



# TECHNICAL REGULATIONS

Any entity wishing to join ANIX (the Albanian Neutral Internet Exchange) must agree to the following Technical Regulations.

## 1 ABOUT ANIX

1. ANIX (the Albanian Neutral Internet Exchange) is managed by RASH (“Rrjeti Akademik Shqiptar”), the Albanian Academic Network.
2. The ANIX switching equipment is housed in RASH Data Centre.

## 2 RULES FOR ADMISSION

1. Any legally recognised entity may enter into this agreement.
2. This agreement is between the entity wishing to connect to ANIX (“Connecting Entity”) and the Academic Network of Albania (“RASH”).
3. The Connecting Entity must:
  - a. Possess its own Autonomous System Number and classes of public networks obtained from a Regional Internet Registry (RIR);
  - b. Submit the Connection Request to RASH;
  - c. Submit any documents required by RASH aimed to certify that the Connecting Entity has the necessary requirements to connect to ANIX.

## 3 GENERAL RULES

1. The costs of interconnection between the location of ANIX Internet Exchange Point and the location of the Connecting Entity are the complete responsibility of the Connecting Entity.
2. The activity of the Connecting Entity shall not be in conflict with the laws in force.
3. The Connecting Entity must communicate and keep up-to-date the following contact points (name, role, e-mail address, telephone number):
  - a. A legal/contractual contact point, with an e-mail address that RASH will use for official communications;
  - b. An administrative contact point, for administrative and invoicing issues;
  - c. A technical contact point, for technical issues;



- d. A NOC (Network Operations Centre), with a telephone number for emergencies.
4. The devices owned by the Connecting Entity housed in the RASH data centre must be covered by an insurance policy against theft, fire and damages/injuries to third parties.
5. The Connecting Entity agrees to pay to RASH the fees corresponding to the service requested. The fees are published on the ANIX website; if the fees are updated, RASH will send an official communication at least two months before the new fees enter into force.

## 4 TECHNICAL RULES

### 4.1 ANIX SERVICES

The following services are offered at ANIX:

- Connection to the main peering VLAN of the ANIX switching infrastructure;
- Dedicated VLANs on ANIX switching infrastructure.

### 4.2 TECHNICAL RULES FOR INSTALLATION

1. The devices of the Connecting Entity dedicated to peering services shall operate at Level 3 of the ISO/OSI stack.
2. The device(s) of the Connecting Entity can be installed in RASH Data Centre, in the area reserved for peering services. The device(s) must be mountable in a 19" rack and powered with 220V AC.
3. If the Connecting Entity wishes to remotely connect to ANIX, the connections between the ANIX switching infrastructure and the device of the Connecting Entity shall be carried out by means of Level 2 dedicated point-to-point circuits. The Connecting Entity shall specify the make and model of said device, as well as the MAC address of the interface that will be used to connect to the peering LAN.
4. The ports available for connection with the switching infrastructure are Ethernet 10/100/1000 Mbps (RJ45 connectors), Gigabit Ethernet 1000Base LX (SC connectors), and 10 Gigabit Ethernet (XENPAK SR connectors).
5. Any variations in the type of media available for connection with the switching infrastructure shall be communicated by RASH technical staff to all Connecting Entities present.
6. Any equipment necessary for the installation of the device(s) belonging to the Connecting Entity at the location of the ANIX exchange point must be provided by the Connecting Entity.
7. The Connecting Entity shall install its device(s) in the rack in the position indicated by RASH technical staff.
8. The installation of the device(s) shall take place in compliance with technical specifications determined by RASH.
9. The only authorized connections from the devices of the Connecting Entity located in the peering services area are WAN connections and connections with the switching infrastructure.



10. The personnel of the Connecting Entity is not allowed to intervene on the switching infrastructure or any router of other Connecting Entities present in the areas dedicated to peering services.

