The Art of Peering

Excerpts from Chapter 11 of The Internet Peering Playbook: Connecting to the Core of the Internet

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Research “The Art of Peering”

• Follow up to the first three white papers.
Q: When e-mail to peering@<ispdomain>.net generates no response, what do Seasoned Peering Coordinators do?

• Smartest Peering Coordinator: “Tricks of the Trade”
• 20 Tactics successfully used to obtain Peering where you otherwise might not be able to.

Disclaimer: These are NOT recommended tactics…I am simply documenting what has been successfully used in the field to obtain peering.
Graphical Notation of Tactics

To Portray Peering Plays Pictorially...

- **P?** = Peering Request with Peering Coordinator
- **T?** = Transit Request To Sales Person

**ISP Initiator** | **ISP Target**
---|---
A | B

- **ISP A Customers** → A
- **ISP B Customers** → B

Larger Circle = More Customer Prefixes
Thicker Lines = More Traffic
Graphical Notation for Peering, Paid Peering and Transit

a) ISP A is Peering with ISP B
b) ISP A is Purchasing Paid Peering from ISP B
c) ISP A is Buying Transit from ISP B
Customers shown as clouds

Customers of ISP A

Customers of ISP B
Equivalent Internet Transit Notations
Equivalent Peering Notations

ISP A and ISP B Are Peers

ISP A Is Compensating ($) ISP B for Peering
Traffic
Ch. 11 The ISP Peering Playbook
Tactic 1 – Extended Direct Approach

ISP A Peering Request to ISP B

ISP A and B Enter into Peering Relationship
Best ways to contact peers

- Top 10 ways seasoned peering coordinators contact target ISPs
- Face-to-face at informal meetings in an “open” Internet Operations forums like NANOG, IETF, RIPE, APNIC, AFNOG, etc. (here “open” means anyone can attend)
- Face-to-face at “selective” commercially-sponsored peering forums like the Global Peering Forum (Here “selective” means there are some prerequisites to attend, like being a customer of a GPF IXP sponsor.)
- Face-to-face at (“selective”) IXP Member Meetings like DE-CIX, LINX, or AMS-IXP member meetings.
- Via introductions made through an IXP Chief Technical Liaison or a peer that knows the right contact
• Via electronic mail, using the pseudo standard peering@ispdomain.net or a personal contact
• From contacts listed on an exchange point participant list, or peeringdb registrations
• With tech-c or admin-c from DNS or ASN registries
• Through a search for "peering contact $ASN peering"
• From the target ISP sales force, at trade show or as part of sales process
• From the target ISP NOC
Email maneuver

Knowledge base
peeringdb.com
technical, admin
Google Search
NOC
Sales Team
Tactic - go to all ops conferences
Tactic 2 – Transit with Peering Migration
Tactic 3 – End Run Maneuver
Tactic 4 – Bundle Internet Transit with Peering
Tactic 5 – Buy Transit from Restrictive Tier 1 ISP
Tactic 6 - Transitional Paid Peering
Tactic 7 – Partial Route Transit
Tactic 9 – Traffic Manipulation
Normal State

All Traffic Goes Across ISP B’s Free Peering Session with ISP L

Small Requests

Content Heavy ISP

Access ISP
Force Traffic along targets transit
Then request peering
Tactic 10 – Bluff Issues
Tactic 11 – Acquire Tier 1 Status

Telstra Story
Optus-SingTel
Connect.com-TNZ
Ozimail-Verizon
Tactic 19 – False Peering Outage
20) The **Leverage Broader Business Arrangement** takes advantage of other aspects of the relationship between two companies to obtain peering in exchange for something else.
Summary

- These are the “Tricks of the Trade”
- Comments/Additions welcome!
- Copies of the “Art of Peering: The Peering Playbook” are freely available
  - Send e-mail to wbn@DrPeering.com or
  - Or <google search “William B. Norton”>
Some differences between European and U.S. Model Internet Exchange

<table>
<thead>
<tr>
<th>European IXes</th>
<th>U.S. IXes</th>
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</thead>
<tbody>
<tr>
<td>1. Are Non-Profit Associations</td>
<td>1. Are Commercial Corporations</td>
</tr>
<tr>
<td>2. Have “Members”</td>
<td>2. Have “Customers”</td>
</tr>
<tr>
<td>4. Are Colo-Neutral: Some University Grade Colo</td>
<td>4. Own Financial/Commercial Grade Colo infrastructure</td>
</tr>
<tr>
<td>5. Member Meetings and Voting on changes to policies and fees</td>
<td>5. Follow interests of Customers, Stockholders, Employees</td>
</tr>
<tr>
<td>6. Fixed contracts and fees</td>
<td>6. Negotiable Contracts and fees</td>
</tr>
<tr>
<td>7. Modest Capital and Operating Budget</td>
<td>7. Large Capital and Operating Budget</td>
</tr>
<tr>
<td>8. Low Price</td>
<td>8. High(er) Price</td>
</tr>
<tr>
<td>9. 24/7 on-call support</td>
<td>9. 24/7 on-site support w/backup processes</td>
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