



**MINISTRY OF PUBLIC ADMINISTRATION**

National Library Building

Level 5-7, Corner Hart & Abercromby Streets, Port of Spain, Trinidad, W.I.

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# **REQUEST FOR PROPOSAL**

**Engagement of a Qualified Vendor to Supply, Install, Configure, and  
Provide Warranty Support for a Hyper Converged Infrastructure Solution**

**May 2019**

## Table of Contents

Glossary.....	5
SECTION 1.0 INSTRUCTIONS TO BIDDERS .....	7
1.0 Introduction .....	7
2.0 Conflict of Interest.....	7
3.0 Proposal Documents.....	8
3.1. <i>Set of Proposal Documents</i> .....	8
3.2 <i>Language of the Proposal</i> .....	8
3.3 <i>Communications Regarding the RFP</i> .....	8
4.0 Preparation Of Proposals .....	9
6.0 Costing Of Proposals.....	11
7.0 Amendment Of Proposal Package.....	11
8.0 Submission Of Proposals.....	12
8.3 <i>Technical Proposal</i> .....	12
8.4 <i>Financial Proposal</i> .....	12
8.5 <i>Envelope Preparation</i> .....	13
9.0 Evaluation Of The Technical Proposal.....	14
9.5 <i>Evaluation Criteria</i> .....	15
10.0 Contract Negotiation.....	15
11.0 Changes To The Bidder Affecting Performance .....	16
12.0 Commencement Of Contract .....	16
13.0 Terms Of Payment.....	16
14.0 Right To Accept Or Reject Any Or All Proposal(s) .....	16
15.0 Cancellation Of Proposals .....	17
16.0 Disclaimers .....	17

SECTION 2.0 TERMS OF REFERENCE .....	18
Current Server Technology Environment .....	19
1. Overview .....	19
2. Service/ Application Ecosystem .....	20
2.1. Server and Network Infrastructure .....	21
3. Future Changes and Growth Projections.....	23
4. Challenges with the Current Environment .....	23
5. REQUIRED SOLUTION .....	25
5.1. Overview.....	25
5.2. Solution Life Expectancy.....	26
6. Functional Requirements.....	26
6.1. High Availability .....	26
6.2. Centralized Remote Configuration, Management, Monitoring and Reporting .....	26
6.3. Backup, Restore and Disaster Recovery .....	27
6.4. Technical Baseline .....	27
6.5. Processing Power.....	27
6.6. Disk Capacity and Storage Management.....	27
6.7. Memory .....	28
6.8. Interfaces.....	28
6.9. Power Redundancy.....	28
7. Deliverables .....	29
7.1. In-Scope .....	29
7.2. Out of Scope .....	29
8. Additional Requirements .....	29
8.1. Overview.....	29

8.2.	Operational Environmental Conditions.....	30
8.3.	Power Management Solution.....	30
9.	Project Requirements .....	31
9.1.	Performance Management .....	31
9.2.	Competencies Required .....	31
10.	Government Inputs.....	32
SECTION 3.0 TECHNICAL PROPOSAL FORMS .....		33
<i>FORM TP-1 Cover Letter .....</i>		<i>34</i>
<i>FORM TP-2 Hyper Converged Infrastructure Solution Proposal .....</i>		<i>35</i>
<i>FORM TP-3 HyperConverged Solution Characteristics.....</i>		<i>36</i>
<i>FORM TP-4 Bidder’s Organization and Experience .....</i>		<i>44</i>
<i>FORM TP-5 Comments and Suggestions on the Terms of Reference .....</i>		<i>46</i>
SECTION 4.0 FINANCIAL PROPOSAL FORMS .....		48
<i>FORM FP-1 Financial Proposal Form .....</i>		<i>49</i>
<i>FORM FP-2 Summary of Costs.....</i>		<i>50</i>
SECTION 5.0 .....		51
<i>Bid Conformance Sheet .....</i>		<i>52</i>
<i>Sample - Standard Terms And Conditions Of Contract .....</i>		<i>53</i>

## *Glossary*

<b>No.</b>	<b>Acronym</b>	<b>Description</b>
1.	AD	Active Directory
2.	AVR	Automatic Voltage Regulation
3.	DHCP	Dynamic Host Configuration Protocol
4.	DNS	Domain Name System
5.	KVM	Kernel-based Virtual Machine
6.	HCI	Hyper Converged Infrastructure
7.	iSCSI	Internet Small Computer System Interface
8.	RAID	Redundant Array of Independent Disks
9.	NFS	Network File System
10.	NIC	Network Interface Card
11.	NVMe	Non Volatile Memory Express
12.	RTO	Recovery Time Objective
13.	RPO	Recovery Point Objective
14.	SAS	Serial Attached SCSI
15.	SATA	Serial Advanced Technology Attachment
16.	SMB	Server Message Block
17.	SSD	Solid State Drive
18.	UPS	Uninterruptable Power Supply
19.	US DISA STIG	United States Defence Information Systems Agency, Security Technical Implementation Guides

<b>No.</b>	<b>Acronym</b>	<b>Description</b>
20.	VPN	Virtual Private Network

## SECTION 1.0 INSTRUCTIONS TO BIDDERS

### 1.0 Introduction

- 1.1 Bidders are invited to submit a Technical Proposal and a Financial Proposal, for the **Supply, Installation and Configuration and warranty service for a Hyper Converged Infrastructure Solution for MPA**. The Proposal will be the basis for contract negotiations and ultimately for a signed contract between the Ministry of Public Administration and the selected Bidder
- 1.2 The Client (Ministry of Public Administration (MPA)) will select a qualified firm/organization (the Vendor) from those whose proposals are deemed eligible and which satisfy the evaluation criteria indicated in Section 9.5
- 1.3 Bidders shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to contract award, without thereby incurring any liability to the Bidders.
- 1.4 By submitting a Proposal, the Bidder represents and warrants that it has studied and is thoroughly familiar with the requirements and specifications of the Services. This includes familiarity with the **Standard Terms and Conditions of Contract** attached to this RFP, with all current labour and market conditions, and with applicable laws, such that the Bidder accepts responsibility for and is prepared to execute and shall completely fulfil all obligations under the proposed Contract. Likewise, the Bidders shall warrant the accuracy and reliability of all information they submit in this process.

### 2.0 Conflict of Interest

- 2.1 The Client requires that Bidders at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work.
- 2.2 Bidders have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of the Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Bidder or the termination of its Contract.

### **3.0 Proposal Documents**

#### **3.1. *Set of Proposal Documents***

3.1.1 This Request for Proposal document issued for the purpose of inviting proposals includes:

- Instructions to Bidders
- Terms of Reference
- Evaluation Criteria
- Technical Proposal Forms
- Financial Proposal Forms
- Bid Conformance Sheet
- Standard Terms and Conditions of Contract

3.1.2 The Bidder is expected to examine carefully all instructions, conditions, forms and terms. Failure to comply with the requirements of the tendering procedures will be at the Bidder's own risk.

3.1.3 All proposals would be considered the property of the Bidder, unless the proposal has been selected.

#### **3.2 *Language of the Proposal***

3.2.1 All documents, correspondence, and any other formatted communications shall be written in the English Language.

#### **3.3 *Communications Regarding the RFP***

3.3.1. Upon release of this Request for Proposal (RFP), a mandatory pre-bid conference will be held on Thursday 23<sup>rd</sup> May 2019 at 10:00 AM. Interested bidders are required to assemble at the Old Fire Station Building, Cor. Hart and Abercromby Streets, Port of Spain. Bidders should contact The Procurement Unit to register for the pre-bid conference:

Procurement Unit  
Ministry of Public Administration  
Level 5, National Library Building  
Cor. Hart and Abercromby Streets  
Port of Spain  
Office: 1.868.623.4724 ext. 31900/31903  
Email address: [ProcurementUnit@mpa.gov.tt](mailto:ProcurementUnit@mpa.gov.tt)



- 3.3.2. All questions arising out of the RFP document must be submitted in writing via email to the address listed above on or before 4:00 PM Wednesday 29<sup>th</sup> May 2019.
- 3.3.3. Answers to all questions and queries will be forwarded to all bidders who register for this solicitation no later than Tuesday June 4<sup>th</sup> 2019.
- 3.3.4 All communications by bidders should be submitted via email as identified in 3.3.1 above. Any oral communications shall be considered unofficial and non-binding. These questions must be submitted on or before the defined date for query submission.
- 3.3.5 All responses shall be made in writing via email or may constitute an amendment to the RFP. Only written responses to written communications shall be considered official and binding upon, the Government of the Republic of Trinidad and Tobago. The Ministry of Public Administration reserves the right, at its sole discretion, to determine appropriate and adequate responses to written comments, questions, and requests for clarification.
- 3.3.6 Written copies of the responses will be sent to all prospective Bidders that attends the pre-bid conference as their name and particulars appear on the register.

