Internet Society

Network Services Request for Proposal
For
IETF Meetings

1. Purpose

The Internet Society and the IETF Administrative Oversight Committee (IAOC) are considering outsourcing the network communications infrastructure for Internet Engineering Task Force (IETF) meetings in 2007 and beyond, and to that end seek a partner to perform the appropriate services. Outsourced services would include: performing a pre-meeting site survey; developing a detailed network design; installing all equipment; conducting tests; and providing operations, systems management; and user support functions during the 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. Attendance is in the range of 1,200 to 1,500 per meeting. These meetings are in furtherance of the IETF's mission of standards development for the Internet. Attendees include engineers, computer scientists, and academicians who are always connected with one or more devices. The meetings are typically conducted in March, July and November.

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 12 meeting rooms holding between 100 – 500; one Plenary room holding 1,000; a 140 seat terminal room; 5 offices and a registration area.

The meetings run Monday through Friday from 9:00 AM to 8:00 PM, except Friday when the last session typically ends at 2:00 PM. The Sunday schedule has registration open at noon and multiple education sessions scheduled for 1:00 to 5:00 PM. There is a Welcome Reception Sunday evening, but network services are not required for that location. Typically throughout the week there are eight simultaneous meeting sessions at any given time.   The Plenary sessions are conducted on Wednesday and Thursday evenings from 5:00 PM to 7:30 PM with an attendance of 750 and up. Network services are required in certain areas throughout the preceding Sunday and the Friday afternoon, with exact details varying from site to site.

Historically, network services have been provided by corporate hosts, who have either delivered the service themselves, with volunteers from the IETF, or outsourced the responsibility to a third party. Results have been mixed, although the most consistently

successful network deployments have occurred when the IETF Volunteers have been engaged with the host from the beginning in all aspects of planning, design, deployment and operations. Changes to the IETF meeting hosting models and a need for greater consistency with the network services have motivated this new approach.

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 150 drops. Audio streaming and Jabber conference rooms are provided in addition to the wired and wireless canopy for the meeting.

3. Requirements

3.1 Required Network Services
See Appendix 1 for detailed network service requirements.

3.2 Network Equipment

a. Vendor is to provide all networking equipment including network servers, routers, hubs, access points, and cabling, and any equipment required by its staff in fulfilling the requirements of this contract.

3.3 Network Support Services

VENDOR is to provide the following network support services:

a. Design the network configuration for each site including both internal network layout and the external connections to the Internet. Include design for all back-up alternatives, as necessary, to provide recovery mechanisms for common mode failures that would prevent network usage.

b. Propose cost-effective Internet Service Provider appropriate to the venue.

c. Provide the CLIENT with a comprehensive pre-meeting site survey report.

d. Provide the CLIENT with the final documentation of the planned network design and layout including topology diagrams and configuration information forty-five (45) days prior to the start of each Meeting.

e. Provide the CLIENT with a detailed Network Services Budget based on the final design including estimates of all costs and expenses.

f. Install and operate onsite Network Operations Center (NOC) and server facility.

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

h. Install wireless and wired network infrastructure as needed at session sites.

i. Monitor and maintain network operation.

j. Provide the CLIENT with a mid-session network report including AP deployment locations, network loading and monitoring data.

k. Work with internet connection provider to resolve any external connection problems. Verify contracted bandwidth capacity and proper operation of internet service provider connection with simulated load testing on the Saturday before the start of each session.

l. Provide user and network support during sessions. The user support "helpdesk" may be limited to the hours of 8:00AM to 8:00PM, but the network itself should be operational 24x7.

m. After close of Meeting, break down the network.

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

4. Performance

Performance goals of the network are support of up to 2000 simultaneous connected devices with connectivity availability of at least 99% during the hours when session meetings are in progress. VENDOR will provide sufficient performance monitor data to prove that adequate performance is being delivered during the required operational periods.

5. Experience

VENDOR must have successful experience designing, provisioning and managing rapid deployment wired and wireless networks for technical organizations of similar size and needs. It is important that the VENDOR has successfully demonstrated the ability to support and manage simultaneous connections for more than 1600 network devices. References required.

