Thin Clients (TC)		Devices	1,000			
1.6	Mini PCs		Devices	30			
1.7	Kiosks		Devices	50			
1.8	Microsoft VDA Licenses		Devices	1,000			

			
2	End Device Management						
2.1	Software Maintenance and Service Support for Endpoints & VDs		Devices	2,750			
2.2	Licenses for Device Management System		Devices	2,750			
			
3	Application Packaging and Delivery						
3.1	Application Virtualization and porting in Internal Network		Devices	2,150			
3.2	Digital Workspace		Users	600			
3.3	Remote Application Access		Users	100			
			
4	Storage & Backup						
4.1	User Network Share of 25 GB		Users	6000			
4.2	Backup & Data Retention for DR & Compliance		To be included by the Bidder				
		
5	Internet Access & Network Services						
5.1	Firewall - Min 2 Devices with FT		Concurrent Users	2,750			
5.2	Proxy- Min 2 Devices with FT		Concurrent Users	2,750			
5.3	Load Balancers- (If required for the solution)		To be included by the Bidder				
5.4	Core Switch/Switches/Routers		To be included by the Bidder				
5.5	Resources for connectivity to the proposed solution's public cloud components including internet links for 5 years		To be included by the Bidder				
			
6	Information Security for Endpoints						
6.1	DLP (Data Leakage Prevention) & Endpoint Protection		Devices	2,750			
6.2	Encryption		Devices	600			
3.3	Next Gen End Point Security		Devices	2,750			

			
7	Any other requirements to provision the Solution which covers the mandatory requirements (To be included by the Bidder)						
7.1	Other requirements (to be included by Bidder)		To be included by the Bidder				
7.2	.....			.....
7.3	.....			.....
8.	All other related services (Staff, Technology Support & Implementation)						
8.1	Cost of installing & commissioning the system with all required accessories and labour		To be included by the Bidder				
8.2	Maintenance & Support of the system including spares through a Service Level Agreement for 5 years to meet the service levels stated in the Bid document		To be included by the Bidder				
			
9.	Insurance						
9.1	Cost of Insurance covering all equipment on natural or accidental damages during the 5-year contractual period		To be included by the Bidder				
		
	Total one-time cost for 5 years						

Note: Please submit your Best and Final Offer (BAFO) since no further price negotiations will be carried out and your BAFO will be considered as the final price for evaluation

If the items are to be imported from your foreign principal / manufacture / agent, please quote the best possible CFR - Colombo port price or Duty-Free price to clear the shipment through SL Customs under the BOI - Duty Free facility. This will ensure that your proposal is more competitive since Sri Lankan Airlines could clear the shipment through SL Customs under the BOI - Duty Free facility.

Payment terms for Option II: **Please confirm**

Outright purchase with 5-year warranty extension and end to end support with Service Level Agreement for 5 years

Hardware: 50% on successful delivery of Hardware & 50% on system installation, commissioning & UAT

Software & Licenses: Quarterly in arrears

Installation & Commissioning: on successful system installation & commissioning

Maintenance Support & other charges: Quarterly in arrears

Advance payment is not acceptable. 45 days credit from the date of invoice

A bank guarantee (unconditional, irrevocable and on first written demand) of 10% of the total order value shall provide to cover both the warranty period and contract period)

Bid Validity:.....

Bid Security: Yes/ No (to be attached with Technical bid)

Acceptance on 10% performance security:

Implementation lead time:

Available locations for inspection of the proposed solution/service -

Method of payment :

Bank details :

Head Office :

Account Name :

Period of Agreement : ___ years commencing from ___ until ___

Price shall be fixed for the Term of the Agreement

..... [signature of person signing the Bid]

.....[designation of person signing the Bid with frank]

Date : [insert date]

Section IV - Annex B-III - Optional Items

(The below prices are for future reference only. These cost components will not be considered for the final evaluation of the proposals)
 Proposals for Provisioning of a Desktop Management Solution for SriLankan Airlines.
 Reference No: CPIT/ICB 04/2019

Line Item N°	Description of requirement	Unit of Measure	Qty	Unit price	Total cost	Remarks
1	Two Factor Authentication	Users	1,750			
2	Single Sign on and Intelligent Access	Users	6,000			
3	Privilege access management	To be included by the Bidder				
4	Advance Network Access Control	Devices	2,750			
5	Disaster Recovery Setup	To be included by the Bidder				
5.1	Virtual Desktops	Devices	500			
5.2	Application Delivery for Virtual Desktops	Devices	500			
5.3	Application Delivery for Mobile Users	Users	500			
5.4	Standard Laptops	Devices	500			
6	Long Term Data Retention	To be included by the Bidder				
7	Monitoring Station for Security Control Framework	To be included by the Bidder				
	<include any other items as appropriate>					

Section IV - Annex B-IV - Additional Services/Items

(The below prices are for future reference only. These cost components will not be considered for the final evaluation of the proposals)
 Proposals for Provisioning of a Desktop Management Solution for SriLankan Airlines.
 Reference No: CPIT/ICB 04/2019

Line Item Nº	Item /Repair Description	Unit price	Remarks
1	ZCs, Laptops & Desktops		
1.1	Professional Laptop Bag		
1.2	Optical Wireless Travel Mouse		
1.3	USB Keyboard		
1.4	USB Optical Mouse		
1.5	LCD Display/ Laptop Keyboard		
1.6	Docking Stations for Laptops (Without Keyboard/Mouse)		
1.7	RAM Upgrade by 8 GB Per Device		
1.8	LCD 23" Wide Screen Monitor		
1.9	LCD 19" Non-wide Screen Monitor		
1.10	DVD /CD/ Blue Ray Drive (External or Internal)		
1.11	Storage 1TB SATA/SSD		
1.12	VGA adapters/Cards with Multiple outputs		
1.13	LCD Screen of Laptop		

1.14	Inbuilt Keyboard of Laptop		
1.15	Inbuilt Touch Pad of Laptop		
2	Virtual Computers		
2.1	RAM Upgrade by 2 GB Per Device		
2.2	RAM Upgrade by 4 GB Per Device		
2.3	RAM Upgrade by 8 GB Per Device		
2.4	Additional vCPU		
2.5	Additional 128 GB Storage with 500 IOPS (50% R/W)		
2.6	VGA Support for VDs		
2.7	Additional Storage for Users by 10 GB		
2.8	Additional Storage for Users by 25 GB		
2.9	Additional Storage for Users by 50 GB		
2.10	Additional Storage for Users by 100 GB		
	<include any other items as appropriate>		

Section V - Schedule of Requirements

Line Item N°	Description of items	Unit of Measure	Qty	Final Destination	Delivery Date (Based on the project implementation time lines)
1	End User Devices & Virtual Desktops			IT division of SLAL	
1.1	Desktop Computers as per specification provided	Devices	1,070		
1.2	Enterprise Standard Laptops/Notebooks as per specification provided	Devices	580		
1.3	Enterprise High-end Laptops/Notebooks as per specification provided	Devices	20		
1.4	Virtual Computers as per specification provided	Devices	1,000		
1.5	Zero Clients (ZC)/ Thin Clients (TC)	Devices	1,000		
1.6	Mini PCs	Devices	30		
1.7	Kiosks	Devices	50		
1.8	Microsoft VDA Licenses	Devices	1,000		
		
2	End Device Management				
2.1	Software Maintenance and Service Support for Endpoints & VD's	Devices	2.750		
2.2	Licenses for Device Management System	Devices	2.750		
		
3	Application Packaging and Delivery				
3.1	Application Virtualization and porting in Internal Network	Devices	2,150		
3.2	Digital Workspace	Users	600		
3.3	Remote Application Access	Users	100		
		
4	Storage & Backup				
4.1	User Network Share of 25 GB	Users	6000		
4.2	Backup & Data Retention for DR & Compliance	To be included by the Bidder			
				
5	Internet Access & Network Services				
5.1	Firewall - Min 2 Devices with FT	Concurrent Users	2,750		

5.2	Proxy- Min 2 Devices with FT	Concurrent Users	2,750		
5.3	Load Balancers- (If required for the solution)	To be included by the Bidder			
5.4	Core Switch/Switches/Routers	To be included by the Bidder			
5.5	Resources for connectivity to the proposed solution's public cloud components including internet links for 5 years	To be included by the Bidder			
		
6	Information Security for Endpoints				
6.1	DLP (Data Leakage Prevention) & Endpoint Protection	Devices	2,750		
6.2	Encryption	Devices	600		
3.3	Next Gen End Point Security	Devices	2,750		
		
7	Any other requirements to provision the Solution which covers the mandatory requirements (To be included by the Bidder)				
7.1	Other requirements (to be included by Bidder)	To be included by the Bidder			
7.2	.....		.....
7.3	.....		.....
8.	All other related services (Staff, Technology Support & Implementation)				
8.1	installing & commissioning the system with all required accessories and labour	To be included by the Bidder			
8.2	Maintenance & Support of the system including spares through a Service Level Agreement for 5 years to meet the service levels stated in the Bid document	To be included by the Bidder			
		
9.	Insurance				
9.1	Insurance covering all equipment on natural or accidental damages during the 5-year contractual period	To be included by the Bidder			
				

Section VI - Technical Specifications & Compliance Sheet

Name of the Bidder :
Name of the Principal :
Name of the Manufacturer :
Brand :
Model :

Introduction to Technical Solution

Desktop and Application Delivery Solution (The Solution) for SriLankan Airline is to provide users a digital environment with rich user experience. Furthermore, The Solution must satisfy compliance and regulatory requirements and provide in depth visibility.

SriLankan Airline is currently using various mobile devices, laptops, Thin Clients (TCs), Zero Clients (ZCs) and Desktop Computers for enabling corporate data and application access to its users. In-addition, SriLankan Airlines intends to Introduce Bring Your Own Device (BYOD) practices. The solution is expected to improve the corporate digital environment beyond domain connected and controlled laptops, desktop computers and virtual computers. In addition to enhanced user experience, it is required to enable Application and Data Services over Internet using State of the art Technologies.

Therefore, proposed solution for this “Request for Proposal (RFP) for Endpoint & Application Delivery”, is expected to address following functional areas at minimum but not limited to:

- a) Provision of Endpoints
- b) Endpoint Management
- c) Application Packaging & Delivery
- d) Digital Workspace
- e) Internet Access & Network Services
- f) User/Group/Application & Data Storage
- g) Provision of Security Controls
- h) Compliance to Industry Standards
- i) Support & Maintenance

Basic Requirements

1. Scope of Work

The scope of this RFP includes the following and bidder should agree to work within the scope defined here:

- A. The current desktop environment of Sri Lankan Airlines to be transformed by a mix of products coming together as single managed solution to enhance the end user experience and improve endpoint performances to address expectation set forth by business.
- B. The Solution shall be implemented and maintained for five (5) years.
- C. Desktop and application delivery as a managed service is expected from reputed Bidders with relevant skills and expertise on delivering, maintaining & supporting similar environments. Alternatively, outright purchase model together with maintenance and support is also expected. Both these options are mandatory and the best proposal in terms of solution and the cost will be selected.
- D. Identification and recommendation of an appropriate solutions(s), which fits the SriLankan Airlines requirement herein and allows for future growth. Interested Parties must perform their own comprehensive sizing assessment.
- E. The work consists of design, deploy and manage a private computing environment with end user devices virtually isolated from the main data center of SriLankan Airlines. This requires a complete study of the present application suite and the hosting environment.
- F. On demand execution of comprehensive technical proof of concept (POC) on technologies proposed during technical evaluation.
- G. Assure the compliance with SriLankan Airlines policies and procedures including information security directives in the delivery and maintenance of the solution.
- H. The solution should enable a convenient, on-demand access to SriLankan Airlines applications with minimal management effort from the SriLankan Airlines support team. It is required to provide agile, performing, flexible and satisfactory services for 6000+ users and manage 2750 end user devices or terminals with 100 + applications.

2. Proposal Prerequisites

- A. The bidder shall sign an NDA with SriLankan Airlines prior to requesting any confidential information. The terms and conditions in the NDA (Section VI - Annex O) are not negotiable.

3. Sizing and Design of the Solution:

- A. Bidder should ensure integration of proposed solution with existing environment seamlessly and the coexistence of the proposed solution with present environment at SriLankan Airlines. A network strategy for proposed solutions should be given with no changes to existing network (core infrastructure). Devices will be connecting to SriLankan network through Internet/intranet, VPN or any public network. Internal Wi-Fi network also could be used for connecting to the environment by any authenticated user. The backend infrastructure should be able to provide required connectivity for these users to allow below described application and desktop services. In Annex G, Desktop & Application Delivery Solution Setup is depicted. Annex F describes the main access networks and logical separation of different networks
- B. The bidder shall thoroughly study and understand related parameters, functional relationships in-between, platform dependencies, network segments, traffic flow rates etc. before responding to this RFP. Bidder should validate, clarify and/or obtain additional relevant information, if any, from SriLankan Airlines so that Bidder can extensively identify technical requirements to be delivered with Bidder's solution. As required, the bidder may request additional information within the first 2 weeks after receiving this RFP in compliance with clause 4.1 A. Your proposal should clearly indicate your findings and parameters /assumptions used to design the solution. Vendor should attend to information sessions conducted by SLAL if requested by SLAL. SLAL will have the right to reject the proposals without meeting this requirement.
- C. The bidder holds the explicit responsibility to perform an independent and accurate sizing assessment. The result of such assessment shall be shared with SriLankan in Bidder's Proposal.
- D. Design should be carried out with the latest available technologies and using brand-new infrastructure components. SriLankan Airline has the full right to disqualify the Bidder in case of any deviations.

4. Eligibility of the Bidder

- A. Bidder should have relevant experience in implementing and managing similar complex environments (having more than 500 users.) within last 3 years period (please indicate relevant clientele and project descriptions). Bidder should have completed minimum two other large-scale information technology infrastructure projects for reputed companies and organizations of Sri Lanka. The reference letters given by the customer companies or organizations with their satisfactions of the provided services should be presented. Bidder should provide project summary of these project engagements with references. The referees should be able to answer a confidential questionnaire and directly submit to Sri Lankan Airlines. Two such customers should be nominated. Bidder should provide details together with Bidder proposals.
- B. Bidders expertise should be in following areas but not limited to. Bidder should provide adequate evidence about their previous work and company information with their proposal.
- i. End User Devices & End Device Management
 - ii. Virtual Desktops, User profile Management
 - iii. Application Packaging and Delivery
 - iv. Digital Workspace
 - v. Data Storage Solutions & Backups
 - vi. Internet & Network Services
 - vii. Information Security Controls
 - viii. Technological Service Management
- C. Bidder shall indicate the adequate Skilled Human Resource availability to complete the implementations within agreed time line and deliver services successfully. Selected Bidder for this project,
- D. Bidder shall agree to change designated resources during the engagement and replacement must be in same or above skill level. Minimum Qualifications of Bidder's resource personals who will be working under this project should meet described requirements in **Annex I** accordingly. Bidder should provide a summary of relevant qualifications of its employees with evidence and solid references. If Bidder do not have

requested competencies in all areas Bidder should agree to acquire all required competencies within one month after award of contract. Any gap or deviations need to be addressed by recruiting new employees or training and certification of employees within 3 months' time. Successful completion of this task shall precede the UAT Process. Relevant documentation to be attached in the Bidder's proposal

- E. Bids are liable to be rejected if; they are not conforming the terms, conditions and specifications stipulated in this RFP.

5. Bidder Proposals

- A. SLAL employees/users are having many different requirements due to nature of their duties, responsibilities, working locations and compatibility with other available resources. It is required to have right product & service mix to provide the cost effective and most productive solution. Figure in **Annex D** represent the architecture of the required solution (Logical Product service Mix). High level summary of the product Mix is presented in **Annex E**. Bidder should provide all the required products and components as mentioned in the RFP. Total number of users in the environment is 6000.
- B. Bidders shall provide pricing for both “**managed service**” option & “**outright purchase plus support**” option so that final decision shall be taken by SriLankan Airlines after financial analysis. This is purely a financial decision and therefore both the options should include same level of services.
- C. Interested Parties should submit proposals with **Mandatory Requirements & Optional requirements** along with separate financials for each component/option if any cost involves. It is essential to cover both mandatory and optional requirements in the proposal. The proposals without **optional requirements** may not be considered for evaluation.
- D. Also, Bidder should provide unit value/unit cost for optional requirement after the initial deployments and for additional options. Bidder shall provide details in line with the layout in “**Annex B-III Optional Items**” to provide the breakdown of financial charges for (monthly basis / onetime payment) the proposed solution. The proposals without **Optional Requirements** may not be considered for evaluation.

- E. Bidder needs to provide cost structures in the format given in “**Annex B-IV Additional Services/Items**” for accessories and upgrades of physical infrastructure and service components. The proposals without **Additional Requirements** may not be considered for evaluation.
- F. The bidder shall clearly detail the dependencies, such as licenses and efforts for the implementation/integrations which are not covered in the RFP. This is a mandatory requirement.
- G. Bidder should provide details of support infrastructure such as storage, Hosting Servers, Cloud Components, Switches, Tape Libraries, UPS, Load balancers and other hardware components.
- H. Direct Support from manufacturer or supplier through back to back agreement is a must for each service component
- I. The bidder should ensure minimum impact to the SLAL network performances by incorporating the proposed solution. Any increase in resource requirement such as internet bandwidth firewall, proxy, routers, switches, storage etc. to be addressed by the bidder without any cost escalation to SLAL. Please indicate such areas and solutions identified in the proposal.
- J. The specifications provided in this RFP are the minimum requirements of SriLankan Airlines. The supplier must meet or exceed these specifications to meet the actual requirements.
- K. All the components of the Solution must be recognized as leaders in respective field by leading independent market research organizations such as Gartner Magic Quadrant®, IDC (International Data Corporation), Forrester etc. in their most recent publications. Failure to do so will disqualify the proposal for further evaluations.
- L. The core product knowledge articles, troubleshooting documents, admin guides, installation guides, and manuals should be made available by Bidders from the beginning of the evaluation and thereafter.
- M. Comprehensive and elaborative proposal with relevant technical documentation with explicit reference to compliance statement should be submitted. The proposal should clearly explain the solution & its architecture addressing each point mentioned in this RFP document.

N. A point by point compliance to the requirements laid-down in sections of this RFP including annexes is essential for the proposal to be taken into evaluation process. The bidder should fill complete Annex P and Annex Q, including the remarks column, stating in relation to each statement point of the given requirements & specifications of this RFP, whether the proposed solution is fully complied, partially complied or non-complied. In case of partial-compliance any alternate method of realization should be clearly stated with illustrations and explanations justifying the deviation from the technical specifications. Also, any limitations should be clearly mentioned in the compliance statement. The remarks column should not be kept blank even if the term is “Complied”; use the column to detail out how the requirement is achieved. Completing the compliance statement, which constitute the primary point of information for proposal evaluation, is a prerequisite for the evaluation. All responses which do not satisfy this requirement will not be considered for evaluation. Bidder may attach required amendments as annexures if required.

6. Mandatory Documents

It should include Mandatory Documents mentioned following but not limited to.

	Mandatory Document	Remarks
A	Compliance Sheet	- Including Digital Copy-Excel Annex P (covering all the clauses in Section VI of this RFP) & Annex Q should be filled and submitted. Bidder essentially needs to include and address all the terms which are mentioned in Section VI of this RFP to be eligible for technical evaluation in bidder's compliance sheet of bidder's proposal. Should submit hard copies as well as soft copies.
B	Non-disclosure Agreement	- Signed by Respective Authority
C	Report on sizing and Designing of Solution	Comprehensive report on independent sizing exercise, methodology and results
D	BOM	1. Comprehensive Bill of Material 2. Support Infrastructure & Other Requirements (Power, cooling, data network, space, storage,

		<p>processing power, memory, backup media, etc.)</p> <p>3. Spare and backup stock list</p>
E	Project Plan	Detailed project plan indicating all milestones with aggressive time lines. Must reflect logical deployment phases. Also, should include Schedule of preventive maintenance.
F	POC Proposal	Scale and plan to conduct Proof of Concept
G	Company information & Referrals	<p>Minimum of two references of similar deployment, completed within last 3 years</p> <ul style="list-style-type: none"> ▪ Job Location ▪ Contact name and telephone number ▪ Date of contract ▪ Description ▪ Services Provided
H	Main technological partners support	Manufacturer Authorization Letter conforming the authorize partnership.
I	Bidder's Financial Reports	last three years financial statement of the bidder
J	Bidder's Competency and skilled resources	<p>Skilled Human Resource Allocation for deployment, maintenance & support of proposed solution which include following details at minimum.</p> <ul style="list-style-type: none"> ▪ Skilled technical resources allocation ▪ Project management resources allocation ▪ Experience of similar projects ▪ Deployment certifications from the principle for the proposed solution ▪ Related Technical skills ▪ Detail curriculum-vitae of all proposed resources
K	Details of the Technical Solution	<p>Details of technical specifications of products & product catalogues and details of any software versions & releases to be provided.</p> <p>Other Technical Specifications of Products used to deliver the solution</p>
J	Financial Proposals	Should submit Along with Bidding Forms provided in Annex B-I,BII, B-III & B-IV

7. Proof of Concept

- A. Bidder should carry out complete POC to demonstrate the viability of the solution for Sri Lankan requirements. All agreed requirements to be demonstrated in the POC and required to be completed within 8 weeks. The total POC cost should be borne by the Bidder. Bidder must provide monitoring capabilities at POC and access for these monitoring tools to SriLankan Airlines. Bidder should provide detailed report based on POC which should include required capacity planning and should assure higher or similar system performance if the contract is awarded.

8. Contract Award

- A. SriLankan have the right to purchase full or part of the solution from any Bidder depending on the quality and the cost of the proposal either as managed service or outright purchase with support.
- B. SriLankan Airlines has right to change the device/product mix based on the experiences to be gathered at the delivery of services in the POC while maintaining total requirement.
- C. Total order quantity might vary by $\pm 25\%$ at the time of purchase regardless of success of each service in the POC. There is a possibility of reduction of user count to 4500 and please identify and clearly indicate areas where cost reduction can be achieved if the user count is reduced.

9. Project Implementation

- A. A dedicated project manager with a team should overlook the project delivery if the contract is awarded.
- B. Project should be completed within 4 months of issuing the letter of intent or purchase order by SLAL. Any delay in project completion will lead to service credits as described in Service Levels & Service Credit Scheme.
- C. User Acceptance Test (UAT) will be carried out by Bidder and SriLankan Airlines and it can be started soon after fully and successful deployment of each service Component. Implementation is considered as completed only after receiving User Acceptance.