## **4.0 Preparation Of Proposals**

- 4.1 The Bidder is expected to examine all terms and instructions included in the proposal documents. All information requested must be provided.
- 4.2 Bidders must provide the following in their Proposal:
- (i) The full name, signature, office and business address of the Bidder
  - (ii) The signature of the person making the offer, or in the case of a company, partnership or business firm, by a duly authorised officer or employee of such company, partnership or business firm.
- 4.3 The Bidder must supply six copies of all submissions with one being designated as the Original and the others being exact copies. The original should be designated "ORIGINAL" and the others as "COPY".

- 4.4 In the case of any discrepancy between the copies of the proposals, the original will govern. The original and each copy of the proposal must be prepared in indelible ink and must be signed by the authorised representative of the Bidder.
- 4.5 The initials of the person making the offer must be inserted next to any alterations or erasures made in the case of a company, partnership or business firm, the initial of a duly authorised officer or employee of such company, partnership or business firm.
- 4.6 The Ministry of Public Administration reserves the right to reject any offers which are not signed, or are in unsealed envelopes, or contain alterations or erasures which are not initialed by the tenderer, without incurring any liability whatsoever.

## **5.0 *Mandatory Submissions***

- 5.1 Failure to submit the following will result in the proposal being disqualified:

- I. A Technical Proposal as outlined in 8.3 utilising the Technical Proposal Form (Form TP-3)
- II. A Financial Proposal as outlined in 8.4
- III. Valid Income Tax Clearance Certificate;
- IV. Valid Value Added Tax (VAT) Clearance Certificate;
- V. Valid National Insurance (NIS) Clearance Certificate; and
- VI. 120 day bid validity period with option for an extension;
- VII. A brief description of the Bidder's Organization including :
  - A copy of the Bidder's bylaws
  - A copy of the Bidder's Articles of Incorporation
  - A list of the directors of the Company
  - A disclosure statement of conflict of interest, where applicable
  - Certificate of Insurance Coverage.
- VIII. Information on financial capacity of the Bidder:
  - I. Copies of Auditor's report together with audited statements made in accordance with approved standards for the last three (3) years, (if not required by law to have audited financials, please submit unaudited statements and legal proof that audited financials are not required;
  - II. Provide a Letter of Comfort i.e. a letter from your Bank certifying you are in good financial standing; and
- IX. Statement Re: legal claims (previous and pending)
- X. Acknowledgement of any Addenda issued by the Ministry of Public Administration, in response to any queries received by Bidders or for any other reason.

**Bidders must provide valid exemption certificates if not qualified for any of the above.**

## **6.0 Costing Of Proposals**

- 6.1 The Bidder shall bear all costs associated with the preparation and submission of the proposals. The Ministry of Public Administration shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the tendering process.
- 6.2 By submitting a Proposal, the Bidder accepts that it shall bear any and all costs due to the Bidder's misinterpretation or misunderstanding of the Contract requirements, or because of any information which is known or should have been known to the Bidder, such as the Bidder's labour costs.

## **7.0 Amendment Of Proposal Package**

- 7.1 If it becomes necessary to revise or amend any part of the proposal package prior to the submission deadline, addenda will be provided to the Bidder.
- 7.2 No oral statement of any individual will in any manner modify or affect the terms and conditions of the bid package or any amendment hereto.
- 7.3 Any amendment to this package will be forwarded to you prior to the hour and date specified for receipt of the proposal.
- 7.4 Any Addendum will be sent in writing by letter, facsimile or email to Bidders and will be binding upon the Bidder. Receipt of any Addendum must be promptly acknowledged, by letter, email or facsimile to the Ministry of Public Administration via the following:

Procurement Unit  
Ministry of Public Administration  
Level 5, National Library Building  
Cor. Hart and Abercromby Streets  
Port of Spain  
Office: 1.868.623.4724 ext. 31900/31903  
Email address: [ProcurementUnit@mpa.gov.tt](mailto:ProcurementUnit@mpa.gov.tt)

## **8.0 Submission Of Proposals**

- 8.1 Bidders may only submit one proposal. If a Bidder submits or participates in more than one proposal all such proposals shall be disqualified.
- 8.2 The system to be utilised for submitting the proposals is that of the two sealed envelope system consisting of the Technical Proposal and the Financial Proposal

## **8.3 *Technical Proposal***

- 8.3.1 Bidders are required to utilize the forms outlined in **Section 3.0 Technical Proposal Form** as part of their technical proposal which must include the following:

1. Comments on the Terms of Reference (TOR).
2. The Bidder's understanding of the services required.
3. The Bidder's professional/technical approach to the initiative relative to the development and implementation websites.
4. A detailed Project Plan of the activities, human resource and other needs, and timelines that are proposed to meet the deliverables and objectives as outlined in the TOR. There should be a clear indication of the duration and milestones.
5. Work of recent experience of a similar nature in the subject area of the initiative. The information to be provided on each assignment should indicate, inter alia, the nature of the contract. Further, at least three (3) client organisations for which similar services have been performed within the last eight (8) years should be included and an official of each organisation to whom inquiries may be addressed.

## **8.4 *Financial Proposal***

- 8.4.1 Bidders Financial Proposal must include the following:
- i. A general Price Summary, preferably based on the completion of deliverables as outlined in the Terms of Reference.
  - ii. All hardware and software components should be itemised.
  - iii. All fees and service cost should be clearly stated.
  - iv. All activities should be costed out separately, and in the case of those for which no costing information is provided, it will be assumed that they are included in the overall amount cited in the Financial Proposal.
  - v. The Financial Proposal must take into account all tax liability.

8.4.2 All quoted prices are to be expressed in Trinidad and Tobago Dollars (TTD)

## **8.5 *Envelope Preparation***

8.5.1 Bidders are to submit one (1) original and five (5) copies each of the Technical and Financial Proposals, and mark “ORIGINAL” or “COPY” as appropriate.

8.5.2 The original and all copies of the Technical Proposals should be placed in a sealed envelope clearly marked:-

### **a. Envelope A – Technical Proposal**

**“Engagement of a Qualified Vendor to Supply, Install, Configure, and Provide Warranty Support for a Hyper Converged Infrastructure Solution”**

The original and all copies of the Financial Proposals should be placed in a sealed envelope that is clearly marked:-

### **b. Envelope B – Financial Proposal**

**“Engagement of a Qualified Vendor to Supply, Install, Configure, and Provide Warranty Support for a Hyper Converged Infrastructure Solution”**

**The Bidder’s name and address must be included on each envelope.**

8.5.3 The envelopes containing the Technical Proposals and the Financial Proposals should be placed in sealed envelopes. These envelopes are to bear the tender number MPASSDIT1819005, the title and address of the location where the proposals are to be submitted as follows:

**“Engagement of a Qualified Vendor to Supply, Install, Configure, and provide warranty support for a Hyper Converged Infrastructure Solution”**

**Permanent Secretary,  
Ministry of Public Administration  
Level 5, NALIS Building,  
Corner Hart and Abercromby Streets,  
Republic of Trinidad and Tobago  
West Indies”**

- 8.5.4 The proposals must be deposited in the wooden Tender Box located on Level 5 of the Ministry of Public Administration, National Library Building, Port of Spain no later than the time and date indicated in the Proposal Notice. Please note that:
- a) The Tender Box's slot has the dimensions of 37.5 cm (length) x 9 cm (width). Proposals should be packaged to fit into this slot.
  - b) Late submissions will not be accepted.
  - c) Faxed / emailed proposals will not be considered.
  - d) All proposals will be publicly opened. The Bidder or his authorised representatives may be present at the opening.
  - e) Only technical proposals will be opened after the closing date for submissions on **Friday 28th June, 2019 at 10:00 AM.**
- 8.5.5 **Deadline date for submission is Thursday 27th June, 2019 at 3:00 pm**

## **9.0 Evaluation Of The Technical Proposal**

- 9.1 An Evaluation Committee will review the proposal for responsiveness to the Ministry of Public Administration requirements. Proposal evaluation will be based on a set of evaluation criteria that reflect the relative importance of the various aspects of the proposal and the bidder's submission in relation to the Ministry of Public Administration requirements.
- 9.2 The technical evaluation of the proposals shall be undertaken using the criteria indicated in 9.5 below.
- 9.3 The Evaluation Committee reserves the right to check references submitted by any bidder. If applicable, a site visit may be undertaken to a location where a previous project of a similar nature was completed by the bidder. The purpose of this visit is to determine aspects of the previous project that might factor into the bidder's evaluation scoring. Additional information may also be requested from a bidder about a previous project in order to prepare for the site visit. The Committee also reserves the right to require responses to questions generated by observations at the site visit.

9.4 Bidders must attain a minimum of 70 points in the Technical Evaluation in order to qualify for the Financial evaluation, with the minimum points for each criterion indicated in the table at 9.5, before negotiations on the financial aspect of the proposal could be addressed.

