EMIX Peerings

Emirates Telecommunication Corporation
(Etisalat)

Omar Almansoori
SE/BBO

1:01 **Agenda**

Presentation Agenda

- Why Peering
- Peering definition and examples
- Why going for peering in Internet Exchange (IX)
- Criteria to choose IX
- Setup required to build peering POP in IX
- EMIX Overview
- EMIX figures

1:02

Why Peering

- Improve Network Performance
  - Reduce Delay
  - Localize traffic between ISPs
  - Better utilization of international provider capacity.
- Cost Effective
  - Peering setup cost is shared between both parties.
  - No charge for IP port

1:03

Why Peering

Peering definition and examples

- Peering is the arrangement of exchange traffic between networks.

- **Private "point to point peering"**

  Private peering is point to point connection between two ISPs on a dedicated link.

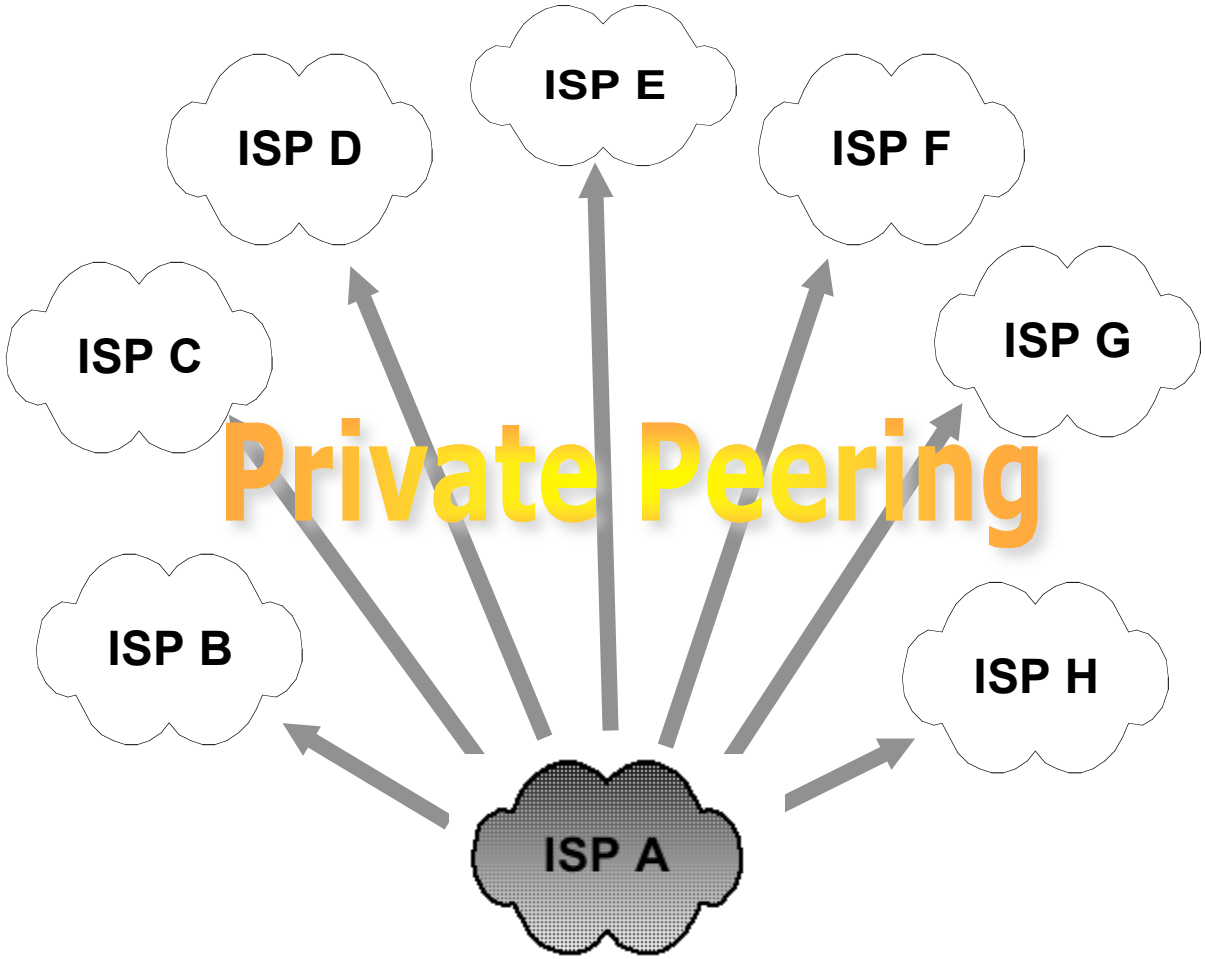
- **Public "point to multi-point peering"**