- D. Proper User acceptance test need to be prepared in coordination with SriLankan Airlines which reflect both alfa (before releasing the product to users by internal teams) & beta (by real users of the system) acceptance tests considering followings.
 - i. Project Team Awareness/ Preparations
 - ii. UAT Team Preparations
 - iii. Test Preparations
 - iv. Test Execution & Evaluations

10. Billing & Financials

- A. Monthly customized detailed bills for each Division/Department should be made available with inventory details for products and services provided to that department/division by the Bidder in addition to the monthly summary of bills/details with cost breakdown indicating cost for each product and service component. Bidder shall provide invoices in line with **Annexes B-I, B-II, B-III and B-IV** to provide the breakdown of monthly or onetime payment.
- B. Bidder need to provide cost structures as defined in **Annex B-IV** for accessories and upgrades of physical infrastructure and service components. Costs shall be pre-agreed for accessories, standard repairs, and loss of items, upgrades of system and new device / new virtual Computer / new service deployments throughout the agreement period. Such cost should be at market value or lesser with same level of products or services in Sri Lanka if not particularly defined in the agreement.
- C. Cost of the service level agreement including warranty upgrade and technology transfer to be identified separately and this will be paid quarterly in case of outright purchase. Bidder should submit the financing details for such a case separately in **Annex B-II**
- D. SriLankan Airlines has right to deduct service credits from the monthly /quarterly invoice or may separately invoice to the Bidder.

Endpoints & Virtual Desktops

11. Provision of Endpoints & Virtual Desktops

- A. Users should be given Microsoft Windows installed Desktop Computers, Laptops, Kiosks and Virtual Desktops (with Thin Clients or Zero Clients) which are connected to the local Microsoft AD and Azure AD for centralized administration and policy maintenance on them.
- B. Desktop Computers, Laptop Computers or Virtual Computer need to support all general applications on them. Microsoft Office Package, Adobe Products etc. could be considered as examples.
- C. Any Authorized and authenticated user should be able to log in to devices running Windows OS which are connected to SriLankan Domain using their active directory or Azure Active Directory account.
- D. Bidder should agree to support Minimum of 25 Virtual Computers with Linux OS and should provide same experience as Windows Virtual Computers as a pilot project. Proposed VDI solution should be capable of replacing Windows OS with Linux for an identified set of VDs on request.
- E. Virtual Computers should be accessible from Dummy Devices (like TC and ZC), browser and any other external and internal devices over RDP or PCOIP or HDX or similar protocols. Shared or dedicated Virtual Computer sets with different base images should be provided. This should ideally provide domain connected/standalone/internet connected Desktop Computer experience to users over Internet or intranet. This will include providing required desktop environment and maintaining updates, providing related facilities (Space for user Data & Profile Management, Provisioning applications in VDs etc.) for an excellent user experience.
- F. USB redirection should be supported for Virtual Desktops while supporting USB storage devices, USB DVD/CD drives, USB Cameras, USB Printers, USB Scanners & USB Flash Drives.
- G. Printing and scanning solutions need to be accessed from any domain connected device where facility is authorized. Printing and scanning devices are connected to internal network or to end user device directly. The user (using the end user device) should be able to print and scan using his applications or virtual desktop/Laptop/Desktop.

- H. All the additional accessories & components given in **Annex B-IV** to be provided by the successful bidder as and when required during the period of the agreement. SLA will have right to purchase such accessories in case bidder has failed to deliver on request or available in the market at a lower price. However, bidder must continue to support such items once installed or purchased by SLA to the system.
- I. Annex K defines the required specifications for laptops, Desktops, Kiosks, Thin clients, Zero Clients and Virtual Computers. **Bidder should comply all the requirements given there in.**
- J. Bidder should maintain minimum of 1 device or 2% of total number of end user devices (except for high-end laptops where minimum of 2 devices required) whichever is higher as onsite backup which should be replenished within 48 hours. Proposed spare equipment list covering all the hardware components shall be attached to the proposal as part of **Bill of Material (BOM)**.
- K. At its sole discretion, SriLankan Airlines, should have a provision to acquire the end user devices at the end of 5 years term on free of charge (FOC) basis or should have provision to purchase them paying only the value after depreciation at a termination considering linear depreciation cost of 20% per annum All laptop computers, desktop computers, Kiosks and ZC/TC Will be considered to have a lifecycle of 5 years. Original bidding values provided in **Annex B-II** by the bidder will be considered in this case as the initial value of the device.
- L. Bidder should provide any number of additional user devices and /or including services at request of SriLankan Airline within the agreement period subjected to agreed cost.

12. Regular Upgrades to Endpoints & Virtual Desktops

- A. Year on year specification of Desktops, Laptops, Kiosks & Mini Computers need to be revised for new requests to represent the performance of industry standards in each category. Required specification/features mentioned in **Annex K** of this RFP should be reviewed regularly or annually and both parties should agree on the specifications. The end user device models to be reviewed every year by bidder and SLAL and agree for the proposed device well in advance. POC to be carried out with the proposed models at least 3 months prior to the requirement or 3 months prior to annual review.

- B. After First 3 years Bidder should match the performance of end user devices and their features with existing market standard devices at the time and should allocate adequate resources to upgrade the resource and performance in them.
- C. Any other improvements needed to system/ devices should be discussed and agree with SriLankan Airlines to avoid any performance degradation or service interruptions after reasonable usage period.

13. Endpoint Management

- A. Device Deployment, Replacement, Transfer, Disposal, Storing, Repair or any other work related to End points should be performed by the Bidder within service levels. Also required documentation, CMDB/component database update & Verification must be handled by the Bidder.
- B. It is required to maintain the OS, applications, data, service delivery platforms etc. active and seamlessly connected, while securely managing user profiles in those devices. Special Operating System builds (Images) / Virtual Computers/Laptops/Desktop Computers/Kiosks need to be deployed at request. Creation & Setting up of build need to be done by Bidder as per the directions given by SriLankan IT Systems, up to 20 number of different builds. (computer disk image building, patch management, user & device policy, user experience etc. to be considered) Bidder should manage these builds and should maintain them to be used whenever required.
- C. Bidder should acquire the managing of software and application delivery of existing computing devices owned by SriLankan Airlines including desktops and laptops. Any Desktop Computers, Laptops, which are to be provided by SriLankan needs to be managed and maintained as per the cost given for “software maintenance and support” in Annex B. Most of present workstations will be replaced with new devices provided under this project. Any number of devices provided by SriLankan Airlines should be able to be managed by the selected Bidder. Hardware maintenance of SriLankan Airline owned devices will be managed by SriLankan Airlines or nominated third party.
- D. Deployment of Created Builds, Installation, Patching and Update of SW/Applications/OS should be supported for all the devices including SLAL owned equipment.

- E. Support needed to be provided for any standard revision or application or resource upgrade in supported devices and in VDs (CPU/Memory/Storage/Network).
- F. All devices should be managed independently from the current services and products used in the environment providing the freedom to users to act freely.

14. Centralized Service & Configuration Management System for Endpoints

- A. Bidder shall provide centralized device management and application management capabilities.
- B. The proposed solution should include a centralized management for each types of end devices. The system should provide all management data necessary to manage the resources securely and optimally. Kiosks should be monitored and reported on regular basis.
- C. A client management solution should provide a comprehensive patch management for device firmware, OS patches, application packaging to be distributed from centralized repository.
- D. Fast Management of shortcuts, wall-papers, news alert and notification display on for internally and externally (over Internet) connected devices (Desktop Computers/laptops/Virtual Computers/Kiosks/official mobile devices) using policies should be available.
- E. A remote assistance solution should be incorporated to support users whenever required. This should be supported in both internal and external networks and facility should be enabled from any internal or external team to support the user securely.

15. Application Packaging and Delivery

- A. The application virtualization and porting for Domain Connected Devices shall enable users to connect to applications and user desktops using any intranet connected terminal (Laptop/Desktop/Virtual/TC/ZC). Application and Data Services should be extended to Laptop/Desktop/Virtual computers by this. End users should have proper access to the applications without compromising performance and information security to increase

their productivity/efficiency. The solution may incorporate multiple technologies to provide the final outcome without compromising performance, usability and maintainability.

- B. The application virtualization and porting for Domain Connected Devices should support all applications and services which are running in current environment at SLAL. It should support any new application to run on existing platforms or Microsoft windows operating systems. Applications may be client-server, web based or stand-alone and should be able to deliver to Virtual Computers, Desktop Computers, and Laptop Computers while connected to intranet.
- C. There are mainly 100+ applications including very critical 40 business applications. However, Bidder should support up to 200 applications altogether. These applications depend on platforms like Java, Dot Net etc., (different versions of them) and different versions of IE or other browsers. The backend database servers/ app servers are in internal or external datacenters or on cloud while some applications use remote access technologies to deliver the application to user. In **Annex H** the number of applications in each category are provided. All applications are supported on Microsoft desktop platforms hence the proposed solution should be capable of supporting applications compatible with MS client OSes (including Win 7, Win 8.x, Win 10).
- D. Solution should support current enterprise wide products like Microsoft Office 365, MS office package etc. and should be able to provide all the capabilities of it without compromising performance and usability while being compatible with update/upgrade cycles.
- E. Provisioning and rollout of Standard and specific commercial applications (Adobe/Office etc) and Licensing need to be managed for all user devices & users in domain environment (at the level of provisioning and delivery of applications).
- F. Application virtualization/porting need to be deployed on existing SriLankan Airlines owned devices and new devices (provided by the Bidder) as well.
- G. Application virtualization/porting should support on all windows operating systems and platforms. Also new Microsoft operating system versions should be supported.
- H. At times, it is required to provide various versions of same application to a user. It is required to support different application or versions of applications running on a Computer which is having incompatible platforms (E.g.: Java app running on Java 6 and another running on Java 7).

- I. Application virtualization and porting should provide application interoperability within the logged in computer as on Microsoft Windows computer with some applications locally installed (e.g.: Initiate IE browser session from a hyperlink in windows from Adobe PDF, Initiate Opening saved Microsoft office documents from the IE browser/word documents, Support interaction between office packages as normal).
- J. Users should be given a functional and user-friendly desktop environment where company will need to introduce new technologies to user for improved performance and efficiency at lesser cost while fulfilling the customer expectations. Graphical interface needs to be changing and up to date with great look and feel to enable alerting/News bulletins/KPI Display/application access. User experience and desktop background and behavior should be similar in all the devices (Laptop Computers/Desktop Computers/Virtual Computers including all the SriLankan Airlines' Desktops & Laptops). Also, whenever user changes his /her preferences in application or environment settings (user profiles) it need to be applied to all devices that user interacts with.
- K. Applications should be delivered or made available through intranet (LANs and WAN of SriLankan Airline) to authenticated users using secure channels. Users connected to the network internally or externally should be able to use their applications on any logged in device by default whenever they need.
- L. It should be possible to access applications from multiple terminals at the same time for users.
- M. There should be a mechanism to provide application remote access for 100 of users (with expansion capability) to make access to any internally available applications over Internet or intranet from any standard user device without limiting the features of the application. This is optional to any other solutions provided under other topics.

16. Digital Workspace

- A. The Solution should consist of a Digital Workspace for Laptop and mobile users with specifications provided in **Annex J**. It is required to provide all the features requested in **Annex J** with detailed cost breakdown for each component or licenses with compliance to each term given.

The Digital Workspace should support the total application portfolio deployed at SLAL.

17. Network User Data Storage

- A. Every User should be able to keep up to 100 GB of data (average of 25GB Data per user) in internal Network Drive or Folder and should be able to access from the internal network from his logged in device. Users should be able to access their official data, using any domain connected device with required security levels.
- B. It should provide the facility to share data over the network with other users based on AD security groups or AD user accounts.
- C. Snapshots and backups should be maintained as defined in clauses in 35 in this section.

Secure Network Services & Internet Access

18. Secure Web Gateway

- A. The Solution should consist of Secure Web Gateway with the Specifications provided in **Annex M**. It is required to provide all the features requested in **Annex M** with detailed cost breakdown for each component or licenses with compliance to each term given.
- B. The bidder needs to manage the Secure Web Gateway as per requests of SLAL. The support and maintenance to be carried out by the bidder meeting agreed service levels. All necessary rights to be available to SLAL team and successful bidder should provide necessary training & documentation so that SLAL team can fully manage the system as and when required.

19. Next Generation Firewall

- A. Whole inbound and Outbound Internet traffic of Desktops & Sri Lankan Airlines Environment should be protected by Next Generation Firewall. The solution should provide all the features defined in **Annex N**. It is required to provide all the features requested in **Annex N** with detailed cost breakdown for each component or licenses with compliance to each term given.
- B. The bidder needs to manage the Next Generation Firewall as per requests of SLAL. The support and maintenance to be carried out by the bidder meeting agreed service levels. All necessary rights to be available to SLAL team and successful bidder should provide necessary training & documentation so that SLAL team can fully manage the system as and when required.

Management and Administration

20. Identity Management

- A. The solution must entirely rely on AD as the primary source of authentication for end users and administrators (to cover entire operation and maintenance)
- B. The solution must support, AD security groups-based permission assignment for end users and administrators (to cover entire operation and maintenance)
- C. All endpoints/servers must manage (enforced with policies) centrally via AD and Azure AD or suitable Mobile Application and Device Management (MADM) platform
- D. Solution must rely on certificate-based authentication for applications and services
- E. Solution must tightly integrate with Microsoft Identity Management (MIM) platform to support
 - automated application provisioning to endpoint, based on user profiles (reflected via AD security group)
 - automated application access and roles provisioning, based on user profiles (reflected via AD security group)
 - end user group AD membership management
 - self-service password management

21. System Administration & Administrative Access Control

- A. System Administration for servers, network devices, storage etc. should be provided with the secure infrastructure & centralized management. Also, centrally controlled Server Management should be provided.
- B. The Solution must provide a role-based access control with granularities. All Administration accounts should be managed centrally, and role-based access should be configured on all servers and network devices. Access to devices must be audited authenticated, authorized and logged.

- C. The Solution must allow administrators to define roles based on job functions and appropriate levels of access to functionality.
- D. The Solution must integrate with Active Directory for user authentication and AD security group-based authorization.
- E. Solution must support restrictions on source IP of administrative access.
- F. The Solution must have search option in GUI to search configuration options and should directly take administrator to configuration window of search result by clicking on search results.
- G. The Solution must have an easy to use, searchable interface.
- H. The Solutions should have the option to add exceptions for network and services.
- I. The Solution must support detailed user activity auditing and must forward comprehensive logs to SIEM.

22. Proactive System Monitoring & Reporting

- A. Centralized and comprehensive monitoring and reporting including CPU usage, memory usage, and storage IOPS usage for each application on each device need to be included.
- B. Accurate Reporting and Monitoring systems need to be in place to provide in detail information about network, system, links performance, utilization and stability related to the solution.
- C. Timing & Performance related to boot, login, application loading, and other process should be measured.
- D. Centralized monitoring (including comprehensive detail and user/device level granularity) with alerting and logical troubleshooting methods to be implemented with use of proper tools. Alert should be made fully available to SriLankan Teams.
- E. Automated & Simplified Dashboards and Data related to Virtual Computer Infrastructure, Application and Device usage, Patch update levels, Virus Protection levels need to be available for any authorized person (IT or non-IT) to access.
- F. Daily Weekly Monthly automated customized reports with any of above details in dashboard need to be configured.

- G. Comprehensive asset tracking and usage statistics of desktops & applications shall be made available to bill different departments within the SriLankan Airlines.
- H. UL should be able to obtain customized usage reports (software metering, access logs, usage reports etc.) at any time. Also, periodic and ad-hoc usage reports and relevant statistics of resource utilization shall be provided by Bidder as and when requested by UL.
- I. Software Metering is essential to produce the reports on application usage. Monthly reports to be available for each application running on end user devices. Please indicate any tool proposed to deliver this requirement. Sample reports to be incorporated with the proposal. This requirement is mandatory, and proposals may be rejected if not addressed.
- J. Access to the above total system should be granted for SriLankan Airline for Monitoring and Audits.
- K. The Solution must support detailed user activity auditing and must forward comprehensive logs to SIEM.
- L. Bidder should get Independent reviews of systems & configurations from solution principles on yearly basis and share them with SriLankan Airlines.
- M. Bidder should provide 52” Large Screen Displays for each monitoring solution covering all aspects including User Experience & End Device Performance, Service Monitoring & Resource Utilization, Security and Vulnerability Status

23. High Availability and Scalability

- A. The Solution architecture and related licensing model must allow for Active-Active deployment which assure high availability and reliability
- B. Proposals shall be scalability for potential future expansions. System should be expandable up to minimum 25% of its capacity. Please provide all the details with your proposal.

- C. The Solution must not have any single point of failure, excluding management and reporting modules. The bidder should clearly explain the design and how the salient user requirements are met with the solution. This is a mandatory requirement.

24. Reports and Dashboards

- A. The Solution should be able to schedule reports and provide the flexibility to generate on-demand reports daily/weekly/monthly/yearly/specific range (date and time), etc.
- B. Solution should provide a Dashboard that offers real time visibility and as part of the solution: Bidder shall deploy real-time monitoring station (including supply of a display panel - 50" recommended) which indicate, including but not limited to -
- Threat dashboard - Top Attacks and characteristics
 - Service health/status
 - High risk users/endpoints
 - Policy violations
- C. The Solution must provide the ability to generate reports directly from dashboards that include the same visual elements and results.
- D. The Solution should provide report templates base on Applications, Users, Threats, Traffic and URLs etc. and reports in (not limited to) HTML/CSV/PDF/XML Formats.
- E. The Solution Should be able to create reports on system usage
- F. The Solution should have features to prioritize and send alerts via SMS and/or email.
- G. The Solution must allow each user to define multiple user-specific dashboards.
- H. Dashboard elements shall be fully customizable by filtering to display data based on asset list, vulnerability or compliance checks, time, key word search, IP address, etc.

- I. The Solution should provide the ability to define various visual elements for customized dashboards to include pie charts, bar charts, and trending
- J. The Solution must provide reports against Information security and governance standards such as ISO27001:2013 and PCI-DSS and EU- GDPR
- K. The Solution must provide Reports on operational inelegance with contextual information to visualize and explore.

25. Seamless Integration with existing infrastructure

- A. Solution must support virtualization technologies and shall seamlessly Integrate with virtualize server and desktop environment without imposing any performance impact for optimum operation.
- B. The Solution shall support Seamless Integration (via flexible-extensive interfaces (APIs) and connectors,) with existing security framework to respond to threats and share intelligence. System including not limited to,
 - i. Perimeter and internal firewall (Checkpoint, Palo alto, Cisco ASA)
 - ii. Vulnerability management systems (tenable SCCV)
 - iii. Security information and event management (MacAfee SIEM)
 - iv. Web application firewalls (F5 ASM)
 - v. Database firewall (IBM Security Guardian)
 - vi. Server and desktop virtualization – VMware VDI, hyper v, exsi
- C. It should be able to provide Network Traffic Spanning for security or other requirements
- D. The Solution should support integration of privately generated intelligence with other security devices through open standards-based protocols like STIX/TAXII, Open IOC etc.
- E. The Solution shall provide events-based alerts/logs and forward to SIEM. Comprehensive security and operational logs should be available.
- F. The Solution should support SNMP, Flow data, OPSEC and syslog for integration with a SIEM and existing security/monitoring framework.

- G. Proposal should indicate connectivity requirements to external services, feeds and call-home functions in terms of dedicated destination IP address and ports.

26. Proactive & Preventive System Maintenance

- A. Firmware and software versions of all infrastructure components should be maintained up to date to most stable commercially available versions with enterprise standards.
- B. Schedules should be made for proactive and preventive maintenance and should be submitted to SriLankan Airlines and should agree with SriLankan IT Teams. Such records and completed tasks need to be shared with SriLankan IT Teams Weekly/Monthly/Quarterly/Annually.
- C. Bidder should demonstrate proficiency to do any critical change within the system including on connected end devices via internet /intranet within 24 hours while keeping the availability targets for the month.
- D. Dependency Matrix for services & hardware interdependence need to be submitted and updated regularly.
- E. Monthly Evaluations for Proactive and Preventive system maintenance should be done internally with technical teams and should share the progress with SriLankan IT Teams together with Monthly report.

27. Skilled Employees allocated for Management and Maintenance of the Solution

- A. At the time of implementation proper skilled project team should be deployed.
- B. Onsite support including client-side application support with stationed technical staff should be available at Colombo & Katunayake premises of SriLankan Airlines. Other offices within Sri Lanka can be catered with on demand on-site support and remote support rest of the time. For services consumed at overseas locations, only the remote support from head office, (Katunayake) deemed essential. It is Bidder's responsibility to arrange transport between premises and inside the premises where external vehicles are allowed.
- C. There should be Minimum number of Experts from each of Following categories of technology as in below table after implementation but not limited to as per the

technologies used. There should be adequate number of onsite engineers /technical officers to support day today operation tasks.

#	Expertise	Experts /Consultants	Senior Support Engineers	Manager/ Lead Engineer	Support Engineer	Associate Support Engineers/ Technical Officers
1	Administration/General			1(Onsite)		4(Onsite-Rostered), 2(Onsite-Day)
2	Desktop /Application Delivery	1	1(Onsite)		1(Onsite)	
3	Microsoft /Server Infrastructure / Database	1	1		1 Onsite)	
4	Backup & Storage	1	1		1(Onsite)	
5	Networking & Security	1(Network), 1(Security)	1		1(Onsite)	

- D. As above total of minimum of 7 staff in day shift and 1 in night shift with relevant experience, certification and qualifications should be onsite. If Bidder could manage work in any better way explain in the proposal with the used technological or any other support.
- E. On Call Engineers should be available in holidays and in off hours and they should be able to report to work within 1 hour of time.
- F. Bidder should allocate experts /Senior engineers/ Support Engineers and Technical Officers as per the Skill Matrix given in Annex I:
- G. Service Credits will be applied if Bidder could not maintain the required number of employees with the relevant skills.
- H. SriLankan Airlines will have right to interview and verify qualifications of any employee recruited or all employees working under the project. Bidder is liable to inform new recruits or change of employees through proper communication channels before one week in case of planned change or within 24 hours if emergency change of employment.
- I. Bidder's Employees should comply with all applicable SriLankan Airlines' HR Policies including Proper Dress codes and Ethics. SriLankan Airlines management shall have undisputed right to request the bidder to terminate any employees (from servicing SriLankan Airlines) who do not meet expected qualifications, performance or do not cooperate with SriLankan Airline's Staff, where Bidder essentially need to heed the request.

