Proposal for Discrete Networks and National Peering

Prop-029-v001

Presented at APNIC 20
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Synopsis

This is a proposal to permit large ISPs to manage multiple country accounts under a single APNIC membership using the concept of discrete networks.

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- Highlights
- Benefits
- Criteria For Qualification
- Prop-029-v001
- Fees
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Highlights

Based on exiting policies, APNIC accounts are defined on geographic terms (per country). Per proposal each organization, ISP or LIR would have one APNIC account with multiple discrete networks. The discrete network categories would be:

1. Country-based discrete networks; same format as the current APNIC accounts.
2. Service-based discrete networks; to include network management and other autonomous networks like remote access and MPLS-based (Private IP) networks. This category will require special approval from APNIC.

APNIC account structure

Organizational Account

Discrete Network 1
Australia Customer Network
- IP allocations used for assignments to small ISPs and customer accounts.
- Country-based allocations

Discrete Network 2
Japan Customer Network
- IP allocations used for assignments to small ISPs and customer accounts.
- Country-based allocations

Discrete Network 3
Management Network/Backbone Network
- IP allocations destined for autonomous networks
- Internal company use
- Specialized services
- Service-based networks

The country-based accounts will retain their current names while the organizational account would have the format "Company-AP" example MCI-AP.

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Highlights

- Existing HD ratios and allocation policies will be enacted at the discrete network level with billing at the organizational level.

- The second point on this proposal recommends that APNIC allocate routable aggregate blocks of IPv6 to enable Global/Continental-regional/National peering for Large ISPs with global facilities.

- This policy will only apply to ISPs who qualify and will be implemented upon request.
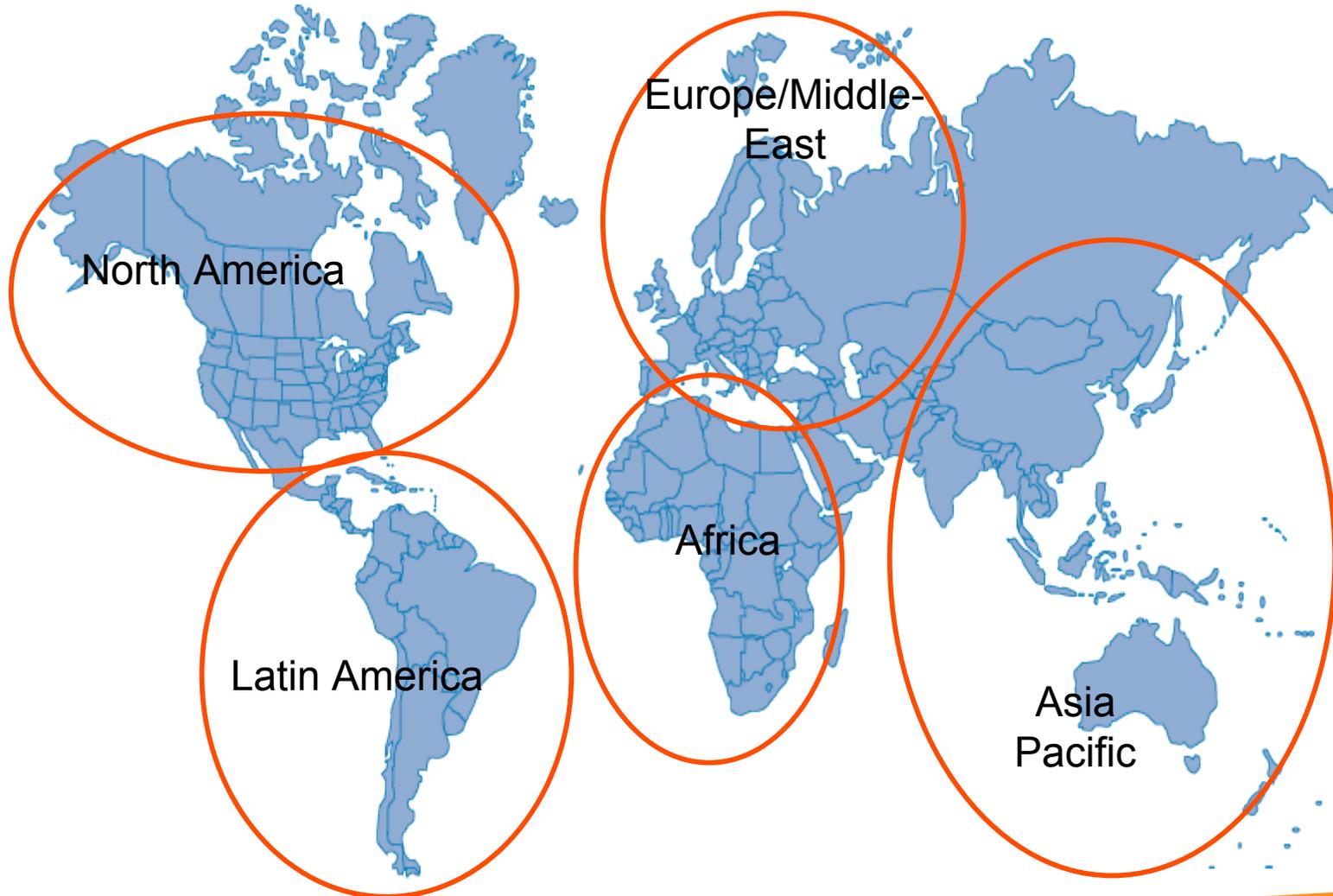
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Global/Continental-regional/National peering

