Terms of Reference (TOR)

**Provision of Internet Connectivity Services for United Nations Agencies in South Africa**

**Background**

The United Nations (UN) House in Pretoria currently comprises of 11 agencies using independent internet connectivity with different bandwidths allocation. The main purpose of this project is to consolidate internet connectivity for the agencies for better economies of scale and return on investment. All Agencies depend on Internet connectivity to enable access to cloud services and business tools that are hosted in their headquarters mainly New York and Geneva. Reliable internet service is therefore a critical requirement for productivity of staff on 11 UN Agencies in UN House namely UNDP, UNFPA, WHO, FAO, UNAIDS, UNIC, OHCHR, UNEP, UNDSS, UNWOMEN and Africa Forum.

This TOR therefore seeks to find a service provider to provide primary Fibre based internet connectivity with 1:1 ratio,100% uptime to the internet to be used for accessing web-based Enterprise Resource Planning (ERP) databases, cloud-based email services, Unified Communication voice and video traffic as well as general internet browsing.

**Purpose and objectives**

The main purpose of this TOR is to contract a reliable and efficient internet service provider to be used to connect to the following critical services:

* UN’s ERP databases centrally hosted in headquarters
* Cloud hosted email services that is integrated with Unified Communication Skype for Business and CISCO Jabber used for voice and video traffic
* Video conferencing and Teleconferencing services used to communicate with different UN offices across the globe.

**Scope of work**

The ISP is expected to perform the following:

Install and configure Customer Premises Equipment

Provide 24/7 Internet connection with a 100 % availability service level agreement

Provide a subnet of 32 Public IP addresses to be shared by all agencies

Provide a bandwidth monitoring tool

Provide 24/7 customer support services

Provide dedicated Account Manager

**Methodology**

The ISP needs to specify and document the method that they shall use to provide and maintain the internet connection. That is, but not limited to:

* The type of media for the backhaul (Fibre)
* The type of media and capacity for the last mile (Fibre)
* The type of media for the primary backhaul link and failover option.
* The type and scope of the bandwidth monitoring tool
* Proof of international redundancy
* Proof of an existing 24/7 customer support team

**Expected deliverables (Specific Requirements)**

* Means of connectivity: Fibre connectivity to UN House that is located in Pretoria CBD (UNDP, UNFPA, WHO, FAO, UNAIDS, UNIC, OHCHR, UNEP, UNDSS, UNWOMEN and Africa Forum) and possible extend our connection to all other UN Offices (UNFPA JHB, FAO Pretoria CBD, UNHCR Brooklyn, UNICEF Brooklyn, IOM Hartfield, ILO Menlyn and WFP JHB (site survey to be conducted by Bidder)
* Provider should allocate specified bandwidth to UN Agencies from the subscribed amount through bandwidth management (allocation to each Agency to be provided by UN ICT Work Group)
* Internet service should be based on a fixed monthly fee payment plan with no additional payment or limitation by traffic amount and/or time
* No limitations on traffic/ports; bandwidth capacity should be ensured through direct IP connection; no mandatory proxy servers and firewalls
* Speed requirement: asymmetric bandwidth (uplink/downlink) requirement for each agency as reflected in the below table
* No bandwidth cap or quotas on upload or download
* Quality of service (QoS)
* Bidder should state their Internet traffic carriers and how many diverse connections to the Internet exist in their network for resiliency
* Bidder should provide and guarantee 99% Availability and Quality of connection
* Provider should describe their network end-to-end latency and associated ability to support VoIP telephony and video conferencing
* Packet loss should not exceed 1%
* Delivery of an IPv4 and IPv6 ready and compliant connection
* Provision of industrial standard service level agreement (SLA) that defines parameters of rebates for non-performance
* Escalation matrix and procedures for reporting faults should be provided
* Provision of diagnostic reports and updates in case of connection failure
* Bidder must submit and present a detailed work plan specifying installation design, detailed activities, connectivity diagram from end user premise up to the last mile and timelines
* The provider should submit and present detailed architecture diagram of their network indicating how the UN Agencies data links will connect to their Internet hand-off points
* Bidder must submit and present a detailed implementation plan to the UN ICT Work Group entailing all the segments and back-up plan in events of outages
* Provider should serve proactive notice of scheduled downtimes or service interruption not less than 7 days
* Provision of 14 days testing period start of billing shall be based on the date of issuance of Acceptance certificate
* Provider must have standby equipment in accordance to the network design to immediately replace the existing equipment required for the provision of the Internet service once found defective at no cost to the UN Agencies
* Provider must provide all required equipment with no rental charges
* Provider should be able to provide monthly and annual uptime availability report for all member Agencies
* Provider shall respond to request for maintenance at no cost to the UN Agencies
* Provider should be able to provide sufficient number of IP addresses as per the needs of the UN Agencies in South Africa without any additional cost
* Bidder should provide an overview of their technology roadmap and any new services and technologies planned for deployment
* Bidder should provide CV of all technical personnel who will be assigned to this Project
* Provider may be called for a presentation by the UN ICT Work Group (if required)
* Latency from any of the UN Offices to New York/Geneva/Rome shall be no more than 275ms
* All necessary hardware, cabling and software (if required for Internet service) should be provided and set up by the provider
* ISP must be able to manage the Customer Premises Equipment (CPE)
* The provider is required to describe what alternate routing or fallback arrangements for continuity of service they have in place (if any), should their primary link(s) to the Internet backbone become nonoperational
* Traffic management, network monitoring and access to raw log files for each UN agency link
* Technical support with contacts for service faults by telephone and email should be provided. An account manager/focal person should be specified
* The successful provider must have free 7x24x365 coverage for technical assistance and/or helpdesk facilities.
* Under normal circumstances, all problems should be resolved within 1 hours after receipt of notification.
* Repair escalation procedure must be formally documented and have a ticket number. Bidder must state how often a report will be given once a ticket is raised
* The selected provider must provide a web interface facility for UN to retrieve real time and historical information on network performance, utilization and usage analysis
* UN may wish to visit the vendor's Network Operations Centre
* The successful provider must have a physical presence, including availability of technical support, in the country.

