



HOSTING REQUIREMENTS FOR *NIGERIAN NETWORK OPERATORS* (ngNOG) WORKSHOP AND MEETINGS

The Nigerian Network Operators Group (ngNOG) is a forum for the exchange of technical information, and aims to promote discussion of implementation issues that require community cooperation. ngNOG (<http://forum.org.ng/ngnog/about>) is modelled after the annual African Network Operators Group (AfNOG) Workshop and Meeting (<http://www.afnog.org>), but continues to be customized to meet Nigeria's needs. The goal of the event is to facilitate exchange and cooperation among, and provide intensive hands-on training & update to Academic Network Operators and Service Providers, Internet Service Providers (ISPs), and other Information and Communication Technology stakeholders in Nigeria with a view to (among others) ensure the stability of services to end users.

ngNOG, the pioneer country NOG in Africa, has continued to evolve to meet requirements of Nigerian operators. The preparatory workshop featured only the System Administration track. At the inaugural workshop in 2006, the three AfNOG workshop tracks (System Admin, Internet Services, and Internet Infrastructure) were offered. In 2007, the tracks on Energy and on Policy were added to the offerings. A sixth track (for programmers and content developers) will be introduced from 2010.

The annual ngNOG event is a full week of intensive activity that is usually held in November. It includes five (5) days of workshop in six (6) concurrent tracks, one (1) day of tutorials, one (1) day of networking meetings and tours, and one (1) day of the interactive meetings and the annual ngNOG Conference on ICTs and Education. The workshop venue is required to be available a week before the workshop (referred to as "setup week"), during which instructors, event facilitators, administrators, network engineers and technicians lay cables, install equipment, and otherwise prepare for the workshop.

Summaries of earlier ngNOG events hosted by the University of Ibadan, the University of Jos, Bayero University Kano, University of Lagos and University of Ilorin are available at <http://forum.org.ng/pre-ngnog/report>, <http://forum.org.ng/NgNOG/2006Report>, and <http://forum.org.ng/ngnog/2007Report>, <http://forum.org.ng/ngnog/2008Report>, <http://forum.org.ng/ngNOG/2009Report> respectively.

For the host, an ngNOG event includes a full week of actual site-preparation and set-up, a second full week for the event itself, followed by a few days for tear-down. Additional or side-meetings may hold during the 3rd week, so intending hosts are advised to prepare for three (3) full weeks of continued activity. The final selection of a host is preceded by two site-inspection visits of two (2) to three (3) days each, a few months apart and before the event.

Institutions and/or organizations wishing to host ngNOG workshop and meetings are invited to propose how they will meet the requirements described in this document and in the associated ngNOG Budget Template. Hosting proposals should be mailed to info@forum.org.ng and should clearly state the hosting-year in view.



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1. OVERVIEW OF SPACE REQUIREMENTS FOR THE EVENT

The following office, classroom and conference spaces will be required. Later sections of this document give more detailed information about each of the rooms.

Office:

One large office for the ngNOG secretariat should be made available for two weeks, that is, from the beginning of setup week to the end of the entire event.

NOC:

One small room for the network operations centre should be available from the beginning of setup week to the end of the entire event.

Classrooms:

One medium to large classroom is required per track. Classrooms are required during setup and the workshop week. (It may be acceptable if some of the classrooms are not available for the first few days of setup week.) The classrooms may be re-used for meetings and/or tutorials on the 6th day of the event, but are not needed during the conference on the last (i.e. 7th) day.

Conference hall and syndicate rooms:

A large conference room that can accommodate 200 or more people theatre style is required, and there should be at least three (3) meeting rooms as part of the facility or close by for syndicate meetings. The conference hall and syndicate rooms should be available no later than the evening before the meetings and conference begins. There should be adequate space, either at the back of the room/hall or near by to serve tea/coffee breaks.

Terminal room:

It would be useful to have additional space available for a "terminal room", where several computers would be set up to allow workshop students and conference attendees to access the Internet. This should be available during the entire meetings and conference period.

2. SHARED INFRASTRUCTURE REQUIREMENTS

The following infrastructure is shared between all the workshop tracks, and is also used during the conference.

