Internet Society

Network Services Request for Proposal
For
IETF Meetings

1. Purpose

The Internet Society and the IETF Administrative Oversight Committee (IAOC) are seeking vendors to perform network services for Internet Engineering Task Force (IETF) meetings beginning in 2017 for a three-year (3) period, with an opportunity for two (2) one year extensions. Generally, the services would include: storage of IETF-owned equipment between meetings, pre-staging of equipment between meetings; performing a pre-meeting site survey; developing a detailed network design; shipping all needed equipment to and from the meeting; installing all equipment at the meeting site; conducting tests; providing operations, systems management, and user support functions during the meeting; and performing any required remedial work post meeting. The purpose of the RFP is to identify qualified vendors that can deliver the required services.

The Internet Society may enter into Master Service Agreements with more than one qualified vendor. The Master Service Agreements are indefinite delivery, indefinite quantity (IDIQ) contracts. IDIQ contracts are a contracting vehicle that provide an opportunity for delivering services at a future IETF meeting, but are not a guarantee of an engagement for an IETF meeting.

2. Background

The Internet Society is the organizational home of the IETF. The IAOC provides oversight over the administrative processes of the IETF through the IETF Administrative Director (IAD).

The IETF conducts three one-week meetings a year throughout the world, generally, one each in Europe, America, and Asia in March, July and November. Attendance is in the range of 1,000 to 1,400 attendees per meeting. These meetings are in furtherance of the IETF's mission of standards development for the Internet. Attendees include engineers, computer scientists, network operators, and academics; attendees require "always on" connectivity with one or more devices. Meeting venues include hotels with conference space (the preference), as well as standalone conference centers. Meeting space requirements are typically 40,000 square feet, comprised of 8 meeting rooms holding between 100 – 500 people each; one Plenary room holding 1,000 people; a 120-seat terminal room; 8 offices; and a registration area.

The main IETF meetings typically run Monday through Friday from 9:00 AM to 8:00 PM, except Friday when the last session typically ends before 5:00 PM.   Network services are required in certain areas throughout the proceedings from Sunday through Friday afternoon, with exact details varying from site to site. Typically, throughout the

week there are eight simultaneous meeting sessions at any given time. The Plenary sessions are historically conducted on two evenings during the week, but the IETF leadership is experimenting with other schedules. 750 or more people generally attend plenary sessions.

A one-day Code Sprint of about 20 participants and a two-day Hackathon of as many as 150 participants require network services, typically wireless, beginning Saturday before the general meeting. The Sunday before the general meeting has the IETF leadership meeting from 9:00 AM, registration opening at or before Noon, and multiple education sessions scheduled for 1:00 to 5:00 PM. Additionally, There is a Welcome Reception Sunday evening, but network services are not required for that location.

Current practice is to start providing some services on Friday at noon before the main meeting, which may require starting set-up as early as the Tuesday of the week before the meeting.

Generally, the wireless network must service all meeting rooms, terminal room, offices, the registration area, and public spaces. Limited wired services are required in the meeting rooms and registration area, however the terminal room requires upwards of 50 drops. Remote participation services, audio streaming, video streaming, and Jabber conference rooms are provided in addition to the wired and wireless network services for the meeting. These additional services will require network support, but are not to be supplied through this request.

In addition to the meeting rooms, the meeting network must extend to the public spaces, such as restaurants and bars within the facility, as well as the guest rooms of the headquarters hotel. The IETF will have worked with the venue during the contracting phase to ensure this is possible and permitted. The vendor will collaborate with the venue staff to implement a mutually acceptable design and implementation.

The IETF meeting site shall be connected to the Internet through a pair of redundant circuits. These links are often brought in specifically for the event. The circuits are often donated from ISPs/PTTs that are friendly with the IETF, but must be ordered and purchased if no contributions can be arranged. Circuit arrangements are not to be done by the vendor.

The IETF maintains a team of volunteer network engineers and architects, drawn from within the ranks of IETF attendees. This team has been involved in every IETF meeting network for many years, and provides site-selection and other technical guidance to the IAD and IAOC. In addition, this team drives the overall design, specification and configuration of the network, and will work alongside the vendor in all phases of the project. The vendor is expected to work with the volunteers and take advantage of the experience of this team in overall design, and their specific understanding of the needs of the IETF community.

