

IRR Scalability

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2000/03/01

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Overview of IRR

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

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Overview of IRR(cont..)

- v The IRR information is indispensable to stabilize the routing system.
 - Possible to search ASN/routing 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 routing information.
- v Therefore, the IRR is regarded as public.

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Current Status

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

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Current Problems

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

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Issues

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

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Do we actually need the IRR?

- v What is the influence of route filtering by IRR?
- v Route authorization by using IRR
 - What are the influences of these issues?
- v IRR is needed.
 - v But, this is not today's focus.

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How should IRR be managed?(1)

- v 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.

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How should IRR be managed?(2)

- v 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 complete data of all routes.

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What kind of organization should manage IRRs?

- v An organization which has many routing information.
 - Limitation of the number of IRR.
 - v Easy to coordinate if there are few.
 - Ability to maintain correctness of IRR data.
- v Candidates
 - Tier-1 ISPs,
 - IRs...
 - Independent research organization, such as Merit

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Which organization should manage IRRs?

- v RIRs seem better.
 - RIRs have administrative information of routing.
 - RIPE/NCC has already started to operate.
 - Relationship among RIRs is clear.
- v ICANN ASO should coordinate this issue.

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JPNIC activities

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

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