Using the IRR to Generate Cisco Configurations

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96.05.30

Status

- we have been using RATool to configure our ciscos since March

- as Alan Barrett reported in LA, it works

- we have used it to
  - configure four inter-related ASs
  - one AS with six edges

- at first i wondered why folk wanted to hear about this, until

```
% gunzip -c radb.db.gz | grep interas
%
```

- so maybe i should tell you what it does
  - configures external BGP neighbor peerage gunk based on data from the IRR
  - generates all the route and as-path filter lists
  - handles MEDs, local communities, prefs, ...

- what it does not really do
  - iBGP configuration, but that's pretty simple stuff
  - route reflectors, but that's iBGP

How you do it?

- register your policy.

  this is left as an exercise for the student.

- put some gunk up front of your configuration

```
include(`rtconfig-macros.m4')dnl
define(`my_AS',`2914')dnl
define(`my_loopback_ip',`199.2.96.1')dnl
```

- take out the BGP neighbor statements

- replace them with gunk to generate the peerage bgp neighbor segments

```
bgp_neighbor(my_AS,144.228.143.18,SPRINT,\
             1792,144.228.143.17,,)dnl
bgp_neighbor(my_AS,199.2.96.2,IAFR,2905,\
             196.7.126.129,loopback1,3)dnl
```

- type make

- stuff the result in your router

Problems

- can not register our aut-num: in the MCIRR due to a bug

```
as-in: from AS4683 10 accept ... AND
  <^AS4683+ AS4674>*$
```

becomes

```
as-in: from AS4683 10 accept ... AND
  <^AS4683+ AS4674*1040
```

Alan suspects a perl script that thought "$>" meant "insert euid number"

- need for private space
  - bet my network on a remote database (asp)
  - don't want to publish details of my policies

Oddities

- /32 and only /32 must be there.

```
interas-in:  from AS1792 204.188.114.5/32 \
                         144.228.48.1/32 ...
```

Uglies

- The IRRs still reorder the contents of each object.

Conclusions

- we would have had to build something ourselves

- so it saved us time and money

- Cengiz, Brian, and crew fixed problems the instant we found them

- and they were downright polite when it was really my misunderstanding

- we actually like it!