### 9.5 *Evaluation Criteria*

#	Criteria	Maximum Points
1	Technical Proposal and Specifications  Product Requirements: <ul style="list-style-type: none"><li>• Software Capabilities - 35</li><li>• Hardware Configuration – 20</li></ul> *Minimum score required: 45 points	55
2	Software Warranty Hardware Warranty (3 year minimum) *Minimum score required: 10 points	15
3	Performance and Benchmarks *Minimum score required: 5 points	10
4	Background and Experience <ul style="list-style-type: none"><li>a) Experience in Hyper convergence Solutions</li><li>b) Feedback from three (3) client references</li></ul> *Minimum score required: 5 points	10
5	Financial Capacity  *Minimum score required: 5 points	10
	<b>TOTAL</b>	<b>100</b>

## 10.0 **Contract Negotiation**

10.1 Firms are required to submit technical and financial proposals in two separate envelopes. The technical proposal is evaluated first and ranked according to pre-established evaluation criteria,

and only the financial proposals of those firms that achieved the minimum qualifying mark (score), indicated in the RFP, are opened and evaluated to discern the best candidate.

10.2 The selected Bidder will then be invited to enter into contract negotiations with the negotiating team. If an agreement on the terms of the contract is not reached with the first Bidder, negotiations will be initiated with the second Bidder, and so on until a satisfactory agreement is reached.

10.3 The inability to agree on detailed costs or compensation for services, or a judgment on the part of the negotiating team that such costs or compensation are inappropriate or excessive, shall be sufficient cause for notifying the Bidder of the rejection of its proposal and for initiating negotiations with the Bidder which follows in order of merit. Once a Bidder has been rejected, it will not be recalled for further negotiations on the contract.

## **11.0 Changes To The Bidder Affecting Performance**

11.1 Any changes in the financial or legal aspects of the Bidder or its partnership which may affect the execution of the project and which occurred from date of proposal to the award date must be reported to the Ministry of Public Administration. Failure to provide such data could result in the refusal of the Bidder's proposal.

## **12.0 Commencement Of Contract**

12.1 The commencement of work or service shall be by agreement of the Permanent Secretary, Ministry of Public Administration and the successful Bidder in accordance with the terms of the contract.

## **13.0 Terms Of Payment**

13.1 The Bidder must provide in its financial proposal any Terms relating to payment schedule. These terms are subject to negotiations with the Ministry of Public Administration.

Payment will only be made if the deliverables have been completed to the full satisfaction and acceptance of the Government of the Republic of Trinidad and Tobago.

## **14.0 Right To Accept Or Reject Any Or All Proposal(s)**

14.1 The Ministry of Public Administration is not bound to accept any proposal.



## 15.0 Cancellation Of Proposals

- 15.1 The Ministry of Public Administration reserves the right to cancel the proposal process in its entirety or even partially without defraying any costs incurred by any Bidder.

## 16.0 Disclaimers

- 16.1 **Confidential Information:** Any proposal information that the Bidder considers confidential, proprietary, or a trade secret must be clearly identified as such in the proposal. Proposals will be kept confidential during the review process. However, once an award has been made, the Ministry may be required by law to disclose the proposals or parts that have been requested under relevant legislation.
- 16.2 **Intellectual Property Rights:** The RFP and its contents remain the property of the Ministry and all documents forming the bidder's proposal shall, once submitted, become the property of the Ministry.
- 16.3 **Bid-rigging and Anti-collusion:** Bidders will be disqualified from participating further in the procurement process if they:
- i. Engage in collusive, deceptive or improper conduct in the preparation and submission of their proposals;
  - ii. Engage in collusive, deceptive or improper conduct in discussions with the Ministry or while negotiating with the Ministry.

In submitting a proposal, a bidder warrants that its proposal has not been prepared in collusion with the competitor.

The Ministry reserves the right, at its discretion to report suspected collusion or anti-competitive conduct by bidders to the appropriate authority and to provide that authority with all relevant information including the bidder's proposal.

- 16.4 **Ethics:** Bidders who attempt to influence or provide any form of personal inducement, reward or benefit to any of the Ministry's representatives will be disqualified from participating further in the procurement process.

## **SECTION 2.0 TERMS OF REFERENCE**

**Engagement of a Qualified Vendor to Supply, Install, Configure, and Support a Hyper Converged Infrastructure Solution**

### **Terms of Reference**

## Current Server Technology Environment

### 1. Overview

The current network and server infrastructure located at the Ministry's Head Office in Port of Spain, supports approximately three hundred and fifty (350) active users spread geographically over three (3) physical locations across Trinidad. The Ministry's Head Office and its satellite locations are logically connected over a Wide Area Network (WAN) via the Government of Trinidad and Tobago's central ICT backbone through iGovTT. The majority of data services facilitated by this infrastructure are LAN/ WAN-based while some others (e.g. Email and file sharing through SharePoint) and are also available via the Internet. For the purposes of these Terms of Reference (TOR) it should be assumed moving forward, unless otherwise stated, that reference is being made to network and server infrastructure hosted physically at the Ministry's Head Office.

The Ministry's current server infrastructure comprises a complement of standalone server appliances and a centralized Storage Area Network (SAN). The servers are deployed in a cluster configuration and function as virtualization hosts. The SAN (manufactured in the early 2000s) is connected to the server farm and is the primary storage hub for all Ministry data, facilitating the "highly available" virtualized environment.

ICT's, including computers and various software, are used daily by 95% of staff in the execution of their duties. The need for additional storage and processing power will therefore increase in the future as the Ministry grows and continues growing and improving its ICT services to staff and external users.

## 2. Service/ Application Ecosystem

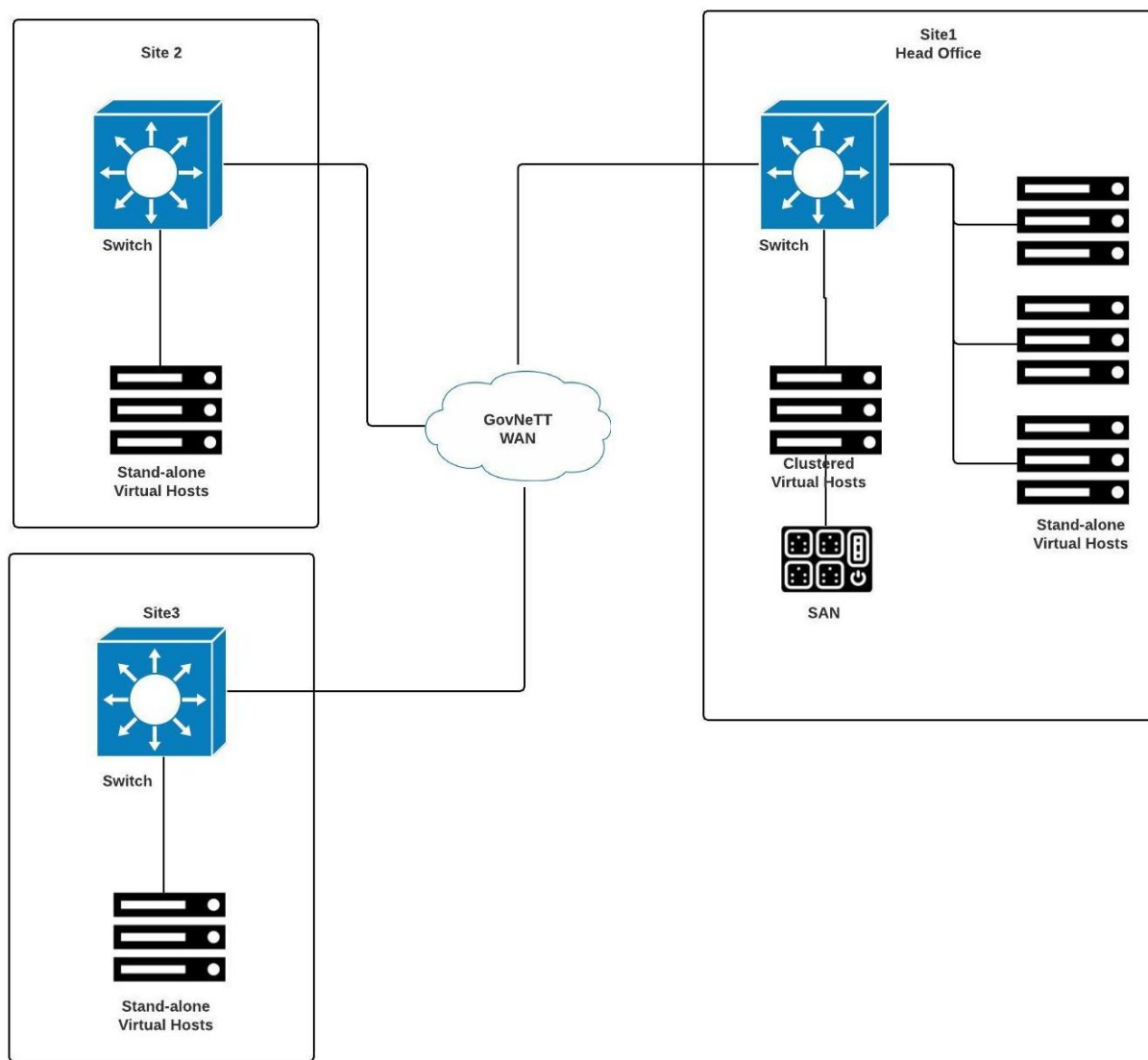
Access to all Ministry data, online applications and digital services is secured through a central Active Directory database. The following table summarizes the network services and applications currently in production within the existing environment:

