

MT-IX Policy (rules)

Conditions of MT-IX operation and use

1. Definitions

- 1.1. The MT-IX - Telecom Internet Exchange: Data exchange center operated by Magyar Telekom
- 1.2. MT-IX member: the business enterprise which is connected to MT-IX with its private network at the MT-IX service point (by proper device or data transmission connection). MT-IX member may only be a business entity that accepts and adheres to the present rules of the use and operation of MT-IX and concluded an effective service contract with the MT-IX service provider for the MT-IX service.
- 1.3. MT-IX service provider: Magyar Telekom Telecommunications Public Limited Company is a joint stock company established for an unlimited period. Headquarter based at: 1097 Budapest, Könyves Kálmán körút 36. Company registration number: 01-10-041928. The MT-IX provider performs the operation of the MT-IX service point.
- 1.4. MT-IX service points are located at:
 - Magyar Telekom room, in the office building Victor Hugo - 1132 Budapest, Victor Hugo u. 18-22.,
 - T-Systems Cloud & DataCenter (Dataplex) – 1087 Budapest, Asztalos Sándor u. 13.
- 1.5. MT-IX infrastructure: the basic infrastructure operated by Magyar Telekom at the MT-IX service points on which physical connections from MT-IX members end. This infrastructure has the following characteristics:
 - UPS , redundant power supply,
 - cooling adequate to the cast dissipation,
 - system -level monitoring,
 - remote in-band management,
 - remote out-of-band management,
- 1.6. MT-IX service : Internet traffic exchange provided for MT-IX members over MT-IX infrastructure
- 1.7. MT-IX service contract: service agreement concluded between the MT-IX provider and MT-IX member for the MT-IX service, to which respective applicable MT-IX policy is an integral annex.
- 1.8. Client: Service Provider initiating conclusion of MT-IX service agreement
- 1.9. MT-IX VLAN: Layer2 level logical segment provided on the MT-IX infrastructure, which provides traffic exchange of the MT-IX members with each other.
- 1.10. MT VLAN: logical segment provided on the MT-IX infrastructure to ensure mutual direct traffic exchange of the MT-IX members and Magyar Telekom Plc. This means separate L2 network segments per each member.
- 1.11. Service delivery point: position on the optical distribution frame (ODF) panel, assigned to a specific member, connected to the MT-IX infrastructure located in the room of Magyar Telekom.

2. The structure of MT-IX

The MT-IX center is one service point, which is located under address 1132 Budapest, Victor Hugo u. 18-22., Budapest (Magyar Telekom room, office building Victor Hugo), the first street (Victor Hugo office building, Magyar Telekom room). The MT-IX members can connect to the MT-IX

service point by their primary and secondary physical links here. The MT-IX service point is operated by the MT-IX provider.

3. Terms of MT-IX connecting, conclusion of the MT-IX service contract

- 3.1. MT-IX member may be a provider, which has its own public AS ID and IP address range, and the associated objects in the RIPE database (aut-num, inetnum, inet6num, route , route6). In the case if the above conditions are not fulfilled no contracting is possible, and in case of change to any of the above conditions the MT-IX provider has the right to terminate the contract.
- 3.2. The legal relationship between the MT-IX member wanting to use the MT-IX service and the MT-IX provider is created by concluding the MT-IX service agreement that contract sets out the rights and obligations of both parties. Under the MT-IX service contract, the MT-IX service is available for the MT-IX member during the term of the MT-IX service contract, under the terms of the MT-IX service agreement.
- 3.3. The MT-IX provider and the MT-IX member conclude a contract for the MT-IX service with definite or indefinite duration.
- 3.4. The Contracting Parties shall be bound in writing regarding the MT-IX service contract with the respective applicable MT-IX Policy being inseparable annex to the MT-IX service contract. By signing the contract the MT-IX member accepts and be bound to comply to the rules set out in the policy.
- 3.5. Client may submit order for the use of the MT-IX service in writing or electronically to any of the following contacts of the MT-IX provider:
 - e-mail address: mt-ix@telekom.hu
 - postal address: 1519 Budapest, Pf. 434
- 3.6. The order must contain the following information:
 - a) client (orderer) official company name;
 - b) denotation of requested MT-IX service (s) and selected option (s)
 - 1GE SM primary optical link pcs
 - 10GE SM primary optical link pcs
 - 1GE SM backup optical link pcs
 - 10GE SM backup optical link pcs
 - MT VLAN (Magyar Telekom Nyrt. mutual , direct traffic exchange)
 - c) technical parameters of the client (AS number, IP prefixes registered at RIPE, which will be published on MT-IX)
 - d) contact for access : to serve the notification/providing the orderer with information in connection with the conclusion of the contract
 - e) Contractor 's name and contact information, which will provision the link necessary to connect to the MT-IX for the MT-IX member.

