

BIX Charter

Rules of operation and use of the BIX

Last modified: on the meeting of the ISZT BIX committee as of 21. 04. 2009

Enters into force on 15. May 2009

1. Major purpose of the BIX (**B**udapest **I**nternet **E**xchange) is to prevent the Hungarian and regional Internet traffic between the different service providers from loading *international* connections of the Internet service providers (a connection is regarded as *international*, if via this connection one of the root name servers of the Internet is accessible from Hungary) and to provide platform for exchanging traffic between different Internet service providers.
2. Structure of the BIX
 - a) The BIX is a network system distributed geographically, which consists of *BIX service access points* and data transmission connections connecting them. The BIX service access points are operated and the data transmission connections between these service access points are maintained by the *BIX service providers*. Users of the BIX – the *BIX members* – can connect their own networks on the BIX service access points. A BIX service access point can only be one with a primary connection of at least 1 Gbps (full duplex) rate and an auxiliary direct level 2 connection with at least 1 Gbps (full duplex) capacity to the BIX service access point at Budapest, XIII. Victor Hugo u. 18-22., or in the case of the auxiliary connection to any other BIX service access point.
 - b) A BIX member: an Internet service provider connected to the BIX with its own network via a BIX service access point (using the proper device or data transmission connection). A BIX member can only be an Internet service provider, which actually renders Internet access services to its users and accepts and adheres to the rules of the operation and use of the BIX defined hereunder. Regarding the connection to the BIX, BIX members may freely select their BIX service provider or service access points.
 - c) *BIX service provider*: a BIX member operating a BIX service access point, where it is entitled to provide BIX access to the BIX members, in accordance with the BIX Code. A BIX service provider can be a service provider, which maintains connections as described in Clause a) at its own cost, while accepting and adhering to the rules of operation and use of the BIX described hereunder. Any BIX service provider is entitled to operate only one BIX service access point, the site of which can be changed only upon the approval of the BIX committee. For the BIX service itself every BIX service provider is entitled to collect the unified fee defined by the BIX Committee from the BIX members connected via its service access point. Establishment of new BIX service access points can be decided by the regular meeting of the BIX Committee with the majority of votes, by approving the connection topology.
 - d) *BIX Committee*: body within the framework of ISzT (Internet Szolgáltatók Tanácsa - Council of Hungarian Internet Service Providers). The Committee sets the rules of using the BIX and supervises its operation. Members of the BIX Committee are those ISzT members who are also BIX members at the same time. Each member of the BIX Committee has one vote. The chairman of the BIX Committee is elected by the General Assembly of ISzT every year. It is the duty of the chairman to coordinate the activities of the BIX Committee, to convene Committee meetings and to administer membership application procedures. All BIX members are entitled to join the open meetings of the BIX Committee.

3. Conditions of the right for BIX membership

a) Any service provider is entitled to BIX membership, if

- holds a Local Internet Registry (LIR) status at RIPE (Réseaux IP Européens) and
- registered with the National Communications Authority as "Internet access provider 64.20.18.0".

Service providers conforming to these requirements are eligible for a simplified membership application procedure. The requirements must be met continuously. Eligibility is checked at half year intervals and membership is cancelled in case of not conforming to the requirements.

- b) A provider is eligible for BIX membership if the application – justified by special reasons – is approved by the BIX Committee during the General Assembly of ISzT by majority vote. The decision of the special judgment details the duration and the conditions of the special membership.
- c) A provider can also apply for BIX membership if it's intent is to exchange traffic with only a select list of members. Such applications are judged by the BIX Committee during a simplified procedure.

4. If a BIX member – as set forth in Clauses 3.a) or 3.b) – is invited by another BIX member to exchange the domestic bilateral traffic mutually free of charge, then the invited BIX member must accept this invitation. These members are allowed to pay the category B service fee because the BIX Committee would like to encourage unlimited and mutually free of charge exchange of the domestic traffic. Otherwise, the conditions of exchanging bilateral traffic are subject to bilateral agreements. This rule does not apply to members being in direct private peering connection, which means that a BIX member is not obliged to exchange traffic with a customer of a BIX member via the BIX.