2.1 OFFICE (SECRETARIAT)

The ngNOG secretariat will require a large office, with the following features and facilities:

1. desk space(s) and chairs for at least 8 people;
2. 8 student interns to assist in the Secretariat
3. 3 desktop computers for office applications and desk top publishing
4. Plenty of space for visitors, office equipment, and storage for items to be handed out to participants (such as books, T-shirts, timetables, workshop registration and other conference packs).
5. a heavy duty coloured printer that can print workshop and tutorial handouts, conference proceedings and certificates on card board paper
6. Copying facilities: Access to a high-capacity copying machine, or a nearby copy shop that will be open at night. Collating, stapling and duplex printing facilities would be very useful; the most useful of these is collating.
7. the secretariat should be reasonably close to all the classrooms and conference rooms
8. connectivity to the internet

2.2 NETWORK OPERATIONS CENTRE (NOC)

The NOC is a small room that will be the hub of the workshop and conference network. (In the event that the institution is not able to provide a separate room to isolate network equipment for the NOC, the existing network infrastructure of the institution will be used to create an independent network for the event). It should have the following features and facilities:

1. Must be close to the classrooms and the conference room
2. No smaller than 2m by 2m
3. Multiple electrical outlets
4. Stable power supply, with provision for backup generator/UPS
5. Space for several computers and specialised items of electronic equipment to be installed
6. A flat working surface for 2 people
7. Air conditioning is highly desirable in view of the amount of equipment that will be used in the NOC
8. There must be provision for network cables to connect the NOC to other rooms (see section on network cabling);
9. The Internet connection should preferably be terminated in the NOC.



2.3 INTERNET CONNECTIVITY¹

1. A minimum of 512kbps of bandwidth to the Internet is required though institutions are encouraged to provide more where possible.
2. The Internet connection may be required not to be subjected to any kind of fire walling or address translation (NAT or private address space);
3. The workshop may require an IP address allocation of at least a "/25" in size.
4. The connectivity and address space should be available from the beginning of setup week.

2.4 NETWORK CABLING

The NOC, the office, the classrooms, and the terminal room (if there is one), will need to be connected together in a computer network. Ideally, the conference room will also be included in the network. Wireless access can be provided at the venue of the conference if cabling the room will not be possible. It may be possible to do this using network cables that are already installed. If this is unavailable, ngNOG will assist the host to install cables during setup week.

3. WORKSHOP REQUIREMENTS

The workshop is subdivided into six (6) tracks. Each track has approximately 30 delegates/students and 4 instructors. The tracks are as follows;

- a. System Administration (Sys Admin);
- b. Internet Services (IS);
- c. Internet Infrastructure (II);
- d. Energy Planning and Appropriate Power Technology (APT);
- e. Strategic Policy and Management (SPM); and
- f. Applications and Content Development/ Management (ACD).

¹ Applicants may want to discuss Internet Connectivity requirements with their ISP. Where required and in some cases, ngNOG workshop instructors can also assist hosts, for example to complete the necessary AfriNIC application forms for IP address allocation.

3.1 CLASSROOMS/LABS

Each workshop track requires one medium to large room with the following characteristics. The six (6) classrooms should be available for setup at least four (4) days before the commencement of the workshop, five (5) days of workshop, and one (1) day of tutorials.

- a) floor space of approximately 8 x 12 (100 square meters - this is a minimum, larger rooms will do just as well);
- b) multiple electrical outlets (extension cords) distributed throughout the room, preferably on separate circuits;
- c) overhead lighting, preferably fluorescent tubes;
- d) stable power supply, with provision for backup generator/UPS;
- e) where possible, air conditioning is highly desirable in view of the amount of equipment and the number of people in each classroom;
- f) Tables: Each classroom requires 14 or 15 tables for equipment, students, and instructors. 10 of the tables will be used for students (with two or three students per table depending on the size), and the remaining tables will be used for instructors and additional equipment. Each table should be a minimum of 2 metres long and 0.8 metres wide, so that it can provide space for two people, one or two PCs (depending on the track), and several other items of equipment. The tables should be stable enough to hold this expensive equipment safely.
- g) Enough chairs for all the students, instructors, and a few visitors.