Type of Service	Services
Networking Services	DHCP DNS AD Print File Sharing VPN Key Management Server (KMS) Network Functions Virtualization OS Imaging (Deployment Server) Virtualization <ul style="list-style-type: none"><li>• Microsoft Windows/ Windows Server</li><li>• Linux Distributions</li></ul> Backup and Restore End Point Protection Certificate Signing
Application Services	Mail Server SharePoint Web Servers <ul style="list-style-type: none"><li>• IIS</li><li>• Apache/Apache Tomcat</li></ul> Database Servers <ul style="list-style-type: none"><li>• SQL Server</li><li>• My SQL</li></ul> Document Digitization/ Digital Records Management Print Management Services
Web Applications	Website Hosting (Multiple)

	SharePoint Functional Applications e.g. Helpdesk and Asset Management
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## 2.1. Server and Network Infrastructure

Figure 1 below, represents the current server deployment topology. As shown, the current setup consists of multiple virtual hosts running on a Hyper-V platform. Each of these hosts are connected to the Government backbone via core switches located at each site. At Head Office, three (3) of the virtual hosts are configured to operate in a cluster which is connected directly to the SAN via uplink through a fiber switch. The SAN is the primary data store for the majority of Ministry user data.



*Figure 1 – Existing Server Deployment Topology*

Table 1 below lists the hardware specifications of the servers currently deployed in the scheme indicated above. This is intended to provide a general understanding of the current hardware capacities and utilization. The storage space listed for Servers 1 to 3 refers specifically to the SAN, while the storage for all of the others is local to the respective server.

Hyper-V Host	Physical Processors	Cores	Logical Cores	RAM (GB) Total	Storage Usable (GB)	Storage Utilized	VMs Count
Server1	2	8	8	32	18,000	30%	3

Hyper-V Host	Physical Processors	Cores	Logical Cores	RAM (GB) Total	Storage Usable (GB)	Storage Utilized	VMs Count
Server2	1	4	4	32			1
Server3	2	8	8	40			1
Server4	2	12	24	384	13,600	45%	12
Server5	2	8	8	16	700	70%	1
Server6	2	12	24	384	13,600	75%	3
Server7	2	16	32	16	1,000	40%	2
Server8	2	16	32	96	9,000	66%	5
Server9	2	16	32	128	11,000	25%	8
Server10	2	12	24	384	14,000	68%	14
Server11	1	4	4	16	800	50%	None
Server12	2	12	24	384	14,500	27%	10
Server13	2	16	32	96	2,000	60%	6
Server14	2	16	32	16	900	66%	2
Server15	2	12	24	24	3,000	27%	1
Server16	2	12	24	24	4,000	34%	2

*Table 1 – Technical Specifications of Existing Server Hardware*

### 3. Future Changes and Growth Projections

In-keeping with the Ministry's ongoing drive to achieve control, efficiency and high availability, the following changes are expected to take place within the next three (3) years:

- Implementation of Desktop Virtualization for at least two hundred and fifty (250) of the users currently being served.
- Removal of on premise Mail Server hosting in favour of a hosted solution.

Both changes will of course, impact on storage and processing needs.

### 4. Challenges with the Current Environment

While at the cutting edge when first implemented, and though still able to deliver most of our needs at this time, the current complement of hardware and deployment configuration does

present several functional challenges that any replacement solution must be able to overcome. These are briefly summarized below:

#### 4.1. [Present/ Imminent Obsolescence](#)

All of the existing hardware (both server appliances and SAN) are either end of life or out of support. This of course presents difficulties for repairs and sourcing of replacement components, which may themselves at times be restrictively expensive. The age of the hardware also increases the risk of component failure with implications for reliability, availability and loss of data.

#### 4.2. [Cost and Complexity of Maintenance](#)

The current disaggregated design, adds complexity and is costly. Each component within this infrastructure configuration, i.e. the SAN, Servers, Ethernet network and Fiber network, require warranties and support costs. Not only is this costly and complex, but different network communications require more network protocols which can be difficult to secure and manage.

#### 4.3. [Implications of Static Capacities/ Lack of Upgradeability](#)

At this point, due to the age of the technologies, the capacities of the current solution in terms of memory, processing power and storage, are largely static. This has several operational implications including:

- Performance – particularly in terms of speed and reliability due to an inability to meet the increasing demand for storage and utilization of digital services
- Scalability – the ability to add more users (thereby increasing performance requirements) and increase data volumes
- Extensibility – the ability to add new services and applications to meet the changing needs of the Ministry and the wider Public Service.



#### [4.4. Redundancy/ Load Balancing](#)

The static capacities and component-based nature of the existing solution, coupled with our current utilization does not afford opportunities for robust redundancy and load balancing either at the hardware or service levels. This has direct implications for reliability and availability.

#### [4.5. Backups/ Disaster Recovery](#)

The static storage capacity of the current solution presents limitations to maintaining sufficient hot backups on disk, resulting in the need to resort to costly and time-consuming tape backups which has implications for speed of recovery.

#### [4.6. Central Manageability](#)

The component-based nature of the current solution does not present a facility that allows for a holistic overview and central management of the infrastructure. This includes a lack of automated monitoring, alerting and reporting which makes administering the solution labour and resource intensive.

### **5. REQUIRED SOLUTION**

#### **5.1. Overview**

In a move away from the restrictive and limitedly scalable component-based infrastructure, The Ministry should like to implement a Hyper Convergence Infrastructure (HCI) Solution. This new HCI Solution should provide a highly scalable environment along with a lower total cost of ownership of both the physical and virtual server infrastructure. The solution must offer intuitive administration, flexible storage capacity and performance, robust fault tolerance, centralized logical storage and must be compatible with industry leading virtualization technologies e.g. Hyper-V, VMWare and KVM. The solution must also minimize disruptions during software system

upgrades or implementations and must be flexible enough to adapt to the Ministry's current and future infrastructure environment such as hybrid cloud services.

In addition to the core HCI Solution the proposal should include specifications and quotations for two (2) appropriately featured network switches to be installed with the solution in a redundant configuration. These devices will connect directly to the HCI Appliance and uplink to the Ministry's backbone network switch. The HCI Solution is expected to replace all distributed servers at remote sites resulting in a simplified deployment topology where the appliance is located at either the Ministry's Head Office or collocated at an off-site Data Centre.

### 5.2. Solution Life Expectancy

For the purposes of this tender, it should be assumed that the usable life of any solution provided will be a minimum of five (5) years. During this period, any expansion or upgrades to the hardware and software provided should modular and executable without revision, overhaul or replacement of the core solution as adopted.

The proposer must also guarantee, to the best of its ability to do so, that during this time the solution as a whole, or any technologies used therein, will not become end of sale or end of support.

## 6. Functional Requirements

### 6.1. High Availability

The proposed solution is intended to be operated and remain available under 24/7 365 demand conditions. Its use of technologies, robustness and architecture, should ideally facilitate "5-9's" (99.999%) availability in terms of data, run-time and delivery of services, with due consideration for the impact of environmental conditions.

### 6.2. Centralized Remote Configuration, Management, Monitoring and Reporting

The solution should natively offer a secure management portal that can be accessed via a web-based interface deployable via LAN or via the Internet (if so configured). For security and

auditability this management portal should facilitate multiple users with configurable levels-of access. The system should also provide state-of-health and utilization monitoring facilities with configurable alerts and automated reporting.

### 6.3. Backup, Restore and Disaster Recovery

The technical baseline below prescribes minimum storage requirements for the solution with required allowances for tier 1 backup data. It would be an asset if the proposed solution includes a native facility for conducting and managing these backups. Notwithstanding this optional feature, the solution should natively possess fault tolerance at all levels including power, storage, and software to the threshold of up to fifty percent (50%) failure of any component.

### 6.4. Technical Baseline

The following sections define the minimum technical specifications expected of the HCI Solution. These specifications are based on the Ministry's expected utilization and growth over the next three

(3) years:

### 6.5. Processing Power

A minimum of one hundred and twenty-eight (128) cores with a clock speed of 3GHz per processor is desirable to satisfy the Ministry's immediate and medium-term needs. The hardware should however be sufficiently modular so as to facilitate further upgrades to this processing capacity without complete replacement over the duration of the solution life expectancy (see above).

### 6.6. Disk Capacity and Storage Management

For the purpose of this tender, the term "usable capacity" refers to the amount of space available for Ministry data after the array/ arrays are fully configured. The Ministry requires a minimum of fifty terabytes (50TB) of usable capacity. This does not factor in capacity used for

snapshots/ clones/ replication of data-sets and tier 1 backups. The proposed solution should include sufficient additional storage for this, and be sufficiently modular to be able to grow to seventy-five terabytes (75TB) of usable capacity over the duration of the solution life expectancy (see above) without the need to purchase a new solution. RAID Levels 0, 1, 5, 6 and 10 must be supported. The solution should also facilitate improved storage utilization through the use of technologies such as data deduplication and compression.