3. Requirements

3.1 Required Network Services

See Exhibit A Statement of Work for a description of the services that are to be performed prior to the meeting, during the meeting, and after the meeting.

3.2 Network Equipment

a. The IETF has equipment available to be used by the vendor, which is subject to change over time. See Exhibit B Equipment List.

b. Vendor is to provide all other networking equipment which may include network servers, routers, switches, access points, cabling, and any equipment required by its staff in fulfilling the requirements of this contract.

c. Vendor is to store the IETF equipment at its facilities and arrange for the shipment of the equipment to and from the venue.

d. Vendor is to participate and facilitate the pre-staging of equipment between meetings. During the period between meetings, the network team will request that some subset of the network equipment to be powered on, integrated, and made remotely accessible. During this time, the Vendor will provide onsite "remote hands" for the network team.

4. Performance

Performance goals of the network are support of up to 3000 simultaneous connected devices with uninterrupted connectivity availability. Network links must all be sized to meet or exceed the bandwidth demands of the users, within the constraints of available technology. Vendor shall provide sufficient performance monitoring data to demonstrate that adequate performance is being delivered during the required periods.

5. Experience

Vendor must be able to demonstrate experience designing, provisioning, and managing rapid deployment wired and wireless networks for technical organizations of similar size, needs and for more than 3000 network devices. References are required.

Vendor must identify and provide resumes for personnel it proposes to perform required services.

6. Additional Information

Proposals shall include information on staffing requirements and options, as well as a detailed explanation of the basis for computing the charges for a meeting. Reasonable and appropriate travel and shipping expenses for Vendor for each meeting and for pre-

meeting on-site inspections will be reimbursed based onVendor submission of an expense report and appropriate receipts to document the expenses. Economy air travel is considered "reasonable".

7. Possible Meetings to be Covered by Agreement

This is an indefinite delivery, indefinite quantity (IDIQ) contract. While the IETF has a meeting calendar through 2022 (see https://www.ietf.org/meeting/upcoming.html), it is uncertain which of these meetings will require Vendor performance as the IETF permits Host companies to perform or arrange for network services for IETF Meetings, and the IETF may have more than one qualified network vendor.

Should a decision be taken to contract for the network services for the IETF meetings, it may include none, one or more meetings in 2017 of:

> a. IETF 98 at the Swissotel, Chicago, IL, USA, March 26-31, 2017;
>
> b. IETF 99 at the Hilton Prague, Prague, Czech Republic, July 16-21, 2017; and
>
> c. IETF 100 at the Raffles Convention Center, Singapore, November 12-17, 2017.

From time to time a Work Order could add meetings to this Master Agreement.

8. Materials to be submitted in response to this RFP

The following materials shall be submitted in this order:

> a. Identity of responsible point of contact with full address, phone, and email.
>
> b. A statement of introduction to the organization providing a recent history of business activities and a statement highlighting relevant expertise and experiences that would qualify the organization to perform this job.
>
> c. Prior experience that demonstrates the ability to perform this job.
>
> d. An explanation of organization experience with high-speed (i.e. 1 Gbit/s and above) carrier interfacing and provisioning of temporary facilities at hotels or convention centers, including experience outside of North America.
>
> e. A formulaic quotation indicating the basis of the charges for services, and the metrics to be used to compute the charges for supporting a single IETF meeting.
>
> f. Provide sample quotations for three meetings:

Assume one each in Yokohama, San Francisco and Berlin.

Assume also that IETF gear will be shipped from and back to Portland Oregon, and that hotel lodging will be $200 per night for each meeting.

Describe the timeline for and how shipping arrangements are made to each of these venues.

