

SUPPORT IXPS

Euro-IX Activities

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What is an IXP in need?

Any planned or already established not-for-profit IXP that has very limited or no funding, or technical/operational support. It may not necessarily always come down to an issue of money, it could very well be the case that the IXP is in search of technical information or hands on experience at another IXP which is simply not possible to find in his region. Phases of the IXP in need:

1. *Planning*: This could range from a simple idea put forward by someone to a full plan with contracts already in place and construction work on the way. The IXP may simply require some technical advice or could be attempting to fully equip his IXP with donated equipment.
2. *Start-up*: This might range more from the actual implementation/construction phase of an IXP through to the IXP being set-up and possibly already having one or two connected ASNs. Once again assistance might be sought in all possible areas.
3. *Recently established*: The IXP is now “up and running” with at least three ASNs that are exchanging traffic over the IXP infrastructure. The IXP has been established for less than 24 months. Assistance might be sought in all possible areas.
4. *Long established*: The IXP has been established for more than a 24-month period and either at some point had or still does have more than three ASNs exchanging traffic over the IXP infrastructure. This IXP may be going into the next phase of

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development or may have run into some unexpected problems that it is now looking for assistance to rectify.

What might the IXPs need?

The sort of assistance that a particular IXP may require will vary from IXP to IXP and naturally region to region. Some of the main areas of need are classified in the following five categories:

1. Information:

- i. The translations of IXP related documents and manuals
- ii. L2 stability management training materials, localized in French, Spanish, Portuguese, Chinese, and Russian
- iii. L2 diagnostic tools with localized documentation
- iv. Configuration examples for switches, with localized documentation
- v. Localize training materials and tools

2. Experience (personnel):

- i. Hands on help at their IXP

- ii. Hands on training elsewhere
- iii. Good relationship with IXPs so that they have e-mail contact
- iv. Encourage engineers to attend regional and other local meetings
- v.

3. *Support*: In certain situations the underlying factor that may be inhibiting an IXP from getting started is one of trust or government understanding.

- i. *Lack of Trust*: This lack of trust may either come from a group of ISPs that don't trust one another or the organization that is attempting to start the IXP. Or the trust issue may simply stem from a lack of understanding of the whole concept of peering. In both cases neutral third party intervention can be beneficial.
- ii. *Government understanding*: Once again mainly due to lack of understanding, the local authorities may not be willing to authorize or financial aid an IXP. Letters or visits from Euro-IX representatives to these government officials may be of benefit in certain situations.

4. *Equipment*: In some circumstances this could be the largest financial investment that an IXP will have to make to initialize the IXP. The following is a list of the some of the most needed equipment being sort by IXPs:

- i. 48-port 10/100/GigE switches (preferably 1U models)
- ii. Fiber splicing, termination toolkits and test equipment
- iii. LX GBICS and SFPs

5. *Financial aid*: An IXP may be in need of actual cash to pay for certain required services, personnel, etc. or may ask for assistance in full or part payment of IXP related equipment

or scholarships to attend regional operators conferences both locally and internationally.

6. *What is not needed:* It is also worth pointing out what these IXPs in need do typically not need so as save some time and effort:

- i. TDM gear of any kind
- ii. Facilities-management advice from people who live in developed countries
- iii. Financial advice from people who make more than €4.00 per week
- iv. Anything that looks expensive, weighs more than 20 kilos, or is unable to be carried in a suitcase

3. How Euro-IX might help IXPs in need?

1. ***Mentor-IX Program:*** A Euro-IX Member IXP would find, with help from Euro-IX, a 'mentee' IXP somewhere else in the world. This would either be a planned or already established IXP. The Member IXP would then do one or all of the following:

- i. Offer an open communication channel between IXP staff, giving IXPs direct phone extensions and e-mail addresses so as they are able to make immediate contact with IXP staff. There may also be an allowance for IXPs to gain access to restricted pages on each other sites and possibly even 'intranet' access.

