BMP for BGP Route Leak Detection

draft-gu-grow-bmp-route-leak-detection-03

Yunan Gu, Huawei
Huanan Chen, China Telecom
Di Ma, ZDNS
Shunwan Zhuang, Zhenbin Li, Huawei
Actions Against Route Leaks

- **Route leak prevention**
  - Inbound/outbound prefix/peer/AS filtering policies

- **Route leak detection**
  - *Intra-AS*: business relation analysis of ingress + egress nodes within an AS
  - *Inter-AS*: business relation analysis of upstream ASes

- **Route leak mitigation**
  - Reject or reduce priority of invalid routes
RLD TLV for BMP Route Monitoring Message

Figure 1: RLD TLV

<table>
<thead>
<tr>
<th>Value</th>
<th>Business</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>F2C</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>C2P</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>F2P</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>T2I</td>
<td></td>
</tr>
</tbody>
</table>
Single ISP Deployment Example