J. The cost of the above support staff to be separately indicated in your proposal.

Information Security Administration

28. Endpoint Security

- A. Solution should provide Endpoint Security having proactive threat mitigation. It should be consistent of components mentioned in **Annex L**. It is required to provide all the features requested in **Annex L** with detailed cost breakdown for each component or licenses, with compliance to each term given.

29. Integration with current & future Security & Monitoring Solutions

- A. All components of the solution, including endpoints (VD, Desktop, and laptop) and applications shall be enabled with comprehensive event logging and logs must be forwarded to corporate SIEM (McAfee Enterprise Security Manager) setup. Also, Logs should be retained in the centralized locations up to minimum of 3 months but not limited to.
- B. Copy of all network traffic between solution components and endpoints (including but not limited to server to server, user to servers and user/server to internet/external network) must be forwarded to corporate Network Behavior Analysis Solution (Dark Trace) via SPAN, RSPAN. (Network Behavior Analysis Solution (Dark Trace) support direct connectivity via 10 Gigabit SFP+ Optical Transceivers)
- C. All bidder systems should be integrated to any Privilege Access Management System which might be deployed by SriLankan IT Systems. Privilege Access Management will work through system accounts, users & groups in Active Directory domain services.
- D. If SLAL decides to implement any other systems related to Device Management, End device Protection, Data Protection bidder should support deployment of such systems and integrations.

30. Security on Data at Rest

- A. Data at endpoints (Laptops & Desktops) shall be encrypted
- B. Encryption solution must support central key management
- C. Encryption solution must support self-service portal for key recovery based on strong challenge response mechanism.
- D. Encryption to be supported on external flash drives/USB devices and hard disk drives.

31. Security on data at transit

- A. All communications channels between solution components including endpoints (server to server, server to endpoint) must be protected by transport layer security (SSL, TLS)
- B. The solution must establish Internal certificate framework (AD based CA)
 - i. authentication of devices
 - ii. to authentication of application and services (omit the use of service accounts)
- C. Inbound & Outbound Data transfers to be logged centrally, including copying of data locally or through network to/from any other media.
- D. Disable/Enable/ Control all data transfers through policy and based on connected network and devices.

32. Endpoint & Infrastructure Vulnerability Monitoring and Remediation

- A. All network devices IOS or firmware need to be up to date with latest stable versions to maintain security compliance. Any upgrade cost to meet security compliance need to be borne by the Bidder.
- B. Centralized Vulnerability Scan, reporting & identification should be able to monitor patch levels, version details and vulnerability status in all components/endpoints/servers and take them in to convenient report formats

- C. Device Firmware, OS & Application patch updates need to be managed centrally for end devices & Windows Servers. It should have capability to deploy patches effectively within acceptable timeline (Within 24hrs from the release date. See Service Level Definitions for related service levels). Any other network components also should be maintained up to date by applying regular patches. Installation of security patches needs to be supported for all end devices & Servers.
- D. If any critical vulnerability identified on a device need to be fixed with maximum of one week. Any medium or low vulnerability identified on a device need to be fixed within maximum of 30 days. Any deviations from agreed vulnerability management conditions, service credits to be received by SLAL as defined in “Service Credits Scheme” of this document.
- E. It should be able to verify system hardening against industry benchmark.

Information Security Governance

33. Compliance to Organizational Standards and Processes

- A. Bidder should follow proper CR (Change Request) process and update CMDB (Configuration Management Database) & maintaining transparency of all maintenance and administration activities together with responsibility of bidder's internal teams to be maintained. Corporate security incident response and management procedures and change management procedures must be followed administrator/analyst, at all the time.
- B. Bidder should develop comprehensive standard operations procedure manual which cover all operational requirements and obtain approval from SriLankan management.
(Standard operations procedures must be reviews and improved at least annually)
- C. Monthly service review/information security review meetings should be held with required parties and agreed actions should be taken accordingly.
- D. Bidder should Align to ITIL best practices & ISO20000-1 standard. Also, Adherence to PCI-DSS, GDPR and ISO27001:2013 practices and requirements is a must.
- E. The core product troubleshooting documents like admin guides, installation guides, and manuals should be made available including OEM documentation and Knowledge Bases during technical evaluation and thereafter.
- F. SriLankan Airlines has the right to audit any network device or system at any time. Bidder should provide SriLankan Airlines with admin access without any delay at minimum, but not limited to. SriLankan Airlines will have authority to question/inquire any Bidder employee or obtain assistance for any system related investigations at sole discretion of SriLankan Airlines. Also, SriLankan should be given physical/virtual access to any location where the data of SriLankan Airlines resides.
- G. Application inventory and license tracking system should be maintained for whole environment by the Bidder.
- H. Bidder should manage and maintain assets tracking together with electronic notification to users and Service Teams. Should include approval process & should support obtaining web-based acknowledgement from users. This should provide an interface to get changed information to SriLankan CMDB.

34. License and intellectual properties

- A. All License must be procured under SriLankan airlines ownership, unless there is a legal limitation or cost benefit where both parties should be mutually agreed for the exceptions. However, if Bidder has obtained any license from SriLankan Airlines the values should be transferred to SLAL.
- B. All devices including VDs (Not needed for ZCs) should come along with Microsoft Windows OS Licenses (OEM Windows OS, Microsoft VDA for VDs) provided by Bidder where the OS should be able to upgrade to Enterprise Versions with Microsoft Software Assurance.
- C. All custom build connectors for integrations shall be with SriLankan airlines ownership.

Compliance to Organization Business Continuity Plan

35. Backups, Retention & Redundancy

A. Vender should essentially consider business continuity in designing and improving the systems. Vendor should take adequate Precautions, Procedures & Processes, Systems, Backup Devices, Redundancy (Should be having automatic failover), Spare Parts, Data Backup and Technological Advantages to ensure business continuity.

B. Backup of Systems & Data must be done according to the SriLankan Backup policies. Following backups & snapshots to be maintained

Data Type	Description	Frequency	Backup Type	Backup Location	Data Retention Period
User Data	File servers & Storage with User Data & User Profiles,	Hourly	Snapshots	Onsite Storage	1 Day
		Daily	Snapshots	Onsite Storage	1 Week
		Weekly	Snapshots	Onsite Storage	1 Month
		Monthly	Snapshots	Onsite Storage	3 Months
		Daily	Full Backup	Offsite Tape/ Storage	7 Days
		Weekly	Full Backup	Offsite Tape/ Storage	1 Month
		Monthly	Full Backup	Offsite Tape/ Storage	5 Year

Systems & Configurations	File servers, Application servers & Files, Special VMs & Appliances, Data Bases, Servers & System Configurations together with any data required for DR in case of Full or Partial failure of systems.	Daily	Snapshots	Onsite Storage	1 Week
		Monthly	Snapshots	Onsite Storage	3 Months
		Daily	Full Backup	Offsite Tape/ Storage	7 Days
		Monthly	Full Backup	Offsite Tape/ Storage	3 Years

- C. All the backup jobs should be configured with system 'Verification' process that is to be initiated at the end of a backup.
- D. Restoration should support for recovering only part of data of a user or device as well as for whole of data at a given date/time.
- E. Restoration testing and confirmation at the initial phase of a system setup is a must for all the systems.
- F. Restoration testing is carried out with the frequency as detailed in 'Business Continuity Management Policy'. Restorations are carried out and processes are documented for identified critical & high severity systems. User acceptance signoff is also carried out on the restorations.

36. Regulatory Compliance

- A. Bidder should retain Information to comply with RTI (Right to Information) act.
- B. Data Retention as per organizational requirements should be maintained.
- C. Data & Information Transfer at the end of Project need to be done by the Bidder to safeguard business continuity of SriLankan Airlines. Bidder will be responsible till the data & information transfer is completed.

37. Training & Knowledge Sharing

- A. Bidder should provide necessary trainings (official curriculum) to SLAL staff leading to full certifications in all major technologies used in the proposed solution (minimum of four programs) and shall be continued for the contract period on annual basis. The overall price of the proposal should include the training and related costs all inclusive.
- B. Bidder should facilitate knowledge transfer and technology update measures (including participation for recognized industry workshops & conferences) worth of at least USD 500 per quarter and can be cumulative. This value should be separately included in the quarterly invoice and SLAL will have the right to reclaim it at the end of each year in case the necessary knowledge transfer does not happen as expected. This serves for SLAL core technical teams to be prepared in meeting business continuity requirements in case of a vender agreement termination due to unavoidable circumstances such as bankruptcy or non-delivery of services.
- C. Bidder should provide informative sessions carried out by competent personal covering front end technical aspects of the services for SLAL Service desk, field technical officers/supervisors and end users. An annual schedule for sessions to be proposed by bidder and should be mutually agreed.
- D. SLAL Engineers and Technical Staff should be involved in the project implementation for hands-on experience after necessary trainings. Onsite demonstrations to be provided by the implementation team on relevant aspects.

38. Solution Verification & OEM Certifications

- A. Vender should be a partner for the principle products that they provide and should provide the certification letter from the principle together with proposal indicating bidder's partnership level and validity. The proposal shall include annual health checks and performance checks carried out by the principles and a schedule to be attached.
- B. The vendor shall obtain warranty and support for the equipment which are used to provide the services, from the manufacturers/principles (ex: VMWare, Cisco, Citrix, Microsoft etc.) with commitment. This should include warranty, maintenance and Support from the Principle throughout the contract period. Bidder shall provide a letter from principle confirming their eligibility to obtain services from the principle for existing equipment for the relevant contract period at each term or annually.

39. Insurance

A. Vendor should agree to arrange and keep in place the undernoted policies of insurance;

- i. A property all risk insurance policy covering any property of the two companies whilst on the premises of SLA for their current replacement costs. The insurance policy so arranged shall be extended to cover but not be limited to the perils of fire, lightning, electrical and electronic damage, riot & strike, Malicious damage, explosion, cyclone, storm, tempest, flood, natural perils, aircraft damage, impact, accidental damage, terrorism, burglary.
- ii. A public liability insurance policy with a limit of indemnity of not less than LKR 5,000,000 per event. The insurance policy so arranged shall be extended to cover liability arising out of fire and explosion.
- iii. A workmen's compensation insurance policy covering any employees of the two companies whilst on the premises of SLA in the performance of this agreement. The insurance policy so arranged shall be extended to cover riot and terrorism. In the event a non-Sri Lankan national is employed in the performance of this agreement such employee or consultant shall have a suitable personal accident insurance cover which shall be extended to cover riot and terrorism.

Performance Benchmark

40. System Performance

- A. Total Application performance and Device performance should be maintained as agreed and performance need to be proactively measured. Bidder should carry out periodic performance benchmarking (at least annually or whenever changes happen) and business continuity drills to be carried out in every 6 months. Reports should be provided to SriLankan Airline after each test and Accuracy of those reports should be maintained.
- B. Bidder should provide a standard tool for performance measurement from the beginning of POC & After that for comparing current SriLankan Airlines systems. SriLankan Airline shall have full rights to use any performance monitoring tools to measure performance.
- C. UL can run a performance test time to time to compare the product with standard devices. SriLankan Airline shall have full rights to use any other performance monitoring tools to measure performance.
- D. User might be using few business applications at a time and performance should not decrease with number of concurrent applications running on a Device.
- E. Performance of application delivery should not degrade with other backend workloads related to maintenance and updating of the system. Bidder should provide a standard tool for performance measurement from the beginning of POC for comparing with current SriLankan Airlines systems.
- F. Applications should be able to run as it is on a standard enterprise grade computer (having Windows 10 Professional 64-bit OS, Core i5 9th Gen- 4 GHz CPU and 8 GB RAM with SSD), running on internal network of SriLankan Airlines at Katunayake. Log in to application or system should not exceed that of loading an application directly installed on the standard enterprise grade computer.
- G. Indexing, Paging & Virus Scanning requirements need to be handled on VDs and on App Streaming, App Virtualization Servers without affecting the applications running and without any interruption to logged-in or logging in users.
- H. Virtual Computer Refresh, Virtual Computer Updates with Patches and any similar Maintenance should be able to carry out in the background within 12 hours for total environment without affecting the performance of applications and user tasks.

- I. Fully loaded System should maintain the system load under 60% in RAM/Network/CPU/IOPS etc. in general operating conditions.
- J. Boot time should be less than 20 s for Virtual computers, Desktop Computers, Laptop Computers while the Login Time to Device & Workspace on any device should be less than 20 s.
- K. If performance defined in this proposal are not met in any or all devices or systems/services provided by Bidder, it will be assumed that those applications or services are unavailable. In Such a situation Bidder, should improve the system to satisfactory or specified levels or if not rectified within SLA, it will be considered as an incident of service outage.

41. End User Experience Benchmark

- A. User feedback also will be considered in evaluating the system performance. User Satisfaction should be positive according to 90% users in overall Services to users for any application or service. At minimum for all the major business applications this should be true.
- B. Feedback will be collected from users by Survey or feedback received to system/Service Management Centre.
- C. Bidder need to conduct enterprise wide surveys as per instructions given by SriLankan Airlines annually to evaluate performance and identify system wide issues. Results need to be shared with SriLankan Airlines. Please explain how you propose to carry out the survey the survey and any cost involved.
- D. Technical measures will be taken in order to check the key performance metrics related to user experience. Following will be considered as Key matrices.
 - i. Instantaneous response over clicks and selection. (Under 100 milliseconds is perceived as instantaneous)
 - ii. Switch between opened applications within 300 ms.
 - iii. Response should be received within one second for simple submissions
 - iv. Locked but connected sessions should load in 2 seconds
 - v. Locked down but not connected sessions should load in 10 seconds

Service Level Requirements

42. Service Levels

- A. A comprehensive service level agreement should be signed by successful Bidder, including terms of Service Continuity, Disaster Recovery and Service credit scheme and as agreed between both parties to ensure the performances, availability, latency and other salient parameters as described in this RFP.
- B. Nature of Support and Locations are described in below table and Bidder should support all the locations according to working hours. Special requests by SriLankan Airlines related to services outside working hours need to be catered by Bidder around the clock at all those locations. When SriLankan Offices are relocated (other than main data Centers where Bidder’s server and equipment are located) still the Bidder need to change the scope accordingly without any additional cost.
- C. Escalations, complaints and any incident will be assigned to relevant teams of bidder through SriLankan Airlines' Service Management System. SLAL defined Incident Management, Request Management, Problem Management and Change Management, Processes should be followed by the bidder.
- D. Selected Bidder should carry out Service Desk functions using the Sri Lankan Airline ITIL compliant ITSM tool, BMC Remedy or any other application provided by SriLankan Airlines. Bidder will be given necessary access and permission to facilitate this requirement.
- E. Service Availability Targets for different services and total service are calculated as described in **following table**. Bidder should agree to provide the requested service availability targets.

	Service	Availability Target	Calculation
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	Nature of Support	Locations	Time Duration	No of Support Staff (Except
1	Experts & Specialist	-	When Necessary	8
2	2 nd Level (Engineers & Manager) Onsite Support & Management (8x5)	Airline Centre/Data Centre	Office Hours (8AM-5PM 5 Days per week)	6
3	Onsite Support (24x7x365)	All SriLankan Airlines offices and locations in Katunayake All SriLankan Catering Locations in Katunayake	Office Hours (8AM-5PM 5 Days per week) Non -Office Hours	3 1
4	Onsite Support (8x5)	All SriLankan Airline Offices in WTC - Colombo All SriLankan Airline Offices in Regional Building (Sir Baron Jayatileke Mawatha, Colombo 01) All SriLankan Airline Offices in Cargo Building (De Vos Avenue, Colombo 04) SriLankan Airline Call Centre (Iceland Business Centre, Colombo 03)	Office Hours (8AM-5PM 5.5 Days per week presence is essential)	1
5	On-demand (arrive at location within 4hrs) on-site Support (8x5.5)	SriLankan Airlines Sales offices in Kandy & Galle	Office Hours (8AM - 5PM 5.5 Days per week)	Allocate Above Staff on demand
6	On-demand (arrive at location within 8 hrs.) on-site Support (24x7x365)	SriLankan Airlines offices at MRIA, Maththala (Only the Transport will be provided by SLAL)	24 Hours	
7	Remote Support/Telephone Support (24x7x365)	All Local & Overseas SriLankan Stations Including Sales and Airport Offices and all remote users who might use services remotely over Internet from any location.	24 Hours	

1	Total Device or User Profile	99.95 %	Average of Monthly Availability of Desktop Delivery Service (Device or User Profile) = (Total Monthly Service Availability of Desktop Delivery) / (Number of Devices or Number of user profiles)
2	Total Application Delivery	99.95 %	Average of Monthly Availability of Application Delivery Service = (Total Monthly Application Delivery Service Availability) / (Number of user profiles Agreed to given with Application Delivery)
3	Internet Access	99.98 %	Monthly Availability of Internet Access Service
4	Network Data Storage	99.98 %	Total Time of Monthly Availability of Network Data Storage Service
5	Any Other Service which are billed to SLAL	99.95%	Average of Monthly Availability of Service

Where,

Service Availability of Any Service Component or Service= (Total Minutes in Month- Planned Service Outage Time in Minutes- Unplanned Service Outage in Minutes)/ (Total Minutes in Month-Planned Service Outage Time in Minutes) x 100%

- F. If the services interrupted for more than 10% of user base of a service component or application, it will be considered as failure of total infrastructure /total service component/devices or application mentioned in above table or any paid services given by bidder. Also, it is considered as a critical failure and will be treated accordingly.
- G. If any delivery of application is not available to a user/device/profile, it will be considered as total application failure for the user/ device/ profile.
- H. Internet service will be considered as not available if any of Proxy Service or Firewall Load Balancers is not available.

- I. Any outage due to unprofessional management of infrastructure would directly count for service level breaches from the time of incident.
- J. Details of service outages interruptions and performance could be gathered from user feedback, formal tests, Monitoring tools, logs or any other reliable source while Service Management tool is considered as the basic source.
- K. To maintain required service reliability Bidder should agree following terms. At operations, any violation of them will be considered as unavailability of service for additional 24 hours per each incident in addition to real outage.
 - i. No more than 2 (two) Critical Failures in 12 (twelve) months, and Mean Time between Critical Failures should be greater than 90 days. (Any such Critical Incident may be considered as Critical Failure of additional full day.)
 - ii. No more than 4 service interruptions per user per month due to same issue. (If recorded it will be considered as one full day interruption per each incident even though it is resolved within the service target limits.)
 - iii. No more than 4 service interruptions per device per month due to same issue. (If recorded it will be considered as one full day interruption per each incident even though it is resolved within the service target limits.)
- L. The target response, resolution & delivery time for each Incident or Service Request or Change Request or Report Request should depend on its Priority. The requested service targets are as follows. Bidder should agree to provide resolution or complete the request successfully within the target delivery time or target resolution time.

Priority	Description	Target Response Time	Target Resolution Time for Incidents	Target Delivery Time for New Request*	Target Delivery Time for Change Request* & Report Requests
1	Critical	5 minutes	1 hour	1 Day	1 hour
2	High	15 minutes	2 hours	Max 1 Week	Max 24 hours
3	Medium	20 minutes	4 hours	Max 2 Weeks	Max 1 week
4	Low	30 minutes	8 hours	Max 1 Month	Max 3 weeks

* Bidder may propose different values for new & change requests and to be mutually agreed within the framework.

M. Priority will be determined by the Urgency and the Impact of the Incident or Service Request or Change Request, as per follow: Impact & Urgency will be decided by SriLankan Airlines.

Urgency	Impact			
	Extensive / Widespread	Significant / Large	Moderate / Limited	Minor/Localized
Very High	Critical	Critical	High	High
High	Critical	High	High	Medium
Medium	High	Medium	Medium	Medium
Low	Low	Low	Low	Low

N. Urgency and Impact are calculated according to the service requirements. 10% of devices and 10% of users will be considered as having Extensive Impact. 20% of devices and 20% of users will be considered as having Significant Impact. 60% of devices and 60% of users will be considered as having Moderate Impact. 10% users and 10% of devices will be considered as having Minor Impact. Additionally, a certain location can be declared as having Extensive or Significant or Medium or Minor Impact level depending on its business functions. All users and devices within such a location will have the declared Impact level.

O. The parties agree to try resolving their differences internally in good faith. In case a difference persists, parties can submit their complaints to an arbitrator as mutually agreed by both parties. The decision of the arbitrator will be considered final and must be accepted by both parties. All the costs associated with arbitration process to be borne by selected Bidder.

P. Periodic (Monthly) Service Review Meetings to be held with customer to review the service and any other concerns of both parties.

Q. If violating any other condition related to the RFP /Agreement or agreed number or quality of employees SriLankan Airline has right to deduct the evaluated cost of the service fully or partially from the payments to the Bidder and if bidder still do not comply

with agreement the payments might be permanently held and might be considered for terminating the agreement fully or partially.

- R. Service levels and service credit scheme shall be agreed by Bidder. SriLankan Airlines is open for constructive negotiations where Bidder need to provide such ideas in the proposal itself and any acceptance shall be at sole discretion of SLAL. Bidders who do not comply with this requirement will not be considered for evaluation.
- S. Bidder should provide agreed and requested reports of the systems and Root Cause Analysis (RCA) within two weeks and any deviations will be subjected to service credits considering the delivery targets defined below.

43. Service Credits Scheme

- A. Unless it demonstrated with clear evidence that a breach of service levels occurred due to a failure of “SriLankan Airlines” in delivering its obligations SLAL has rights to receive or obtain service credits from the bidder. Service credits can also be waived if both parties reach an agreement to do so.
- B. For any service availability below the agreed service levels, a prorated service credit will be earned by SriLankan Airlines as bellow. This could be earned per user or per device or per service component or per Service basis or considering total service.

$$\text{Service Credits} = \text{Monthly Value of Considered Service} \times (\text{Agreed Service Availability} - \text{Actual Service Availability})$$

- C. When the Incident or Request Rating is “Target breached”, SriLankan Airline shall earn service credits from the Bidder, Service Credit shall be calculated by:

$$\text{Service Credit} = \text{Prorate cost for Affected Service Per Minute} \times (\text{Time of Actual Resolution in Minutes} - \text{Target Resolution Time in Minutes}) \times W;$$

where W: Weight Applied based on Priority

Priority	Description	W
1	Critical	1.00

2	High	0.50
3	Medium	0.25
4	Low	0.10

- D. Service credits will be applied for any deviation from given time lines as in following table in addressing New Service Requests, Report Requests & Change Requests in case of the service is not listed with a price /cost in the agreement.