6. Additional Information

Proposals should include information on staffing requirements and options, a detailed explanation of the basis for computing the charges for a session. Reasonable and appropriate travel and shipping expenses for VENDOR for each session and for pre-session on-site inspections will be reimbursed based on VENDOR 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

Should a decision be taken to outsource the network communications infrastructure for the Internet Engineering Task Force (IETF) meetings, it may include:

        a. IETF 68 at the Hilton Prague, Prague, Czech Republic, March 18 – 23, 2007

        b. IETF 69 at the Palmer House Hilton, Chicago, IL, USA, July 22 – 27, 2007

        c. IETF 70, at a location TBD, North America, December 2 – 7, 2007.

Future meetings could be added to this Master Agreement from time to time by a mutually signed Supplemental Agreement.

8. Materials to be Submitted in Response to this RFP

The following materials should be submitted in this order:

        a. Identity of responsible point of contact with full address, phone, fax, & email.

        b. A statement of introduction for 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. A resume of any prior experiences that demonstrate the ability to perform this job.

        d. An explanation of organization experience with high speed (i.e. >10 Mb/s) carrier interfacing and provisioning of temporary facilities at hotels or convention centers, including experiences 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 meeting.

        f. Provide quotations for IETF 68 and IETF 69. TBD pricing is strongly discouraged. (See sample agenda at www3.ietf.org/proceedings/06jul/index.html and meeting space plan for IETF 68 attached).

        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 Appendix.

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 event 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 will involve IETF Volunteers in the design, deployment, and operation of network services.

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

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

o. Note any recommendations for improving this RFP.

p. Note any exceptions between your proposal and this RFP.

9. Expected Timeline to Contract Award

The following timeline may lead to contract award:

a. RFP Issued by email: December 22, 2006

b. RFP Response by email due no later than 5 PM EDT on January 5, 2007

c. Response Review Period: January 8 through January 12, 2007

d. Notification of selection: January 15, 2007

e. Contract Negotiation and Agreement: January 15 through January 19, 2007

f. Contract Signed and Accepted: January 22, 2007

Questions regarding this RFP may be submitted via email to the IAD, iad@ietf.org, and technical matters may be passed onto subject experts for response. Telephone conferences, when necessary to discuss logistical matters or technical matters, will be scheduled in advance via email appointments.

Bidder's contact person(s) should be available for emails or telephone appointments scheduled by email 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.

Appendix I

IETF Meeting Network and Terminal Room Requirements

Note: This document was prepared by IETF Volunteers. It reflects the network service requirements and the environment in which those services will be deployed.

1. External Connectivity
    1. The primary and backup links SHOULD have physical and logical path diversity.
    2. IPv6 MUST be provided (possibly via a tunnel) for the primary link.
    3. The primary link MUST support BGP peering, and the backup link SHOULD support BGP peering.
    4. Routing MAY be configured to allow the simultaneous usage of the bandwidth of both the primary and backup links.
    5. Access to research networks, like those that are part of Internet 2, MAY be provided on one of the external links.
    6. AS Numbers MAY be supplied by the provider. If not, the provider MUST use the AS Numbers provided by IETF.
    7. The provider MUST provide at least a /19 of provider independent public IPv4 space or allow the IETF to advertise their own space.
    8. The provider MUST provide at least a /32 of LIR public IPv6 space or allow the IETF to advertise their own space.
    9. The provider MUST provide proper IP address delegation for DNS reverse lookups.

2. Meeting Facility
    1. The facility SHOULD have as much physical separation as possible in the meeting room area to improve the RF environment. In addition, the facility SHOULD avoid using airwalls and other partitions with low RF attenuation in the 2.4Mhz spectrum between meeting rooms.
    2. The facility SHOULD provide a RF environment in all meeting rooms (as identified by the Secretariat), common gathering spaces around the meeting rooms, the registration area, and the terminal room that has a reasonable noise floor in the 2.4Mhz spectrum.
    3. The meeting facility SHOULD have installed network cabling that can be used to deploy the network infrastructure.
    4. The meeting facility SHOULD provide the network installation team with 24 hour access to key telecom spaces. The meeting facility MUST provide the network installation team with access to key telecom spaces from one hour prior to the beginning of sessions to one hour after the end of sessions.
    5. All locations for network gear, with the exception of wireless APs, must be secure.
    6. If wireless will be used for an external link then access to the roof or installed location MUST be provided.
    7. The meeting facility MUST have adequate ventilation to support the equipment rooms and the terminal room.

