



ITER-India
(Institute For Plasma Research)

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| Title | Internet Bandwidth Service at ITER-India |
| Sub Title | PART-A: Scope of Work, Technical and Management Specifications |

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1 Scope of Work

- a) The assured Internet bandwidth should be functional at our premises through the fiber as last mile connectivity from it's own ISP router via underground fiber connectivity on ring topology (two different paths) and should be owned by the ISP. ISP should give undertaking that no third party last mile media had been used.
- b) The termination of the last mile connection should be made in the Server Room / network rack installed at ITER-India.
- c) If any earth work is involved inside premise of ITER-India it should be coordinated with our site Engineers/Scientific Officers. ITER-India will provide power supply through UPS. The complete installation should be in the existing infrastructure.
- d) The bidder shall not subcontract or permit anyone else the defined SOW.
- e) ISP should have fully resilient and self-healing network architecture on optical fiber medium, for the domestic backbone up to the international gateway in India and also up to the international points of presence.
- f) The ISP must provide comprehensive DDoS attack prevention services, including detection and mitigation capabilities, with guaranteed uptime and rapid response times during incidents, supported by robust monitoring, reporting, and secure integration into existing network infrastructure.
- g) Any hardware that may be needed to render the specified services shall be in the scope of the bidder (ISP).
- h) ISP should provide complete network layout diagram of the proposed connectivity.
- i) ISP should provide the service call escalation procedure with contact details (24/7) via phone and online web portal and should maintain a record of complaint/ downtime statisitcs.
- j) ISP should provide a minimum of 16 IPv4 addresses on this circuit at no extra cost. IPs allotted should not be in any blacklist. The service provider shall arrange additional IPs at no extra cost if required in future.
- k) ISP should provide reverse DNS services.
- l) ISP should be able to start the services with-in 2 months from the date of contract.

2 Technical Specifications

Table 1: Technical Specification

| Sr. No. | Particulars | Requirement | Compliance (YES / NO) | Remarks |
|---------|-------------------------|--|-----------------------|---------|
| 1 | Bandwidth | 250 Mbps (1:1) | | |
| 2 | Uptime of circuit | 99.50% or better | | |
| 3 | Latency within country | Less than 60 milliseconds | | |
| 4 | Latency outside country | Latency between Ahmedabad to European cities (e.g. Paris) ≤ 180 milliseconds and North American cities (e.g. New York) ≤ 180 milliseconds. | | |
| 5 | Packet loss rate | Less than 1.0% | | |

| | | | | |
|---|-----------------------|---|--|--|
| 6 | Network Diagram | ISP should provide complete network layout diagram of this proposed connectivity. | | |
| 7 | Number of public IPv4 | ISP should provide 16 (IPv4) addresses on this circuit. | | |
| 8 | SLA | ISP should provide signed SLA (Service Level Agreement) in compliance with the Tender specifications and terms after the circuit commissioning. | | |
| 9 | Internet port. | The termination should be provided on Gigabit Ethernet. The router shall be provided by ITER-India. | | |

3 Testing & Acceptance after commissioning

- i) ISP has to submit copy of network diagram showing interconnects points, backup links, form the ISP's NOC (Network Operation Centre). The vendor should have own fully functional NOC at 2 different locations for business continuity with 24x7x365 field & online support center.
- ii) Initial testing of the circuit will be for an approximate period of 2 to 7 days to ascertain the performance before switching from existing ISP. After succesful testing of the installed Internet leased line circuit, ITER-India shall issue acceptance note.
- iii) The ISP shall submit. Signed SLA which is in compliance with the Tender specifications and commercial terms.
- iv) The billing cycle shall start from the date of acceptance note and the date of submission of SLA document, which ever is later.

4 Management Specifications

4.1 Project Execution Schedule

- 4.1.1 The Service provider has to succesfully commision Internet services at ITER-India site on or before 2 Months from the date of contract.

4.2 Monitoring, Problem Reporting during execution

- 4.2.1 Complaint registration should be directly with human interaction on designated contacts
- 4.2.2 The technical telephonic support related to services should be available round the clock on 24x7 basis. The technical personnel responsible for the maintenance of bandwidth in all respect must be available through telephone and email for contacting them round the clock. List of such officials must be made available to ITER-India IT Department by the ISP. Any change in such details should also be intimated to ITER-India IT Department with sufficient prior notice.
- 4.2.3 Maximum Time to Respond/ Mean time to resolve (MTTR)
The maximum time to respond for any problems reported on the Internet leased line connection and for local access is as per table below:

| Description | Maximum Time to Respond | Mean Time to Resolve |
|-------------|-------------------------|----------------------|
|-------------|-------------------------|----------------------|



| | | |
|----------------------|------------|---------|
| Internet leased line | 30 minutes | 2 hours |
|----------------------|------------|---------|

- 4.2.4 Details of separate designated personals for each of the issues related with Technical, Billing (Accounts), Sales (Market) with the escalation matrix in that division should be intimated to ITER-India.
- 4.2.5 The vendor has to submit Internet bandwidth performance report using Cacti, MRTG or equivalent software. The vendor shall submit the Internet bandwidth performance report along with quarterly billing. The performance report shall be reviewed and approved by ITER-India before processing the bills. ITER-India on it's own may verify the report using internal monitoring prcoess before giving an approval.
- 4.2.6 The charges for unplanned outages (downtimes) would be calculated on monthly basis and deductions will made on quarterly payments, refer to clause 2.3.5 of ATC.