  Public peering is a place where multiple ISPs exchange traffic at one point.

1:04

Private Peering

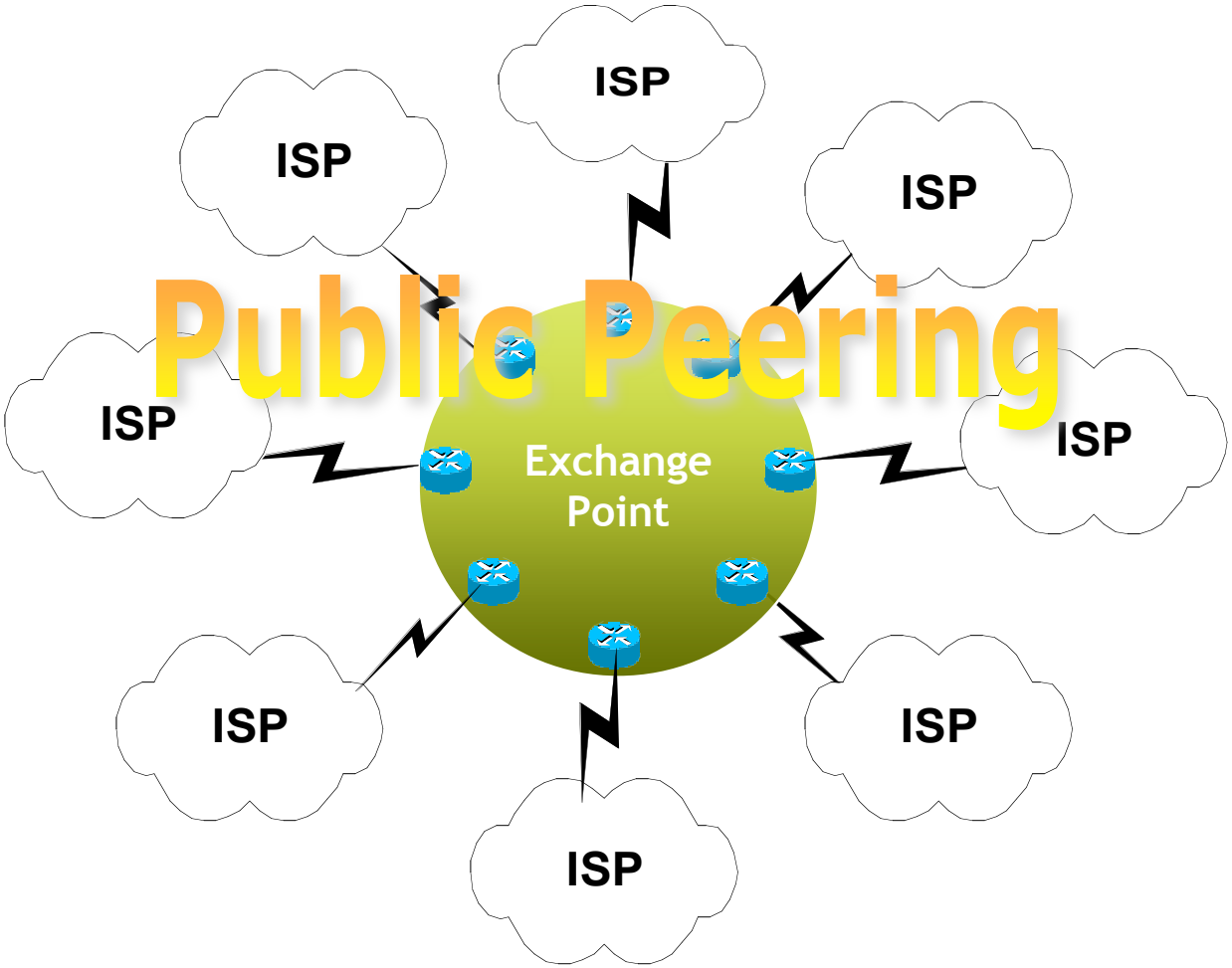
Peering definition and examples



1:05

Public Peering

Peering definition and examples



1:06

Internet Exchange

Why peering in internet exchange

- Improve performance toward that region
- Access to many ISPs and their direct routes
- Save cost
- Easy upgrade bandwidth
- Bandwidth optimization
- Easy to administer and manage
- Future services such as VPN and Voice..etc

1:07

Internet Exchange

Criteria to choose internet exchange

- Total bandwidth per exchange
- Business demand and traffic analysis
- Number of routes exchanged
- Exchange support
- Total cost (Backhaul+ Port)
- Who are participating in that exchange
- Number of participants