8. The meeting facility MUST have adequate power available to support the equipment required to support the network and its users.
9. The meeting facility SHOULD have UPS power available to support key network infrastructure components, including at least the core routers, core switches, and hardware to maintain the external links.
10. The meeting facility MUST provide sufficient power in all meeting rooms to handle the projected load from users' laptops, using 100% congruency between the projected number of attendees in each meeting room and the number of laptop users and projecting 70 watts of power usage per laptop.

3. Internal Network
    1. Wired Ethernet connections (network drops) MUST be provided in all the locations used for meeting room for the presenters, scribes and audio distribution for the purposes of audio recording and transmission.
    2. Wired network drops MUST be provided to the registration desk.
    3. The network SHOULD have separate VLANS for wired (primarily terminal room and audio) and wireless traffic.
    4. The network MUST NOT prohibit end-to-end and external connectivity for any traffic (no limiting firewalls or NATs).
    5. Client may require additional servers to be connected to the network onsite.

4. Terminal Room or Equivalent
    1. A terminal room MUST be provided. This terminal room MAY be a single room or distributed sites in reasonable proximity to the meeting rooms.
    2. The terminal room MUST provide Ethernet 10/100 connectivity with RJ-45 connectors (approximately 100-150 drops required). (note: this number should be revised based on terminal room usage statistics)
    3. The terminal room SHOULD provide Four (4) computers for emergency use by attendees (minimum application requirements are web browsing, word processing, presentation production, and printing capability).
    4. The terminal room SHOULD have 24 hour access. This access SHOULD include security, but it MAY not include a 24 hour staffed help desk.
    5. The IETF users MUST have access to the terminal room from one hour prior to the beginning of sessions to one hour after the end of sessions.
    6. The terminal room MUST provide at least two network connected enterprise class printers. These printers SHOULD have duplex capability.
    7. A color printer MUST be provided.
    8. The terminal room MUST have a manned help desk from one hour prior to the beginning of sessions to one hour after the end of sessions. The help desk provides technical assistance to attendees, provides one potential interface to the trouble ticket system (see next requirement), and maintains the printers.
    9. The network supplier SHOULD provide a trouble ticket system to track attendee network issues. This trouble ticket system SHOULD be accessible to the help desk staff in addition to NOC staff.
    10. Power strips MUST be provided in the terminal room.
    11. Power strips MAY be provided in common gathering areas (desirable).

12. The terminal room MUST have physical security (guards) during operating hours.

5. Wireless
    1. The network MUST provide 802.11b coverage in all meeting rooms (as identified by the Secretariat), common gathering spaces around the meeting rooms, the registration area, and the terminal room.
    2. The network SHOULD provide 802.11b coverage in additional common spaces including hotel lobby, hotel bar, hotel restaurant, most commonly used hallways, etc.
    3. The network SHOULD provide 802.11g in all the spaces identified above.
    4. The network SHOULD provide 802.11a coverage in as many of the above identified spaces as possible focusing on the spaces with the highest user density first (e.g. plenary meeting room).
    5. The network design MUST anticipate 100% congruency between the projected number of attendees in each meeting room and the number of wireless network users (historical utilization in excess of 1000 simultaneous wireless users has been observed during a plenary session).
    6. The network SHOULD provide separate SSIDs for 802.11b and 802.11a networks.
    7. The network MUST provide fully open (unsecured) wireless access.
    8. The network MAY provide additional secured (WEP, 802.11i, WPA) wireless access.

6. Services
    1. The network MUST provide redundant DHCPv4 servers.
    2. The network SHOULD provide DHCPv6 service.
    3. The network MUST provide local redundant DNS servers.
    4. The network MAY provide NTP.
    5. Printers MUST support IPP and SHOULD support LPR and Windows printing.
    6. The network MUST provide a SMTP server providing relay services for the IETF network.
    7. The network SHOULD provide a full on-site mirror of the RFC and I-D directories.