3.2 EQUIPMENT

High end routing and switching equipment will normally be provided by ngNOG, but the host will be required to make provision for the following:

Number of PCs Required

A total of at least 140 desktop PCs are required to host an ngNOG event, as per the following guidelines:

- a) **System Administration (Sys Admin) (33):** one PC per student (30 students); two PCs for instructors and one PC for presentations/demos.
- b) **Internet Services (IS) (33):** one PC per student (30 students); two PCs for instructors and one PC for presentations/demos.
- c) **Internet Infrastructure (II) (33):** one PC for per student (30 students); two PCs for instructors and one PC for presentations/demos.
- d) **Energy Planning and Appropriate Power Technology (APT) (3):** two PCs for instructors and one PC for presentations/demos.
- e) **Strategic Policy and Management (SPM) (3):** two PCs for instructors and one PC for presentations/demos.
- f) **Applications and content Development/ Management (ACD) (33) :** one PC per student (30 students);two PC for instructors and one PC for Presentations/demos
- g) **Workshop Infrastructure (NOC etc)** requires two (2) PCs, and the Secretariat requires three (3) PCs.

As equipment failures do happen, provision should also be made for a few spares. .

Minimum Specifications of PCs and Accessories Required

Each computer should have the following minimum specifications:

1. CPU: x86 \geq 1Ghz;
2. Memory: \geq 1GB;
3. Hard disk: \geq 40 GB;
4. Network interface card: 10baseT or 100baseT Ethernet or fast Ethernet;
5. Serial port: at least one working serial port.
6. At least 10 additional network interface cards should be available, so that we can configure a few of the PCs to have two or three network interfaces.
7. It's highly desirable for all the PCs to have identical hardware (main board, disk drive, video adapter, network adapter). If this cannot be achieved, then having identical hardware on a track by track basis is acceptable.
8. The PCs do not need to have any operating system or other software pre-installed. Instructors will re-format the disks and install whatever operating system and software they require for the workshop. The PC supplier should be prepared to re-format and re-install their own preferred operating system after the end of the event.
9. The PC hardware works well with the operating systems chosen by the instructors. The Unix operating system; FreeBSD will be used.
10. PCs should have been tested well in advance;
11. Power extension adapters (power strips/extension cords) with correct local power plugs. We need about one power strip (with 4 to 5 outlets) per one or two PCs; It is advisable to have at least 10 spare extension cords available for contingencies.
12. Sufficient power cords for all the PCs and monitors.
13. Category-5 UTP Ethernet Cable: 1 to 3 boxes (where each box contains approximately 300 metres or 1000 feet of cable). The exact amount depends on the distances between rooms, the availability of pre-installed cables between the rooms, and the availability of ready-made cables in shorter lengths.
14. RJ-45 male plugs, for making network cables: Quantity 100 to 300, depending on the availability of ready-made cables.
15. Tie wraps (also known as cable ties): Large size (30 cm) quantity 100; Medium size (15 cm) quantity 200; Small size (10 cm) quantity 200.
16. Gaffer tape: Approximately one large roll of 5cm-wide gaffer tape per track, for neatly securing cables to the floor. At least one additional roll of gaffer tape if we will have to install temporary network cables to link the various rooms to each other. (In other words, a total of 5 to 10 rolls.) Note that genuine gaffer tape does not leave any sticky residue when it is removed after a temporary installation. Duct tape must not be substituted under any circumstances.
17. It is desirable for all the equipment to be available from the start of setup week. If that is not possible, then at least the following must be available no later than 4 days before the beginning of setup week:
 - a. 20 PCs
 - b. 5 additional network interface cards
 - c. 1 printer
 - d. Fire extinguisher
 - e. all the cable ties
 - f. 10 power strips (with 4 or 5 outlets per strip)

- g. 1 box of category-5 UTP cable (300 metres)
- h. 50 RJ-45 male plugs, and
- i. 1 roll of gaffer tape.

3.3 AUDIO/VISUAL

Each of the six (6) tracks will require the following audio/visual equipment:

1. SVGA Projector, for projecting computer output onto a screen;
2. Small public address system with support for at least 2 audio inputs and 4-6 speakers (depends on size/shape of room);
3. Lapel or cordless microphone;
4. 6' x 6' projection screen with stand;
5. Medium size to large white board with stand and white board markers;
6. Flip chart with stand , duster and markers.

4. TUTORIAL REQUIREMENTS

In most cases, the equipment and facilities used for the workshop can be re-used for the meetings and tutorials that take place on the day after the workshop ends.

5. ngNOG MEETINGS/CONFERENCE REQUIREMENTS

The conference will require a hall and 3 meeting rooms with sufficient seating capacity and audio-visual equipment. In most cases, the classrooms used for the workshop cannot be re-used as the conference meeting room, but some of the audio-visual equipment may be re-used.