1:08

Internet Exchange

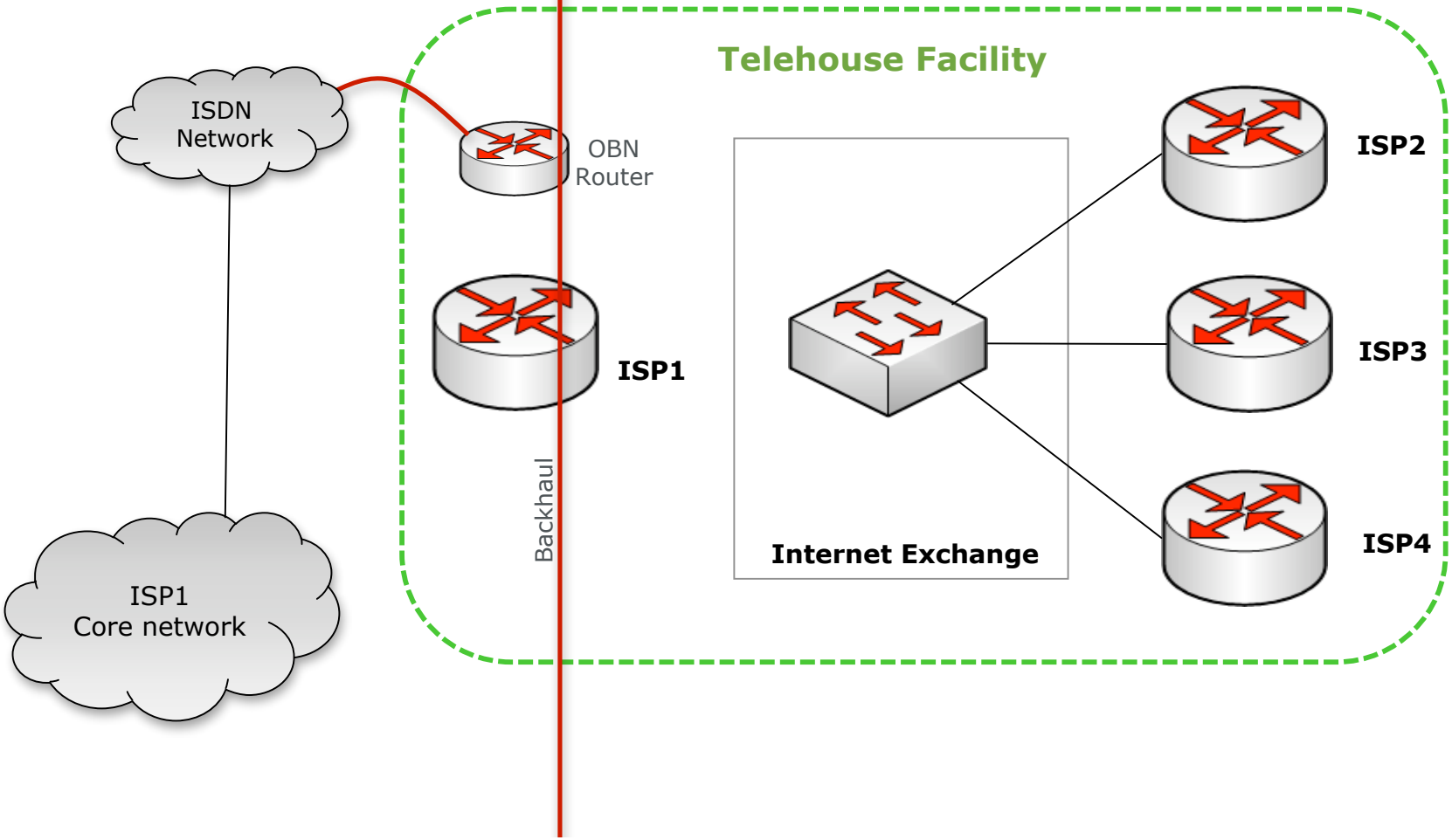
Setup required to build POP in IX

- Carrier class router
- Port and IP from exchange
- Backhaul from exchange to core network
- Signing an agreement with exchange and collocation
- Setup OBN access
- Support from telehouse and exchange
- Support from vendor

1:09

Internet Exchange

Setup required to build POP in IX



1:10

Internet Exchange

Getting ready

- ATP with Vendor
- Stable image for the router
- Configure backhaul interface and do end to end test
- Configure FE/GE interface and test end to end
- Bring up BGP
- Mail list and request for peering

1:11

Exchange Peering

Getting ready

- Start configuring BGP sessions with members who are interested in peering
- Configure max-prefix for members
- Create simple policies which will be used for common members
- Reject prefixes shorter than /24
- Quarterly review the list and send separate peering request