7. Network Monitoring
    1. The network MUST provide sufficient monitoring to ensure adequate network availability and to detect faults before they impact the user experience.
    2. The network SHOULD provide some visibility into the state of the network for attendees (e.g. public graphs of network utilization, number of wireless associations, etc.).
    3. The network MUST collect data for future use in scaling IETF meeting network requirements. Minimum required metrics include bandwidth utilization (average and peak) for each external connection and user density per AP and radio.
    4. The provider SHOULD provide SNMP read-only access to the network devices to individuals as identified by the Secretariat for network management and planning purposes.

8. Miscellaneous Requirements

1. The network provider SHOULD maintain spares of critical network components on-site.

2. Attendees SHOULD be notified of power connector requirements well in advance of the meeting via both the IETF meeting web page and the IETF-announce mailing list.

3. A document MUST be provided to attendees detailing on-site network configuration information, including wireless configuration details, services available (e.g. printing, SMTP), instructions on how to report network issues (e.g. trouble ticket system interface instructions), etc. Initial versions of this information SHOULD be provided in advance of the meeting.

4. The network provider SHOULD NOT view the IETF network as an experimental facility at the risk of impacting the IETF attendee experience. (Do not experiment with his/her favorite pet technology.)

5. The network provider SHOULD have attended at least one prior IETF to observe the IETF network deployment and operation.

6. The network provider MAY supply the IETF network design to an IETF technical review team for comments.

7. The Vendor SHALL provide a network utilization report within two weeks of the meeting.

Title: 68th IETF

#	ROOM	Capacity		Wed 3/14/2007	Thur 3/15/2007	Fri 3/16/2007	Sat 3/17/2007	Sun 3/18/2007	Mon 3/19/2007	Tues 3/20/2007	Wed 3/21/2007	Thurs 3/22/2007	Fri 3/23/2007	#
1	Karlin II	50 theater	Breakout 1											1
2	Karlin I	75 theater	Breakout 2				set-up							2
3	Madrid/Vienna/Roma	100 theater	Breakout 3											3
4	Athens/Barcelona/Berlin	100 theater	Breakout 4											4
5	Congress I	300 theater	Breakout 5											5
6	Congress III	300 theater	Breakout 6											6
7	Grand Ballroom	500 theater	Breakout 7											7
8	Congress II	750 theater	Breakout 8											8
9	Congress I - III	900 theater	Plenary											9
10	Paris	15 conf.	NSS Office		set-up	set-up	set-up							10
11	Rokuska	20 conf.	IAB Mtg Rm											11
12	Hercovka	20 conf	IESG Mtg Rm											12
13	Karlin III	20 u-shaped	IAB Bkft											13
14	Sofia	10 conf.												14
15	London	10 conf.			set-up	set-up	set-up							15
16	Istanbul	10 conf.												16
17	Brussels	10 conf.												17
18	Amsterdam	10 conf.			set-up	set-up	set-up							18
19	Smetana	8 boardroom												19
20	Mozart	8 boardroom												20
21	Dvorak	8 boardroom												21
22	LL, Mezzanine, L Foyers		Breaks											22
23	Congress Hall Foyer	per drawing	Registration											23
24	Cloakrooms	per drawing	IETF Reg Office	set-up	set-up	set-up	set-up							24
25	Grand Ballroom/Foyer		Reception											25
26	Budapest	10 conf.	NomCom											26
27	Dublin	10 conf.	IAD/IAOC		set-up	set-up	set-up							27
28	Verdi	10 conf.	Host Office											28
29	Chez Louis	per drawing	NOC Room	set-up	set-up	set-up	set-up							29
30	Venice	10 conf.	Exec. Dir. Off.		set-up	set-up	set-up							30
31	Tyrolka	40 u-shaped	IESG/IAB Bkft				set-up							31
32	Palmovka		Storage											32
33	Chez Louis	per drawing	Computer Rm	set-up	set-up	set-up	set-up							33

Updated: 11/3/2006