

Philippine IX Information

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I. STATE

The Philippines has 3 Internet Exchanges in operation. All of them are in the capital of Metro Manila, where most providers with international links operate. Other ISPs in the Philippines connect to these "first tier" providers.

Two of them are operated by telcos. The operational one was the Philippine Internet Exchange (PhIX), run by the dominant telco PLDT (Philippine Long Distance Telephone Company). It is a Layer 3 multilateral exchange where participants provide routers on an HP Ethernet switch, but peer with PLDT's Cisco router configured as a route reflector. This enforces the policy that all participants must be peered with each other.

PLDT charges Philippine Pesos 8,000 (roughly US\$160) per month and requires the participant to order a leased line going to the IX location, in the one of the PLDT network centers in Makati City (part of the Metro Manila area). This fee is waived for customers of PLDT's Internet transit service.

There are currently 14 members, including ISP's of different sizes, two telco competitors of PLDT, Globe and Reach of Hong Kong Telecom. PLDT requires that each IX participant buys their IP transit from an international carrier and not from another local one. The local loops of the ISP's range from 256Kbps to 2 Mbps (E1).

The second telco-run exchange is the Manila Internet Exchange (MIX) operated by Eastern Telecommunications Philippines (ETPI). Like PhIX it is a multilateral exchange but with a more complex setup. It uses all Cisco gear, from the Catalyst switch, to two 7206VXR routers used as the route reflectors, and a 2621 used as a public route server (telnet to route-server.manilaix.net.ph).

ETPI charges \$300 monthly for this service, and bundles in the local loop for \$1,000 total. These fees are waived for customers of ETPI's Internet transit service.

The MIX has 14 members, including two competing telcos, with all of them having an E1 connection to the exchange.

Both telco-run exchanges, PhIX and MIX, offer network monitoring and security. This is in contrast to the third exchange called CORE (Common ROuting Exchange), operated by the Philippine Internet Foundation (PHNET). The CORE operates at a lower level of service but is completely free of charge. PHNET was the first ISP in the Philippines back in 1994 but has since gotten out of ISP operations. Unlike the other two exchanges, CORE is a bilateral setup where members peer directly with each other. It has 8 members with access speeds from 128Kbps to E1.

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II. ANALYSIS

The Philippine Internet network is still at a state where interconnection is sufficient. This is mostly due to the fact that in the country, foreign (mostly US) traffic makes up 90% of the consumers' consumption. This is also partly due to inter-telco politics. For instance, at the PLDT PhIX, ETPI and another dominant telco are not present. There are telco IP services that are not connected to IXs at all.

This study of IXs does not include private peering, but there are some private peering arrangements between local ISPs to overcome the limitations of the IXs. Besides member coverage, quality of service on the IX and on peering is one issue which reduces their value. For instance, on multilateral IXs, being forced to peer with all participants means that a member cannot drop peering with one of them without dropping all. Bilateral peering would allow peer-to-peer negotiations, but it seems the IX operators are still on the "make everyone peer regardless of QoS" mode of thinking.

To summarize, the limited state of Philippine peering and IXs is due to the characteristics of the market. The limited consumer interest in local content and applications is also partly due to the lack of a compelling application. Internet-wise, the Philippines is part of the US Internet at the end of a very long string across the ocean. Even connectivity to other Asia-Pacific countries is a small fraction compared to the US connection. This is because the US-Philippines route has a lot of competition unlike the Asian routes.

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