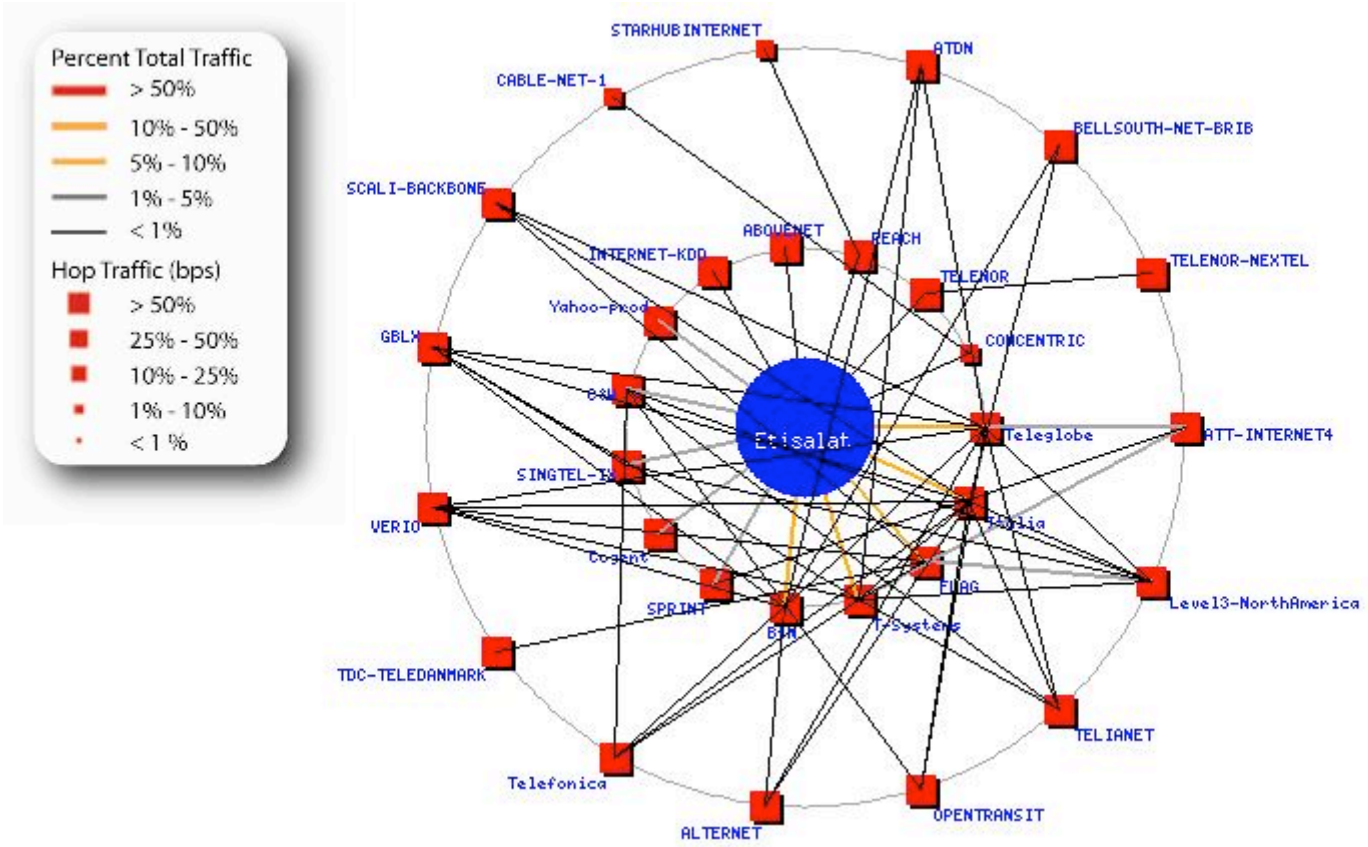
Vendor best practice would help

1:12

Internet Exchange

Network monitoring

Tools must be available to monitor and troubleshoot



1:13

EMIX Overview

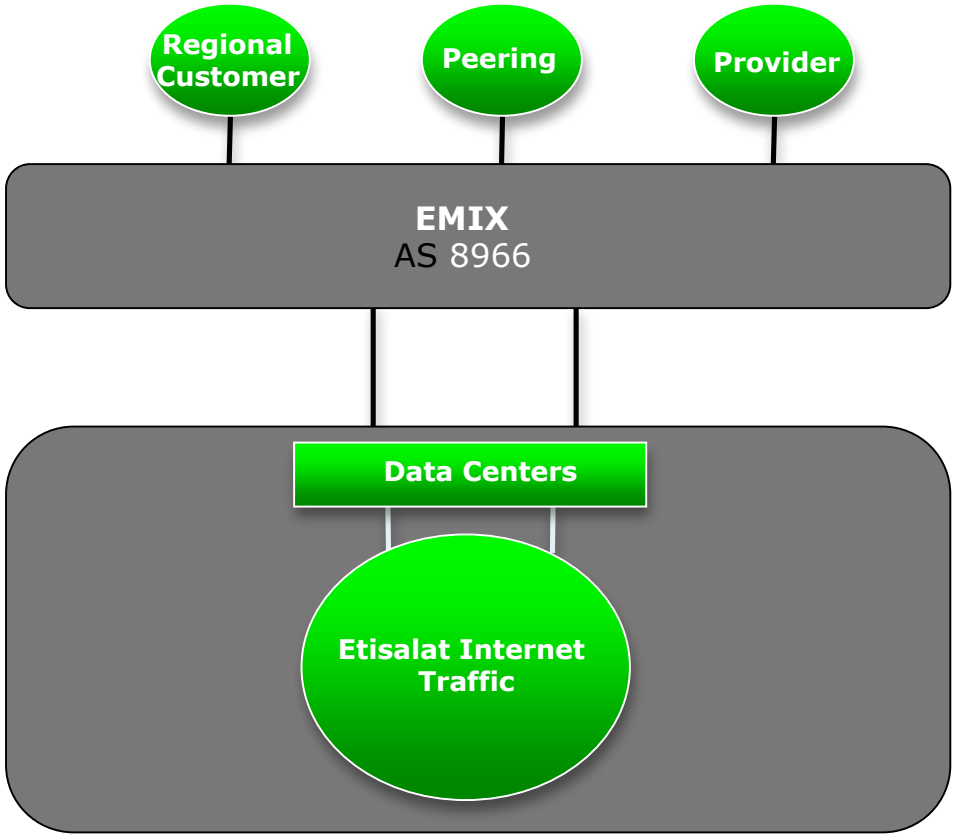
Emirates Internet Exchange

- Stands for Emirates Internet Exchange.
- It is a Network Access Point (NAP).
- Launched on 1998.
- EMIX POPs:
  - Dubai
  - Abu Dhabi
  - Fujairah (2nd Q of 2007)
  - New York
  - London
  - Amsterdam
  - Singapore
  - West coast in US (4th Q of 2007)
  - Frankfurt (2nd Q of 2007)
  - More to come..

