



# *Using Routing Policies*

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# *Topics*

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- *Why define a routing policy?*
- *How to define a policy*
- *What to do with the policy now?*
- *Futures...*

# *Why define a Routing Policy?*

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- *Documents relationship between BGP peers*
- *Allows automatic generation of router configurations*
- *Provides a debugging aid to third parties*

# *How to define a Policy*

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- *Current de facto language in use is defined by RIPE-181*
- *Used by Internet Routing Registries*
  - *RADB, MCI, RIPE, ANS & CA\*NET*
- *Connect registers its policy at RADB (run by Merit in the USA)*

# *Aut-Num Object*

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- *Routing Policy Description object*
- *Most important components are*
  - *as-in*
  - *as-out*
- *These define the incoming and outgoing external routing announcement relationships*

# *Example*

*aut-num: AS2764*

*descr: connect.com.au pty ltd*

*as-in: from ASn 5 accept ASn and <^ASn+\$>*

*as-out: to ASn announce AS2764*

*as-out: to ASn announce AS-CONNECT and AS-  
CONNECTDOMESTIC*

*mnt-by: MAINT-AS2764*

*changed: mrp@connect.com.au 980514*

*source: RADB*

# *Connect's Real Policy*

- *RIPE-181 policy registered at whois.ra.net*
  - *whois -h whois.ra.net AS2764*
- *(Work in Progress) RPSL policy soon to appear at new RPSL server run by Merit at compute.merit.edu*
- *To examine routes registered under an AS*
  - *whois -h whois.ra.net !gAS2764*
  - *Note: This only works at RADB*

# *What to do with the policy?*

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- *Use it to generate router configurations*
- *RtConfig, part of RAToolSet from USC/Information Sciences Institute*
- *Creates route and AS path filters. Can also create ingress/egress filters.*



## *Things RIPE-181 can't do*

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- *Perform special processing for communities*
- *Connect communities*
  - *2764:1, 2764:2, 2764:3, 2764:4, 2764:5*

# *Futures*

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- *RPSL, new IETF defined standard*
- *More flexible than RIPE-181*
- *Connect will be migrating to RPSL over next couple of months*
- *Start to use our own server in place of RADB (but will still register at RADB for information) for configuration generation*

# References

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- *RIPE-181*
  - *<ftp://ftp.ripe.net/ripe/docs/ripe-181.ps>*
- *RPSL - RFC 2280*
  - *<ftp://munnari.oz.au/rfc/rfc2280.Z>*
- *RAToolSet*
  - *<ftp://ftp.isi.edu/ra/RAToolSet>*
- *RPS Working Group of the IETF*

# *Contact Details*

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