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Management Simplification of multiple country accounts

Currently large ISPs such as MCI with multiple APNIC accounts (one per country) using the concept of discrete network can simplify their procedures by combining their membership accounts under a single account, while managing each country IP allocation as separate discrete networks.

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Simplify Billing

This concept will simplify the billing requirement for APNIC, hereby reducing the number of member accounts per ISP and unify the billing cycles.

Peering

Most large ISPs with International networks spanning multiple continent and regions have peering policies implemented on their network.

In order to make regional peering work in IPv6, we will need to advertise a single aggregate address block per region.

These Single aggregates are then announced to continental-regional peers.

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Peering (cont.)

In some countries, it is required by law that we peer with other ISPs or interconnect at NAP (Network Access Point). In this case, the issue of peering is required and this can only be done using aggregated IPv6 addresses which will be based on the level of peering (It can be Global/Continental-regional/National peering).

Realignment of Policies

This proposal is realignment of APNIC policies to include the discrete networks; it only seeks to simplify current APNIC operational requirements, frameworks for management and allocation of IPv6/IPv4 addresses. This policy will be vital to integration of IPv6 into the Asia Pacific region.

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Criteria For Qualification

- The organization should be a single entity, and not a consortium of smaller independent entities.

- This policy applies only to organizations that have been previously granted address space by an RIR. This policy does not apply to organizations with only legacy address space.

- The organization must have multiple (at least two) discrete multi-homed networks.

Criteria For Qualification

- The organization must have compelling criteria for creating discrete networks. Examples:
  1. Regulatory restrictions for data transmission
  2. Geographic distance and diversity between networks
  3. Autonomous multi-homed discrete networks

- The organization must apply for this policy to be applied to their account.

- Other APNIC IP allocation policies for IPv6/IPv4 would apply to this proposal (including HD ratios).

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Refer to posted Proposal, which is based on a similar policy approved ARIN.

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Fees

The IP addresses from all combined resources would be taken into account when assessing the membership tier for the organization upon the renewal of their membership.

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References

APNIC References

http://www.apnic.net/docs/policy/proposals/prop-013-v001.html

Similar proposal withdrawn by MCI

http://www.apnic.net/docs/policy/proposals/prop-020-v001.html

HD ratio Policy

ARIN References

http://www.arin.net/policy/index.html#four5

http://www.arin.net/policy/proposals/2004_5.html

Policy Proposal 2004-5: Address Space for Multiple Discrete Networks

http://www.arin.net/policy/proposals/2001_6.html

Policy 2001-6: Multiple Discrete Networks - Single Maintainer ID

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Questions ?