Impact of the incident/request	Service Credits Per Day (After Exceeding given time lines)
Critical	100 USD
High	50 USD
Medium	20 USD
Low	10 USD

- E. If any services are not delivered as agreed SriLankan Airlines will earn Service Credits for the time of failure and it will double in each day from the time of failure till it goes up to 50% of the total monthly solution cost. This is also valid for additional new equipment delivery which comes under this agreement.
- F. In a situation where Bidder can not meet agreed service levels and not able to provide agreed services for more than one month (after exceeding the service levels), SriLankan Airline has rights to receive or obtain the products and services (full or in part) from an alternate Bidder/service provider and to charge back/deduct the corresponding cost from the Bidder and Bidder should agree to pay the reasonable service credits (This cost could be defined by SriLankan Airlines procurement process) or moneys for obtained services from other party.
- G. Service Credits will be applied for delayed deliverables or beyond the requested deadlines of the project due to faults and misses caused by Bidder or any of Bidder's parties considering it as Service Level Breaches of service or services delayed for New Service/Equipment Request.
- H. Service credits will be applied for any deviation from given time lines as in following table in addressing vulnerabilities, in backend infrastructure.

Impact of the vulnerability	Maximum Duration Bidder should apply the patch	Service Credits Per Day (After Exceeding given time lines)
Critical /High	7 Days	200 USD
Medium	30 Days	100 USD
Low	30 Days	50 USD

- I. Any deviations from agreed vulnerability management conditions on end device (except backend infrastructure), service credits to be received by SLAL considering as incident occurred on affected service.
- J. Service credits will be applied for any deviation of not having required employees and lagging in competencies required. If not met, after each two months Service Credits will be doubled.

Competency Level	Maximum Duration Bidder might take to fulfil talents	Service Credits Per Day (After Exceeding given time lines)
Experts	30 Days	50 USD
Lead Engineer/Manager	30 Days	30 USD
Senior Engineer	30 Days	20 USD
Engineer	30 Days	15 USD
Technical Officer	30 Days	12 USD

- K. Service credits of 5% of the fees stipulated in the agreement for each service component/Device will be applied for any deviation of other terms in this agreement in line with affected service. However, this will be doubled in each month if the resolutions are not provided with regards to the same issue.

Optional Requirements

44. Two Factor Authentication

- A. Two factor authentications should be supported for above Virtual Desktops/Remote Application Access/Digital Workspace users when login from external networks or unregistered devices.
- B. Two Factor Authentication Solution shall support enforcement of policies based on
 - AD security groups
 - Device IP subnet, Device host name- IP
 - Time and Day
 - Geolocation
- C. The solution shall cater Fast user switching - makes sure that the previous user is logged out before the next person uses the workstation or application, a requirement for fast and secure movement between devices (authentication based on Smart card, biometrics for high efficiency).

45. Single Sign-On (SSO) and Intelligent Access

- A. The solution shall facilitate users to relay on Active Directory (AD) credentials to access all applications (web, client), local and network resources (using a single set of credentials) and automatically authenticates user to all their applications and resources
- B. The solution shall enforce central password policy (based on AD).
- C. The solution shall provide an SSO experience for portable devices (Laptops), even when they are not connected.
- D. The solution shall provide Multi-directory support -Microsoft Active Directory, oracle identity manager or generic Lightweight Directory Access Protocol (LDAP) directories.

46. Privilege access management

- A. All components of the solution must govern by Privilege Access Management framework
 - i. Engineers must be able escalate account permission to perform system administration tasks, for specific maintenance window on request via approval workflow. (By default, admin accounts for systems shall not be assigned to engineers in permanent basis)
 - ii. All administration activities must be logged, and screen recoded during maintenance window
- B. Privilege Access Management & Monitoring need to be available for File, Storage & Systems.
 - i. Prevention of privacy violation, information leakage.
 - ii. Provide weekly, Monthly reports on security changes in the system which are Categorized as confidential.

47. Advance Network Access Control

- A. A network solution should be proposed (as an option) to enable BYOD which is expandable per requirements. It should be able to deliver the required services to domain connected devices as well.
- B. Functionalities in solution must include features related to Visibility, Profiling, Compliance check, Alert, Remediation & Blocking support and support Access policies based on
 - i. User attributes and context
 - ii. Application-level posture and compliance requirements
 - iii. Device posture (USB detection etc.)
 - iv. Threat intelligence

- v. Time, location
- C. The Solution should support Active Directory integration for identification user and related attributes.
- D. Solution should capable to achieve all feature & functionality with agentless or Dissolvable agent mode where possible and use Agent based deployment as last resort.
- E. The Solution should provide a comprehensive view of the network (all the IP enabled devices connected in the network)
- F. The solution should be able to identify all network devices such as routers and switches using factory default or common credentials
- G. The Solution Must support the below high-level use cases:
 - i. Device tracking (What, Where, Who, When and how)
 - ii. Posture check & compliance control
 - iii. Auto-Remediate or adjust the non-complied endpoint
 - iv. Guiding users through a self-remediation process.
 - v. Grant Time based access to guest after checking security posture
 - vi. Discover any new network device entering the network and permit network access based upon the policy for this network device.
 - vii. Provide complete asset inventory i.e. hardware and software inventory
 - viii. Capability to block the access of endpoints which are connected on unmanaged network (i.e. Unmanaged Switch).

real time alerts

- H. The Solution should provide information about users accessing the network.
- I. The Solution should support for device profiling, endpoint profiling and provide information regarding the endpoint connected to the network, such as IP Address, MAC Address, NetBIOS Name, NetBIOS Domain, Domain User, Domain Member, OS-Class, IP of the connected switch, Switch Port, Switch Port VLAN, Switch Port Status, Switch Bidder, Access status.
- J. The Solution should support for guest services and BYOD requirements
 - i. Support captive portal-based solution

- ii. Users must get alerted if the compliance check on their machines fails.
 - iii. Notifications and user interaction via Web Page redirect, SMS integration, Email
- K. The Solution should detect when endpoints try to masquerade as other endpoints.
- L. The Solution should perform Endpoint isolation based on Indicator of compromise (IOC).
- M. The solution should have a provision to support non-NAC capable hosts (i.e., printers, IP phones, IoT's etc.) based on different parameter and it should support exception lists for non-NAC capable hosts.
- N. The Solution should Integration into existing environment
 - i. Operate within a heterogeneous network with devices from multiple Bidders
 - ii. Integrate with existing Antivirus for Auto- Remediation.
 - iii. Integrate with SCCM or WSUS for Auto-Remediation.
 - iv. Validate List of Allowed Applications running on the Machine.
- O. The solution must support the authentication methods such as 802.1X Authentication and MAC Address based Authentication.

48. Monitoring station for security control framework

- A. Bidder must deploy dedicated real time security monitoring station on premise for proactive treat identification and response
- B. Dedicated dashboard/display panels must be available for each major security control deployed under this solution for security threat, anomaly and performance visualization, which indicate, including but not limited to -
 - 1. Threat dashboard - Top Attacks and characteristics
 - 2. Service health/status
 - 3. High risk users/endpoints
 - 4. Policy violations

- C. Bidder must deploy dedicated skilled security administrator/analyst on premise (at minimum during business hours) for administration and maintenance of security controls integrated to the solution and monitor systems proactively.

49. Disaster Recovery Site

- A. Disaster Recovery Plan for 1000 users/profiles & devices should be shared optional to the provided system for normal operations.
- B. Bidder should comply to Business Continuity plan of SriLankan Airlines by keeping required backups, Systems & Processes for DR and to meet requested RTO & RPO.
- C. Disaster recovery site should be able to communicate with SriLankan Airlines Disaster recovery site together with application delivery for critical applications.
- D. Disaster recovery site should be able to provide digital workspace environment for selected 200 users/profiles in addition to above application delivery systems.
- E. Disaster recovery site could be located at SriLankan Airlines Disaster recovery site or on cloud. For any option, all relevant cost should be communicated clearly together with link cost required for maintaining and operating the DR site.

50. Long Term Data Retention

- A. Data retention for all user data for 12 Years having daily snapshots to be stored on public cloud.
- B. Solution should provide search and locate data of any given employee at any given date within the 12 years.
- C. Predicted Link utilization details/ sizing details must be submitted with costing for amount of data to be stored on cloud system.

51. Cryptographic and VPN functionalities

- A. The Solution should support Dynamic policy enforcement on VPN Clients.

- B. The Solution should support the SSL VPN and IPSec VPN for both Site-Site & Remote Access VPN.
- C. The Solution's IPSec ISAKMP methods should support MD5, IKE (v1, v2), AES256, SHA (256,512), DH (1,2,5,7,11,15,20,21,24), RSA & Manual Key Exchange Authentication, 3DES/AES-256 Encryption of the Key Exchange Material and algorithms like RSA-1024 / 1536.
- D. The Solution's Gateway system should support virtual tunnel interfaces to provision Route-Based IPSec VPN.
- E. The Solution should support PKI Authentication with PCKS#7 & PCKS#10 standards
- F. The Solution's IPSec should have the functionality of Perfect Forward Secrecy (PFS) and NAT-T (NAT Traversal)

52. Next Generation Intrusion Prevention

- A. The Solution must constantly update with new defenses against emerging threats.
- B. The Solution should provide protection for all incoming and outgoing traffic from /to Internet while preventing both Advanced Persistent Threat (APT) attacks and Advanced Malware across Network
- C. The Solution should scan all ports of the sessions in both directions
- D. The Solution should block known network and application-layer vulnerability exploits
- E. Solution must have provisions to monitor endpoints vulnerabilities in real time and remediate via virtual patching.
- F. The Solution should provide application level threat analysis and prevention (The bidder should provide a comprehensive list of supported applications).
- G. The Solution must support Geo Protection to Block the traffic country wise in incoming direction, outgoing direction or both.
- H. The Solution must be able to detect and prevent embedded threats within SSL traffic.
- I. The Solution should allow for third party signature import such as Snort for enrich intrusion prevention capabilities.

- J. The Solution must perform Stateful protocol decoder-based analysis and then intelligently apply signatures to detect network and application exploits
- K. The Solution must provide DOS/DDOS prevention
- L. The Solution should detect Zero Days attacks via protocol or application anomaly detection.
- M. The Solution must be able to identify Layer 2 Address Resolution Protocol (ARP) attacks and man-in-the-middle attacks.
- N. The Solution should be able to detect attacks running inside of the tunneling protocols such as GRE, IP-in-IP, MPLS, and IPv4/IPv6. (The bidder should specify details regarding this provision).
- O. The Solution should be resistant to evasion techniques.
- P. The Solution should provide Comprehensive support for packet encapsulation decoding which includes IPv6, V4-in-V4, V4-in-V6, V6-in-V4, and V6-in-V6 tunnels, MPLS, GRE, Q-in-Q Double VLAN.
- Q. The Solution must support Traffic Policing based on File Type, application/service (granular), user identity and context etc.
- R. The Solution must support Software Fail Open in case if performance suffers beyond defined administrative thresholds or IPS function/engine fails (In which case, the Solution should trigger an e-mail to the administrator)
- S. The Solution must be capable of detecting device failure, link and path failure
- T. The Solution should be able to define protections based on Severity, Confidence level, Performance impact, Protocol Anomalies.
- U. The Solution should have an option to create its own signatures with an open signature language.
- V. The Solution shall provide detailed information on each IPS signature in terms of associated vulnerability and threat descriptions, threat severity, performance impact, release date, industry reference, confidence level etc.
- W. The Solution should have minimum signatures update window of every 3 hour for Anti-Virus/Malware, Anti Spyware.
- X. The Solution should be able to perform Anti-virus scans for SMB traffic.

- Y. The Solution shall have flexibility to define newly configured protections to be in Detect or Prevent mode.
- Z. The Solution should have automated Impact Assessment capability.
- AA. The Solution should have Automated Tuning capability based on multi factor profiling.
- BB. The Solution shall support Custom IPS Rule Creation.
- CC. The Solution shall be able to perform Network behavior analysis and deep packet inspection to derive Network intelligence.
- DD. The Solution shall be able to support Packet-level forensic analysis
- EE. The Solution shall provide real-time Contextual Awareness in analysis and policy/rule enforcement –applications, users, devices, operating systems, vulnerabilities, services, processes, network behaviors, files types and threats
- FF. The Solution shall provide real-time in-depth Visibility in to
 - i. Physical/virtual hosts
 - ii. Operating systems
 - iii. Applications
 - iv. Consumer devices
 - v. Mobile phones
 - vi. VoIP phones
 - vii. Network printers
 - viii. Routers
 - ix. Potential vulnerabilities
 - x. Network flow and
 - xi. Bandwidth
 - xii. Network anomalies
 - xiii. User identity
 - xiv. File type and protocol

GG. Granular policy enforcement over Application Control and URL Filtering

HH. The Solution shall support Intrusion prevention, Advanced Threat Protection, Advanced malware protection in terms of (including but not limited to);

- i. Worms
- ii. Trojans
- iii. Backdoor attacks
- iv. Spyware
- v. Port Scans
- vi. VoIP attacks
- vii. IPv6 attacks
- viii. DoS attacks
- ix. Buffer overflows
- x. P2P attacks
- xi. Statistical anomalies
- xii. Protocol anomalies
- xiii. Application anomalies
- xiv. Malformed traffic
- xv. Invalid headers
- xvi. Blended threats
- xvii. Rate-based threats
- xviii. Zero-day threats
- xix. TCP segmentations
- xx. IP fragmentation

- II. The Solution shall support Intelligent Security Automation in terms of real time threat intelligence sharing within the solution components and other integrated systems, automating protection policy updates based on network changes, produce “actionable security events” by correlating related contextual and system parameters.
- JJ. The Solution shall support NGIPS/FW functionalities in Virtual Environments including not limited to Hyper-V, VMware, Xen and Red Hat virtual platforms through Virtual Sensors. The Solution shall have the capability to inspect VM-to-VM communications, providing the same control and protection as their physical counterparts.
- KK. Anomaly detection for user access requests to corporate services (intranet, mail, VDI- view client etc.) and security policy compliance verification of end system.
- LL. login attempts from same user ID from different geo locations in short time windows
- MM. block access to webmail portal from endpoints that do not have up-to-date antivirus

53. Advanced Persistent Threat (APT) Prevention

- A. The Solution should provide endpoint level Sandboxing and reinforce the advanced malware prevention, APT prevention, ransomware prevention functionality.
- B. The Solution must be able to detect and report malware via Sandboxing
 - I. The Solution should support sandboxing of file sizes above 25 Mb
 - II. The Solution should analyze malware (VM based execution) coming over protocols like HTTP/HTTPS, SMTP, SMTP-TLS, CIFS etc. (The bidder should provide the full protocol list).
 - III. The Solution should be able to perform pre-emulation static filtering.
 - IV. The virtual execution environment must have anti-evasion capabilities to prevent the malwares to evade detection of the sandboxing environment. Anti VM detection activities like Time delays, Shutdown, Restart, VM detection, User interaction etc. must be prevented by the Solution.
 - V. The solution may leverage on:
 - fully cloud based Sandboxing service
 - please indicate the estimated bandwidth requirement to connect internal endpoints to Cloud service.
 - connectivity requests to SaaS offering from internal endpoint must be aggregated and channeled via single secure tunnel)

or

- **Hybrid Setup** (recommended approach) where dedicated Sandboxing appliance for internal network and SaaS offering for mobile users.
- C. The Solution should provide protection for all incoming and outgoing traffic from /to Internet while preventing both APT attacks and Advanced Malware across Network and at endpoint level (independent of network perimeter or device type)
- D. The Solution should have the inherent ability to detect multi-stage attacks. For the purpose of detecting multi stage attacks the Solution should include static analysis technologies like IPS, antivirus, anti-malware/anti bot, however in an integrated mode with the Solution.
- E. The Solution must employ an on premise and/or cloud analysis engine using virtual execution (VM based detonation of samples) to detect zero day and unknown threats and must not be signature based.
- F. The Solution should inspect the web sessions (HTTP and HTTPS both) to detect and notify the malicious web activity including malicious file downloads through the internet
- G. The Solution should have the ability to stop web-based attacks and block all outbound call-back communication initiated by the infected internal clients.
- H. The Solution should capable of removing all the suspicious executables/scripts and active content and macros of Office and PDF files and send only a clean document to the end user through any channel - email, web, file transfer etc.
- I. The Solution must be able to support scanning links inside emails for zero days & unknown malware
- J. The Solution shall report source IP, destination IP, source port, destination port and complete URL of the attack. The Solution should also assign a unique identification number to each identified/detected threat for future reference.
- K. Anti-APT solution should be able to work independently of signature updates from OEM website.
- L. The engine should detect malicious
- i. API calls,
 - ii. file system changes,
 - iii. system registry changes,
 - iv. network connections,
 - v. system processes,
 - vi. kernel code injection,
 - vii. system calls and
 - viii. Direct CPU interaction.

- M. The Solution should detect the attack at the exploitation stage - i.e. before the shell-code is executed and before the malware is downloaded/executed.
- N. The Solution should be able to detect ROP and other exploitation techniques (e.g. privilege escalation, directory traversal) by monitoring the CPU flow
- O. The Solution shall support identifying the Internal LAN IP address and logged in users ID of a host in a proxy environment.
- P. The Solution should support logging of important parameters like Source IP, Destination IP, ports, protocol, Domain, time stamp etc. of the malicious web sessions
- Q. The Solution should dynamically generate real-time malware intelligence for immediate local protection
- R. The Solution must provide the ability to increase security with automatic sharing of new attack information with other gateways/firewalls by means of signature updates etc.
- S. The Solution must utilize a Global Threat Intelligence feeds regarding new malware profiles, vulnerability exploits, C&C call-back destinations and obfuscation tactics etc.

54. Advanced Malware Prevention

- A. The Solution shall provide Advanced Malware Prevention functionalities within corporate network perimeter (virtual server/desktop environments) and beyond at mobile endpoint such as laptops, iPad and Tabs.
- B. The Solution's malware update mechanism should include reputation, network signatures, endpoint anomaly detection and suspicious email activity detection
- C. The Solution should prevent malware over encrypted or unencrypted traffic/files via
 - I. HTTP, HTTPS, SMTP, FTP and other standard services
 - II. files that are passing on CIFS protocol

55. Host Based Intrusion Prevention and Anomaly Detection

- A. The Solution should support Host based intrusion prevention, static as well as dynamic behavioral analysis.
- B. The Solution must continuously monitor and analyzes all file Activity, processes, and communications at end point level, and alert malicious behavior, indications of compromise. Furthermore, The Solution must support tracking, and analysis, while providing deep visibility into the origin and scope of a compromise.
- C. The Solution should be able to detect & prevent the Bot networks
 - I. prevent communications with Command and Control (C&C)

- II. block Command and Control IP/URL and DNS
 - III. Identify unique communication patterns (via behavioral analysis) used by BOTs
 - IV. Prevent bot associated attacks such as such as “spam sending”, “click fraud” or “self-distribution”
- D. The Solution should be able to automatically
- I. Block traffic between an infected Host and Remote Operator, without affecting the legitimate traffic and
 - II. Endpoint quarantine during a compromise.

56. In Depth Visibility and Forensic Investigations

- A. The Solution should have ability depict the life cycle of attack/intrusion, including time, method, point of entry affected system etc.
- B. The Solution should support forensic investigations via
- I. Details of Infected Users/Devices, Malware type, Malware action etc.
 - II. option for packet capture for further analysis of an incident
 - III. Detect and record the entire attack lifecycle and provide stage-by-stage analysis of the attack starting from system exploitation to data exfiltration.
 - IV. Continuous analysis and recording of all endpoint attributes through its life cycle along with detailed user activity at endpoint.
 - File
 - Process
 - Communications and associated applications
- C. Upon malicious files detection, a detailed report should be generated for each one of the malicious files. The detailed report must include:
- a. Screen shots,
 - b. Time lines,
 - c. Registry key creation/modifications,
 - d. File and processes creation,
 - e. Network activity detected.
- D. The Solution should provide Lineage of activity at endpoint or group of endpoints by collating multiple endpoint attributes for attack-chain analysis

57. Automated Response

- A. The Solution should provide Real-time response capabilities and system isolation/outbreak control
- B. The Solution should provide Automated and on demand containment of application, files, process (whitelisting/blacklisting).
- C. The Solution should support Intelligence sharing with network security layer where applicable.