TBD pricing is strongly discouraged. (For your information sample agendas for past meetings in the Proceedings directory at http://www.ietf.org/proceedings.html.)

g. Provide an example of a pre-conference site survey report.

h. Provide an example of a mid-session network report, including AP deployment locations, network loading, and monitoring data.

i. Provide detailed and specific information addressing each requirement in Exhibit A, Statement of Work.

j. Provide a List of References for current or prior customers who are willing to be interviewed about their experiences with the organization as a Network Service provider or related service activities.

k. Provide a List of potential staff, and the technical point of contact for the meeting to be used for on-site support functions with a short statement of their technical background and experiences, and their relevant history with the organization.

l. Discuss how you would involve IETF Volunteers in the design, deployment, and operation of network services.

m. Discuss how you will interface with the meeting venue and connectivity providers.

n. Any other materials that will help to demonstrate the organization's technical qualifications and customer-service orientation for this job.

o. Describe in detail any exceptions between your proposal and this RFP.

p. Explain any assumptions made in your proposal.

9. Expected Timeline to Contract Award

Multiple awards may be made. The following is the timeline for the initial award(s):

a. 16 Jan   RFP Issued
b. 23 Jan   Questions Due to tmc@ietf-bids.org
c. 25 Jan   Answers Provided at < https://iaoc.ietf.org/rfps.html >
d. 8 Feb   Proposals Due to tmc@ietf-bids.org
e. 23 Feb   Notification of Selection
f. 27 Feb   Negotiations Begin
g. 6 Mar   Contract Execution

Additional awards may be made on a rolling basis as new proposals are received.

Questions regarding this RFP may be submitted via email to the Technology Management Committee, tmc@ietf-bids.org.

Bidder's contact person(s) should be available for email or telephone appointments to handle questions and/or clarifications of response materials at any time during the review period. Failure to provide timely responses may result in disqualification.

EXHIBIT A

STATEMENT OF WORK

A. Vendor shall perform the following services prior to the contracted meeting:

1. Conduct a technical survey of the meeting site and provide a comprehensive pre-meeting site survey report including external connectivity options, status of installed cable plant and switching, and any potential issues identified during the survey.

2. Design a network configuration for the meeting site including both internal network layout and the external connections to the Internet in accordance with the technical requirements specified in the meeting network requirements document (available at https://iaoc.ietf.org/ietf-network-requirements.html).

3. Provide the IAD or his/her designated representatives with detailed documentation of the proposed network design and layout including topology diagrams and configuration information forty-five (45) days prior to the start of the contracted meeting, twenty-one (21) days in the case of IETF 98.

4. Update the planned network design based on reviews or feedback received from the IETF. This feedback may be either a written analysis of the submitted network design or informal technical discussions. Promptly provide the updated design documentation to the IAD or his/her designated representatives.

5. Provide the IAD with a detailed Network Services Budget based on the final design including estimates of all costs and expenses within 5 business days of the submission of the final design.

6. Work with the headquarters hotel on a transition plan for taking over the meetings, public space, and guest room networks and the port-meeting restoration of the hotel network.

7. Participate in weekly event planning status conference calls beginning 12 weeks prior to the commencement of the meeting, and participate in an evaluation meeting on site at the conclusion of the meeting or within one week thereafter by phone.

8. Participate in bi-weekly technical planning status conference calls beginning 12 weeks prior to the commencement of the meeting.

9. Work with the IETF NOC Volunteers to pursue potential Internet connectivity donations. If donations are not possible, circuit options must be determined, and, in cooperation with the Volunteers and IAD, be ordered.

B. Vendor shall perform the following services during each contracted meeting:

1. Install a wired and wireless attendee network for the contracted meeting in accordance with the requirements specified in the meeting network requirements document (available at https://iaoc.ietf.org/ietf-network-requirements.html).

2. Complete the installation of the network at least the Friday prior to the start of the contracted meeting (with the exception of spaces that are not accessible in advance). The meeting network includes:

   o   Eight or more meeting rooms for simultaneous sessions configured for 100 – 1000 attendees with wireless coverage for all participants and wired Ethernet connections for two working group chairs, one scribe, one secretary, the streaming audio service, and four for Meetecho remote participation for that meeting room.

   o   Wireless coverage for public areas that are expected to become common gathering spaces.

   o   Wireless or wired coverage in IETF offices, small meeting spaces, the IETF registration desk, and other areas as agreed in the approved network design.

   o   Wired Ethernet connectivity and printing services in a central or distributed terminal room.

   o   Internet connectivity for headquarters hotel IETF guest rooms.