In the interest of striking an optimal balance between performance, capacity and cost (considering future maintenance and expansion) the solution should be able to use a mix of drive technologies (NVMe, SSD, SAS, SATA) within the same enclosure, so the option of converting to all flash is available for the future.

#### 6.7. Memory

A minimum of five hundred and twelve gigabytes (512GB) of RAM is desirable to satisfy the Ministry's immediate and medium-term needs. The hardware should however be sufficiently modular so as to facilitate further upgrades to this memory capacity without complete replacement over the duration of the solution life expectancy (see above).

#### 6.8. Interfaces

The proposed solution should support redundant connections of at least ten gigabits per second (10Gbps) which will be used for virtual machine communications, with a separate port for management. These Network Interface Cards (NIC) should support NIC teaming and possess the ability to connect to switches that support Link Aggregation Control Protocol (LACP) and Port Aggregation Protocol (PAgP). The NICs may be BaseT or Small Form-Factor Pluggable (SFP+) architecture.

#### 6.9. Power Redundancy

The solution hardware should include a minimum of two (2) redundant, hot-swappable power supplies.

## 7. Deliverables

### 7.1. In-Scope

In consideration of the functional requirements and technical baseline specified above, the following deliverables are expected to be provided for fulfilment of this tender:

- HCI hardware (with baseline configuration as specified above)
- Native software for the HCI Solution and related licenses
- 2 Network switches (featured as specified above) including cables and connection modules
- Physical on-site installation
- On-site configuration of native HCI software (based on specifications to be provided)
- Administrator training including training manuals and other materials
- Manufacturer and vendor support accounts and credentials as appropriate

### 7.2. Out of Scope

The following items/ services are NOT expected to be provided by the selected vendor and will be fulfilled internally by the Ministry:

- Microsoft software
- Full Data migration

## 8. Additional Requirements

### 8.1. Overview

Bidders are asked to make prescriptions or recommendations for each of the following areas relevant to the safe and proper operation of the HCI Solution being quoted. If there is need for a specialised solution or additional hardware to ensure that safe and proper operation of the HCI being quoted, then the vendor is expected to make such prescriptions or recommendations clear within their proposal. Bidders are asked to provide a quotation for the requisite solution or hardware in the itemised financial proposal.

## 8.2. Operational Environmental Conditions

Bidders should indicate any specific requirements for environmental conditions governing the operation of the proposed solution. This may include, but is not limited to, temperature, power quality, mounting, utilization thresholds, etc.

## 8.3. Power Management Solution

Bidders should advise regarding the need for a specific power management hardware. The vendor is expected to make such prescriptions or recommendations within their proposal as to the appropriately sized and configured Power Management Solution (such as uninterruptible power supplies (UPS) that can be warranted as part of the HCI Solution contract. The Power Management Solution proposed must be approved for use with the HCI Solution by the vendor.

The proposed Power Management Solution must be sufficiently featured, sized and configured to mitigate against damage to the connected HCI Solution and ensure 98% uptime.

- Automatic Voltage Regulation (AVR)
- Surge protection
- Battery power supporting a minimum of eight (8) hours run-time in the event of an environmental power failure
- A facility for adding external, modular batteries (attachable battery packs) to facilitate expansion of on-battery up-time without investment in a new primary unit
- Independent redundant units (a minimum of two (2)) for load balancing and to facilitate availability in the event of failure or maintenance of one unit
- A network-based, software interface for the configuration and management of the appliances, including basic reporting
- Sufficient ports to support the HCI Solution and expected future expansions without the need for additional hub devices

## 9. Project Requirements

### 9.1. Performance Management

The work of the selected firm will be in accordance with an agreed-to schedule/work breakdown structure that will identify a sequence of activities, timelines, personnel responsible (both from the firm and from MPA), contingencies and inter-dependencies. The oversight of work by the selected firm will be undertaken by a project manager from the Ministry who will liaise with other Ministry personnel, as necessary, to ensure both the quality completion of services and the quality provision of hardware and software.

The Ministry, through its appointed Project Manager, will advise the selected firm of any issues encountered or impending via the agreed-to contact and form(s) of contact.

### 9.2. Competencies Required

- **Type of Bidder:** ICT Product and Services Firm or sole trader
- **Expertise Specialities:** Hyper Converged Infrastructure Solution
- **Qualifications:**

The firm should be an authorised reseller of the proposed hardware and/or software.

The firm should have personnel certified in the installation and configuration of the proposed product and services.
- **Financial Status/Capacity**

The firm must be legally registered to operate within Trinidad and Tobago.

See RFP for further requirements.

## 10. Government Inputs

The Ministry will assign a team of ICT professionals and other support personnel from its Information Technology Division and any other Divisions, as necessary, to facilitate and support the solution.

The Ministry will make available updated system and other documentation, as necessary, for the design and implementation of the solution.

In respect of the accommodation for the infrastructure, the Ministry shall ensure appropriate electrical, fire suppression, temperature controls, are in place.

The Ministry shall provide appropriate accommodation for meetings and other sessions as may be necessary for the solution, including web-based communications.



## SECTION 3.0 TECHNICAL PROPOSAL FORMS

*[Comments in brackets [ ] provide guidance to the Vendor for the preparation of their Technical Proposals; they should not appear on the Technical Proposals to be submitted.]*

- TP-1      Cover Letter
- TP-2      Hyper Converged Solution and Support and Maintenance Proposal
- TP-3      Hyper Converged Solution Characteristics
- TP-4      Bidder's Organization and Experience
  - a) Bidder's Organization
  - b) Bidder's Experience
- TP- 5      Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be provided by the Ministry:
  - a) On the Terms of Reference
  - b) Counterpart Personnel, Services, Facilities
- TP-6      Team Composition and Task Assignments

## FORM TP-1 Cover Letter

[Location, Date]

Permanent Secretary,  
Ministry of Public Administration  
Level 7, NALIS Building,  
Corner Hart and Abercromby Streets,  
Port of Spain  
Republic of Trinidad and Tobago  
West Indies  
Dear Madam:

We, the undersigned, offer to provide services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial or Price Proposal sealed under a separate envelope.

We are submitting our Proposal in association with: [Insert a list with full name and address of each associated Vendor]

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

The Proposal validity period is ( ) days from the deadline date of submission of proposals. If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We agree, if our proposal is accepted, to execute the services related to the assignment, not later than the date indicated by the Ministry.

We hereby agree that in competing for (and, if the award is made to us, in executing) the Contract, we undertake to observe the laws against fraud and corruption, including bribery, enforced in the Republic of Trinidad and Tobago.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Company Stamp: \_\_\_\_\_

## ***FORM TP-2 Hyper Converged Infrastructure Solution Proposal***

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*[Provide a detailed description of the product being proposed including but not limited to the items listed at Section 2 sub items 5 – 8]*

### FORM TP-3 HyperConverged Solution Characteristics

[Provide a detailed description of the product being proposed including but not limited to the items listed at Section 2 sub items 5 – 8. Please include all dates using the DD/MM/YYYY format.]

#### Software Requirements

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution		
Solution Life Expectancy and Warranty	<ul style="list-style-type: none"><li>3 years support</li></ul>	Software	Release Date:	
			End of Life:	
			End of Support:	
			Warranty Support:	
Distributed Storage Fabric	<ul style="list-style-type: none"><li>Does the solution provide enterprise storage services for applications - eliminating the need for any additional Storage Area Network device? (Y/N)</li></ul>			
	<ul style="list-style-type: none"><li>Does the solution include the following capabilities:<ul style="list-style-type: none"><li>performance acceleration (Y/N)</li><li>data reduction (Y/N)</li><li>data protection (Y/N)</li><li>other (Y/N)</li></ul></li></ul>			
	<ul style="list-style-type: none"><li>Does the solution provide full support for VMware vSphere, Microsoft Hyper-V, Citrix Hypervisor or Acropolis? (Y/N)</li></ul>			
Virtualization	<ul style="list-style-type: none"><li>Does the solution provide comprehensive native virtualization solution included at no additional cost? (Y/N)</li></ul>			
	<ul style="list-style-type: none"><li>Does the solution provide integrated virtual machine</li></ul>			

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
	management through a web portal? (Y/N)		
Virtualisation	<ul style="list-style-type: none"> <li>Does the solution provide intelligent virtual machine (VM) placement, live migration, hypervisor conversion, and cross-hypervisor high availability for maximum flexibility? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide enterprise cloud type management with the ability to see the entire cluster from a single window? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution support Live Migration? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide the functionality to govern where VMs run? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution support Cross-Hypervisor Migration? (Y/N)</li> </ul>		
Storage	<ul style="list-style-type: none"> <li>Does the solution provide a software-defined storage? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide support for an industry-standard S3-compatible REST API? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide iSCSI access to applications that require direct access to block storage? (Y/N)</li> </ul>		