58. Advance security controls

- A. The Solution should provide Endpoint Vulnerabilities detection and patch monitoring
- B. The Solution should provide Endpoint asset discovery and application inventory,
- C. The solution should support data exfiltration prevention -
 - i. Automated sensitive data identification and leakage prevention (credit card, personally identifiable information)
 - ii. Monitoring and logging of file transfers via USB and shared drives,
 - iii. Allow or disable use of removable drives (time based, and user/user-group based)
- D. The Solution should provide Endpoint encryption with central key management
- E. The Solution should provide File integrity monitoring (especially for servers)
- F. The Solution should provide secure remote support with screen sharing functionality (specially for mobile endpoints - Laptops)
- G. The Solution should prevent DNS resolution to known malicious domains and IP address (via global threat intelligence feed) at network and endpoint level (even on laptops/endpoints which are connected to direct internet).
- H. 'File system to Application' or 'Application to File System' Interactive File transfers through browsers and other application should be monitored logged and controlled.
- I. Solution must have provisions to monitor and police Traffic flow between virtual servers and deploy firewall polices
- J. Solution must be capable to deploy virtual patches for servers and endpoints including VD (network level or via endpoint agent)

Section VI-Annex D: Proposed Solution Architecture

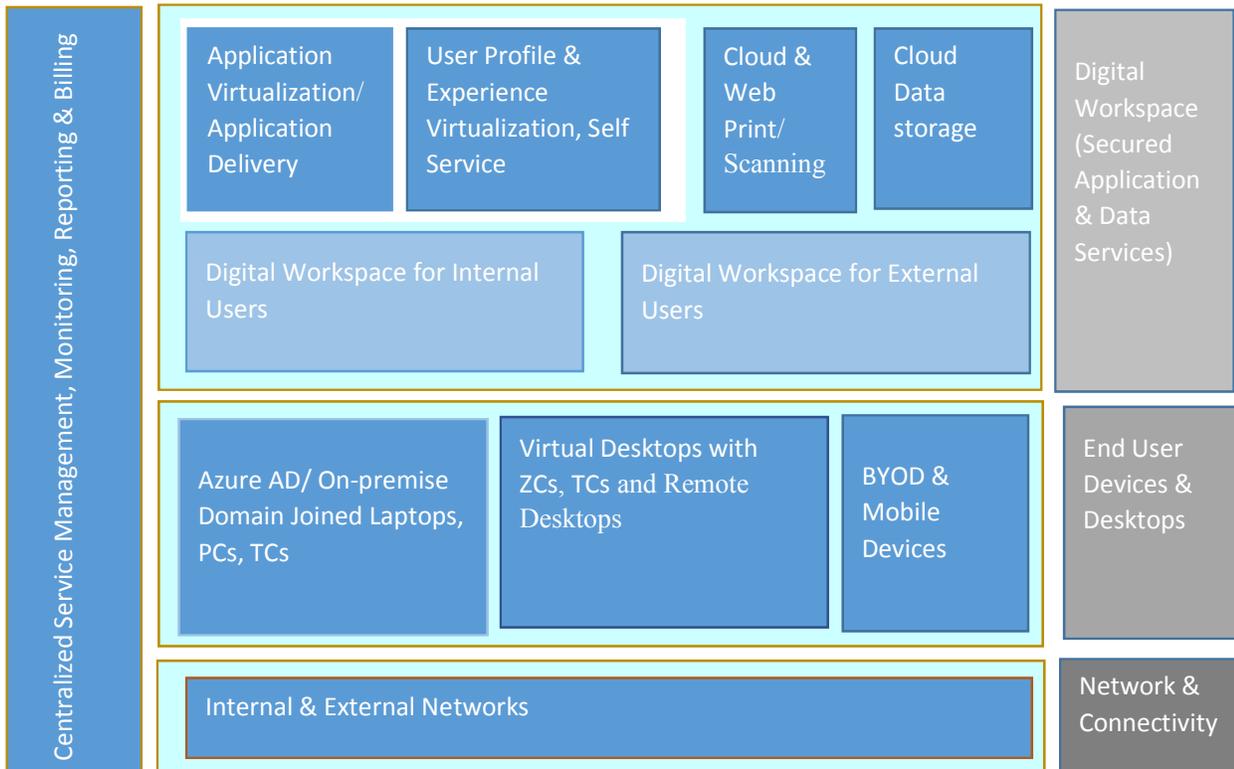


FIGURE: PROPOSED SOLUTION ARCHITECTURE

Section VI-Annex E: High Level Summary of Requirements

Description of Count	Number of Users	Number of Devices	Details
Desktop Computers		1070	For Operational Areas Like Engineering/Airport/ and Highly Shared Devices- (Reduce the dependency of Centralized environments) However, there might be some dedicated devices too.
Laptop Computers		600 (580- Standard Enterprise Grade 20- High End)	For 600 Users who need to access service with mobility
Virtual Computers		1000	For Office/Shift Users who need a device to access workspace or Virtual Computer. These may be shared or dedicated user terminals with Virtual Desktops.
Mini Computers		30	To be used for Kiosk & Dashboards With 21” Monitor & Other accessories
Kiosks		50	With 17”/19” Touch Screen, Fingerprint Reader, RFID Reader, Keyboard with track ball and Management & Monitoring Software
ZC/ TC		1000	Should Include Management and Maintenance need for virtual computer access or Workspace Access
Application delivery & porting to domain connected devices		2750	For domain connected users/devices (Desktop Computer/Virtual Computer/Laptops/)
Remote Application Access	100		For Those who do not have workspace Access from outside should have a solution for access of few apps without all other features of workspace / Virtual Computers
Digital Workspace for Mobile users	600		For users with mobility requirements with access from multiple devices (company provided or other, at least 5 devices per user)

Internet & Network Services	2750		2750 Concurrent Users -To be decided by Bidder based on their proposed solution
Proxy Service	2750		Concurrent Users
Firewall Service	2750		Concurrent Users
Load Balancer	2750		Concurrent Users

- Total Number of Devices may indicate total number of maximum concurrent users.
- This is only a high-level summary of the requirements, Bidder should provide all the requirements mentioned in the RFP.

Section VI-Annex F: High Level Network Architecture

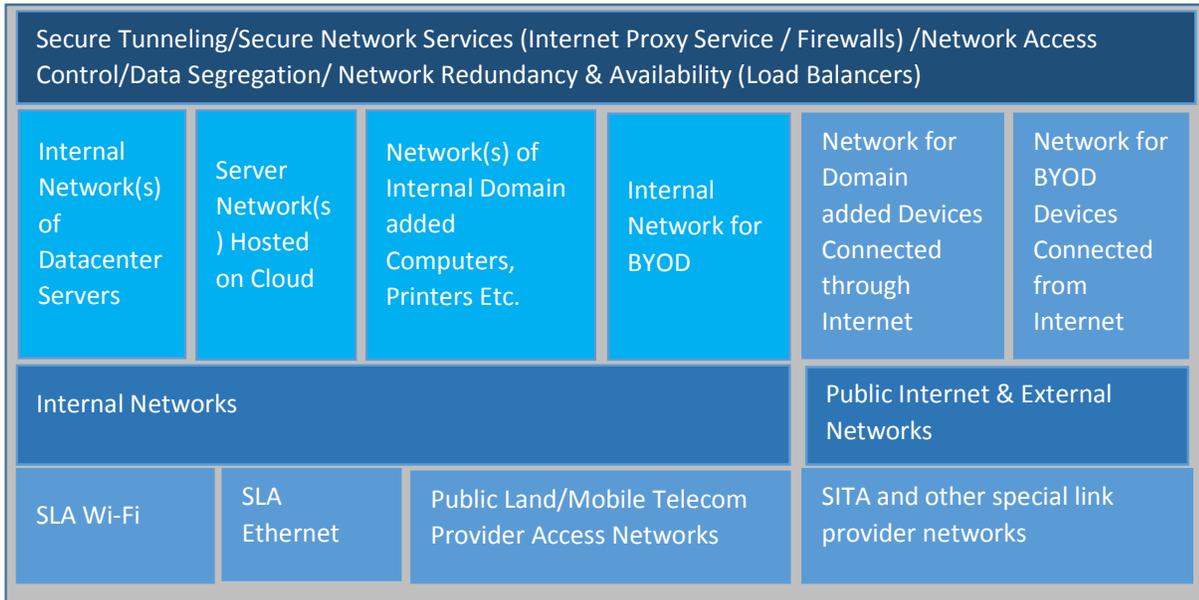
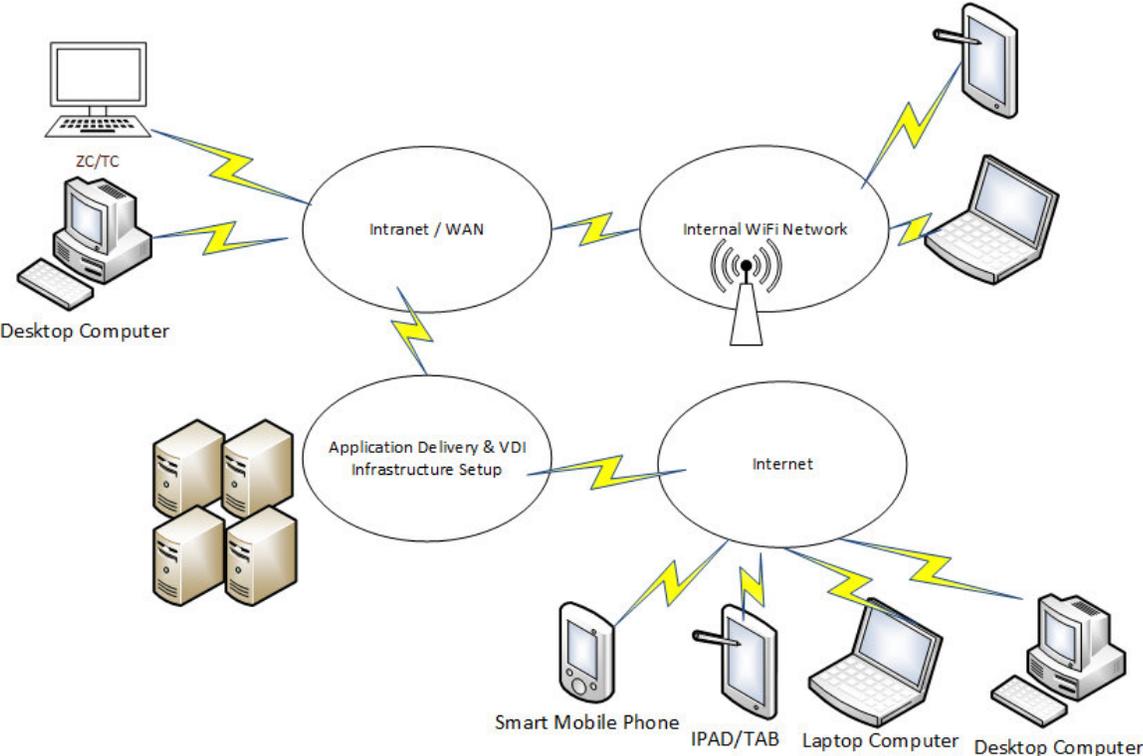


FIGURE: High Level Network Architecture

Section VI-Annex G: Desktop & Application Delivery Solution Setup



Section VI-Annex H: Summary of Major Business Applications

	Importance				
App Category	Critical	High	Low	Medium	Total
Web Based	6	15	12	20	53
External	2	2	2	3	9
In-house	4	13	10	17	44
Windows	8	14	12	13	47
External	5	4	1		10
In-house	3	10	11	13	37

TABLE: BREAKDOWN OF APPLICATIONS

Section VI-Annex I: Skilled Employees and Skills Matrix for Support Personals

Experts/Specialists- Minimum One Employees from Each Category of Principle Products Used

1. Degree from Recognized University or Degree Equivalent Qualification from recognized institute in relevant Discipline
2. Minimum of 5 Years Working Experience in relevant Discipline
3. Expertise in Respective Domains (Certifications should be available for highest expert levels by principles)

Senior Support Engineers - One Onsite & Minimum One Employees from Each Category of Principle Products Used

1. Degree from Recognized University or Degree Level Qualification from recognized institute in relevant Discipline
2. Minimum of 3 Years Working Experience at Engineer/Executive Level
3. Medium to High Level Professional Qualifications

Lead Engineer/Manager - One Employee (On site/Office Hours)

1. Bachelor's Degree in Engineering, Computer Science, General Science with Mathematics, Management Information Systems or Applied Statistics from a recognized University or Full professional qualification equivalent to NVQ Level 7 in a mentioned field of education.
2. High level Professional Qualifications in two or more relevant technical disciplines including ITIL/ISO /PMP
3. Expertise in Communication (English/Sinhalese) and Managerial Skills
4. Minimum of 5 Years of Experience in technical and Service Management

Support Engineers-Four Employees (Onsite /Office Hours and Non-Office Hours)

1. Degree from Recognized University or Degree Equivalent Qualification from recognized institute in relevant Discipline
2. Medium to Entry Level Professional Qualifications
3. Minimum of 1 Year Working Experience at Engineer Level in relevant Disciplines
4. Fluency in English

Technical Officers/Technicians- To cover required daily tasks and operations (Onsite /Office Hours or Non-Office Hours)

1. Minimum of Diploma Level (NVQ 5-6 verified) Qualifications
2. Minimum of 1 Year Working Experience in Technical Backgrounds
3. Fluency in English

Section VI-Annex J: Digital Workspace for Mobile users & Devices

1. Connecting to Applications & Desktop from any where

- A. Digital workspace for Mobile Users & Devices shall enable users to connect to applications and desktops anywhere anytime using any device through intranet or internet (minimum 5 devices per user). Application and Data Services should be extended to various end user devices (Laptops/Desktops/TC/ZC/Tablets/Smart Phones) or to virtual computers. End users should have proper access to the applications without compromising performance and information security to increase their productivity/efficiency.

2. Self Service Enabled

- A. Product Features for User Friendliness need to be available.

- i. Access Portal
 - ii. Unified Enterprise App Store & Request portal
 - iii. Fast End User Access
 - iv. Easy Device Enrollment
 - v. Easy to Manage devices and enrolments
 - vi. Over the Air Diagnostics & Support
 - vii. BYO-Anything, Single Sign On
 - viii. Peripheral Devices & Resource Redirection (Including USB Devices)
- & Other features will be considered for rating the user friendliness of the solution.

- B. Digital workspace for Mobile Users should be a single technical solution for application and Desktop Delivery. This should not add complexities to users or devices. It should be easy to set up required client components on different devices by users themselves.

3. Single Sign On

- A. Digital workspace for Mobile Users should enable users with single sign on (SSO) facility where users should not need to log in to another app (in Digital workspace) by typing the same password again if user has entered it once. Also, this should support required security standard to protect unauthorized access to applications.

4. **Work Flow Management**

- A. Workflow Management with Self-service portal/Approving console/User Rating and feedback to be integrated to apps and devices. Users should be able to get installed their allowed set of applications on their devices.

5. **Remote Assistance**

- A. Remote assistance solution should be incorporated to support users whenever required. This facility should be enabled from any internal or external team to support the user.

6. **Connect through Different End Devices**

- A. Not only laptops, users who need application access while on the go should be able to use their mobile devices to access applications (without log in to virtual or remote desktops). Authorized Users should be allowed to set up their preferred devices (not only one but few devices) by themselves.
- B. There are some set of users who may use their own Laptops or Mobile Devices to access the applications through Internet or some other external network including internal Wi-Fi network. This should be facilitated by Digital Workspace Solution for Mobile Users & Devices.
- C. Digital workspace for mobile Users & Devices should support all mainstream mobile and desktop operating systems and platforms. It is essential that any end user workspace should support devices running different operating systems such as Apple IOS, Windows, Android, Linux, Chrome OS etc. or Standard Browsers (Including Current and Future Releases). New mainstream operating system versions should be supported.

7. **Support for Bring Your Own Device (BYOD) option**

- A. The solution should be extendable to support BYOD/BYO Anything with required security features (*including network admission control*) if SriLankan decides to migrate its services to BYOD concepts anytime within the tenure. Implementation timelines, costs must be clearly indicated in the proposal. Any additional cost to implement the BYOD to be separately identified and quoted as optional pricing.

8. **Two Factor Authentication**

- A. Two factor authentications should be supported for above digital workspace devices for first time setup & Continuous use for all the users. Different policies shall be supported based on Device Type/User Type/Access Network etc. If accessing from external network from any new device two factor authentication should be triggered. For internal network It should have the simple password authentication mechanisms. Please indicate if there is any cost escalation to include this feature.

9. Automated Compliance Check

- B. These externally & internally connecting devices should be audited and allowed only if it has met defined conditions such as updated malware protection, secured operating system on the device etc. Please indicate if there is any cost escalation to include this feature.

10. Enhanced Communication & Collaboration

- A. It should deliver full featured corporate email & communication functionality & empower corporate communication. Email is one major communication medium and manageability of IM and corporate social media would be a plus point. Client should support existing email and communication services, or General Email Clients should be able to manage with Digital Workspace.

11. Support All Current/New Applications & Services

- A. The Digital workspace should support all applications and services which are running in current environment at UL. It should support any new application released to run on existing platforms or operating systems. Applications may be client-server, web based or stand-alone and should be able to deliver to Virtual Computers, Desktop Computers, Laptop Computers, mobile devices etc. while connected to intranet/Internet.
- B. There are mainly 100+ applications including very critical 40 business applications. However, Bidder should support up to 200 applications altogether. These applications depend on platforms like Java, Dot Net etc. (different versions of them) and different versions of IE or browser. The backend database servers/ app servers are in internal or external datacenters or on cloud while some applications use remote access technologies to deliver the application to user. In *Annex H* the number of Business-related applications used in each category in SriLankan Airlines' are provided. All applications are supported on Microsoft platforms hence the proposed solution should be capable of supporting applications compatible with MS client OSes (including Win 7, Win 8.x, Win 10).
- C. Facility need to be provided for users to connect or use only one or two applications at a time without any dedicated desktop but from any terminal (including ZC/TC), or browser.

12. Support O365, Office Apps, Store Apps, Play Store Apps Management

- A. Solution should support current enterprise wide products like Microsoft Office 365, MS office package etc. and should be able to provide all the capabilities of it without compromising performance and usability while being compatible with update/upgrade cycles.

13. Provisioning & Deployment of Applications

- A. Provisioning and rollout of Standard and specific commercial applications (Adobe/Office etc) and Licensing need to be managed for all user devices & users (at the level of provisioning and delivery of applications).

14. Support Multiple application versions

- A. At times, it is required to provide various versions of same application to a user. It is required to support different application or versions of applications running on a Computer which is having incompatible depending platforms (E.g.: Java app running on Java 6 and another running on Java 7).

15. Application Interoperability

- A. Application interoperability within the device should be made possible by the Digital Workspace.

16. User Desktop

- A. Users should be given a functional and user-friendly desktop environment at lesser cost while fulfilling the customer expectations. Graphical interface needs to be changing and up to date with great look and feel to enable alerting/KPI Display/application access. Users should be able to see the installed applications, available applications and all applications conveniently. User experience and desktop background and behavior should be similar in all the devices (Laptop Computers/Desktop Computers/Virtual Computers/Mobile devices). Also, whenever user changes his /her preferences in application or environment settings (user profiles) it need to be applied to all devices that user interacts with.

17. Secure Network Channels

- A. Desktops and Applications should be only delivered through secure channels to authenticated users.

18. Connect Peripherals

- A. Printing and scanning solutions need to be accessed from any internal or external device where facility is authorized. Printing and scanning devices are connected to internal network or to end user device directly. The user using the end user device should be able to print and scan using his applications or virtual desktop.
- B. USB redirection should be supported while supporting USB storage devices, USB DVD/CD drives, USB Cameras, USB Printers, USB Scanners & USB Flash Drives.

19. Web Printing

- A. Web printing to printers in internal network & on internet should be enabled for authorized and authenticated users to print from outside network. Page wise selections of uploaded document and paper size and other optional settings while printing is preferred.

20. Storage & Content Sync

- A. Users should be able to access their official data, using any device. When required it should be supported to be stored in local devices for using when there is no network access. Synchronizing new versions of edited files from /to device is required. It is needed to have high standard for data protection while having a mechanism to control /restrict end user devices at required levels to remotely wipe out end user devices. User should be able to keep up to 100GB (Average 25 GB Per user) Data in internal Network Drive or Folder and should be able to access from internal and external network from his device. Data should be encrypted while stored on mobile device.
- B. Sharing and collaboration of data and files should made available remotely with other users.

21. Segregate Cooperate Data & Data Protection

- A. The solution should segregate corporate data from personal data using a secure container solution for cooperate data and apps installed on device. User should be allowed to use his choice of data and other secure apps on stores to use as per his/her wish.
- B. Data Leakage protection (DLP) solution need to be given for all end user devices with USB data logging enabled. Please indicate if there is any cost escalation to include this feature.
- C. Cooperate Data should be encrypted while stored on Devices' Data Storages (Laptop/Desktop Computers, Mobile devices). Please indicate if there is any cost escalation to include this feature.

22. Performance

- A. Application delivery should be having performance as described in this RFP. User might be using few business applications at a time and performance should not decrease with number of concurrent applications running on the device. Also, the performance of Digital Workspace should not degrade with other backend workloads related to maintenance and updating of the system.

23. Reliable, Scalable, Flexible

- A. Solution Should be high available with mechanisms to reduced downtime, scalable, flexible, highly configurable, and highly manageable by design.

24. Reporting

- A. Advanced Logging and Reporting should be available. Custom Reports and app usage, resource metering should be supported.

25. Centralized Monitoring & Management

- A. All mobile devices (laptops, iPad, tab etc.) deployed to end-users must be centrally managed via comprehensive Mobile Device and Application Management Solution - based on policy.
- B. Should be able to apply policies based on device type/group as well as based on user groups and support policy-based Application Provisioning.
- C. It should have the ability to manage the registered devices and if required wipe data remotely as required by administrators/owners.
- D. The solution should incorporate a dash board that monitors application performances from the end user's perspective with display of performances at any point of the delivery chain.

26. Advance management features

- A. Advance device management features such as custom scripting, encryption management (In app or device level), app management, profile management etc. shall be provided with the solution.
- B. Should provide administrative facilities for above features provided.