3. Work with Internet connection provider to resolve any external connection problems. Verify contracted bandwidth capacity and proper operation of Internet Service Provider (ISP) connection on the Saturday before the start of the contracted meeting.

4.   Install and operate onsite Network Operations Center (NOC) and server facility. Services in this facility include, but are not limited to, DHCPv4, DHCPv6, DNS, NTP, and printer support with IPP, LPR, and Windows printing.

5. Assist in the installation of additional equipment provided by the IETF or an agent of IETF as part of the meeting infrastructure (web servers for IETF meeting support, audio servers, etc.).

6. Provide real-time network management and monitoring tools accessible to the IAD or his/her designated representatives including SNMP read access to all network devices.

7. Monitor and maintain the attendee network for the full duration of the meeting. Provide a network support team available 24/7. This support can be on a 15-minute call back basis between the hours of 8:00 PM and 8:00 AM.

8. Monitor the network for security issues and deploy tools to limit the impact of unintentional or malicious behavior.

9. Ensure that the network does not prohibit end-to-end and external connectivity for all traffic.

10. Provide a user trouble ticket system to track attendee network issues. This trouble ticket system shall be accessible to help desk staff, NOC staff, and designated IAOC representatives if requested.

11. Staff and maintain a User Help Desk between the hours of 8:00 AM and 8:00 PM. This help desk shall provide IT support services for IETF members including support with configuration of the attendees' devices to connect to the wireless and wired networks, Internet access, and printing services.

12. Provide IETF with a mid-session network report including AP deployment locations, network loading, and monitoring data. Provide daily status reports if requested.

13. Provide visibility into the state of the network for attendees (e.g., public graphs of network utilization, number of wireless associations, etc.).

14. Provide sufficient performance monitoring data for proof that adequate performance is being delivered during required operational periods. The performance goals of the network are support of up to 3000 simultaneous connected devices with connectivity availability of at least 99% during the hours when session meetings are in progress.

15. Remove the network at the conclusion of the meeting commencing no earlier than 60 minutes after the last regularly scheduled meeting has adjourned. Return the meeting facility to a satisfactory pre-meeting state.

16. Work with IETF Volunteers as directed in the accomplishment of the foregoing.

C. Vendor shall perform the following services after each contracted meeting:
   1. Provide a detailed network utilization report and any lessons learned

within two weeks of the meeting. This data will be used for planning future meeting network requirements.

D. Year-Round Activities:

1. If selected for the storage of the IETF equipment, Vendor will ship as requested.

2. Vendor is to participate and facilitate the pre-staging of equipment between meetings. During the period between meetings, the network team will request that some subset of the network equipment be powered on, integrated, and made remotely accessible. During this time, the Vendor will provide onsite "remote hands" for the network team.

EXHIBIT B

CURRENT EQUIPMENT LIST

<u>1. Access Points</u>

 1100 Series   2/5/Ng 53

 1200 Series   2/5/Ng 67

 2700 Series   2/5/Ac-W1   95

<u>2. Switches</u>

 3500 Series   8-Port 10

 3500-Cg Series   8-Port 25

 3500 Series   24-Port   12

 3700 Series   24-Port   2

 3700 Series   48-Port   4

 3500-X Series   24-Port   19

 4500-X Series   32-Port   3

<u>3. Routers</u>

 Juniper   Mx-80 2

 A10   1

 Ubiquiti 3

<u>4. Servers</u>

 Dell R710   3

 Cisco C240   3

 Cisco - Wlc 4

<u>5. Laptops</u>

 Acer 28

Dell   6

Other 5

6. Optics

1gb - Glc-T

1gb - Juniper Copper

1gb - Glc-Sx-Mm

1gb - Gbic-Sx

10gb - Cisco Lrm

10gb - Cisco Lr

10gb - Juniper Xfp   2

7. Cases

1650-Series   10

1740-Series   2

370-Series   4