Swarm analysis: 7 days of two popular swarms

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Overview

- Torrent details
- Attenuation rate of torrents
- Peer duration
- ASN statistics of interest
- Country-specific statistics
- Peer density
Torrent details

- Sniper: Cantonese language action movie (target audience: non-English speaking population.)
  - Swarm size: 122,437 peers across 165 countries.
- Push: English language action movie (target audience: English speaking population.)
  - Swarm size: 136,259 peers across 159 countries.
  - US release date: Feb 6, 2009
Torrent details

- Tracker used: TPB.

- Data collection methodology:
  - Dates: May 30, 2009 19:18:19 to Jun 6, 2009, 03:00:10 (GMT).
  - Frequency: every 4 hours.

- Raw data:
  - http://www.khirman.com/blog/7_days_SNIPER
  - http://www.khirman.com/blog/7_days_PUSH
Attenuation rate of torrent (Sniper)
Attenuation rate of torrent (Push)
Peer duration

- Definition: Observed the same IP:port in multiple scrapes every 4 hours.
Peer duration (Sniper)
Peer duration (Push)

[Diagram showing the probability of peer duration over time in a logarithmic scale, with a line graph that decreases as time to live increases.]
Peer duration (Combined)
ASN statistics of interest

Sniper
- Number of distinct ASNs: 2,836.
- Highest number of peers in an ASN: 3,873 (AE - UAE).
- Number of ASNs with 100-3,873 peers: 208.
- Number of ASNs with < 100 peers: 2,628.

Push
- Number of distinct ASNs: 2,821.
- Highest number of peers in an ASN: 7,491 (PL - Poland).
- Number of ASNs with 100-7,491 peers: 221.
- Number of ASNs with < 100 peers: 2,600.

Source: asn_all_time.
Country-specific statistics (Sniper)

Peers per country (1000+ peers)

Source: country_all_time.
Country-specific statistics (Push)

Peers per country (1000+ peers)

Source: country_all_time.
Peer density

- Definition: Number of peers per ASN (for top 5 ASNs)

<table>
<thead>
<tr>
<th></th>
<th>Sniper</th>
<th>Push</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>165 peers/ASN</td>
<td>GB: 176 peers/ASN</td>
</tr>
<tr>
<td>GB</td>
<td>133 peers/ASN</td>
<td>BR: 83 peers/ASN</td>
</tr>
<tr>
<td>IN</td>
<td>115 peers/ASN</td>
<td>PL: 66 peers/ASN</td>
</tr>
<tr>
<td>CA</td>
<td>45 peers/ASN</td>
<td>CA: 62 peers/ASN</td>
</tr>
<tr>
<td>US</td>
<td>27 peers/ASN</td>
<td>US: 34 peers/ASN</td>
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</tbody>
</table>
Next steps

- Continue more mining.
- More data collection on torrents of local interest.
- Repeat data collection with more localized languages (Russian, Indian movies, etc.)
- Calculate statistics for these torrents to draw any conclusions.