5.1 CONFERENCE HALL & MEETING ROOMS

1. Conference hall should comfortably seat 200 or more people, and the 3 syndicate rooms should each seat at least 30 people;
2. Public Address system for the hall;
3. Entry, exits and access pathways;
4. Ideally air-conditioned, especially in hot weather;
5. It would be nice if the conference room and meeting rooms had plenty of electrical outlets, because many of the conference attendees will want to connect their laptop computers;
6. If possible, we would like to provide wireless Internet coverage in the conference room. For this to be possible, the conference room will also have to be included in the network cabling that connects the NOC, office and classrooms.
7. A few tables should be placed at the back of the hall for people with laptops to use.

5.2 AUDIO/VISUAL:

1. SVGA Projector, for projecting computer output onto a screen;
2. Public address system of sufficient power to cover entire hall;
3. Lapel or cordless microphone (one for speaker);
4. Cordless microphone (2-3 for audience);
5. 6' x 6' projection screen with stand.

6. TERMINAL ROOM

If a terminal room is provided only after the workshop ends (that is, only during the tutorials and conference), then the space and PCs that were used for one of the workshop classrooms can be re-used as the terminal room. The terminal room requires:

1. 10 to 20 PCs with Internet connectivity;
2. 1 or 2 PostScript printers;
3. several tables and chairs at which laptop users can obtain electrical power connections and Ethernet network connections;
4. at least one person on duty at all times the room is open, to assist users and to keep an eye on the equipment.

7. SECURITY

All rooms (i.e. classrooms/labs, NOC and Office) must be lockable. Each room should have two keys available for use by instructors or ngNOG staff. Keys must be available from the beginning of setup week. In view of the value of the specialised equipment, it is desirable for the area to be patrolled by security guards.

8. ACCOMMODATION AND MEALS

It is preferred that all participants, organiser and instructors be accommodated in the same location and also that the classroom facilities for the workshop and tutorials, and the meeting room for the conference, be provided at the same location. The host is required to provide transportation from the hotel or accommodation to the venue of the workshop and meeting every morning and evening throughout the duration of the event.

Hotel or hostel capacity must be sufficient to accommodate workshop participants, instructors and staff (about 200 people), and it would be nice if there is sufficient accommodation for an additional 100 conference-only delegates during the last two days (i.e. Friday and Saturday) of the event.

Instructors and ngNOG staff will have single rooms;
Workshop participants will share rooms (2 per room); the shared rooms must have separate beds. Additional information should be provided about other hotels, accommodation options for meetings and conference participants. The local host is encouraged to liaise with identified hotels etc to provide affordable rates for participants considering the number and period of stay.

All meals will be served in the restaurant of the hotel (where the workshop and conference rooms are located near the hotel). In the event that the venue for accommodation is a considerable distance from the workshop and conference rooms, a large room or hall should be provided preferably within walking distance to the workshop/conference rooms where tea/coffee breaks and lunch will be served. The host will be required to liaise with the Organizing Committee to make arrangements for efficient and reliable caterers to serve separate meals without interrupting the event at the workshop/conference venue. The host is also encouraged to liaise with members of previous ngNOG host Committees for more information about hosting the event. These details will be provided by ngNOG on request.

9. TRAVEL

The host institution (s) will from time to time be required to provide local coordination for travel arrangements for participants. This may involve:

- a. Providing information regarding travel regulations to the host town, such as health restrictions, recommended mode of transportation (this should include air, road, rail etc for local and where applicable international travel) information.
- b. Coordinating reservations and where applicable, booking of air tickets for ngNOG organisers, instructors and participants, and Conference-only delegates.

10. SOCIAL EVENINGS

The local hosting institution (s) should also be prepared to organize and sponsor a guided tour (of the host-institution and/or host-city) and/or an out-of-venue social activity on Friday (i.e. the day before the Conference) and at least one social evening during the event, and to assist the organizers to arrange a second social evening during the event. The social evenings can be either the opening or closing dinner or a cocktail event with some entertainment preferably hosted at a local place of interest (logistics considered).

Host institution(s) are also expected to arrange a guided tour of their ICT and related infrastructure facilities.