5. Physical connection to the BIX

- a) On the BIX the member can be connected to one or more ports of an Ethernet switch (Gigabit Ethernet or 10 Gigabit Ethernet) with a router or a data transmission device establishing a direct level 2 (data connection level) connection. On one port of the BIX switch only one MAC address is allowed.

There are several connection types to establish a new BIX connection as follows:

- 100 Mbps, Gigabit Ethernet port with SFP SX/LX optics
- 100 Mbps, Gigabit Ethernet port with SFP ZX optics
- 1 Gbps, Gigabit Ethernet port with SFP SX/LX optics
- 1 Gbps, Gigabit Ethernet port with SFP ZX optics
- 10 Gbps, 10GE port with XFP SR/LR optics
- 10 Gbps, 10GE port with XFP ER optics

- b) BIX members must not use the BIX to transmit their internal traffic. A member can be connected to the BIX via more than one port and/or more than one BIX service access point, multipoint connection may serve load balancing or backup purposes.
- c) The BIX itself is a geographically distributed system. The distributed system consists of BIX service access points, connected to each other with direct, backup level 2 (data connection level) connection. Additional BIX service providers can connect to ports of the Ethernet switches with their required data transmission devices on the service access point of the distributed BIX system at Victor Hugo street. The BIX service provider is obliged to render the BIX service to the members on the interfaces of Gigabit Ethernet or 10 Gigabit Ethernet

switch(es) located at the BIX service access point. The optical transceiver at the BIX site belonging to the selected connection type is included in the BIX service. The BIX member is obliged – at its own expense – to ensure that its connecting interface is compatible with the selected connection type.

Members have to use optical cable connection to the BIX service access point, copper cable connections are not allowed.

6. Only BGP4 external routing protocol can be used on the BIX. The possession of a valid, registered AS number by the service provider and the Internet reachability of networks that are going to be announced are prerequisites of BIX membership.
7. IP addresses used on the BIX shall be allocated from the independent address block dedicated to this purpose. Addresses are allocated by an operator appointed by ISzT.
8. There are route servers in operation on the BIX, based on the information located in the RIPE objects (route, aut-num).
9. The BIX member is obliged to maintain the RIPE object entries according to the actual situation.
10. The BIX member is entitled to announce on the BIX only networks, that fall
 - within its own address range,
 - within the address range of its customers,
 - within the address range of its backup partners.

The announcements must be aligned with the RIPE entries.

11. The BIX member may forward to the BIX only IP packages with source addresses, which can also be announced by that member. In order to ensure this, the BIX member is obliged to apply properly set filters in its router.
12. Traffic of the Ethernet switches operated at the BIX service access points is measured and supervised by ISzT, the traffic information is made available to the public on the web-site of ISzT. BIX service providers are obliged to provide the representative of the ISzT with the access rights in the Ethernet switches necessary to perform traffic measurements.
13. ISzT expects from a BIX service provider the adherence to the following operational requirements:
 - a) ISzT and the BIX service provider enter into an agreement, which sets out general rules of the use and operation of the BIX,
 - b) The BIX member and the BIX service provider enter into an operational agreement with each other, which sets out details and charges of the operation,
 - c) A BIX service provider can connect to the BIX only members, the right for BIX membership of which is confirmed approved by ISzT,
 - d) Task of the BIX service provider:
 - Accommodation and uninterrupted operation of equipment directly connected to the BIX, and insurance of the normal temperature of the environment,
 - Operation of the BIX Ethernet switch,

