How to engineer a global peering network

Peering Track Feb 1, 2011

Take aways..

- *These are not definitive answers*

- *Take notes on things to consider and discuss with (potential) peers or networks who have done this.*

Making the decision

- *Transport vs. Transit*

- *How are you going to get there?*

    - *Can you get there?*

    - *Transport availability?*

    - *Cost? (Does this still make sense?)*

    - *Leverage transport for qualification?*

Peering Growth Decision..

- *You've made the decision to expand*
- *Sounds simple but..*

Goals

- *What are you looking to achieve?*

- *Larger / different types of peers?*

- *Reduction of latency?*

- *New services unique to region(s)?*

- *Blended cost reduction?*

- *Direct access to specific networks?*

Considerations

- *Impacts on*
  - *Traffic Engineering*
  - *Tools*
  - *Communication*
  - *Quality*
  - *Support staff (internal resources)*
  - *Contracts? Legal? Transit v Peer.*

Traffic Engineering

- *Hot Potato becomes very important!*

- *Analytics...*

  - *Paths for src/dst optimization*

  - *Single ASN vs. Regional ASN?*

  - *Impact of each peer modification*

  - *Peers at single locations*

- *Impacts of being DE-peered region(s)*

Global ASN vs. Regional ASN?

- *ASN recognition?*

- *Evaluate your (potential) peer requirements*

  - *Consistent announcement requirements*

- *Traffic path selection*

- *Additional tools / monitoring / ops*

Tools

- *Automation becomes very important*

- *Database almost a must*

- *Monitoring from regional perspective*

- *Tracking peer communications*

- *Tracking changes in qualifications*

- *Impacts of failure scenarios*

Operational Impacts

- *Keeping track of peers (changes)*

- *M&A (AS consolidation)*

- *Regional peers who become multi-regional (Now impact you too)*

- *Language / Maintenance / Communication NOC to NOC issues*

- *New Exchanges Evaluation*

Summary

- *Evaluate total impact carefully*

- *Talk to resources who have experience*

- *Make sound decisions to better the Global Internet and your customers*