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
	<ul style="list-style-type: none"> <li>Does the solution provide support for data management for virtual environments?               <ul style="list-style-type: none"> <li>example pools flash and hard disk drive storage across a cluster and exports as a data store to the virtualization layer as iSCSI, NFS, and SMB shares? (Y/N)</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide automatic disk balancing and ensures that data is uniformly distributed across the entire cluster? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide storage features such as               <ol style="list-style-type: none"> <li>Intelligent Tiering (Y/N)</li> <li>Data Locality (Y/N)</li> <li>Automatic Disk Balancing (Y/N)</li> <li>Shadow Clones Deduplication (Y/N)</li> <li>Compression (Y/N)</li> </ol> </li> </ul>		
<b>Networking Features</b>	<ul style="list-style-type: none"> <li>Does the solution provide micro-segmentation as a proactive and adaptive approach to VM network security? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide service chains that enable network feature virtualization? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide network visualization and optimization? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide network automation and orchestration? (Y/N)</li> </ul>		

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
<b>Data Protection</b>	<ul style="list-style-type: none"> <li>Does the solution provide integrated data protection and continuous availability at the VM level, with the ability to provide RTO in minutes and define an unlimited amount for RPO. Including critical workloads that require near-zero RTO and zero RPO? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide converged Local Backups with Snapshots and restore points? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide integrated Remote Backup and disaster recovery using asynchronous replication? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide self-service File Restore? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide provide the ability to replicate workloads bi-directionally between two sites connected over a metro area network and provide the capability to write data synchronously to both sites? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide replication and allows for Virtual machine migration in a non-disruptive manner for planned maintenance events or other needs? (Y/N)</li> </ul>		
<b>Security</b>	<ul style="list-style-type: none"> <li>Does the solution provide Two-Factor Authentication? (Y/N)</li> </ul>		

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
	<ul style="list-style-type: none"> <li>Does the solution provide Data-at-rest Encryption? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide secure configuration baseline that is based on the US DISA STIG format? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide the ability to track what configurations have changed and return them back to their desired state? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the solution provide secure access with the ability to lock down all levels of login access including interactive and shell logins? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does the system allow for multi-user management with assignable levels of access? (Y/N)</li> </ul>		
	<ul style="list-style-type: none"> <li>Does it provide detailed audit trails and access logs? (Y/N)</li> </ul>		

#### Hardware Requirements

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution		
Solution Life Expectancy and Warranty	<ul style="list-style-type: none"> <li>5 years</li> </ul>	Hardware	Equipment Manufacture Date:	
			End of Life:	
			End of Support:	
			Warranty Period:	



Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
Processing Power	<ul style="list-style-type: none"> <li>3GHz per physical processor</li> <li>128 Cores</li> </ul>	No. of Sockets:	
		No. of Physical Processors:	
		No. of Logical Cores:	
		No. of Threads:	
		Processor Model/Speed:	
Memory	<ul style="list-style-type: none"> <li>512GB RAM</li> <li>Physical capacity to facilitate upgrades over life expectancy of solution without replacement</li> </ul>	No of Slots:	
		No of DIMMs:	
		Speed/ Capacity:	
Disk Capacity and Storage Management	<ul style="list-style-type: none"> <li>50TB useable capacity (excluding capacity for snapshots/ clones/ replication of data-sets and tier 1 backups)</li> <li>Physical capacity to facilitate upgrades to 75TB useable capacity over life expectancy of solution without replacement</li> <li>Support for RAID levels 0, 1, 5, 6 and 10</li> <li>Should employ technologies such as data deduplication and compression to facilitate improved storage utilization</li> <li>Solution to support a mix of drive technologies, including NVMe, SSD, SAS, and SATA, within the same enclosure</li> </ul>	No of Drive Bays:	
		Cache Tier	Type
			Speed
			Capacity
			Quantity
			Size (2.5"/3.5")
		Capacity Tier	Type
			Speed
			Capacity
			Quantity
			Size (2.5"/3.5")
		Supported RAID Levels:	
		Could additional drives be purchased through multiple distribution channels? (Y/N)	
		Does the Storage Solution perform deduplication? (Y/N)	
		Can you dynamically	

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
		expand volumes (physically, logically, plus re-stripe)? (Y/N)	
		Is there a limit on number of volumes, and if so, what is it? Is there a volume size limit, and if so, what is it? (Y/N)	
		Does the solution provide for the upgrading to larger capacity disk drives as they become available? (Y/N)	
		Can your solution mix and match disk drives, both size and type? What types? Are SSD drives available as an option? (Y/N)	
Interfaces	<ul style="list-style-type: none"> <li>• Redundant connections of at least 10Gpbs</li> <li>• Separate port for management</li> <li>• NICs may be BaseT or SFP+ architecture</li> <li>• NICs should support NIC teaming</li> </ul>	Type:	
		Speed:	
		Quantity:	
		NIC Teaming (Y/N):	
		Separate Management Port (Y/N):	
Power Redundancy	<ul style="list-style-type: none"> <li>• 2 redundant, hot-swappable power supplies</li> </ul>	Quantity:	
		Capacity:	
		Efficiency Rating:	
Backup and Recovery Facilities		What type of built-in backup and recovery facilities are available?	
Support and		Is local hardware support	

Technical Component/ Feature	Baseline Specification	Specifications of Proposed HCI Solution	
Service Levels		available? (Y/N)	
		Can repair of parts be available on-site within 4 hours? (Y/N)	
		What options do you offer for spare parts delivery/availability? (Y/N)	
Monitoring, Management and Reporting		Does the solution provide for real time hardware and service monitoring? (Y/N)	
		Does your HCI solution allow for real time management? (Y/N)	
		Does your solution provide remote administration capabilities built-in including web administration? (Y/N)	
Additional Network Switches	2 network switches (including cables and connection modules) appropriately featured to connect HCI appliance and uplink to Ministry's core switch	Brand/Model:	
		No. of Ports:	
		Type (L2/L3):	

## **FORM TP-4 Bidder's Organization and Experience**

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### **A - Bidder's Organization**

*Provide here a brief (two pages) description of the background and organization of your firm/entity and each associate for this assignment.*

*Also include as an Appendix and make reference to copies of;*

- i. the Firm's By Laws*
- ii. Articles of Incorporation*
- iii. Directors of the Firm/Company*
- iv. Certificate of Insurance Coverage*
- v. Disclosure Statement of Conflict of Interest where applicable*
- vi. Valid Income Tax Certificate;*
- vii. Valid Value Added Tax (VAT) Certificate;*
- viii. Valid National Insurance (NIS) Certificate;*
- ix. Information on financial capacity of the Bidder:*
  - a. Copies of Auditor's report*
  - b. Provide a Letter of Comfort*
- x. Statement Re: legal claims (previous and pending)*

### ***B - Bidder's Experience***

*[Provide information about each of the assignments for which your firm has been legally engaged under contract in its own name to deliver services similar to those requested here in the RFP during the past five years. It is recommended that you list a maximum of ten (10) such assignments.]*

Assignment name:	Approx. value of the contract (in TT \$ currency):
Name of Organization:	Duration of assignment (months)
Address:	Total N <sup>o</sup> of staff-months of the assignment:
Nature and Scope:	
Organization size:	Start date (month/year):  Completion date (month/year):
Name of associated Vendors/Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):
Narrative description of Project	
Description of actual work and services provided by your staff within the assignment:	
Client Reference  Name:  Contact No:  Email:	

Firm's Name: \_\_\_\_\_

## **FORM TP-5 Comments and Suggestions on the Terms of Reference**

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### **A - On the Terms of Reference**

*[Please use this space to document and justify any observation or suggestion you have concerning the Terms of Reference (provided that it would not alter the requirements to be met by the Ministry) that would improve contract performance (such as eliminating an activity that you feel is unnecessary, adding one, or proposing that activities include or be divided up into different stages). These suggestions should be concise and specific and should be incorporated into your Proposal.]*

## ***B – Counterpart Personnel, Services and Facilities***

*[Comment here on personnel and facilities that will be supplied by the Ministry, including administrative support, equipment, information, etc.]*

## **SECTION 4.0 FINANCIAL PROPOSAL FORMS**



## ***FORM FP-1 Financial Proposal Form***

Financial Proposal Form shall be used for the preparation of the Financial Proposal according to the instructions provided under para. Section 1 sub-item 8.4.

FP-1 Financial Proposal Submission Form (VAT must be clearly stated)

FP -2 Summary of Costs

- Hardware
- Software
- Peripherals
- Warranties and or support

FP -3 Breakdown of Cost by item/activity

FP -4 Breakdown of Other Costs per item/Activity

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**FORM FP-2 Summary of Costs**

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Description (Item/Activity)	Quantity	Unit Cost	Amount(s)
		Subtotal	
		Other Costs	
		Total Amount of Financial Proposal	-----

## SECTION 5.0

### ***Bid Conformance Sheet***

1	Signed Cover Letter	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
2	Technical Proposal	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3	Financial Proposal	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4	120 days bid validity period	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5	Valid Income Tax Clearance Certificate	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
6	Valid VAT Clearance Certificate	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
7	Valid National Insurance Certificate of Compliance	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
8	Description of Bidders Organisation	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
9	Information regarding Financial Capacity	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

I/We certify that the above checked items have been included in my/our Proposal. Submission is in accordance with instructions therein.