Section VI-Annex K: Technical Specifications of User Devices

Technical Specifications for Standard Laptops		
No	Feature	Description
1	Type	Business Laptop (Enterprise Grade)
2	Processors	Intel Core i5-9 th Generation Processor or Higher
3	OS	Standard OEM Windows 10 Professional 64-bit OS license should come along with the device. Manufacturer's standard support for the device should include all Windows Operating Systems that are officially supported by Microsoft at the date of Bidder quotation or proposal. Support for Enterprise versions of Windows Operating Systems is mandatory Attach documentary proof from manufacturer confirming full scale support for Enterprise versions of windows OSs Support for Professional versions of Windows Operating Systems is mandatory
4	Graphics	Models with integrated graphics: Intel HD Graphics 620 (minimum)
5	Display	Internal: 14-inch, diagonal LED-backlit HD+ anti-glare (1920 x 1080 resolution)
6	Memory	DDR4 PC4-2133 SDRAM (Transfer rates up to 2133 MT/s) Minimum 8GB-DDR4 SODIMMs or higher Maximum: Ungradable to 32GB with dual-channel memory support
7	Communications	Integrated Intel 1219LM Gigabit Network Connection
8	Wireless Type	802.11abg, 802.11 a/b/g/n, 802.11A Bluetooth
9	Audio	HD audio. Integrated stereo speakers and microphone. Button for volume mute, function keys for volume up and down. Combo microphone-in/stereo headphone-out jack.
10	Video Camera	Web camera (Fixed type)
11	Pointing device	Touchpad with on /off button, two-way scroll, gestures, two pick buttons Pointstick with two additional Pointstick buttons
12	Internal storage	Type: SSD, Min Capacity 500 GB, Interface SATA 6Gb/s
13	Optical Drive	DVD+/-RW

14	Battery	<p>Primary battery:4-cell (55 W·h or above) Li-Ion battery</p> <p>Secondary battery options: Ultra Extended Life Notebook Battery (9-cell 100 W·h or above) Extended Life Notebook Battery (9-cell 73 W·h or above)</p>
15	Ports & slots	<p>2x USB 2.0</p> <p>2x USB 3.0</p> <p>HDMI Port</p> <p>VGA Port</p> <p>RJ-45 / Ethernet</p> <p>Headphone/microphone combo</p> <p>AC port</p>
16	Security Management	<p>Security lock slot;</p> <p>TPM 1.2/2.0;</p> <p>Integrated smart card reader;</p> <p>Preboot Authentication (password, Smart Card);</p> <p>Fingerprint reader</p>
17	Keyboard	US international English, Backlit
18	AC Adapter	65 W AC Adaptor Input 100-240V AC,50/60 Hz
19	Weight	1.5 Kg or below
20	Dimensions (w x d x h)	33.8 x 23.7 x 1.89 cm (13.35 x 9.33 x 0.83 in) or below
21	System standby time	Up to 1 week
22	Travel mouse	Mini optical USB travel mouse
23	Accessories	Carry bag
24	Finishing	Black/Silver

Technical Specifications for High End Laptops		
No	Feature	Description
1	Type	Ultra-thin Business Laptop (Enterprise Grade)
2	Processors	Intel Core i5-9 th Generation Processor or Higher
3	OS	Windows 10 Enterprise and/or Professional 64 bit
4	Graphics	Models with integrated graphics: Intel HD Graphics 615 or newer up to 4096-by-2304 resolution at 60Hz on external display millions of colors
5	Display	Retina display 12-inch (diagonal) LED-backlit display with IPS technology + 2304-by-1440 resolution at 226 ppi + 16:10 aspect ratio
6	Memory	Minimum 8GB
7	Communications	Gigabit Network Connection (May use adaptor)
8	Wireless Type	802.11 ac WiFi wireless networking 802.11a/b/g/n compatible Bluetooth 4.2 wireless technology
9	Audio	HD audio. Integrated stereo speakers and microphone.
		Combo microphone-in/stereo headphone-out jack.
10	Video Camera	Web camera (Fixed type)
11	Pointing device	Touchpad with on /off button, two-way scroll, gestures, two pick buttons
		Pointstick with two additional Pointstick buttons
12	Internal storage	Type: SSD, Min Capacity 1 TB, Interface SATA 6Gb/s
13	Optical Drive	External Drive
14	Battery	Up to 10 hours wireless web Up to 30 days of standby time Built-in 41.4-watt-hour lithium-polymer battery
15	Ports & slots	USB-C port with support for: Charging USB 3.1 Gen 1 (up to 5 Gbps) Native DisplayPort 1.2 video output VGA output using USB-C VGA Multiport Adapter (sold separately) HDMI video output using USB-C Digital AV Multiport Adapter (sold separately)
		3.5 mm headphone jack
16	Security Management	Security lock slot;
		TPM 1.2/2.0;
		Integrated smart card reader;

		Preboot Authentication (password, Smart Card);
		Fingerprint reader
17	Keyboard	US international English, Backlit
19	Weight	1 Kg or bellow
20	Dimensions (w x d x h)	Lesser than 29.2 cm x 20.1 cm x 0.85 cm
22	Travel mouse	Mini Wireless travel mouse
23	Supplied Accessories	Carry bag, Docking station, surface dial
24	Finishing	Silver

Technical Specifications for Standard Desktops		
No	Feature	Description
1	Type	Enterprise Grade
2	Processors	Intel Core i5-9 th Generation Processor or Higher
3	OS	Standard OEM Windows OS license should come along with the device.
		Manufacturer's standard support for the device should include all Windows Operating Systems that are officially supported by Microsoft at the date of Bidder quotation or proposal.
		Support for Enterprise versions of Windows Operating Systems is mandatory
		Support for Professional versions of Windows Operating Systems is mandatory
4	Memory:	8GB 1600 MHz DDR4 SDRAM or more; Memory slots: 2 DIMM or more upgradable to 32GB
5	Internal Storage:	Type: SSD, Min Capacity 500GB, Interface SATA 6Gb/s
6	Dimensions:	Small Form Factor PC (less than 35cm x 40cm x 10 cm)
7	Optical Drives:	SATA Slim Super Multi DVD writer
8	Graphics:	HD Graphics
9	Audio:	High Definition Audio
10	Internal speaker:	Standard
11	Communications:	Gigabit network connection (standard)
12	Expansion Slots:	1 low-profile PCI; 1 low-profile PCIe x1; 2 low-profile PCIe x8
13	Ports and Connectors:	4 USB 3.0; 4 USB 2.0; 1 serial; 2 PS/2; 1 VGA; 1 DisplayPort; 1 audio in; 1 audio out; 1 RJ-45; 1 headphone; 1 microphone
14	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse (USB)
15	Security Management	BIOS Security/Internal solenoid lock
		TPM 1.2/2.0;
		Preboot Authentication (password, Smart Card);
16	Weight:	less than 10 kg
17	Power:	240W & 230V AC Compliance ENERGY STAR® qualified configurations
18	Display:	Included 19"/23" LCD/TFT Color Display with 1920*1080 Resolution HDMI Port | DisplayPort | VGA Connector

Technical Specifications for Thin Clients		
No	Feature	Description
1	Type	Enterprise Grade
2	Processors	Intel Core Supported Processor for OSs
3	OS & Application Support	Windows Thin OS (or Windows 10 or Any Other supported for the technology used)
		Citrix/ Microsoft/VMware or relevant Application Delivery Methods to be supported
		IE11, Edge, Chrome Browser Support
		Remote Management Mechanisms and Remote configuration
4	Memory:	8GB DDR3 SDRAM 1066MHz Upgradable to 4 GB
5	Internal Storage:	8 GB Flash
6	Dimensions:	Tower or all in one (less than 2.3 in x 8.5 in x8.6 in)
7	Optical Drives:	External Drive need to be provided
8	Graphics:	Integrated Shared Graphics
9	Audio:	Integrated Stereo
10	Internal speaker:	Built in
11	Communications:	Integrated Gigabit network connection (standard)
		Wake on LAN (WoL), DHCP support, PXE support
12	Expansion Slots:	1 low-profile PCI; 1 low-profile PCIe x1; 2 low-profile PCIe x8
13	Ports and Connectors:	2 USB 3.0; 2 USB 2.0; 1 VGA; 1 DisplayPort; 1 audio in; 1 audio out; 1 headphone; 1 microphone
14	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse (USB)
15	Video Output:	DVI, VGA
16	Weight:	less than 500g
17	Power:	5W & 230V AC Compliance ENERGY STAR® qualified configurations
18	Display:	Included 19"/23" LCD/TFT Color Display with 1920*1080 Resolution HDMI Port |DisplayPort | VGA Connector

Technical Specifications for Zero Clients		
No	Feature	Description
1	Type	Enterprise Grade
2	Firmware	Citrix/ Microsoft/VMware or relevant Application Delivery Methods to be supported Remote Management/Update Mechanisms and Remote configuration
3	Dimensions:	Tower or all in one (less than 2.3 in x 8.5 in x8.6 in)
4	Optical Drives:	External Drive need to be provided
5	Audio:	Integrated Stereo
6	Internal speaker:	Built in
7	Communications:	Integrated Gigabit network connection (standard) Wake on LAN (WoL), DHCP support, PXE support
8	Ports and Connectors:	2 USB 3.0; 2 USB 2.0; 1 VGA; 1 DisplayPort; 1 audio in; 1 audio out; 1 headphone; 1 microphone
9	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse(USB)
10	Video Output:	DVI, VGA
11	Weight:	less than 300g
12	Power:	5W & 230V AC Compliance ENERGY STAR® qualified configurations
13	Display:	Included 19"/23" LCD/TFT Color Display with 1920*1080 Resolution HDMI Port |DisplayPort | VGA Connector

Technical Specifications for Mini Computers		
No	Feature	Description
1	Type	Mini PC
2	Operating System:	Standard OEM Windows 10 Professional 64bit OS license should come along with the device
		Manufacturer's standard support for the device should include all Windows Operating Systems that are officially supported by Microsoft at the date of Bidder quotation or proposal
		Support for Enterprise versions of Windows Operating Systems is mandatory
		Support for Professional versions of Windows Operating Systems is mandatory
		Attach documentary proof from manufacturer confirming full scale support for Enterprise versions of windows OSs
2	Processor:	Intel Core i5-9 th Generation Processor or Higher
3	Memory:	4GB-DDR4 SODIMMs or higher; DDR4 PC4-2400 SDRAM (Transfer rates up to 2400 MT/s); Upgradable to 32GB
4	Internal Storage:	Type: SSD, Min Capacity 500GB, Interface SATA 6Gb/s or higher
5	Dimensions:	6.97 x 1.35 x 6.88 in or below
7	Graphics:	HD Graphics
8	Audio:	High Definition Audio
9	Internal speaker:	Standard
10	Communications:	Integrated Intel i219LM Gigabit Network Connection
11	Wireless Type:	802.11abg, 802.11 a/b/g/n WiFi
12	Ports and Connectors:	2 USB 3.0; 2 USB 2.0; 1 serial;2 PS/2; 1 VGA; 1 HDMI; 1 audio in; 1 audio out; 1 RJ-45; 1 headphone; 1 microphone
13	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse (USB)
14	Security Management	BIOS Security/Internal solenoid lock
		TPM 1.2/2.0;
		Preboot Authentication (password, Smart Card);
15	Weight:	2.67 lb or below
16	AC Adapter:	65 W AC Adaptor Input 100-240V AC,50/60 Hz
17		1. Warranty and support for 5 Years

	Warranty terms & conditions:	<p>2. On Site Back-up 1 unit</p> <p>3. Replacement for faulty device within 5 days (same Brand/Model)</p> <p>4. On-site support for any issue (Monday to Friday, from 08:00 Hrs to 18:00Hrs)</p>
18	Display:	Included 19"/23" LCD/TFT Color Display with 1920*1080 Resolution HDMI Port | DisplayPort | VGA Connector

Technical Specifications for Kiosks		
No	Feature	Description
1	Type	Kiosks with Mini PC
2	Operating System:	Standard OEM Windows OS license should come along with the device
		Manufacturer's standard support for the device should include all Windows Operating Systems that are officially supported by Microsoft at the date of Bidder quotation or proposal
		Support for Enterprise versions of Windows Operating Systems is mandatory
		Support for Professional versions of Windows Operating Systems is mandatory
		Attach documentary proof from manufacturer confirming full scale support for Enterprise versions of windows OSs
2	Processor:	Intel Core i5-9 th Generation Processor or Higher
3	Memory:	8GB-DDR4 SODIMMs or higher; DDR4 PC4-2400 SDRAM (Transfer rates up to 2400 MT/s); Upgradable to 32GB
4	Internal Storage:	Type: SSD, Min Capacity 500GB, Interface SATA 6Gb/s or Higher
5	Dimensions:	Standard
7	Graphics:	HD Graphics
8	Audio:	High Definition Audio
9	Internal speaker:	Standard
10	Communications:	Integrated Intel i219LM Gigabit Network Connection
11	Wireless Type:	802.11abg, 802.11 a/b/g/n WiFi
12	Ports and Connectors:	2 USB 3.0; 2 USB 2.0; 1 serial;2 PS/2; 1 VGA; 1 HDMI; 1 audio in; 1 audio out; 1 RJ-45; 1 headphone; 1 microphone
13	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse (USB)
14	Security Management	BIOS Security/Internal solenoid lock
		TPM 1.2/2.0;
		Preboot Authentication (password, Smart Card);
15	Weight:	

16	AC Adapter:	65 W AC Adaptor Input 100~240V AC,50/60 Hz
17	Warranty terms & conditions:	1. Warranty and support for 5 Years
		2. On Site Back-up 1 unit
		3. Replacement for faulty device within 5 days (same Brand/Model)
		4. On-site support for any issue (Monday to Friday, from 08:00 Hrs to 18:00Hrs)
18	Display	Included 17"/19" LCD/TFT Touch Sensitive Color Display
19	Fingerprint Reader	Included
20	RFID Reader	Included
21	Keyboard	Keyboard with imbedded Trackball

Technical Specifications for Virtual Computers		
No	Feature	Description
1	Type	Virtual
2	Processors	Should support enterprise standard desktop performance in current Market.
3	OS	Microsoft VDA license should come along with the solution
		Support for Enterprise versions of Windows Operating Systems (including Windows 10 64bit) is mandatory by technology used
4	Memory:	Should support enterprise standard desktop performance in current Market.
5	Storage:	Adequate OS Partition supporting user profiles. (Network storage of 25GB for each user should be accessible)
		Should support enterprise standard desktop performance in current Market.
6	Graphics:	HD Graphics with Dual Monitors Support /SVGA
7	Audio:	Microphone in & Speaker out supported
8	Communications:	Virtual Network Adapter- Minimum 1 Gbps
9	Ports and Connectors:	Virtual USB Host Controller/Virtual USB Hub(USB 3.0, USB 2.0); 1 serial;2 PS/2; 1 VGA; 1 DisplayPort;

10	Input Device:	Standard Keyboard (USB)/ 2-Button Optical Scroll Mouse(USB)
11	DVD/CD	Virtual DVD/CD drives & External DVD/CD Drive Mapping

Technical Specifications for Monitor		
No	Feature	Description
1	Size:	19 inch- Non Wide/ 23 inch Wide
2	Type:	LCD/LED Display
3	Brightness(typ):	250nits(cd/m ²)
4	Contrast ratio:	Static 1000:1 ; Dynamic 1,000,000:1
5	Native Resolution:	1280 x 1024 / 1920 x 1080 @ 60 Hz
6	Panel Backlight:	LED
7	Color Support:	16.7 million colors
8	Response time:	5 ms
9	Viewing angle	Horizontal 170 ⁰ , Vertical 170 ⁰
10	No of minimum VGA ports:	1
11	No of DVI display ports:	1
12	No of HDMI Ports	1
13	Voltage:	100 to 240 V AC/50 or 60 Hz / 1.5 A
14	Other Accessories:	Stand, Cable cover, Power cable, VGA cable

Section VI-Annex L: Endpoint Security

FEATURE	REQUIREMENT	OFFER
General features	<p>a. A protection solution requires against currently active malicious programs such as virus, spyware, adware, spam, etc...</p> <p>b. A suitable software is required for such protection for installation in all end user devices or VDs and servers.</p> <p>c. The protection should have Centralized management, monitoring and update capabilities.</p>	
Solution Details		
	Proposed Solution should be in 'Leaders' quadrant of the granter's magic Quadrant for endpoint protection platform for past 3 years with Highest detection ratio	
	The-Endpoint security solution Should have a Centralized Management Console for both servers & desktop/laptops.	
	Solution should support with Active directory or workgroup for directory structure of computers for better management.	
	The Endpoint security Should be capable of pushing client installation from a centralized location and it should also support standalone installation	
	Solution should have capability of do remote remediation rather than visiting to client.	
	Central management should have Application and Asset information visibility.	

<p>Product Features</p>	<ul style="list-style-type: none"> a. On-access and on Demand Scanning b. File, Web and Email Scanning on Realtime c. quick and Schedule scanning d. Ability to scan and cure files packed in RAR, ARJ, ZIP, CAB archives, including password protected archives e. Manual and Remote Task execution. f. Heuristic analyzer for detection and blocking of unknown (zero day) malware g. Adware/Spyware scan h. Script Blocking i. Schedule update and Manual update j. Personal Firewall k. Auto-Clean Infected Files l. Quarantines Infected Files m. Email POP3 Protection n. Instant Messaging Protection o. P2P/File Sharing Protection p. Registry Startup Protection q. Detailed information of the detected virus. r. Root kit detection 	
	<p>Cloud protection from new threats allowing product to perform cloud requests in real-time during on-access and on-demand scans to get actual verdict in regard to the object.</p>	
	<p>Web traffic protection with ability to scan objects delivered to end user computer via HTTP and FTP protocols, including possibilities to perform heuristic analysis and define trusted sites excluded from the scan.</p>	
	<p>Ad banners and pop-up windows block.</p>	
	<p>Detection and block access to phishing links.</p>	
	<p>Mail threats protection with ability to scan incoming and outgoing mail flows delivered via the following protocols: IMAP, SMTP, POP3, MAPI, NNTP – regardless of mail client software vendor used by end user</p>	

	Ability to detect anomalies in application behavior. Ability to roll back all actions done by a malware, including recovery of files encrypted by a malware.	
Scanning Time	Bidder should specify scanning recourse usage and time consuming for 100GB in his proposal.	
	Reduced scan time by omitting scan of unchanged objects since last scan	
VDB Updates	<ul style="list-style-type: none"> a. The solution adopted for updating the software, if a new release or a patch is introduced within the period of lessening contract. b. Automatic Definition Updates via Internet c. Automatic Definition Update via Central server 	
Other Features	<ul style="list-style-type: none"> a. Detailed information of the detected virus. b. Online Virus Scanner d. History/Report logging e. Password Protect Settings f. Outbreak Notice g. Fully manageable independently h. Virus detection indications 	
	Network monitor with ability to set up per application network rules for certain protocols (TCP, UDP) and ports	
	Solution client firewall should be running in stealth mode that denies the unauthorized network access by hackers.	
	Administrator should be able to lock down all-virus configurations at the desktop & user should be prevented from being able to uninstall the anti-virus software.	
	Antivirus should provide event logging to locate and cure virus problems.	
	Alerts on virus activities should be passed on to administrator.	
	Solution should have Machine Learning and Exploit Prevention to cover Zero-day attacks and exploits.	

	Ability to define rules preventing installation and startup of any given application via Application control by their OS path, metadata, file hashes and predefined categories.	
Vulnerability management	Ability to find vulnerabilities within installed applications with possibility to get the report of all found vulnerabilities.	
	Solution should have capability of identify missing windows vulnerability patches and missing update patches on windows.	
	Solution have capability of identify vulnerabilities and deploy release patches either windows or third party Application.	
Control and Protection	Solution should have Web Filtering on URL and category basis allow, warn and block rule.	
	Solution should have APPLICATION control module with the ability to block or be alerted to the use of a long list of Unauthorized applications. (E.g. File Sharing, Games, etc.)	
	<ul style="list-style-type: none"> a. Control and Manage all the USB ports in client PCs. b. Antivirus solution should have integrated DEVICE control module by “Read Only” and “Block” 	
	Solution should have capability of Allow USB Storage temporary for time period even if off side the network.	
	Ability to install custom set of protection components.	
	Solution should have a License Provisioning and Control feature.	
Technical Support	<p>Availability of following facilities to be specified by the bidder.</p> <ul style="list-style-type: none"> a. Phone Support b. Manual/FAQ/Knowledge Base c. Email/Phone Support 	
OS Support	<p>The bidder is required to give support OS</p> <ul style="list-style-type: none"> a. Windows 7,8,10 b. Server 2008,2008R2, 2012,2012R2, &2016 	
	The propose solution Should Support Multi-Platform operating system such as Windows, Mac, Linux	

Documents for Evaluation	Bidder should detail out product name and propose solution type in the proposal.	
	<p>a. Full technical features, the product guide and solution data sheet should be provided with the proposal.</p> <p>b. The bidder is to specify the certifications awarded by industry recognized organizations for the offered protection software and provide product certifications related to the protection software.</p>	

Section VI-Annex M: Secure Web Gateway

- A. Bidder proposal should include an Internet Proxy solution and it should be able to provide authenticated users & devices with multiple sessions and should include layer 7 filtering capabilities using constantly updated filter lists. Also, it should be able to cover up all Internet session requirements of the Desktop & Laptop Environment as well as App Delivery platforms, O365 & other public cloud access requirements etc.
- A. The Solution must have on premise and/or cloud web filtering engine which work independently to device type and network perimeter to protect mobile workforce.
- B. The Solution may provide on premise in-line proxy and/or cloud-endpoint-agent for in-box malware inspection, content filtering, SSL inspection, protocol filtering functionalities.
- C. The Solution should protect users from downloading virus / malwares embedded files by stopping viruses / malwares, malicious-code detection and filtering at the gateway itself. The Solution should provide Real-Time security scanning.
- D. The Solution should stop incoming malicious files with updated signatures & prevent access to malware infected websites & unblock the sites when the threats have been removed.
- E. The Solution must have a URL categorization that exceeds 100+ million URLs filtering database. The Solution should have pre-defined URL categories.
- F. The Solution must be able to create a filtering rule with multiple URL categories. It should support enforcing corporate and regulatory policy compliance on web traffic based on user groups and categorization.
- G. The Solution should have the capabilities to inspect in depth block, permit, allow & log, wide range of protocols not limiting to HTTP, HTTPS, FTP. (The bidder should provide the protocols that support the above requirement).
- H. The Solution should perform inspection to detect & block malicious content downloaded through SSL.
- I. The Solution shall provide in-depth visibility in Application level and capable to enforce filtering rules and policies. It should provide application controls for popular Web-based applications (such as instant messaging (IM) and Skype) and should be able to identify Microsoft O365/Facebook and any specific traffic automatically and route them separately. It is preferred if itself shall have the uplink load-sharing methodology for applications or categories.
- J. The Solution shall provide reputation-based URL filtering to avoid users visiting/redirecting to blacklisted/high risk/suspicious URL (DNS level threat mitigation or URL rewriting)

K. Solution should be able to provide a customizable user and group quota allocation system based on data access volumes.