Condition of using the MT-IX service is that the Client fulfills the terms/conditions set out in section 3.1, and in addition it must have the devices necessary to connect to the MT-IX service. In order to use the MT-IX Service the Client/MT-IX Member must provide the good working condition of the equipment necessary to use the MT-IX service, or make these devices suitable for the use of the MT-IX service during the term of the MT-IX service contract.
- 3.7. Assessment of the order/request
 - From side of the MT-IX member the presentation of a certified copy of firm register or company certificate regarding a state not older than 30 days or a certificate of incorporation,

constitution memorandum, other registration deed or a certified copy of the original of the court order of registration printed, countersigned by an authorized person entitled for representation, and a notarized specimen signature of the person entitled to represent the organization or an equivalent specimen signature countersigned by an attorney is required. In case of a private entrepreneur it is required to present the entrepreneur's business license. In the event that a person not entitled to representation will act, in addition to the listed documents confirming the authorization for firm representation a valid and effective letter of attorney given by the person entitled for representation is required, which certifies that the claimant may sign the contract on behalf of the company. The MT-IX Provider is entitled to carry out auditing/checking of the client who wants to conclude the contract in respect of his/her authorization/entitlement for contracting and representing and to request the documents and the client is obliged to provide the data. In case of denying the presentation of above documents the MT-IX provider may refuse the request for contracting.

3.8. Adoption of the order (request)

Upon receipt of the order the MT-IX Provider immediately performs its assessments necessary to ensure that the order can be fulfilled. In case of accepting the order the MT-IX provider personally hands over or sends (by post) the MT-IX service contract signed by him to the MT-IX member. If the adoption of the order shall require the personal coordination with the MT-IX member, it shall be immediately indicated to the MT-IX member. In the case of orders received by the MT-IX provider in writing the MT-IX service contract signed by the MT-IX provider is created at the time it is sent to the MT-IX member.

3.9. Subcontractors: To install an MT-IX service the MT-IX provider may engage a subcontractor, as well. By signing the MT-IX service contract the MT-IX member agrees that the MT-IX provider may transfer the data of the MT-IX member necessary for building the access and installing other network devices (eg. Ethernet card, adapter, router, etc.) for the service requested by the MT-IX member to the subcontractors of the MT-IX provider to carry out the job.

4. Obligations of the MT-IX provider

- 4.1. The providing accommodation of and uninterruptible power supply for the MT-IX infrastructure equipments, ensuring normal ambient temperature.
- 4.2. The operation of the MT-IX Ethernet switch (-es)
- 4.3. The operation of the MT-IX route servers
- 4.4. The MT-IX service provider agrees to provide all kind of help, contribution within the limits of technical possibilities in order to enable the MT-IX member to realize data transmission access for its equipment connecting to the MT-IX infrastructure by the telecommunications solution available to the MT-IX member. This includes the enabling of the installation of an in-door feeding route (costs shall be borne by the MT-IX member)
- 4.5. The MT-IX member performs the notification/report on the perceived failure to the following addresses, phone numbers and e- mail address provided by the MT-IX service provider:
 - telephone: +36-80-466-111;
 - e-mail: noc.kiemelt@telekom.huFault report has to be sent by e-mail as well. In the subject of e-mail should be included the followings: circuit ID, short description of fault
- 4.5.1. The MT-IX provider undertakes the following SLA for the MT-IX service.