**N.B.** Failure to provide all the (documents listed in the above Check List) would deem your bid non-compliant and will lead to the Ministry's non acceptance of your offer.

\_\_\_\_\_  
**Print Name**

\_\_\_\_\_  
**Date**

---

Authorized Signature

---

Company Stamp

## ***Sample - Standard Terms And Conditions Of Contract***

### **1. DUTIES OF CONTRACTOR**

#### **General Obligations**

- (a) The Contractor shall exercise all reasonable skill, care and diligence in the discharge of its obligations under this Contract, with efficiency and economy in accordance with the highest professional standards and consistent with generally accepted standards applicable to these services. The Contractor shall respect, comply with and adhere to the laws and customs of the Republic of Trinidad and Tobago.
- (b) In carrying out the Services entrusted to it, the Contractor shall endeavour to use best practice and find the technical solutions best suited to the requirements thereof.

#### **Standard of Performance**

The Contractor shall perform the Services and carry out its obligations hereunder with all due diligence. The Contractor shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with third parties.

#### **Confidentiality**

- (a) The Contractor shall throughout the performance of the Services and following their completion maintain the strictest secrecy vis-à-vis third parties in respect of information, data or documents acquired or brought to its notice during the performance of the Services;
- (b) The restriction at Clause (a) above shall continue to apply after the completion of the Services without any time limit but shall cease to apply to such information or knowledge which has in its entirety become public knowledge otherwise than through any unauthorized disclosure or other breach on the part of the Contractor of the said restriction.

### **2. DELIVERY DATE**

The Delivery Date/s shall be agreed between the parties and on the said date/s the Vendor shall deliver the Hardware and Software to the Location.

The Contractor hereby agrees to provide the Hardware and Software herein described upon the terms and conditions hereinafter contained:

- (a) Provide training, support documentation, user manuals, certificates and licences with respect to the Hardware and Software and related documents in accordance with the Specifications as outlined in **Appendix**.
- (b) Supply and deliver the Hardware and Software in accordance with the Client's Specifications as outlined in **Appendix**.
- (c) Title to and risk in the Hardware and Software will pass to the Client upon Delivery and the Client will be responsible for insuring and taking care of the Hardware and Software from that time.
- (d) The Contractor will be responsible at its own cost for the delivery, off-loading installation and configuration of the Hardware and Software at the Location.
- (e) The Contractor shall provide such packing of the Hardware and Software as is required to prevent its damage or deterioration during transit to the Location. The packing shall, be sufficient to withstand, without limitation, rough handling during transit and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the Hardware and Software's final destination and the absence of heavy facilities at all points of transit.
- (f) The Hardware and Software supplied under the Contract shall be fully insured by the Contractor against loss or damage incidental to manufacture or acquisition, transportation, and storage until Delivery to the Client.

### **3. LOCATION PREPARATION**

The Contractor shall supply to the Client in reasonable time before the delivery of the Hardware and Software such information and assistance as may be necessary to enable the Client to prepare the Location for the installation of the Hardware and Software.

The Client will provide reasonable notice to the Contractor that the Location is ready for installation and the Contractor will as soon as reasonably practicable inspect the Location and certify whether or not the Location provides a suitable environment for the Hardware and Software.

### **4. TESTS**

#### **PRE-DELIVERY TESTS**

The Contractor shall submit the Hardware and Software to its standard tests before delivery to the Client and on or before delivery shall provide the Client with a written statement certifying that the Hardware and Software have passed same. The Contractor shall promptly supply to the Client on request copies of the specifications of the standard tests.

#### **POST-DELIVERY TESTS**

The Contractor shall within seven (7) days after the Hardware and Software have been installed, submit the Hardware and Software to the Contractor's standard installation tests ("the Installation Tests") to ensure that

the Hardware and Software and every part thereof is in full working order. The Contractor shall supply the Client with copies of the specifications and results of the Installation Tests. The Client or its authorized representative shall be entitled to attend the Installation Tests. The Contractor shall give the Client two (2) days written notice of the date and time at which the Contractor proposes to carry out the Installation Tests.

If the Hardware and Software fails the Installation Tests or any part thereof does not comply with the specifications, the Contractor shall inform the Client accordingly in writing and the Contractor shall forthwith free of charge take all the necessary steps to ensure that the Installation Tests are repeated on the same terms and conditions within a reasonable time thereafter but in any event no later than three (3) days thereafter.

If the Hardware and Software or any part thereof shall fail to pass such repeat tests as specified herein then the Client may by written notice to the Contractor elect at its sole option:

- (a) to require (without prejudice to its other rights and remedies) the Contractor to provide such replacement Hardware and Software to pass the Installation Tests; or
- (b) to accept the Hardware and Software subject to an abatement of the price such an abatement to be such amount as, taking into account the circumstances, is reasonable. In the absence of a written Contract as to abatement within fourteen (14) days after the date of such notice the Client shall be entitled to reject the Hardware and Software.
- (c) In the event that the Contractor fails to provide such replacement Hardware and Software, to terminate the Contract.

Once the Hardware and the Software and every part thereof have successfully passed the Installation Tests then the Hardware and Software shall be accepted by the Client.

Nothing in this clause shall release the Contractor from any warranty or other obligation under this Contract.

## ACCEPTANCE TESTS

Acceptance tests will be conducted to ensure that all of the Services to be provided by the Contractor detailed at **Appendix** are completed within acceptable parameters, including but not limited to:

- (a) Accessibility to all end users – front end and backend;
- (b) Highly Available and fully redundant; and
- (c) Ensuring that measures are in place to ensure data integrity.

Testing of the IT Solution will be the collective responsibility of the Client and the Contractor and will be conducted as mutually agreed between the parties in accordance with the Project Schedule and the Specifications as outlined in **Appendix**.

The Contractor will provide migration services as outlined in **Appendix** which will include:

- (a) An assessment of the current environment to be migrated to the IT Solution; and
- (b) The migration and restoration of services and data onto the IT Solution.

If any part of the IT Solution fails to pass its applicable Acceptance Tests the Contractor will be given such time and facilities as are reasonable in all the circumstances to rectify such part of the Solution and repeat those tests applying to such part within a reasonable time. The Contractor will not be required to repeat any tests in respect of those parts of the IT Solution which have successfully completed the Acceptance Tests applicable to them.

## 5. MAINTAINANCE AND SUPPORT

The Contractor shall provide the Services to the Client in accordance with the Service Level Agreement outlined in **Appendix**.

The Contractor agrees to report to the Client at regular intervals as mutually agreed between the parties as to the effectiveness of the delivery of the Services, including the extent to which the Services are being or have been adapted to meet the Customer's changing business needs; and

The Contractor will advise the Client if it considers that the Specifications or service levels should be revised to take account of new functions performed by the Client that are outside the scope of this Contract.

If the Contractor fails to meet performance requirements for the Services as specified in the Service Level Agreement the Contractor will promptly:

- (a) investigate the underlying causes of the problem and use all commercially reasonable efforts to preserve any data indicating the cause of the problem; and
- (b) advise the Client of the status of remedial efforts being undertaken with respect to the underlying cause of the problem;

but such action will not deprive the Client of a right to pursue any other remedy under this Contract arising from the failure of the Contractor to meet its obligations under the Contract.

## 6. WARRANTY

The Contractor warrants to the Client that:

- (a) The Hardware and Software will:-
  - (i) be supported as outlined in **Appendix**
  - (ii) be free from defects in materials design workmanship and delivery; and
  - (iii) comply with the Specifications.



- (b) The Manufacturer Hardware and Software Documentation will provide adequate instruction to enable the Client's duly appointed staff to make proper use of such Hardware and Software.
- (c) The import, supply, installation, maintenance and support of the IT Solution and any part of it will not infringe any laws enforceable under the laws of the Republic of Trinidad and Tobago.
- (d) It is not aware as at the date of this Contract of anything within its reasonable control which might or will adversely affect its ability to perform its obligations under this Contract.
- (e) Elements of the IT Solution will work properly in combination with each other in accordance with the Specifications.
- (f) That the IT Solution will conform to all applicable health and safety regulations.
- (g) The Client shall give notice to the Contractor in writing as soon as it is reasonably able upon becoming aware of any claim arising under this warranty.
- (h) Upon receipt of such notice, the Contractor shall within twenty-four (24) hours thereof investigate any alleged breach of warranty and in the case of a breach of warranty, remedy the same by carrying out such repairs, modifications or alterations to the IT Solution and/or by replacing the Solution or component parts at its own expense and within a reasonable time after receiving such notice but in any event no later than seven (7) days thereafter provided that the Contractor shall have no liability or obligations under the said warranty unless it shall have received notice of the defect in question no later than the expiry of the Warranty Period and in cases where the problem or malfunction relating to the claim is covered under the maintenance services to be provided hereunder. If the Contractor shall fail to remedy any breach of the said warranties as aforesaid then the Contractor shall be liable to the Client for all loss and damage suffered by the Client as a result of such failure.
- (i) The obligations of the Contractor above shall be discharged between the hours of 8:00 am to 4.30 pm Monday to Friday (public holidays, excepted) unless otherwise agreed by the parties.
- (j) Subject to the foregoing with the exception of the conditions and warranties implied by sections 12 - 16 of the Sale of Goods Act Chapter 82:30 of the Laws of Trinidad and Tobago, conditions, warranties, terms and undertakings, expressed or implied, statutory or otherwise in respect of the IT Solution are hereby excluded to the fullest extent permitted by law.