#### 4.3 OPERATING RULES OF THE PUBLIC PEERING SERVICE

1. The switching infrastructure of the ANIX Internet Exchange Point is made by devices operating at Level 2 of the ISO/OSI stack.
2. The RASH technical staff will assign to the Connecting Entity one IP address for each interface connected to the switching platform. The Connecting Entity shall assign that IP address to the interface.
3. The Connecting Entities undertake to establish peering agreements using the BGPv4 and/or BGPv4+ routing protocol.
4. Every Connecting Entity shall establish a peering session with the AS of RASH.
5. The Connecting Entities shall announce the IP address of their own router at ANIX as next-hop of the networks that they announce.
6. The Connecting Entities shall announce their networks in the best possible way. Specifically, they undertake to announce their own networks using an aggregate modality (route summarisation) and to announce the lowest possible amount of specific networks.
7. The Connecting Entities shall keep their own peering agreements up to date with regard to the IRR (Internet Routing Registry) of the RIR (Regional Internet Registry) of their region in accordance with the specifications set forth in documents RFC-2622 (RPSL) and RFC-4012 (RPSLNg), and they shall endeavour to keep their entries up to date in PeeringDB.
8. The Connecting Entities undertake to control the stability of the announcements of their own networks (route-flap) and to maintain it at quality levels considered acceptable by the Internet community and defined in document ripe-580.
9. The Connecting Entities undertake to take the utmost care so as to not cause any damage to other Connecting Entity due to their own traffic or that of their customers.
10. A single MAC address shall correspond to each port of the ANIX switching infrastructure used by the Connecting Entity. This MAC address must always be associated with the IP address assigned for peering.
11. The Connecting Entities shall deactivate the following functions on their devices:
  - a. Proxy-ARP
  - b. ICMP redirect
  - c. IP direct broadcast
  - d. IEEE 802.1D Spanning tree
  - e. All protocols that generate broadcast toward the switching infrastructure of the exchange point, with the sole exception of the ARP protocol and of all other protocols necessary for the correct functioning of the exchange point.



12. The Connecting Entities shall not collect data in transit on the exchange point.

#### 4.4 OPERATING RULES REGARDING SERVICES ON DEDICATED VLAN

1. The Connecting Entities have the possibility of requesting dedicated VLANs configured on the switching infrastructure of the exchange point.
2. A single MAC address shall correspond to each gateway on dedicated VLAN used by the Connecting Entity.

#### 5 DUTIES OF THE TECHNICAL STAFF

1. The RASH technical staff undertakes to run a website where technical information will be displayed:
  - a. In the public part of the site:
    - i. graphs of the total traffic exchanged through the switching infrastructure of the exchange point;
    - ii. the upstream capacity and the port connection of each Connecting Entity.
  - b. In a part of the site with access restricted to Connecting Entities:
    - i. graphs of the traffic of each Connecting Entity at the switching infrastructure of the exchange point;
    - ii. a list of all the technical contact points of Connecting Entities.
2. The technical staff has the task of keeping the switching infrastructure of the exchange point as efficient as possible.
3. The technical staff has the task of keeping the infrastructure for wiring/cables and support to the interconnection and peering services as efficient as possible.
4. The technical staff has the duty to intervene in case of malfunctioning of the switching infrastructure of the exchange point.
5. The technical staff has the duty to intervene in case of defective functioning, deterioration of performance/services or general inefficiency of the wiring/cable infrastructures that support the peering and interconnection services.
6. The technical staff has the task of attaching and keeping up to date the labels/tags pertaining to the connection cables between the peering devices and the switching infrastructure.
7. The technical staff has the task of attaching and keeping up to date the labels/tags pertaining to the patch cords installed in the meet-me area.
8. The technical staff has the obligation to inform the technical contact points of the Connecting Entities present at ANIX about routine maintenance work. Notice shall be given by e-mail at least 7 days in advance.



## 6 VIOLATION OF THESE REGULATIONS

1. The technical staff of ANIX reserves the right to ask Connecting Entities for evidence of compliance with these regulations.
2. In the event of violation of these regulations by a Connecting Entity, ANIX will send formal reprimands to the technical contacts. Should the situation persist or recur, ANIX reserves the right to decide whether to take further measures.
3. In the event of serious violation of these regulations, ANIX reserves the right to act in the way it deems most appropriate to rectify matters.