- 4.5.2. The specific target value of the service-quality committed by the Service Provider (annual availability - SLA) is 99.95 % on annual level. The assessment period of target performance is one given calendar year.
- 4.5.3. In order to ensure proper service quality the Provider is required to perform quality assessment-related measurements and checks on a regular (annual) basis. For to define provider SLA the MT-IX provider tests accessibility of the MT-IX infrastructure elements by ICMP from measurement probes placed at network points independent from MT-IX provider's infrastructure (RS, MT-IX Ethernet switches)
- 4.5.4. The Provider operates a comprehensive quality management system and has the ISO 9001 quality management system certification. The system provides systematic measurement, documentation, and archiving of the quality features through regulated/controlled processes. The ongoing maintenance and compliance of the quality management system is verified and certified by the accredited independent organization SGS UK Ltd System & Services Certification with specified frequency.
- 4.5.5. By its certified quality management system the Provider provides to the National Media and Communications Authority the data necessary for the market supervision of the Service.

5. The MT-IX website address

Web site address: www.telekom.hu/MT-IX

6. Physical connection to the MT-IX infrastructure, Conditions to connect MT-IX member devices

- 6.1. On the MT-IX infrastructure the MT-IX member may have several active and backup connections at the same time for the Ethernet switches operated by the MT-IX. The latter is intended solely for backup purposes. The speed of the ports can be 1 Gigabit Ethernet or 10 Gigabit Ethernet. The MT-IX member can connect only by router to MT-IX. At one port at a time, only one MAC address is allowed. The MT-IX member is prohibited to use the MT-IX infrastructure to transmit its own internal traffic.
- 6.2. For the MT-IX service, the MT-IX member has the choice among the following available connection types:
 - 1 Gbps, Gigabit Ethernet port, Optical LR connection
 - 10 Gbps, 10GE port, Optical LR connection
- 6.3. The MT-IX side optical module required for the selected connection type is part of the MT-IX service that is provided by MT-IX to the MT-IX member. The operation and error handling of this is responsibility of the MT-IX provider. The MT-IX member must ensure at its own expense, that its own connecting interface is compatible with the selected connection type. The MT-IX member is entitled to connect to the MT-IX service point by optical connection. The MT-IX provider is not liable for any damage caused in the MT-IX member equipment.
- 6.4. The MT-IX Provider is not obliged to make the MT-IX member's equipment suitable for the use of the MT-IX service.

7. Logical connection to the MT-IX

- 7.1. The MT-IX members can connect to the MT-IX infrastructure exclusively by using external BGP routing protocol. Condition for connection is the existence of an own registered AS number

and RIPE entries and the accessibility of the network domains to be advertised from the Internet.

7.2. The MT-IX member may only advertise/publish the networks on the MT-IX infrastructure which fall within:

- its own/private address range,
- the address range of its members,
- the address range of its partners.

The ads must be in accordance with the RIPE inetnum and route objects entries. The route servers operating on MT-IX verify and filter the prefixes advertised by the MT-IX members on the basis of information in the RIPE objects (inetnum, aut-num). The MT-IX member is required to maintain the RIPE object entries. The MT-IX service provider is not liable for losses, errors caused by improper maintenance.

7.3. Magyar Telekom Plc is not present in the MT-IX VLAN as MT-IX provider. The mutual , direct traffic exchange with Magyar Telekom Plc is realized in a dedicated MT VLAN per member.

7.4. The Magyar Telekom Plc. reserves the right to initiate establishing of a direct port connection with the member instead of MT VLAN in case the member's traffic towards Magyar Telekom is exceeding 1Gbps.

8. IP ranges used to connect to MT-IX

For the MT-IX members the IP addresses assigned to connect to MT-IX will be allocated from the provider dependent domain. The assignment of the addresses is responsibility of the MT-IX provider operating MT-IX.

9. The terms of sale/marketing over MT-IX

The MT-IX member may only let out IP packets with such source addresses towards MT-IX, which networks are advertised using BGP (Section 7.2). The MT-IX provider reserves the right to filter out traffics coming with improper source address. In order to ensure this he is required to use filters in its router set accordingly.

10. Measuring MT-IX traffic/turnover

The traffic of Ethernet switches active at the MT-IX service points are measured and monitored by the MT-IX provider.