**Installation**

The service provider is required to provide a quote for installation of customer premise equipment separately from the monthly recurring costs.

**Capacity of Internet Link**

The service provider is required to quote the monthly recurring costs for each of these bandwidth bands as detailed below:

10Mbps

100 Mbps

150 Mbps

200 Mbps

300 Mbps

500 Mbps

1GBps

All bands at symmetrical and no contention.

The required bandwidth allotment is as below and may change at the time of contracting:

|  |  |  |
| --- | --- | --- |
| **UN Agency** | **Bandwidth requirements** | **Public IPs Required** |
| UNDP | 100Mps | 6 IP |
| UNFPA | 50 MB | 6 IP |
| UNIC | 15Mbps | 6 IP |
| IOM | 100mbps | 6 IP |
| UNHCR | 85 Mbps | 6 IP |
| WFP | 60Mbps | 6 IP |
| UNODC | 10Mbps | 6 IP |
| FAO | 40Mbps | 6 IP |
| ILO | 20Mbps | 6 IP |

The service provider is also required to quote for the monthly recurrent cost for provision of a subnet of 32 Public IP addresses (32 usable IP addresses). Also, provide incremental cost for additional IPs if required.

**System performance**

The service provider must commit to a Service Level Agreement (SLA) that defines the various parts of the service that are intended to ensure that the overall system provides appropriate levels of functionality to adequately support the business applications which the UN intends to deliver through this ISP link. Some key examples are Enterprise Resource Planning systems such as SAP, Oracle, Corporate e-mail services, Intranet and Internet access and Video Conferencing.

**Service Metrics**

The metrics used to measure the performance of the system to determine compliance with agreed SLA levels will be:

Round-Trip Time (RTT), which is defined as the time taken for an IP packet to travel from a customer’s network to the hub and back to the customer’s network.

Packet Loss, which is defined as the failure of one or more transmitted data packets to arrive at their destination.

Committed Information Rate (CIR) is the bandwidth for a circuit or Class of service (CoS) guaranteed by the provider to be available under normal conditions. At any given time, the bandwidth should not fall below this committed figure. It is usually expressed in kilobits per second (kbit/s).

Quality of Service (QoS) methodologies used by ISP.

**Service Availability**

The link shall be considered available if it meets the agreed threshold for all the above service metrics. Therefore, actual downtime is the total time that the outstation has not met one or more of the availability metrics.

The service provider should specify level of percentage availability that they can commit to for each of the four bandwidth bands specified above.

For example, these availabilities measured on a monthly basis, that is 720 hours in a month; 99.5% = 3.6 hours downtime, 99.8% = 1.44 hours downtime.

**Service Monitoring Tool**

The bidder should provide a web-based usage monitoring tool along with login credentials.

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| --- | --- | --- | --- | --- |
| **Site Name** | **Site Address** | **Area** | **Date** | **Time** |
| **UNFPA JHB** | 9 Simba Rd, Sunninghill, Sandton, 2157 | Rivonia | 21 August 2019 | 10h00am |
| **WFP** | 1 EGLIN ROAD, SUNHILL PARK, SUNNINGHILL, JOHANNESBURG | Sunninghill | 21 August 2019 | 11h30 am |
|  |  |  |  |  |
| **UNDP** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **Africa Forum** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNIC** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNFPA** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **FAO Pretoria CBD** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNWOMEN** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNDP OAI** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNDSS** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **UNEP** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
| **WHO** | 351 Francis Baard Street, Pretoria, 0002 | PTA CBD | 22 August 2019 | 10h00 am |
|  |  |  |  |  |
| **UNODC** | 1059 Francis Baard Street, Hatfield, Pretoria | Hatfield | 22 August 2019 | 11h00 am |
|  |  |  |  |  |
| **IOM** | 25 Nicolson St, Bailey`s Muckleneuk, Pretoria, 0181 | Muckleneuk | 22 August 2019 | 11h30 pm |
|  |  |  |  |  |
| **UNHCR Brooklyn** | Waterkloof House, 209 Waterkloof Rd, Brooklyn, Pretoria | Lynwood | 22 August 2019 | 12h00 pm |
| **UNICEF Brooklyn** | 659 Pienaar St, Brooklyn, Pretoria, 0011 | Lynwood | 22 August 2019 | 12h30 pm |
|  |  |  | 22 August 2019 |  |
| **ILO Menlyn** | Crestway Office Park, 20 Hotel St, Persequor, Pretoria, 0020 | Lynwood | 22 August 2019 | 14h00 pm |
|  |  |  |  |  |

**Site Visit (Dates & Times)**

**Note: UNDP, Africa Forum, UNIC, UNFPA, UNWOMEN, UNDP OAI, UNDSS, UNEP, WHO (Agencies) in 351 Francis Baard are utilizing the same link.**