- e) The BIX service provider commits to provide any kind of assistance and contribution – within reasonable frames of the technical possibilities – to the BIX member in order to implement the access to the equipment installed on the BIX using the telecommunications solution owned by or available to the BIX member, including access to the building (cable, antenna) and the establishment of the admission within the building (the related expenses must be compensated by the member).
14. The right for the BIX membership and to render BIX service (or losing such rights) is investigated and determined by ISzT BIX Committee. It is also investigated and identified by the Committee, which conditions are met by the member or the BIX service provider, and whether they adhere to the rules. An appeal lies against the resolution of the Committee submitted to the ISzT General Assembly, which investigates righteousness of the resolution.
15. Applications for the BIX membership, or the BIX service provision can be submitted in writing to the ISzT (posted or electronically, using the bix@iszt.hu e-mail address). All certifications and information making possible the resolution of the Committee regarding the rights of the applicant must be enclosed. The application – if conditions of the simplified procedure are met – is approved by the BIX Committee on-line: the application is forwarded to the BIX members for comments or questions within a week. If there are no questions or the answers are satisfactory, the Chairman of the BIX Committee notifies the applicant and the prospective member can proceed by signing the BIX Service Contract. Applications not eligible for the simplified procedure will be discussed on the next General Assembly of ISzT.
16. In case if – after multiple notices – the BIX member or the BIX service provider does not adhere to the rules set forth here, then the ISzT BIX Committee conducts an investigation and after considering all circumstances (does the breach of the rules occur by the negligence of the BIX member or the BIX service provider, or it is due to external reasons; is the breach a first instance or it occurs repeatedly, etc.) the Board of ISzT may bind the BIX member to pay an extra charge (between HUF 100 thousand and 500 thousand not including VAT). In very serious case the right for the BIX membership must be called off.
17. Access of BIX members causing continued operational disturbances or failures of the BIX operation can be restricted by the BIX service provider without prior notice. The BIX service provider must notify the restricted BIX members on the fact of and reasons for the restriction within 24 hours.
18. BIX members are obliged to:
- have a public e-mail address published on the BIX web site to receive error notifications from the BIX members and BIX service provider(s). The BIX member is obliged to reply the error notifications sent to its e-mail address within 24 hours.
 - ensure an emergency telephone number to their BIX service provider, available 24 hours a day
19. The Acceptable Use Policy document titled “Guidelines of the network usage supported by ISZT” (<http://www.iszt.hu/iszt/egyebek/aup.html>) should be considered as the appendix of the present Charter.
20. Temporary rules:
- a) Peering connections established on the BIX are regarded by the BIX members as valid traffic exchanges based on mutual agreement.

b) The BIX Committee sets the fee for the BIX service ports as of May 15st 2009 as follows:

Connection Type	One-time fee	Monthly fee Category A	Monthly fee Category B
100 Mbps SFP SX/LX	165,000.- Ft	110,000.- Ft	55,000.- Ft
100 Mbps SFP ZX	685,000.- Ft	110,000.- Ft	55,000.- Ft
1 Gbps SFP SX/LX	330,000.- Ft	220,000.- Ft	110,000.- Ft
1 Gbps SFP ZX	850,000.- Ft	220,000.- Ft	110,000.- Ft
10 Gbps XFP SR/LR	1,500,000.- Ft	600,000.- Ft	300,000.- Ft
10 Gbps XFP ER	2,300,000.- Ft	600,000.- Ft	300,000.- Ft

Requirements	Category A	Category B
Peering	bilateral	mandatory and free of charge for domestic traffic (according to section 4)
Membership application procedure	simplified procedure (see section 3/c)	RIPE LIR status, registration with the Authority -> simplified procedure (see section 3/a) all others -> individual decision of ISzT General Assembly (see section 3/b)

The amounts indicated above in case of using multiple ports have to be aggregated accordingly. The monthly fee of a port used only in standby mode is 50% of the fee shown in the table above. In case of a new port installation the one-time fee of that connection type have to be paid. In case of an upgrade the difference between the one-time fee of the new and old connection type have to be paid as a one-time fee.

The amounts indicated above do not include the VAT. "Ft" means HUF (Hungarian Forint).

- c) For the time being, the BIX Committee authorizes the following service providers to render the BIX service: Antenna Hungária, GTS Datamet, Invitel. BIX service provider of the BIX service access point in Victor Hugo street is the Council of Hungarian Internet Providers Association.
- d) In case of Hungarnet – considering the special situation of the academic network – the BIX Committee sets a special fee: 10Gbps port can be used for the price of one 1Gbps port.