## 7. DELAYS IN THE CONTRACTOR'S PERFORMANCE

- a. The Contractor shall provide the IT Solution **Ready for Use** on or before the Completion Date.
- b. If the Contractor fails to deliver the IT Solution **Ready for Use** by the Completion Date for causes attributable exclusively to the acts or omission of the Contractor or any third party authorized by the Contractor then the Client shall be entitled to do any of the following:
  - (a) Without prejudice to any other rights or remedies it may have hereunder or at law to terminate this Contract.
  - (b) After consultation with the Contractor to specify by notice to the Contractor such revised Delivery Dates as it shall in its reasonable opinion think fit.

## HARDWARE AND SOFTWARE

## 8. ABANDONMENT, CHANGE OF PLAN

The Client shall have the absolute right to abandon or amend the Services or to change the general basis for the execution of the Services at any time and such action on its part shall in no event be deemed a breach of contract.

If the Client amends the scope of the Services or changes its general basis and the Contractor is of the opinion that extra services are made necessary as a result thereof, the provisions of the Extra Services Clause herein shall apply.

#### **Termination by Client**

The Client may terminate this Contract at any time before the expiration of the engagement, by not less than thirty (30) days' written notice to the Contractor, such notice to be given after the occurrence of any of the events specified in paragraphs (i) through (ix) of this Clause:

- i. If the Contractor fails to perform any of its obligations under this Contract satisfactorily and fails to remedy same within fourteen (14) days (or such longer period as the Client may have subsequently approved in writing) after written notification of said failure;
- ii. If the Contractor becomes insolvent or bankrupt or takes advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary.
- iii. Forthwith by the Client if the Contractor ceases or threatens to cease to carry on its business.
- iv. Forthwith by the Client if the Contractor fails to deliver any material part or all of the IT Solution within 4 weeks of the Completion Date according to the agreed Project Schedule or any extension thereof granted by the Client in accordance with the terms of this Contract.
- v. If the Contractor, in the judgment of the Client, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- vi. If the Contractor fails to comply with any final decision reached as a result of arbitration proceedings.
- vii. If the Contractor made or is deemed to have made any representation or warranty pursuant to this Contract which has a material effect on the rights, obligations or interests of the Client and which is proved to have been untrue or incorrect when made or deemed to be made with reference to the facts and circumstances existing at the time.
- viii. If, as a result of Force Majeure, the Contractor is unable to perform a material portion of the Services for a period of not less than thirty (30) days;
- ix. If the Client, in the sole exercise of its discretion, decides to terminate this Contract.

In the event of termination by the Client, the Client shall be entitled to recover from the Contractor the amount of all costs incurred as a direct consequence of the termination. Provided however that the Client shall use all reasonable commercial efforts to mitigate all costs resulting from such termination.

#### **Termination by Contractor**

The Contractor may terminate this Agreement, at any time before the expiration of the engagement, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (i) through (iv) of this Clause:

- i. If the Client fails to pay any money due to the Contractor pursuant to this Contract, within thirty (30) days of receiving written notice from the Contractor that such payment is overdue;
- ii. If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within fourteen (14) days (or such longer period as the Contractor may have subsequently approved in writing) following the receipt by the Client of the Contractor's notice specifying such breach;
- iii. If, as the result of Force Majeure, the Contractor or Sub-Contractor is unable to perform a material portion of the Services for a period of not less than thirty (30) days.
- iv. If the Client fails to comply with any final decision reached as a result of arbitration.

In the case of a termination by the Contractor under Sub-Clauses (i) and (ii), the Contractor shall be entitled:

- (i) To recover from Location any equipment and materials that are the property of the Contractor;
- (ii) To be paid for any work carried out prior to termination; and
- (iii) To recover from the Client all reasonable reimbursable costs incurred prior to the date of termination and all costs incurred as a direct consequence of the termination. Provided however the Contractor shall use all reasonable commercial efforts to mitigate all costs resulting from such termination.

## **9. EXTRA SERVICES**

If the Contractor is of the opinion that any Services the Contractor had been directed to perform are outside the scope of this Contract and constitute extra services ("Extra Services") the Contractor shall promptly notify, in writing, the Client of its opinion. In the event that the Client determines that such Services do constitute Extra Services, it shall provide extra compensation to the Contractor upon a mutually agreeable fair and equitable basis. In the event that the Client and the Contractor do not reach mutual agreement on what constitutes Extra Services or fair and equitable compensation, the provisions of the Arbitration Clause of this Contract shall apply.

## **10. LAW GOVERNING AGREEMENT**

The respective rights, privileges, duties and obligations of the Parties under this Contract shall be determined in accordance with the Laws of the Republic of Trinidad and Tobago.

## **11. SETTLEMENT OF DISPUTES**

### **Amicable Settlement**

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof.

In the event of any dispute between the parties in relation to or arising out of this Contract, either of them shall give notice on the other giving particulars of the dispute and requesting a meeting to attempt reach an amicable resolution of the dispute. The parties shall negotiate in good faith for the resolution of the dispute during a period of seven (7) calendar days from the receipt of such notice ("the negotiating period").

If the parties fail to resolve the dispute between them during the negotiation period, the parties may refer same to a mutually-agreed mediator for non-binding mediation.

If after twenty-eight days from the date of reference of the dispute to mediation or such further period as the parties may agree in writing, the parties fail to resolve the dispute by mediation, or if the parties do not proceed to mediation, either of the parties may submit the dispute to arbitration in accordance with the provisions of the Arbitration Act of the Republic of Trinidad and Tobago Chapter 5:01 or any statutory modification(s) or re-enactment thereof for the time being in force.

## **12. ASSIGNMENT AND SUB-CONTRACTING**

Except as provided in the Proposal, this Contract or any part thereof or any benefit or interest therein or thereunder shall not be assigned by the Contractor without the written consent of the Client nor shall it be sub-contracted either in whole or in part without the written consent of the Client and such consent shall not relieve the Contractor of any liabilities or obligations under the terms of this Contract.

## **13. LIABILITY OF CONTRACTOR**

- a. The Contractor shall be liable to the Client for the performance of the Services in accordance with the provisions of this Contract and for any loss suffered by the Client as a result of a default of the Contractor in such performance.
- b. The Contractor shall indemnify and keep indemnified the Client from and against any and all loss damage or liability suffered by the Client resulting from a breach of this Contract by the Contractor.
- c. Notwithstanding any other provision of this Contract, the entire liability of either party to the other party for damages from any cause whatsoever, and regardless of the form of action or the cause of action, whether in contract or in tort (including negligence), strict liability, breach of a fundamental term, fundamental breach or otherwise, shall not exceed the Contract Price.
- d. In no event shall either party be liable to the other party for special indirect, incidental or consequential damages, including without limitation, loss of profits or revenue, loss of goodwill, cost of capital, howsoever caused, even if such damages are foreseeable or the parties have been advised of the possibility of such damages.

## **14. INTELLECTUAL PROPERTY RIGHTS INDEMNITY**

The Contractor will indemnify the Client and keep the Client full and effectively indemnified on demand against all costs, claims demands, expenses and liabilities of whatsoever nature arising out of or in connection with any claim that the normal use or possession of the IT Solution infringes on the intellectual property rights (including without limitation any patent, copyright, registered design, design right or trademark) of any third party, subject to the following conditions:

- (i) The Client shall promptly notify the Contractor in writing of any allegations of infringement of which it has notice and will not make any admissions without the Contractor's prior written consent;
- (ii) The Client at the Contractor's request and expense shall allow the Contractor to conduct and/or settle all negotiations and litigation resulting from any such claim.

## 15. MODIFICATION

Modification of the terms and conditions of this Contract, including any modification of the Services may only be made by written agreement between the Parties.

## 16. FORCE MAJEURE

a) For the purposes of this Contract "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts, or other industrial action (except where such strikes, lockouts or other industrial action are within the powers of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.

b) No Breach of Contract

The failure of a Party to fulfil any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

c) Measures to be taken

- (a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfil its obligations hereunder with a minimum of delay;
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any event not later than one (1) day following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- (c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

17. This Contract shall not be considered or construed to be a partnership or joint venture, and the Client shall not be liable for any obligations incurred by the Contractor unless specifically authorized in writing.

**THE STANDARD TERMS AND CONDITIONS ARE PROVIDED WITHOUT PREJUDICE TO TERMS AND CONDITIONS OF FINAL CONTRACT TO BE NEGOTIATED BETWEEN THE PARTIES**