11. Limitation/blocking of the MT-IX service

11.1. The MT-IX provider is entitled to limit the use of the MT-IX service with 24 hours' notice from enforcement of limiting in the following cases:

- a) if the MT-IX member prevents or jeopardizes the proper functioning of the MT-IX provider's network, especially if he connects a device without conformity certificate with improper interface or causes permanent malfunction, error in the MT-IX service operation, further he fails to comply with the provisions in sections 12.1.d, 12.1.f;
- b) if the MT-IX member still owes due fee debt to the MT-IX provider even after the expiration of the deadline specified in the notice on the debt. Overdue receivables qualify a fee debt.

- c) if it is likely based on the available data and information that the MT-IX member deceived the MT-IX provider with regard to relevant circumstances for the purpose of the conclusion of the MT-IX service contract or the use of MT-IX service;

11.2. If the MT-IX member will not eliminate the cause of the restriction within 15 days, the MT-IX provider is entitled to terminate the MT-IX service contract.

11.3. If the MT-IX member cleared the reason for the restriction and informed the MT-IX provider about it, in this case the service will be reconnected within 1 workday. The MT-IX provider reserves the right to check the configuration of MT-IX member before resetting the service.

12. The MT-IX member is obliged :

12.1. The MT-IX member is obliged to use the services offered by the MT-IX provider, properly. It is required in particular to:

- a) pay the fee set for the MT-IX service in accordance with the current tariff based on the bill of the MT-IX provider,
- b) inform the MT-IX provider on request on the equipment used by him,
- c) lawfully use the MT-IX service, not to misuse it and to do everything possible to ensure that no abuse of the MT-IX service occurs in cases related to his scope of interest ,
- d) take all reasonable steps to enable the identification of the causes for the defect or fault, and to facilitate and speed up correction of the error by the MT-IX provider,
- e) operate the public e-mail address published on the MT-IX web site (section 5.) to receive error reports from the MT-IX members and the MT-IX provider. The MT-IX member is requested to respond to the fault reports coming to e-mail address with 24-hours deadline,
- f) provide emergency phone service available for 24 hours to the MT-IX provider.

12.2. If during the control testing under the present section 12.1 the MT-IX provider finds deficiencies, devices, equipment without indication of a conformity sign jeopardizing the proper functioning of the network or experiences an irregular operation, it is entitled to make use of restriction under section 11.

13. Fees, tariffs , payment , billing

13.1. The port charges of MT-IX service

Connection Speed	Connection Type	One-time fee	Active port monthly fees	Backup port monthly fee	Direct Magyar Telekom port monthly fee
1Gbps LR	SC	0 HUF 0 EUR	25 000 HUF 80 EUR	25 000 HUF 80 EUR	0 HUF 0 EUR
10Gbps LR	SC	0 HUF 0 EUR	135 000 HUF 440 EUR	60 000 HUF 195 EUR	0 HUF 0 EUR

The amounts indicated above obviously add up in case of multi- port use.
Used currency is determined in the MT-IX service contract.

13.2. The traffic fee of IP transit:

A fee of IP transit is 0,6EUR/Mbps or 190HUF/Mbps. The billing of the IP transit is based on used bandwidth.

Total usage is determined by MT-IX service provider collecting bandwidth usage samples every 5 minutes throughout the month for each port (a sample is based upon the average usage across the 5-minute period). Only one sample is captured for each 5-minute period, even though two samples are collected - one for inbound utilization and one for outbound utilization. The higher of the two samples is retained.

The retained samples are listed from highest to lowest. The highest 5% samples are discarded. The highest remaining sample is used to determine total bandwidth usage that is the basis of the billing.

13.3. The traffic asymmetry fee:

If the share of traffic (both in/out) exchanged directly with Magyar Telekom exceeds 3, the MT-IX provider charges bandwidth based usage fee after the difference of in and out traffic.

Traffic asymmetry will be billed only in case of the difference is more than 1 000Mbps.

The fee payable for traffic asymmetry: 50 HUF/Mbps

Until 31/12/2019 the asymmetry fee is not in use.