11. LOCAL LOGISTICS

The host institution (s) should also be prepared to:

- a. Form a Local Organizing Committee (LOC) which will be chaired by a senior staff with the mandate to make decisions regarding the event and assisted by motivated staff who can be reached by email and ready to be part of the ngNOG community. Due to the amount of work involved in being a LOC member, it may be difficult for members of the host LOC to attend the workshop tracks.
- b. Visit hotels or conference centres in the selected town/city well in advance of the conference and recommend a meeting location to ngNOG.
- c. ngNOG staff will then consult or visit the short listed hotels or other identified venues and make the final site selection.



- d. Provide logistical support during the event, including rapporteurs for the SPM track and all the meetings, and staff and student interns (motivated individuals who are enthusiastic about the NOG event) for the registration desk, meeting room setup, interaction with hotel staff, etc.
- e. Handle Internet connectivity to the hotel or conference centre.
- f. Handle all terminal room operations (if there is a terminal room); obtain equipment, set up and tear down of the room, and have staff available to answer organisers and participants' questions. Local hosts are encouraged to use the hosting opportunity to procure and own equipment that, after all, are needed by their institutions. However, hosts may rent the needed workstations and routers, or borrow them from a neighbouring institution or other organisation. Manufacturers, suppliers and vendors may also help defray costs of equipment and installation of Ethernet cabling, power strips, and ensuring that the room has adequate power.

12. FINANCIALS

The local host is encouraged to provide financial support towards the costs of running the ngNOG workshop. This can be provided in cash or in kind. Besides direct financial assistance, the local host may be expected to provide information and budgetary estimates for the following items and others as listed in the ngNOG budget template;

- a. Accommodation and facilities;
- b. Catering
- c. Tour and Social evenings;
- d. Travel and visas (where applicable);
- e. Local transportation; shuttle hire, vehicle rentals, fuel expenses, etc.
- f. Printing of letter-headed papers, T-shirts, caps, pens, etc.

13. PUBLICITY

The local host is also encouraged to provide local publicity for the event and to coordinate among others (please note that all costs associated with local publicity will be borne by the host):

- a. Invitation of VIPs, such as Government officers and other Dignitaries, and media practitioners to cover the event;
- b. Press conferences;
- c. Press Releases;
- d. Media Kits;
- e. Advertising in local newspapers and magazines;
- f. Preparation of banners and posters;

14. COMMERCIAL INTERESTS

ngNOG workshops and meetings are non-commercial, technical, education, collaboration and community-oriented activities. It is therefore expected that the local host will refrain from using the hosting opportunity for commercial purposes. This also applies to supporting/sponsoring vendors.

Any use of the event for advertising or marketing by sponsors must be approved in advance by the ngNOG Organizing Committee, and must not detract from the non-commercial atmosphere. For example, having a sponsor's logo on pens or writing pads could be permitted, while having an exhibition of a sponsor's posters or equipment would not be permitted.



15. FINAL SELECTION OF HOST

- a. The final selection of the host institution (s)/ organisation will be made by the ngNOG Organizing Committee and ngNOG Convenors, whose decision is final.
- b. ngNOG convenors reserve the right to withdraw hosting rights if a selected host seems unable to meet the above hosting requirements following a second site-inspection visit.
- c. Preference will be given to institutions/ organizations where the impact of a local ngNOG workshop would be greatest.
- d. Preference will also be given to regions other than the immediately previous hosting location.
- e. Strong preference will be given to institutions/ organizations that:
 - are members of the Nigeria ICT Forum with a good record of meeting membership obligations, and those that work closely with, or are strongly recommended by such members and/or their industry partners;
 - have a .ng identity, and are at least able to communicate with ngNOG Organizers via an e-mail address in the domain;
 - are familiar with AfNOG and/or ngNOG workshop requirements (through having participated in previous AfNOG or ngNOG workshop events)
 - have organized an institutional and/or regional NOG event
 - are able to demonstrate spirit and ability to collaborate and partner with other institutions, organizations, agencies, ISPs and/or firms by involving them in hosting and organizing the event.
 - are ready to provide and share information about their networks and policies as material for the events;
 - are ready to procure or refund ngNOG for expensive equipment required for practical work that may, after all, be required for use by their own institution after the workshop; and
 - are ready to ensure that utilities at venue and accommodation are functional.

16. MEMORANDUM OF UNDERSTANDING

It is expected that after assessment of the hosting proposal by the ngNOG Organizing Committee, there will be signing of a Memorandum of Understanding between the Nigeria ICT Forum of Partnership Institutions and the hosting organisations/institution(s) which clearly outlines the roles and responsibilities of each party and to which each party would be held responsible.