

IRR Scalability

Kuniaki KONDO

JPNIC IP-WG

kuniaki@iij.ad.jp

Overview

- There are IRR databases which manage the route information. It is not the whois database which is managed by IR.
 - RADB,CW,RIPE/NCC,ANS,CANET...
 - Those IRRs were mirrored each other.
- Some ISPs have been doing route filtering using these databases.

Overview(cont..)

- The information of the IRR is indispensable for stabilizing route information.
 - Possible to search ASN/route information received from BGP peers at IXes.
 - It is information source for route filtering which block denial routes from external.
 - More people will use IRR for authorization of route information.
- Therefore, The IRR has public nature.

Current Status

- Merit started to charge for the use of RADB, the biggest IRR database.
- Merit strongly encourages RADB users to operate their own local RR.
 - IRR counts 26. (on 16 Feb 2000, the present)

Current Problems

- Global IRR operation has not been coordinated by anybody.
- Global IRR system with too many IRR won't work.
 - Dispersing the route information in IRR
 - Increasing potential IRRs.
 - Increasing mirrored IRRs.
 - Search result are different at every IRRs.

Agenda

- Do we need the IRR actually?
 - e.g. Influence by route filtering.
- How IRR system should be managed?
 - How to maintain correctness of IRR data?
 - How far does the global IRR system scale?
How many IRRs?
 - Mirroring method.
- Which organization should manage IRRs?
 - How to collaborate?

Do we need the IRR actually?

- What is the influence of route filtering by IRR?
-
 - This is not today's focus.

How IRR should be managed?(1)

- The number of IRRs should be suppressed as few as possible.
 - Need to clarify the data management structure of IRR system.
 - Need a coordination among IRRs.
 - Mirroring should be managed.

How IRR should be managed?(2)

- Keep correct data in the IRR.
 - It is useless if it has wrong or old data.
 - It is useless if it doesn't have the entire data of all routes.

Which organization should manage IRRs?

- The organization which has many route information.
 - Limitation of IRR dispersion.
 - Possible to maintain correctness of IRR data.
 - Easy to coordinate if there are a few.
 - For example, Tier-1 ISP or IR...

Which organization is management of IRR going to do?

- RIRs seem the best.
 - RIRs have administrative information of routing.
 - RIPE/NCC has already started to operate.
 - Relationship is clarified.

JPNIC activity

- A voluntary group to study IRR issues has formed.
 - Influence by route filtering
 - Influence by IRR dispersion
 - IRR Management Model
 - IRR Mirroring Model
- Your opinions and comments would be appreciated.
 - IRR Needs, IRR dispersing, IRR management...