

IRR Toolset Next Generation

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Agenda

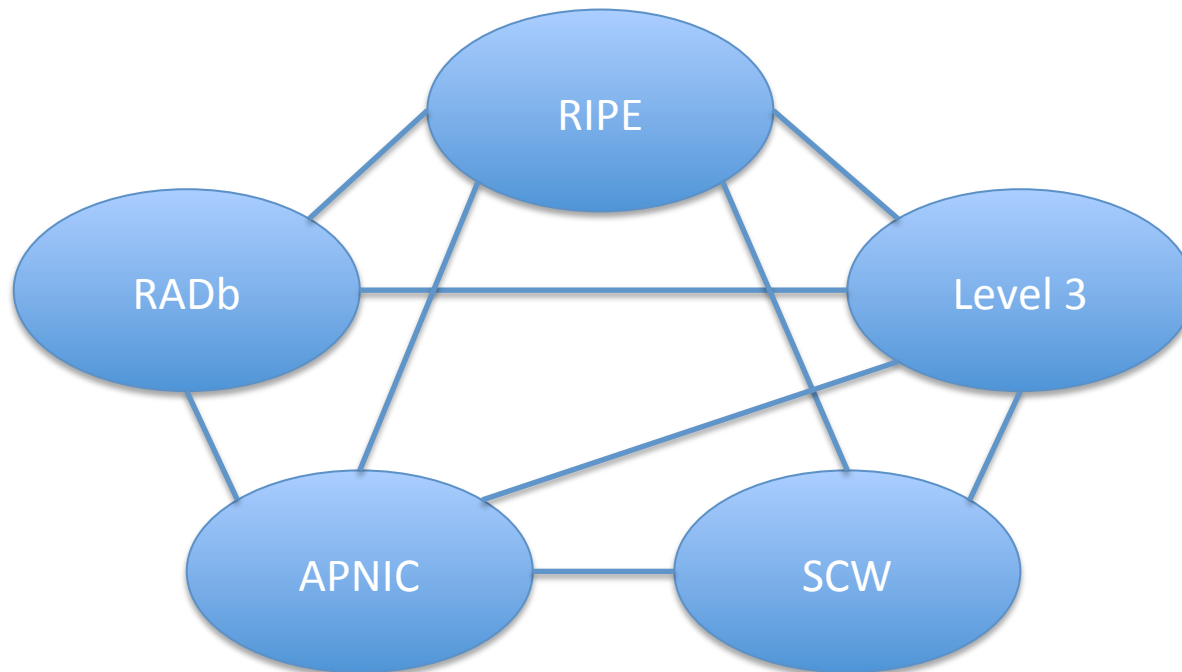
- Overview and BoF takeaway
- IRRToolSet, Nick Hilliard
- IRRToolSet Use at Deutsche Telekom, Rüdiger Volk
- IRR Power Tools, Richard Steenbergen
- Some new ideas for a NG toolset
- Discussion

The Internet Routing Registry (IRR)

- A database with Internet routing policy information
 - BGP inter-domain routing decisions are based on policy-based rules
 - BGP has no mechanism to publish or exchange policies
 - IRR provides this functionality
- Aims stability and consistency of routing
 - network operators share information
- Routing Policy Specification Language (RPSL)
 - vendor independent format

The Internet Routing Registry cont'd

- Global Internet Routing Registry database
 - <http://www.irr.net/>



What Is the Use of IRR/RPSL Tools?

- Policy analysis tools to operate with IRR routing policies in RPSL format
- Make routing information more convenient and useful for network engineers [sic]
- Providing tools for
 - automated router configuration
 - routing policies analysis
 - maintenance

IRRToolSet in Practice

- From irrtoolset mailing list “Death of irrtoolset?”
 - code is unmaintainable
 - no library / API
 - (part of) code may not be used for commercial purposes
 - problem with extensibility of back-end machinery
- Alternatives
 - IRR Power Tools (irrpt)
 - Net::IRR
 - rpsltool

RADb whois Usage (March)

IRRToolSet version	Connections	Unique Hosts
5.0.0	402	4
4.8.5	11714	3
4.8.4	3623	1
4.8.1	1	1
4.7.3	1	1
Total	15741	10

Tool Name	Connections	Unique Hosts
Net::IRR	598738	192
bgpq3	414771	129
IRRPowerTools	42670	66
Md4.7	5806	12
P2BGPTool	132993	1

Stats from Larry Blunk, Merit Network

RIPE whois Database Usage Preamble

- Stats collected by Kaveh Ranjbar, RIPE NCC
- A labs article visualizing the usage stats will be published on RIPE Labs, labs.ripe.net

RIPE whois Usage (March)

IRRToolSet version	Queries	Unique Hosts
IRRToolSet4.8.4.24	12107826	3
irrtolset-5.0.0	5853960	41
IRRToolSet4.8.5	1348472	10
IRRToolSet4.7.3	903813	3
IRRToolSet4.8.4-HB2.1	29985	2
IRRToolSet4.8.1	5246	1
IRRToolSet4.8.4	2699	4
IRRToolSet4.8.0	69	1
IRRToolSet4.8.4-HB2.2	41	1
Total	20252152	66

RIPE whois Usage 2 (March)

Tool Name	Queries	Unique Hosts
rpsltool-1.4	24626968	7
Md5.0	16785900	96813
jw1.0	12009296	3
Md4.7	10982651	272521
NWR1.30	9836861	25
wC2.0	4996128	43
rpsltool-1.0	639368	1
NWR1.20	590821	3
NWR1.22.1	434496	17
rpsltool-1.5	236679	4
Md4.6	229266	465
Md4.5	210443	491
asu1.21	208951	157
NWR1.22	94158	26
NWR1.04	38390	25
wR1.0	4002	9

BoF Takeaway

- IRRToolSet, irrpt, rpsltools, ...
 - is there anything to do here?
 - which functionality should be preserved
 - requirements for (general) router configure tool set
 - need for automated router configuration