- ii. Send one or more Member IXP representatives to the twin IXP to help out on particular issues and possibly give some training.
- iii. Full or part scholarships for IXPs to attend Euro-IX Forums or other IXP related meetings around the world. This scholarship would basically cover registrations fees, accommodation and flights.
- iv. Pay Euro-IX Membership fees for the mentee IXP

2. ***"Fellowship" Program:*** Already popular and widely used in the internet community, to allow certain individuals from planned or already established IXPs to visit Euro-IX Forums for free and possibly even have their hotel rooms paid for.
3. ***Euro-IX Resource centre:*** Euro-IX has a section on the website that is devoted to such information as documentation of switch configurations and other useful documents like BCOPs.
4. ***Training workshops:*** Euro-IX arrange a group of member IXP volunteers that are willing to go to other countries to provide specific hands on training. These workshops could be set-up as part of the regional meetings that are already in place or individual.
5. ***Used Equipment store:*** Euro-IX has a repository of all equipment that member IXPs are either willing to fully donate or sell at a heavily discounted price to IXPs in need.
6. ***Switch courier service:*** It has been pointed out that in many cases it is not the actual equipment that is in need but rather the means of getting it delivered, both the cost of freight and

customs duties can in many cases be more expensive than the cost of the equipment itself!

In our entirety we are a large community of people that are spread over many parts of the globe, we travel for business to many other parts of the world and travel for leisure to even more! We keep in good communication with each other and are generally willing to help one another out. Thus we 'may' be able to initiate a sort of *courier service* for small pieces of equipment that need transportation around the world.

i. *The suggested set-up:*

1. A published list of IXP equipment that is available (where, who, what, how heavy etc.)
2. A published list of who needs what from the list of equipment above.
3. Couriers (our network of persons) then log in and input their itineraries (route, dates, weight limits, etc.)
4. We would then either have a script that automatically matches everything up or it would be done by hand.

ii. *Considerations:*

1. In many cases customs duties or taxes 'should' be paid on the equipment that is being brought into the country, this will of course vary depending on the import regulations of that country and the type of or the age of the equipment that is being imported. We will have to examine the situation on a

case-by-case basis.

2. There should be NO risks to the courier and he should be told of the countries regulations and the process for declaring the equipment.

3. If the officials are willing to take part, we might look into the possibility of delivering this equipment as a 'gift' to an embassy in one of the country's as this may be a way around import duties.

iii. Benefits to courier:

1. In most cases the courier would receive a free transfer or at least a host to meet him at the airport, thus also providing you with a trustworthy and an immediate contact in the country you are visiting.

2. Plenty of room over in your suitcase for the return trip for gifts :-)

3. A good feeling after helping the community and knowing that you played a part in establishing the IXP in question.

4. Listing on the web site that he has helped community (optional).

4. Who will be involved?

1. *Euro-IX IXPs*: Via conducting member surveys, Euro-IX would compile a list of IXPs and their contacts, which programs they are willing to be involved in and to what extent that would participate in these programs.
2. *Euro-IX itself*: Via free or heavily discounted membership fees, free admission to Euro-IX Forums, access to certain parts of the members only web pages (e.g. Switch Database).
3. *Others*: Other regional Internet organizations such as SANOG, Afrinic, LACNIC etc., Switch vendors (patrons), ISP (and other IXP customers), housing locations etc.

5. Benefits of aiding an IXP in need

1. IXPs benefits
 - i. Press and marketing benefits
 - ii. Localization and portability encourage clean coding practices in your tools development
 - iii. Expose engineers to a greater breadth of problems than they find in their own environment
 - iv. Documentation and training materials also benefit the writers
2. Ecologically-friendly reuse of disused equipment
3. The internet community at large
4. The city/country that is being aided and its end users

6. Other issues:

1. **Political:** There may be some sensitivity issues in regards to certain countries getting help from certain other countries. Thus the political situation should always be investigated to some degree beforehand.
2. **Decision process:** Depending on which of the suggested programs Euro-IX decides to go ahead with, there may be a certain procedure that needs to be carried out in determining which IXPs are to be helped, this may be done by the Euro-IX Executive Board, a specific committee made up of Euro-IX Member representatives or the Secretariat.
3. **Best effort:** It should be made clear from the start both to Euro-IX affiliates and the IXPs requiring assistance that all programs will be carried out on a 'best effort' basis. If other Euro-IX projects or the membership in general needs prioritisation then there is no doubt that their needs will come first.
Euro-IX runs a number of program to support IXPs in need, if you'd like to help IXPs in need please [contact us](#).
For more information on the programs available, read about our [Fellowship](#) and [Mentor-IX](#) programs.