1:14

EMIX Overview

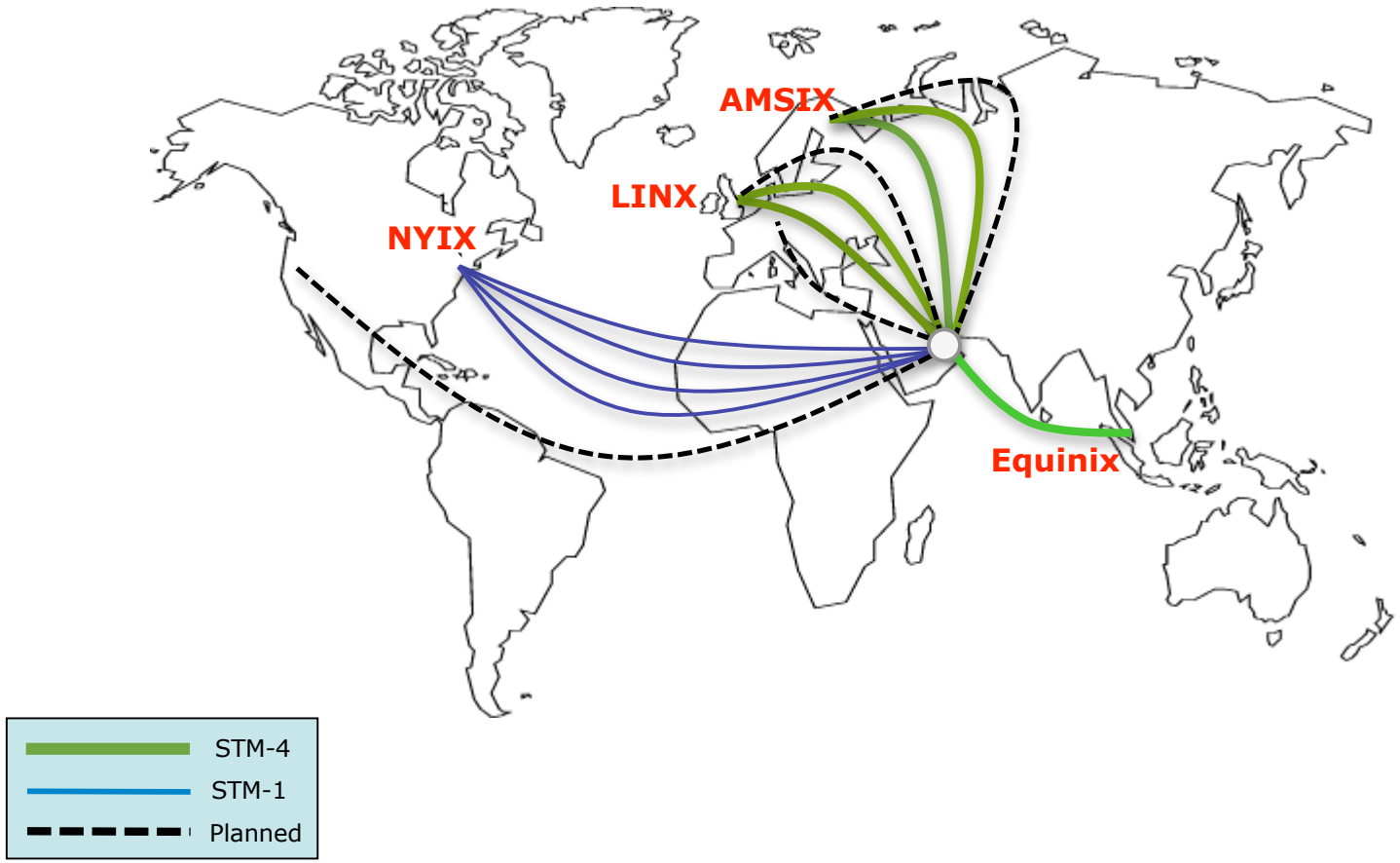
Internet Services



1:15

EMIX Figures

EMIX International Peerings POP



1:16

EMIX Figures

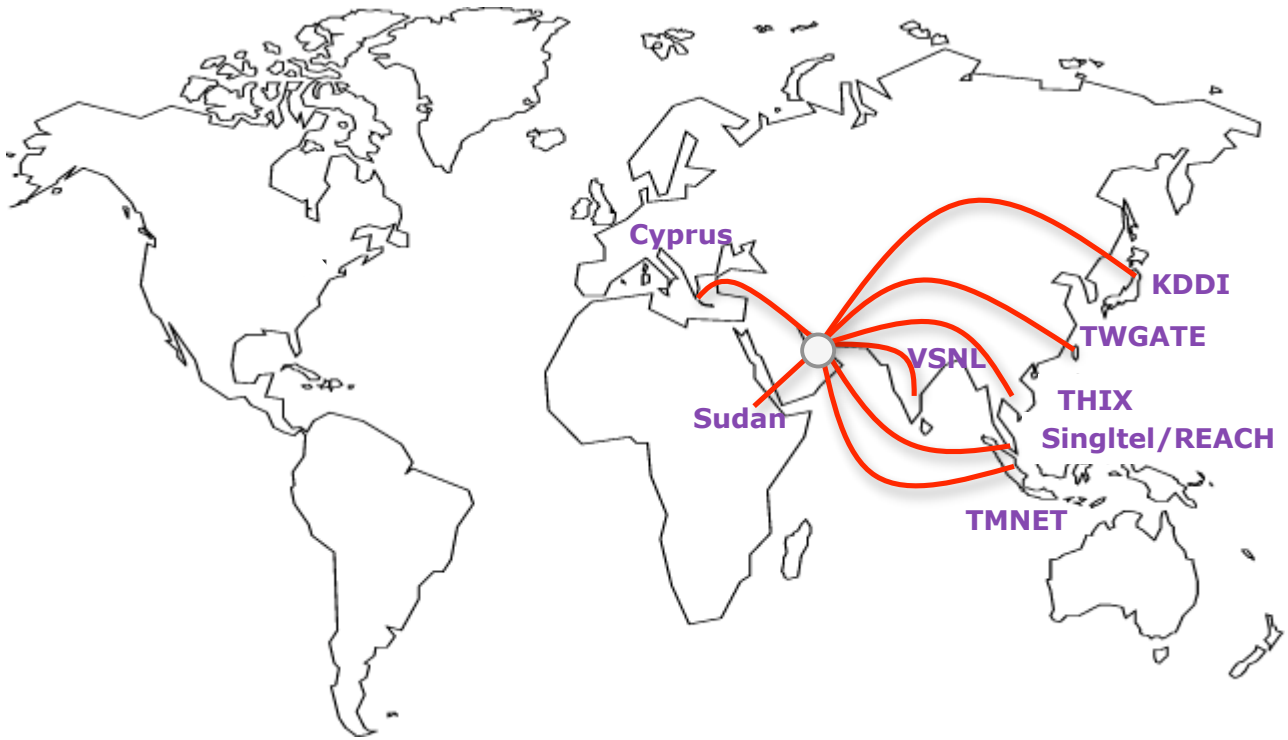
GCC Peering connectivity

Localize traffic between GCC countries

1:17

EMIX Figures

Other Private Peerings



1:18

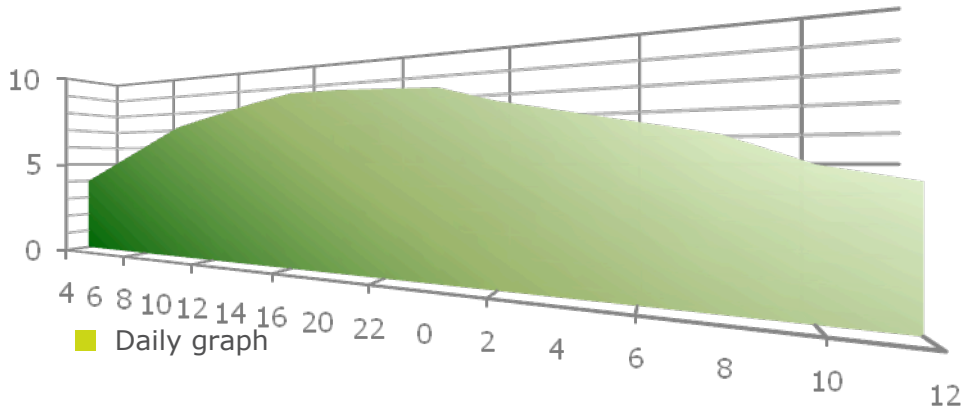
EMIX Figures