13.4. The indicated amounts do not include the VAT.

13.5. The MT-IX member is required to pay the monthly charges based on the bill issued by the MT-IX provider to a deadline specified on the invoice. Payment of the bills is performed by bank transfer to the bank account number indicated on the invoice. The date is considered as fulfillment day on which the amount is credited to the bank account of the MT-IX provider.

13.6. Payment of the monthly fees is due in the current month the traffic fee is due after the current month based on the bill issued by the MT-IX provider.

13.7. The first billing cycle of the monthly fee is due from the date of successful putting into operation of the MT-IX service. If the date of the MT-IX service delivery is not the first business day of the month or the termination date of the MT-IX service is not the last day of the month, the MT-IX provider only charges fee for the days he provided service, so that it is 1/30th of the monthly fee per day. Each commenced 24-hours period counts a full day.

13.8. If the payment of an invoice for charges is not made within the specified payment time limit, and the party obliged to pay did not submit objection against the amount of the invoice, then the MT-IX member's obligation to pay interest for late payment is borne beginning from the day following the expiry of the payment deadline date. The default interest rate corresponds to the default interest rate governed in Civil Code.

14. Defective performance of the MT-IX provider

14.1. The responsibility of the MT-IX provider extends up to the Service Delivery Point. The MT-IX provider is only liable for ensuring technical conditions for the exchange of MT-IX members' traffic within the MT-IX VLAN. In the framework of the MT-IX service the MT-IX provider assumes responsibility for the unchangingness of the data forwarded over its network, but does not take any responsibility for their content.

- 14.2. As defective performance of the MT-IX provider is considered a quality deterioration resulting in underperformance of the specific service quality targets (section 4.6) arising from a technical operating trouble in its scope of interest, due a reason attributable to him.
- 14.3. It is not considered to be defective performance of the MT-IX provider :
- if the error occurred within the MT-IX member 's scope of interest,
 - if the error occurred due to force majeure,
 - if the error was caused by a device with no conformity marking used by the MT-IX member,
 - if the error has not been reported,
 - if the error was cleared by the TIC provider within the timeframe committed to in this Policy,
 - if the MT-IX member did not ensure the possibility for troubleshooting.
- 14.4. In case of defective performance of the MT-IX provider the MT-IX member is entitled to liquidated damages under section 14.5. The due date of the penalty starts from the day on which the defaulting behavior occurred that gave rise to it. The MT-IX provider is exempted from its obligation for payment of penalty or a compensation for damage that may possibly be greater than the penalty if he acted for the contractual fulfillment as generally expected in the given situation.
- 14.5. If the annual availability regarding the Service set out in section 4.5.2 is less than the committed value due to improper performance of the Provider, the Provider pays an amount as penalty equal to the reduction in the availability in percentage based on a one year sum of the monthly fees of the service-volume involved in the faulty performance. The settlement of the annual availability is based upon the report of the MT-IX member until March 1st of the year after the assessment period.
- 14.6. If the MT-IX member raised verified claims in excess of the penalty, based on the verified damage claim of the MT-IX member submitted in writing the MT-IX provider is obligated to pay the damage caused in the MT-IX member's assets, except for loss of profit. The MT-IX provider's liability exists for actual damages only for in case of fault/attributability, ie. the MT-IX provider is exempted from liability if he proves that he acted to avoid delay and to ensure faultless performance as generally expected in the given situation
- 14.7. The MT-IX provider does not reimburse that part of the damage that resulted from the fact that the MT-IX member did not behave as generally expected in the given situation to avoid or reduce the damage.
- 14.8. If the defective performance of MT-IX provider occurs within the scope of interest of the MT-IX member, the MT-IX member is obliged to pay charges under the MT-IX service contract.

15. Unavoidable external causes (force majeure)

It qualifies force majeure, acts of God from view of the MT-IX service provisioning and the MT-IX service contract and is no subject to either the MT-IX provider's or MT-IX member's responsibility/liability :

- force majeure (such as earthquakes , floods , war, sabotage, riot, bombing or other emergency situation, natural disaster, fire, strikes, and action taken on the order of bodies authorized on the basis of the Defence Act)
- unavoidable act of third party/person
- unavoidable effect of other external power which does not qualify force major (eg, animal) .