Detailed Technical Requirements for LACNIC Events*

Generally speaking, an Internet connection of at least 500 Mbps will be required. Each room requires the number of wireless network stations needed to accommodate the number of expected participants. The Internet link to be used by event participants must be separate from the Internet access link used by the hotel or event venue. The wireless network normally used by the hotel must be disabled in all areas covered by the wireless network set up for the event.

1.   Connectivity

- Symmetrical Internet connection of at least 500 Mbps supporting IPv4 and native IPv6, as well as a backup link of similar characteristics from a different provider.
- Network access equipment (router) and a contingency plan in case this equipment fails.
- Wireless coverage supporting at least WIFI 802.11b/g/n technology is required for all areas to be used for the event. Access points (APs) must be capable of operating on both 2.4 GHz and 5 GHz. The use of wireless controllers is specifically required.
    - We recommend that you first check with the manufacturer or supplier of the APs and controllers regarding their ability to support IPv6.
- Computer Room wiring: Network wiring must be laid from the computer room to the wireless APs and terminals located in the various rooms.
- Wired connectivity is required from the Internet link connection point to the wireless APs and server room.
- Providing connectivity to the hotel rooms used by event participants with the same SSIDs announced in the areas where the event is taking place and through the same link hired for the conference rooms will be considered a plus.
- Public addressing (both IPv4 and IPv6) is required for the entire network. Network translation technologies (NAT) and packet filtering are not allowed.
- Transit for LACNIC's IP prefixes (IPv4 and IPv6) via BGP.
    - LACNIC has IPv4 and IPv6 prefixes, as well as an Autonomous System Number:
        - IPv4: 45.6.248.0/21 and 200.0.86.0/23
        - IPv6: 2001:13c7:7003::/48
        - ASN: 28002
    - Announcements must be made from the event network, not anchored to the provider's network. The origin AS must be 28002.

2.   Infrastructure

- At least one main Ethernet switch with support for:
    - VLANs
    - Layer 2 protection technologies both for IPv4 and IPv6 (DHCP snooping, RA Guard, etc.)
    - SNMP
    - Support for PoE is preferred
    - Switch port configured with SPAN for traffic monitoring

- If only one of each type of equipment is provided, a contingency plan must be specified to be used in the event of its failure
- Gigabit Ethernet ports are preferred

- Two servers with the following minimum requirements:
    - Quad Core, at least 8GB RAM, 2GHZ CPU. At least 2 gigabit Ethernet ports.
    - Some of the services LACNIC will install on these servers include DNS, Netflow collector, SNMP collector, RAMOND.
    - These servers must be online at least two weeks prior to the event to allow for remote configuration of the necessary services.

- Router (two preferred, one to be kept as backup)
    - Full IPv6 support
    - BGP Routing Protocols (OSPF if more than one router is to be part of the network)
    - Netflow
    - SNMP
    - ACLs
    - VRRP (if more than one router is part of the network)
    - If only one of each type of equipment is provided, a contingency plan must be specified to be used in the event of its failure.

- Wireless access points
    - 802.11a/b/g/n Wi-Fi technology
    - Equipment must support 2.4 GHz and 5 GHz
    - Wireless equipment must support broadcasting at least 4 SSIDs (Service Set Identifiers).
    - Equipment must be 100% IPv6 compatible
    - VLAN to SSID mapping
    - Support for at least 40 concurrent, **intensive** broadband users per AP
    - Wireless controller and network devices with SNMP
    - Remote access for management purposes
      For the main room, high-density APs with all the features listed above will be required to support 600 concurrent users making intensive use of the network within a reduced space (deploy as few APs as possible, with at least 80 users/device)

- Wireless access point controllers
    - IPv6 support

- Uninterruptible power supply (UPS)
    - Requirements include a UPS properly sized to support potential power outages affecting the equipment installed for the event. This equipment includes the two servers, routers, switches, access points and any additional devices required for the normal provision of network services.

3.   Services

- Physical, on-site installation of :
    - Router(s)
    - Switch(es)
    - WLC
    - Wiring
    - Wireless access points
- Physical installation of servers, their operating system (Linux Ubuntu Server 16.04 LTS) and connectivity
- Permanent contact with the connectivity providers' technical support staff
- A technical point-of-contact must be available on-site to provide infrastructure support. Their contact information (telephone, cell phone, email) must also be provided.
- Prior configuration of remote access to network devices (servers, router, etc.)

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