- Provides IP transit service for Etisalat and others
- 20% out of total bandwidth utilized by EMIX customers
- 73 STM1 international links (29 stm1, 10 stm4) equivalent to 11.3 Gbps
- Upgrade capacity if bandwidth exceeded 70%
- EMIX peers with all GCC countries

1:19

EMIX Figures

- Current international bandwidth reaches 8.7 G



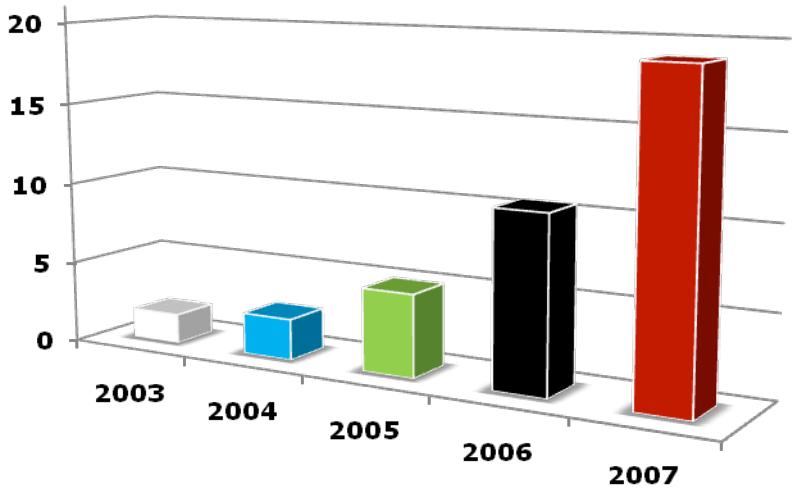
- Emix Cable providers “SMW3, SMW4, FLAG and FOG “more to come”.

- Almost half of internet routes received by peerings

1:20

EMIX Figures

- Emix 2007 forecasted capacity is equal to 19 Gbps
- Recent years the bandwidth is doubling



2005
Capacity is more than double compared to 2004

2006
Capacity is more than double compared to 2005

2007
Capacity forecasted to be double of 2006