L. The Solution should support

- i. Content caching and traffic optimization
- ii. Bandwidth management
- iii. Quota Management (per user, Volume based, Bandwidth Based)
- iv. Quota Based user alert facility
- v. Reporting on per user/ad group-based internet usage
- vi. Streaming media splitting and caching
- vii. Method level controls, per protocol
- viii. User level awareness and authentication
- ix. Native or integrated data leak prevention

M. Solution should be of High Availability configuration and Bidder shall indicate the full specifications.

Section VI-Annex N: Next Generation Firewall

1. Next Generation Firewall functionalities

- A. The Solution should support “Stateful” policy inspection technology and application intelligence.
- B. The Solution shall support network traffic classification which identifies applications across all ports irrespective of port/protocol/evasive tactic.
- C. The Solution must support filtering of TCP/UDP/IP based applications with standard and nonstandard TCP/UDP ports.
- D. The Solution should be able to handle (monitor, block or allow) applications and all UDP & TCP communications
- E. The Solution should have the ability to be deployed in inline mode.
- F. The Solution NGFW should have IPS/IDS Modules for filtering of all traffic.
- G. The Solution should support (without depending on IP addresses)
 - i. URL based traffic Policy Enforcement,
 - ii. URL based traffic Routing (Static, Dynamic, Policy Based)
 - iii. URL based traffic Bandwidth Shaping
 - iv. URL based traffic Load Balancing
 - v. URL based traffic Quota Management
- H. The Solution (NGFW) shall be able to do SSL traffic inspection for all inbound and outbound communications.
- I. The Solution (NGFW) shall support the ability to have an SSL inspection policy differentiate between personal SSL connections i.e. banking, shopping, health and non-personal traffic.
- J. The Solution should have a provision to handle the bandwidth & quota management.
- K. The Solution should be able to explicitly limit bandwidth for bi-directional traffic i.e. upload & download.
- L. The Solution should have in-depth Identity Awareness Capabilities
- M. The Solution should support VLAN tagging (IEEE 802.1q) and trucking
- N. The Solution should support Link Aggregation, Ethernet Bonding functionality to group multiple ports as single port.

- O. The Solution must support at least 2048 VLANs
- P. The Solution must support practically unlimited policy option.
- Q. The Solution should support the multicast protocols as a multicast host, by participating in DVMRP, IGMP and PIM-DM / PIM-SM
- R. The Solution should support SLAAC Stateless Address Auto configuration
- S. The Solution must provide NAT functionality, supporting all applications and services-including H.323 and SIP based applications. (NAT functionality must not depend on the IP assignment of directly connected interfaces)
 - i. Source based and destination-based NAT
 - ii. Dynamic and static NAT translations
 - iii. NAT exclusions,
 - iv. Dynamic IP reservation,
 - v. Port oversubscription
 - vi. Dual Stack IPv4 / IPv6 (NAT64, NPTv6)
- T. The Solution should support Bidirectional Forwarding Detection (BFD), Policy Base Routing, and routing protocols such as
 - i. Static
 - ii. RIP v2
 - iii. OSPFv2/v3 with graceful restart
 - iv. BGP v4 with graceful restart
- U. The Solution should support the authentication protocols such as RADIUS, LDAP, and TACACS etc.
- V. The Solution shall be able to create custom application signatures and categories using the inline packet capture feature.
- W. The Solution shall be able to implement Zones, and use IP address, URL, Port numbers, User id, Application id under the same firewall rule or the policy configuration.
- X. The Solution should have the ability to block Instant Messaging like Yahoo, MSN, ICQ, Skype (SSL and HTTP tunneled) with controls over File Transfer, Block Audio, Block Video, Application Sharing and Remote Assistance.
- Y. The Solution shall delineate different parts of the application such as allowing Facebook chat but blocking its file-transfer capability inside the chat application base on the content

- Z. The Solution shall be able to protect the user from the malicious content upload or download by application such as Facebook chat or file sharing by enforcing the total threat protection for known and unknown malicious content such as virus, malware or a bad URL.
- AA. The Solution shall support DNS sink holing for malicious DNS request from inside hosts to outside bad domains and should be able to integrate and query third party external threat intelligence data bases to block or sinkhole bad IP address, Domain and URLs
- BB. The Solution (NGFW) should be able to call threat intelligence feeds on malicious IPs, URLs and Domains and to use those dynamic data feeds in firewall policy to block those malicious attributes.
- CC. Automated policy tuning based on thereat intelligence shared by solution components (sandbox, IPS) or external security platforms (vulnerability management module/ endpoint security module)/feeds.
- DD. The Solution should have the ability to enable/blocking of Peer-Peer applications, like Kazaa, Gnutella, Bit Torren.t, IRC (over HTTP).
- EE. The Solution shall possess Identity Context Awareness to support:
 - i. Identity based policy deployment
 - ii. Identity based logging options
 - iii. Identity based Quota Management
- FF. The Solution must support clustering protocols including VRRP.
- GG. The Solution must support minimum 3 virtual contexts without performance degradation at full featured functionality.
- HH. NGIPS/FW appliance must be supplied with at least ten (10) 10/100/1000Mbps interfaces/ports (copper /SFP+ copper) and should contain minimum four (4) x 10 Gigabits SFP+ optical interfaces along with “dedicated/separate expansion slot” to add four (4) more 10G/40G interfaces when required (scalability) without changing the Appliance.
 - i. Required Single mode SFP module and single fiber cable shall be included as part of the solution
 - ii. The Solution should have inbuilt high-performance storage (minimum of 200 GB SSD) and storage for log retention
 - iii. The solution should have Capability of handling defined number of concurrent users (as in Annex E) with multiple sessions.

2. Load Balancing and Traffic Optimization

- A. The Solution should support ISP link load balancing (Spill Over, Source based, Destination based, Weighted, URL Based, Application Based, Bandwidth Priority) via dedicated Link Load Balancer appliance or an integrated module with policy-based traffic handling where high-performance is assured.
- B. The Solution should provide provisions to load balance Outwards links to ISPs based on QoS/Application-Delivery policies. [Guaranteed bandwidth, Maximum bandwidth, Priority bandwidth utilization,)
- C. The solution should have following capabilities.
 - i. WAN optimization,
 - ii. Traffic Shaping with Category based traffic shaping
- D. Solution should support automatic link failover between different ISPs in following cases
 - i. ISP Link failure
 - ii. Increase of Latency / Jitter
 - iii. Service unavailability
 - iv. Degradation of Link Performance
- E. The solution should be capable of monitoring and alerting ISP link failure or degradation of performance.

Section VI-Annex O: Non-Disclosure Agreement

It is understood and agreed to that the below identified discloser of confidential information may provide certain information that is and must be kept confidential. To ensure the protection of such information, and to preserve any confidentiality necessary under patent and/or trade secret laws, it is agreed that

1. The Confidential Information to be disclosed can be described as and includes:

Technical and business information relating to airline business information systems, existing and/or contemplated products and services, proprietary ideas and inventions, trade secrets, drawings and/or illustrations, research and development, financial information and financial projections, customers, clients, marketing, and current or future business plans and models, specifications, records, data, computer programs, drawings, schematics, know-how, notes, models, reports, samples or other forms of copies, derivations, analyses, compilations, studies, memoranda, notices and other materials regardless of whether such information is designated as "Confidential Information" at the time of its disclosure.

2. All Confidential Information received by Receiving Party from the SriLankan Airlines Limited (hereinafter referred as 'Disclosing Party') shall remain the exclusive property of the Disclosing Party and no title to or other interest in the Confidential Information is granted or transferred to the Receiving Party by this Agreement
3. To return promptly to the Disclosing Party, or to destroy any copies of such Confidential Information in written, graphic or other tangible form at the Disclosing Party's request including all copies and notes thereof and including Confidential Information incorporated into analyses, compilations, studies or other documents prepared by the Receiving Party with destruction being certified in writing by an officer of the Receiving Party.
4. The Recipient agrees not to disclose the confidential information obtained from the Disclosing Party to anyone unless required to do so by law.
5. This Agreement states the entire agreement between the parties concerning the disclosure of Confidential Information. Any addition or modification to this Agreement must be made in writing and signed by the parties.
6. This Agreement shall commence on the date first written and signed below and shall continue thereafter for a period of 5 years, unless and until terminated by providing 30 days' notice in writing to the Disclosing Party. Notwithstanding the termination, the obligations and limitations with

respect to protection, use, disclosure and return or destruction of Proprietary Information shall survive such termination and shall continue until such time the Parties hereto mutually agree in writing that such treatment is no longer warranted.

7. This Agreement shall be construed in accordance with the laws of Sri Lanka and shall be subject to the exclusive jurisdiction of the Courts in Sri Lanka.

WHEREFORE, the parties acknowledge that they have read and understood this Agreement and voluntarily accept the duties and obligations set forth herein.

Recipient of Confidential Information

Organization Name :

Business Registration :

Organization Address :

Authorized Signatory :

Designation :

Signature :

Date :

Section VI-Annex P: Compliance Sheet

LIST OF COMPLIANCE TO BE SUBMITTED WITH THE PRPOSAL (MANDATORY) in following format.

Refer the attached Excel Sheet. Do not add or remove any row or columns from the original format.

Bidder Name:		Option:	
Comments & Details:		Date:	
Number	Description	Keep Blank (Official Use by SLAL)	Compliance Complied/ Not Complied/ Partially Complied
	Heading 1/Technical Requirement		Remarks
#	Clause		
A			
B			
C			

Section VI-Annex Q: Compliance Sheet for Information Security Requirements

#	Information Security Checklist	Compliance (Compliant/ Partially Compliant/ Not Compliant/ Not Applicable)	Remarks
A	Authentication & Password Compliance		
1	Role Based Access & Workflow Approvals (Segregation of Duties)		
2	Active Directory (AD) Integrated (If Yes, please proceed to A-7)		
3	Password age - 60 Days		
4	Minimum password length - 8 Characters		
5	Password change at initial login		
6	Password Complexity		
6.1	At least one 'UPPERCASE' character		
6.2	At least one 'lowercase' character		
6.3	Mixture of numbers and/or symbols		
6.4	Account Lockout		
6.5	Lockout after 5 unsuccessful attempts		
6.6	30 minutes lockout duration		
6.7	Password History - 8 Passwords		
6.8	Availability of multiple-factor authentication (If Yes, please provide information in remarks)		
6.9	Transfers authentication information through secure protocols (If Yes, please provide information in remarks)		
6.10	Ability to display the time and date of last successful login, and any failed login attempts to user		
7	Bidder shall support integration of solution with Microsoft Identity Manager for Identity & Access Management		
B			
8	Scheduled configuration backups		

9	Scheduled data backups		
10	Backup retention period:		
10.1	Financial & other data: for 12 years		
C	Audit & Event Logs (for all user activities, including administrative and privileged user activities, and system configuration changes)		
11	Application Audit Logs (including transaction logs)		
12	Database Level Audit Logs		
13	OS Level Audit Logs		
14	Event Logs (including successful/unsuccessful login attempts)		
15	Integration with McAfee Enterprise Security Manager for log correlation and management (recommended log format: syslog)		
D			
16	256-bit key encryption for data at rest and in transit.		
17	Application services support enabling a public-key infrastructure (public key cryptography and digital signatures) (If Yes, please provide information in remarks)		
E			
18	Input & Output Data Validation		
F			
19	Web applications enabled with TLS 1.2 certificates		
20	Remote diagnostic and configuration port should be protected.		
21	Ability to configure inactive Sessions timeout (for Application, Database, OS, Console) (If Yes, please provide information in remarks)		
22	Ability to configure a Log-on banner		
G			
23	Solution necessitates dependent systems & services		

H	Vulnerability Assessment		
24	SriLankan Airlines will perform Vulnerability Scans at least annually and findings will be notified to Bidder. If any vulnerability is found, Bidder shall agree to apply security patches in mutually agreed timeline.		
I			
25	Availability - 99.95%		
26	Recovery Time Objective - 1 hour		
27	Recovery Point Objective - 1 hour		
28	Bidder agrees to setup a local office or a competent local service provider to assist SriLankan Airlines in support queries or incidents.		
29	Signed Service Level Agreement including, and not limited to,		
29.1	Reflect Service Continuity objectives set forth above I-25 to I-27		
29.2	Defined Response Times and Resolution Times based on defined priorities		
29.3	Periodic service review meetings between SriLankan Airlines and the Bidder		
29.4	Escalation Criteria for Incident Management to ensure performance of services under the Service Level Agreement		
29.5	Information about the licensing arrangements (for dependents systems/services), code ownership and intellectual property rights related to the Bidder's products/ services		
29.6	Service Credits for failing to meet performance of services under the Service Level Agreement		
J			
30	Bidder/Service Provider agree that performance of the Services will be subject to monitoring by SriLankan Airlines.		

31	Bidder/Service Provider agree to keep accurate and complete records and accounts pertaining to the performance of the Services. Upon no less than seven (7) days' written notice, and no more than once per calendar year, SriLankan Airlines may audit, or nominate a reputable firm to audit, records relating to performance of Bidder/service provider under the Service Level Agreement, during the agreement period and for a period of three (03) months thereafter.		
32	If Bidder/Service Provider obtains third party services by means of outsourcing or sub-contract, Bidder/Service Provider is required to ensure such activities maintain applicable records to reflect the services agreement with SriLankan Airlines and will be subject to audit/monitor as set forth in J-31 & J-32 above.		
K	Licensing Requirements		
33	Does the solution necessitate additional licenses for third party components/services? (If Yes, please provide information in remarks)		
34	If solution necessitates additional licenses for third party components/services, please state if such licenses are included in the proposed solution? (If No, please provide details of additional licenses required from SriLankan Airlines)		
L	Legislative, Standards & Regulatory Compliance		
35	Proposed solution and service provider is compliant for ISO/IEC 27001:2013 Information Security Management System (ISMS) (if proposed solution is compliant to other standards, legislative and regulatory requirements, please provide details in 'Remarks').		
36	Bidder agrees to sign a Reciprocal Non-Disclosure Agreement with SriLankan Airlines		
37	Information shared or services obtained as part of SriLankan Airlines engagement with Bidder will be governed by requirements set forth in ISO/IEC 27001:2013 Information Security Management System (ISMS) and subjected to signing a Reciprocal Information Security Schedule which will become an integral part of the Service Agreement(s).		

REQUEST FOR PROPOSALS FOR MANAGED SERVICE FOR ENDPOINT AND APPLICATION DELIVERY FOR
SRILANKAN AIRLINES LTD.

#	Requirement	Response (Yes/No/Not Applicable)	RFP Requirement statement reference/Remarks
1.	Have you identified information security general requirements related to proposed system/solution?		
2	Have you identified compliance and regulatory requirements related to proposed system/solution?		
3	Have you identified business continuity and data retention requirements related to proposed system/solution?		
4	Have you identified requirements on privacy and intellectual properties , related to proposed system/solution?		
5	Have you identified operational information security risk factors related to the of proposed system/solution - deployment context?		
For the use of Information Security Risk Assessor:			
A	Information Security Risk Assessment verdict	<input type="checkbox"/> Amendments required to RFP scope of work <input type="checkbox"/> Proceed with RFP release	
B	Feedback:		

Section VI - General Specifications

- I. Supplier” means the proprietor of the brand or an authorized distributor for the proprietor. In the event where the supplier is an authorized distributor, it is mandatory an Authorized Distributor Status letter from the Proprietor is submitted to SriLankan Airlines along with the proposal to avoid rejection of the proposal.
- II. The supplier should arrange product demonstration at SriLankan Airlines premises at the evaluation stage. All applicable expenses including airfare should be borne by the bidder.
- III. The supplier needs to perform a Proof of concept (POC) of the proposed system/solution. All applicable expenses including airfare should be borne by the bidder.
- IV. If required, SriLankan Airlines requires to inspect the product at the evaluation stage by SriLankan Airlines’ personnel (minimum 2 pax), same has to be arranged by the bidder at a client site to inspect the proposed product. All applicable expenses excluding airfare (airfare means- SriLankan Airlines’ destinations only) shall be borne by the bidder.
- V. All other on-site & off-site expenses & all incidental expenses related to the project implementation, maintenance & support etc. within the 5-year contract period, excluding Airfare (airfare means- SriLankan Airlines’ destinations only) should be borne by the bidder.
- VI. If accepted, it is mandatory that the supplier signs the Contract Agreement - Annex S.
- VII. In order to ensure continuity of supply of Goods & Services to SriLankan Airlines in the event of a disruption to bidder’s operations, please provide details of alternative arrangements available within the agreed cost and specifications of product.
- VIII. Upon delivery and/ or completion of installation of the system/solution, SriLankan Airlines shall perform User Acceptance Tests (UAT) to determine that the goods/service is operating in conformance with SriLankan Airlines ’s published performance specifications for the goods/service and any other requirements agreed to by the parties (hereinafter "Specification) as indicated in the Specification Sheet.
- IX. If SriLankan Airlines find that the delivered goods/service does not comply with the Specifications stated in this Agreement, SriLankan Airlines in its discretion has the right to either reject or request modification to the goods/service to compliance with the Specifications. Modification will not affect the Warranty/ Service Levels provided hereunder. If the goods/service is rejected SriLankan Airlines shall recover any and all money paid, and any service penalties incurred due to rejection of the system/solution.
- X. Please state whether your company has appointed a local agent for SriLankan Airlines supply & delivery of Goods and services to be procured under this bid exercise. If so, please submit a separate bidder information form including the information of local agent.
- XI. Advance payment is not acceptable. 45 days credit from the date of commissioning and acceptance by UL is required.
- XII. Liquidated Damages

The Contractor shall pay liquidated damages as follows:

Incident	Liquidated Damages
Delayed delivery	Liquidated damages shall be determined by the SriLankan Airlines and shall in any event be not less than the higher of (a) rate of one percent (01%) of the amount due for delivery per day (b) LKR 10,000 per day.
Non-compliance or Breach of Agreement	

Section VII - Draft Contract

AGREEMENT FOR PROVISION OF SERVICE/SOLUTION

The Agreement for Provision of service/solution (hereinafter referred to as "Agreement") is made and entered into on this ___ day of _____

Between;

SRILANKAN AIRLINES LIMITED a company incorporated in Sri Lanka (Company Registration PB 67) and having its registered office at "Airline Centre", Bandaranaike International Airport, Katunayake, Sri Lanka, (hereinafter called and referred to as "**SriLankan Airlines**" which term or expression shall where the context so requires or admits mean and include the said **SriLankan Airlines Limited**, its successors, assignees and representatives) of the **One Part**;

And

_____ a company incorporated in _____ (Company Registration No. _____) and having its registered office at _____ (hereinafter called and referred to as the "**Contractor**" which term or expression shall where the context so requires or admits mean and include the said _____ its successors, assignees and representatives) of the **Other Part**.

WHEREAS SriLankan Airlines is desirous of procuring _____ (hereinafter referred to as "service/ solution") as per the specifications and estimated quantities provided in Schedules attached herewith to the Agreement.

WHEREAS the Contractor is engaged in supply of _____ and desirous of supplying the Service/solution to SriLankan Airlines on a non-exclusive basis according to the specifications and estimated quantities mentioned herein and communicated by SriLankan Airlines from time to time in the future;

WHEREAS the Contractor has expressed its offer to provide SriLankan Airlines with the service/solution according to the terms and conditions provided herein and which offer has been accepted by SriLankan Airlines;

WHEREAS prior to the said offer and the execution of the Agreement, the Contractor has been apprised of the requirements and specification required by SriLankan Airlines for the supply and delivery of service/solution and to all other matters which might have influenced the Contractor in making its bids and has agreed to supply and deliver the Service/solution to SriLankan Airlines pursuant to the said requirements and specifications set forth in the Invitation for Bids document;

WHEREAS the Contractor has expressed its desire to provide SriLankan Airlines with Service/solution according to the terms and conditions provided herein.

IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

1. OBLIGATIONS OF THE CONTRACTOR:

1.1 The Contractor shall:

- 1.1.1 Deliver Service/solution as more fully described in the Schedule in quantities ordered by SriLankan Airlines within the time frame as more fully described in Schedule, to the locations more fully described in Schedule hereto according to the specifications

provided in Annex ... (such schedules and annexes to be part and parcel of this Agreement) on non-exclusive basis on the terms and conditions set out herein.

- 1.1.2 Be deemed to have appraised itself fully of the provisions of this Agreement.
- 1.1.3 Ensure that Service/solution provided under this Agreement shall:
 - a) be in accordance with the specifications set out in Annex ...;
 - b) conform with any sample provided by the Contractor during the selection process or thereafter and approved by SriLankan Airlines;
 - c) be fit for the purposes envisaged under this Agreement and suitable for Airport Ground Operations;
- 1.1.4 Ensure that it has the necessary/required licenses, approvals and authorizations to provide Service/solution to SriLankan Airlines envisaged under this Agreement.
- 1.1.5 Deliver the Service/solution on CFR-CMB basis (defined as per INCOTERMS latest version) to the locations set out in Schedule in quantities mentioned in Annex The Contractor shall be responsible for providing all transportation necessary for the safe movement of Service/solution to the locations as specified in Schedule ... of the Agreement.
- 1.1.6 At its own cost comply with all requirements of any Governmental or local Governmental regulations (particularly with those pertaining to Board of Investment of Sri Lanka, Customs in Sri Lanka or any other country, safety, health, labour, clearing and security) and shall indemnify and hold harmless SriLankan Airlines against any loss, damage or claim that may arise due to the non-compliance with any such regulations.
- 1.1.7 Invoice SriLankan Airlines for the Service/solution at the rates and in the manner specified and described herein (particularly as set out in Clause and Schedule).
- 1.1.8 Not assign, transfer or sublet its rights or obligations under this Agreement without the prior written approval of SriLankan Airlines. Provided that the Contractor shall not be relieved of responsibility under this Agreement for such portion of its obligations as are assigned, transferred or sublet.
- 1.1.9 Not at any time, during or after the term of this Agreement, divulge or allow to be divulged to any person any confidential information relating to the business and operations of SriLankan Airlines unless duly authorized in writing by SriLankan Airlines or required under any law.
- 1.1.10 Pay liquidated damages as stipulated in Schedule if the Contractor fails to deliver the Service/solution on time or SriLankan Airlines rejects the Service/solution pursuant to Clause 2.6 hereof.
- 1.1.11 Subject to the terms and conditions of this Agreement, the Service/solution shall be delivered on CFR-CMB (INCOTERMS latest version) and the rights and obligations of the Parties and the transfer of risk and title shall be governed in terms of CFR-CMB (INCOTERMS latest version).
- 1.1.12 Arrange pre delivery inspection at manufacturing plant once the Service/solution are completely manufactured for minimum 2 personnel of SriLankan Airlines at contractors' cost (except air fare of SriLankan Airlines destinations) at the manufacturing location.
- 1.1.13 Provide all required and relevant testing facilities for pre delivery inspection for SriLankan

Airlines personnel.

- 1.1.14 Make available all the required manuals specified under technical/general specifications should be available in English Language at pre delivery inspection.
- 1.2 In the event any of the Service/solution supplied or delivered pursuant to this Agreement are rejected by SriLankan Airlines, the Contractor shall take immediate steps, and not later than 15 working days from the rejected date to either replace the rejected Service/solution or make alternations necessary to meet the specifications, free of any costs to SriLankan Airlines.
- 1.3 In the event of any item of the Service/solution being damaged at any stage prior to the handing over of the Service/solution to nominated freight forwarder at the port of dispatch or if any item of the Service/solution are lost during transit from the Contractor's warehouse to the locations as set forth under Schedule or if any item of the Service/solution are wrongly supplied, the Contractor shall replace the said damaged, lost or wrongfully supplied item of Service/solution with new ones and shall ensure that supply and delivery of same is affected speedily and no later than Four (04) weeks from the date of notification by SriLankan Airlines ("Replacement") at its own cost. SriLankan Airlines shall not be liable for any damage or deterioration caused or occurring to the wrongly supplied items under Clause 1.3 while in the custody of SriLankan Airlines. In the event the Contractor fails to provide any of the item of Service/solution within a reasonable period of time, SriLankan Airlines shall be at liberty to purchase such items of Service/solution from another source and the Contractor shall reimburse SriLankan Airlines' for any cost incurred in respect of same.
- 1.4 The contractor shall arrange commissioning of the Service/solution and training for relevant SriLankan Airlines staff once the Service/solution are received to SriLankan Airlines stores through a qualified representative engineer of the manufacturing company. All applicable expenses of commissioning and training must be borne by the contractor.
- 1.5 The contractor shall provide a comprehensive unconditional warranty of years from the date mentioned in the Commissioning and Acceptance Form in Annex for manufacturing defects of the Service/solution except ware and tare.
- 1.6 The contractor shall guarantee the spare parts availability of the purchased Service/solution for minimum 10 years irrespective of the validity period of this agreement.
- 1.7 The contractor shall handover all items/Service/solution specified in Schedulewithout any cost to SriLankan Airlines.

2. RIGHTS AND OBLIGATIONS OF SRILANKAN AIRLINES:

- 2.1 SriLankan Airlines shall pay the Contractor for Service/solution provided at the rates and in the manner specified and described herein (particularly in Clause and Schedule hereto). For the avoidance of doubt, the adjustment/variation of the quantity of Service/solution provided under this Agreement shall still be provided by the Contractor in accordance to the same rates as specified under Schedule
- 2.2 SriLankan Airlines shall have the right to charge liquidated damages against the Contractor as provided in Schedule where the Contractor fails to deliver the Service/solution as required under this Agreement or any non-compliance or breach by the Contractor of any of its obligations under this Agreement.
- 2.3 Notwithstanding anything contained in this Agreement, SriLankan Airlines may at any time hire, purchase and/ or engage any other person(s)/contractor(s) to purchase Service/solution which are similar to the Service/solution contemplated in this Agreement and/or which SriLankan Airlines may deem in its opinion as specialized in nature.
- 2.4 Have the right to inspect and reject the Service/solution (or any part thereof) provided under this Agreement if in its opinion it decides that such Service/solution (or any part thereof) fail to meet the specifications required by SriLankan Airlines under this Agreement or is not of merchantable quality

and unfit for the purposes intended. SriLankan Airlines right to inspect and where necessary, reject the Service/solution (or part thereof) after the Service/solution' arrival or issuance of the Delivery Note shall in no way be limited or waived by reason of the Service/solution having previously been inspected and passed by SriLankan Airlines or its representative prior to the Service/solution delivery.

- 2.5 When the Service/solution are received to SriLankan Airlines stores, SriLankan Airlines shall conduct a quality and quantity inspection of the same and shall accept the Service/solution at the locations once commissioning and training is completed, and other required items/Service/solution specified in Schedule are handed over by the contractor. If there is a discrepancy in quantity received and quantity indicated in invoice, UL will inform same to Bidder within 5 working days of receipt of shipment to stores.
- 2.6 Upon the acceptance of the Service/solution by SriLankan Airlines, the Service/solution shall become and remain the property of SriLankan Airlines. Notwithstanding that title in whole or in part of the Service/solution may have passed to SriLankan Airlines pursuant to Clause 2.7, the Contractor shall remain and be responsible to SriLankan Airlines to make good any loss or damage to such Service/solution due to any act or negligence on the part of the Contractor or Contractor's Representatives; or arising from any incident whatsoever from the commencement of this Agreement until the Service/solution are handed over to SriLankan Airlines at the port of destination, Colombo and accepted by SriLankan Airlines.
- 2.7 Nothing in this Agreement shall prevent SriLankan Airlines from sourcing similar Service/solution or any other Service/solution or services from any third party on whatsoever basis during the period of the Agreement.
- 2.8 In the event SriLankan Airlines in its opinion decide that the Service/solution are not in accordance to the requirements and specifications set forth under this Agreement, SriLankan Airlines shall have the right to reject the Service/solution and:
- (i) refrain from making any payments pursuant to such Order made in respect of such Service/solution; and
 - (ii) either replace the rejected Service/solution with Service/solution meeting the specifications required under this Agreement free of any costs to SriLankan Airlines; or
 - (iii) obtain substitute Service/solution for the rejected Service/solution and the Contractor shall reimburse to SriLankan Airlines all costs incurred by SriLankan Airlines in respect of same.

3. INVOICING & PAYMENT:

- 3.1 The Contractor shall provide the Service/solution at the rates assigned to each category as described in Schedule ... hereto.
- 3.2 The Contractor shall not increase the rates, charges or any other prices set out in this Agreement during the period of this Agreement.
- 3.3 Subject to Clause 3.5, SriLankan Airlines will settle the invoices submitted by the Contractor for Service/solution under this Agreement within days from the date of Commissioning and Acceptance in Annex The invoice will be raised at the time of departure of the Service/solution from the warehouse of the Contractor. A copy of invoice will be emailed to SriLankan Airlines at the time, the invoice is raised.
- 3.4 SriLankan Airlines shall inform any dispute on any invoice within 5 working days of receipt of the invoice from the Contractor and proceed to settle the undisputed amount within the payment period referred to in Clause 3.3 hereof. The Parties shall endeavor to resolve the dispute on the invoice

amicably within 30 days of notification or any other period mutually agreed and where the Parties fail to resolve the dispute amicably, Parties shall resort to the dispute resolution mechanism provided in this Agreement as a mean to resolve the dispute. If the dispute is resolved in the Contractor's favor, the amount payable to the Contractor shall be payable within fourteen (14) days of the resolution of the dispute.

3.5 SriLankan Airlines shall be entitled to withhold any payments due to the Contractor under this Agreement and any sums of money required to be withheld by SriLankan Airlines under any law or regulation for the time being in force and/or pursuant to this Agreement.

3.6 Payment shall be made in according to the payment details provided in Schedule

3.7 Invoices to be addressed to: Manager Financial Services, SriLankan Airlines Ltd, Airlines Centre, BIA, Katunayake, Sri Lanka and/or email to: zaroosha.farook@srilankan.com

4. LIABILITY & INDEMNITY:

4.1 The Contractor shall indemnify and hold harmless SriLankan Airlines free and clear from and against any and all losses, costs, expenses, claims, damages and liabilities, to SriLankan Airlines, its officers, agents, employees, representatives or any third parties and/or any property, that may arise pursuant to this Agreement, in particular pursuant to (but not limited to) any:

- a) claim in respect of any workers of the Contractor under the Workman's Compensation laws or any other law;
- b) accident, injury or death caused to any person by negligence or willful misconduct of the Contractor, its servants, agents, employees or representatives;
- c) acts of theft, pilferage, damage of property caused by the Contractor or its servants, agents, employees or representatives;
- d) any losses, damages, injuries, illness or death incurred due to manufacturing defects, nonperformance and or malfunction of the Service/solution procured under this agreement by SriLankan Airlines;
- d) if the Service/solution provided to SriLankan Airlines are not suitable for the use intended and/or does not meet the specifications set out in this Agreement including alleged illness, injury, death or damage as a result of the use of any the Service/solution produced, packaged, stored or shipped by Contractor;
- d) violation of any laws, regulations or intellectual property rights of any party;
- e) breach of any obligations, representations, warranties or covenants in the Agreement by the Contractor;

4.2 SriLankan Airlines shall indemnify and hold harmless the Contractor free and clear from and against any and all losses, costs, expenses, claims, damages and liabilities that may arise pursuant to the death or injury of a worker of the Contractor or damage to the Contractor's (or its workers) property caused by SriLankan Airlines' negligence or willful misconduct.

5. INSURANCE:

5.1 The Contractor shall, without prejudice to its obligations under Clause 5.1 and as a condition precedent to this Agreement, at its own cost secure policies of insurance as described below, acceptable to

SriLankan Airlines which shall be kept current throughout the term of this Agreement. These insurances will include but not limited to;

- a) Workmen's Compensation Insurance or employer's liability insurance for all employees of the contractor or their representatives involved with performance of this contract. The policy shall include extensions for riot and terrorism.

5.2 Such insurances as aforementioned incorporate the following provisions in respect of liability assumed by the Contractor under this Agreement (unless otherwise specified by SriLankan Airlines):

- a) Name SriLankan Airlines, its successors and assigns, directors, officers, servants, employees, agents and contractors as additional assureds.
- b) A severability of interest clause, where the insurances (except with regard to the limits of liability) will operate in all respects as if there were a separate policy covering each assured.
- c) Confirm that such insurances shall be primary without right of contribution from any other insurance carried by SriLankan Airlines.
- d) Provide that the cover afforded to SriLankan Airlines shall not be invalidated by act or omission by the Contractor or by any other person and shall remain valid regardless of any breach or violation by the Contractor or any other person of any warranty, declaration or condition contained in such insurances.
- e) The Insurer (of the insurances) will provide 15 days prior written notice to SriLankan Airlines of any material change of the insurances affected pursuant to this Clause.

5.3 The Contractor shall also within 15 days of the execution of this Agreement and at each consequent renewal (or renewal of insurances whichever shall occur first) produce an Insurance Policy/Certificate/Endorsement evidencing coverage as per the requirements of Clause 5.1.

5.4 In the event the Contractor defaults and/or fails to comply with any of its obligations under this Clause, SriLankan Airlines may (without prejudice to any other remedy available under this Agreement) pay any premiums that may remain due and unpaid provided that SriLankan Airlines shall be entitled to deduct or charge the Contractor any such amounts expended by it to pay such aforementioned unpaid premiums.

5.5 The insurance coverage required by Clause 5.1 and 5.2 shall at all times be valid and adequate to meet all the obligations set out above and any other obligations required by law. Failure to maintain insurance coverage to the required level will be considered by SriLankan Airlines as a fundamental breach of this Agreement.

6. NON-COMPLIANCE:

6.1 In the event of the non-compliance or breach by the Contractor of any of its obligations contained in this Agreement, SriLankan Airlines may at its discretion, without prejudice to any of its rights under this Agreement:

- a) Terminate this Agreement as per Clause 7 below:

- b) Charge the Contractor liquidated damages at the rate specified in Schedule of the estimated amount of the monies payable for the relevant Service/solution for the relevant period of non-compliance or breach; and/or
- c) Obtain the Service/solution from another contractor provided however, that in the event any money is expended by SriLankan Airlines on account of the Contractor's non-compliance or breach of its duties, such said expenditure shall be re-charged to the Contractor.

The Contractor shall in the aforementioned instances make good the irregularity, breach and/or lapse as soon as possible to the satisfaction of SriLankan Airlines and shall reimburse SriLankan Airlines any expenses incurred by it in such said instances.

7. TERM & TERMINATION:

- 7.1 This Agreement shall be valid for a period of ___ years commencing from _____ until _____ unless terminated earlier and shall automatically stand terminated upon the expiry of the Agreement. Notwithstanding the above, the Parties may extend the Term of this Agreement upon the expiry of the Term for a further period of 1 year by written mutual agreement on the same terms and conditions of this Agreement; provided however that such extension shall be subject to the Contractor's satisfactory performance of the Agreement decided at the sole discretion of SriLankan Airlines.
- 7.2 Notwithstanding Clause 7.1, SriLankan Airlines may terminate this Agreement at any time, without assigning any reasons whatsoever, by giving the Contractor 90 days' written notice of termination without any liability to pay compensation and such termination shall take effect on the expiry of the said 90 days' notice period.
- 7.3 SriLankan Airlines may terminate this Agreement forthwith in writing in the event the Contractor does not:
 - a) provide the Service/solution at the time, manner and/or to the specifications/ quality required by SriLankan Airlines pursuant to this Agreement;
 - b) comply with the requirements and/or notices of SriLankan Airlines; and/or
 - c) perform, fails or is failing in the performance of any of its obligations under this Agreement.
- 7.4 Subject to Clause 7.3 hereof, either party shall have the right to terminate this Agreement forthwith at any time by giving written notice to the other upon the happening of any of the following events:
 - a) if the other party is in breach of any of the terms or conditions of this Agreement and fails to rectify same within 30 days of the written notice of the breach to the defaulting party or immediately if the breach is incapable of remedy;
 - b) if the other party enters into liquidation whether compulsory or voluntary (otherwise than for the purpose of amalgamation or reconstruction) or compounds with or enters into a scheme of arrangement for the benefit of its creditors or has a receiver appointed of all or any part of its assets or takes or suffers any similar action in consequence of debt; and/or
 - d) if the other party shall cease substantially to carry on trade or shall threaten to cease substantially to carry on trade.

- e) disruption to the performance of the Agreement for a period of more than 60 days due to force majeure event.
- 7.5 Expiration or termination of this Agreement pursuant to the provisions of this Clause shall be without prejudice to the accrued rights and liabilities of either party.
- 7.6 On termination of this Agreement the Contractor shall only be entitled to receive the payment of monies (less any monies as SriLankan Airlines is entitled to deduct/set-off under this Agreement) for Service/solution duly provided in accordance with the terms of this Agreement. The Contractor shall not be entitled to any further costs, remuneration consequential or special damages, loss of profits or revenue claimed to have been suffered by the Contractor (including its agents, employees and representatives) as a result of this Agreement.
- 7.7 In the event SriLankan Airlines terminates this Agreement in whole or in part, pursuant to 7.3 a), b) or c) of the Agreement, SriLankan Airlines may procure upon such terms and in such manner as it deems appropriate, Service/solution , as the case may be, similar to those undelivered under the Agreement, and the Contractor shall be liable to SriLankan Airlines for any excess costs for such similar Service/solution procured by SriLankan Airlines. However, the Contractor shall continue performance of the Agreement to the extent not terminated herein.

8. BANK GUARANTEE:

- 8.1 Upon the execution of this Agreement, the Contractor shall furnish SriLankan Airlines a bank guarantee for the sum as set forth under Clause 2.1 of Schedule as an irrevocable and unconditional bank guarantee drawable on demand in Sri Lanka from a bank acceptable to SriLankan Airlines, in a form and substance satisfactory to SriLankan Airlines as security for the due and proper performance by the Contractor of its obligations under this Agreement. All applicable bank charges (including any charges at the time of encashment) on such bank guarantee shall be borne by the Contractor). The said bank guarantee shall remain in force for the duration of this Agreement and 90 days thereafter.
- 8.2 The proceeds of the Bank Guarantee shall be payable to SriLankan Airlines as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Agreement.
- 8.3 The Bank Guarantee will be discharged by SriLankan Airlines and returned to the Contractor within 90 days of the expiry of this Agreement or within 90 days following the date of completion of Contractor's obligations under the Agreement, whichever is later, less monies due to SriLankan Airlines and/or as SriLankan Airlines is entitled to deduct/set-off under this Agreement.
- 8.4 In the event, that the Contractor fails to pay any monies due to SriLankan Airlines (or any part thereof) as and when the same become payable under this Agreement, SriLankan Airlines shall be entitled to adjust or deduct any monies due to SriLankan Airlines from the Bank Guarantee accordingly. In the event of an adjustment or deduction of the Bank Guarantee by SriLankan Airlines against any sums due from the Contractor, the Contractor shall immediately submit to SriLankan Airlines the amount adjusted or deducted by SriLankan Airlines and restore the Bank Guarantee to its original amount.
- 8.5 SriLankan Airlines shall not make any payments under this Agreement to the Contractor until SriLankan Airlines has received the Bank Guarantee as stipulated under Clause 8 hereof.
- 8.6 SriLankan Airlines' rights with respect to the Bank Guarantee shall be in addition to any other rights or remedies available to SriLankan Airlines.

9. GOVERNING LAW:

9.1 This Agreement shall be governed by the laws of Sri Lanka and subject to the jurisdiction of the courts in Sri Lanka.

10. FORCE MAJEURE:

10.1 In the event that either party shall be wholly or partly unable to carry out its obligations under this Agreement by reasons or causes beyond its control, including by way of illustration Acts of God or the public enemy, fire, floods, explosions, epidemics, insurrection, riots or other civil commotion, war, Government order or by any other cause (excluding, however, strikes, lockouts or other labour troubles), which it could not be reasonably be expected to foresee or avoid, then the performance of its obligations in so far as they are affected by such cause shall be excused during the continuance of any inability so caused. Such cause(s) shall however as far as possible be remedied by the affected party with all reasonable dispatch.

10.2 Notwithstanding the above each party shall give the other as soon as possible notice of the occurrence or imminent occurrence of an event as indicated above and where such notice is given verbally it shall be followed immediately in writing.

10.3 In the event the force majeure event relates to delivery of Service/solution by the Contractor, unless otherwise directed by SriLankan Airlines in writing, the Contractor shall continue to perform its obligations under the Agreement as far as is reasonable and practical. And shall seek all reasonable alternative means for performance not prevented by the force majeure event. In case of delays in the completion of delivery in accordance to the time schedule as specified in the respective Purchase Order(s) due to any of the force majeure event mentioned above, the time schedule for the delivery of Service/solution shall be extended accordingly.

11. GENERAL:

11.1 This Agreement shall constitute the entire agreement and understanding of the parties and shall supersede all prior agreements, whether written or oral between the parties hereto concerning the subject matter hereof.

11.2 In the event of a conflict between this Agreement and its Schedules, the Schedules shall take precedence over this Agreement in respect of the subject matter thereof. In the event of a discrepancy between Purchase Order and the Agreement, the Purchase Order will take precedence over this Agreement in respect of the subject matter thereof.

11.3 In the event that either party shall be rendered wholly or partly unable to carry out its obligations under this Agreement as a result of strikes, lockouts and labour troubles, then such party so incapacitated shall compensate such other for damage and/or loss suffered by such other as a result of such strike, lockout or labour trouble.

11.4 At all times the Contractor (together with its workers) will be deemed to be an independent contractor and shall not under any circumstances be considered an employee, representative or agent of SriLankan Airlines.

11.5 The right and remedies of SriLankan Airlines against the Contractor for the breach of any condition and for obligations undertaken by the Contractor under this Agreement shall not be prejudiced or deemed to be waived by reason of any indulgence or forbearance of SriLankan Airlines.

- 11.6 Nothing in this Agreement shall prevent SriLankan Airlines from availing itself of any remedies provided under the general law in addition to the remedies stipulated in this Agreement.
- 11.7 Except to the extent as amended under the Purchase Order(s), this Agreement shall not be varied or modified otherwise than by an instrument in writing of even date herewith or subsequent hereto executed by or on behalf of SriLankan Airlines and the Contractor by its duly authorized representatives.
- 11.8 If any provision of this Agreement should become or be adjudged invalid or unenforceable for any reason whatsoever, such invalidity or unenforceability shall not affect any other part of this Agreement and all other provisions shall remain valid and in full force and effect.
- 11.9 The titles to the clauses in the Agreement are for convenience of reference only and do not form part of this Agreement and shall not in any way affect the interpretation thereof.
- 11.10 SriLankan Airlines does not grant the Contractor any right, title or interest in any of its designs, labels, know-how, trade names, trademarks, service marks, logos and other distinctive brand features or business identifiers, logo, copyright or any other intellectual property rights of SriLankan Airlines ("Intellectual Property Rights") except as expressly authorized in writing by SriLankan Airlines and the Contractor shall not have any right, title or interest in the said Intellectual Property Rights of SriLankan Airlines other than the right to use it for purposes of this Agreement for the Term hereof only with the express written consent of the SriLankan Airlines.
- 11.11 The Contractor shall not issue any press release or other public announcement related to this Agreement, written or oral, without the prior written consent of SriLankan Airlines, except as required by law or a court order. For avoidance of any doubt, the Contractor shall not make, give or issue any press release or other press activity involving or referring to SriLankan Airlines or any of its affiliates or their services or operations, without SriLankan Airlines prior written approval.
- 11.12 The Contractor expressly assures and warrants that it has all the necessary approvals, authorizations and licenses to enter into this Agreement and to provide the Service/solution envisaged under this Agreement.
- 11.13 Any notice or other communication required or authorized by this Agreement to be served or given by either party to the other shall be deemed to have been duly served or given if in writing and
- (a) left at or sent by prepaid registered post to the last known place of business of that; or
 - (b) sent by fax or e-mail to such place of business and confirmed by prepaid registered post, similarly addressed, within 24 hours of the dispatch of such fax or e-mail.

In the case of SriLankan Airlines to –
SriLankan Airlines Limited
Commercial Procurement,
Bandaranaike International Airport,
Katunayake
Sri Lanka
Fax :
E-mail:
Attention:

In the case of the Contractor to -

IN WITNESS WHEREOF the parties hereto have caused their authorized signatories to place their hands hereunto and to one other of the same tenor on the date first referred to above in:

For and on behalf of
SRILANKAN AIRLINES LIMITED

For and on behalf of

Name:
Designation:

Name:
Designation:

Witness:

Name:
Designation:

Witness:

Name:
Designation:

Section VII - Annex S: Performance Security

[The issuing agency, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

-----[Issuing Agency's Name, and Address of Issuing Branch or Office]-----

Beneficiary: SriLankan Airlines Limited, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka

Date: -----

PERFORMANCE GUARANTEE No: -----

We have been informed that -----[name of Bidder](hereinafter called "the Bidder") has entered into Contract No. -----[reference number of the contract] dated ----- with you, for the -----Supply of -----[name of contract and brief description] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Bidder, we -----[name of Agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of -----[amount in figures](----- ---) [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the --- day of ----,20..[insert date,28 days beyond the scheduled completion date including the warranty period] and any demand for payment under it must be received by us at this office on or before that date.

[signature(s)]