

# Resource Certification (RPKI)

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# Digital Resource Certificates

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- Resource Certification is a free, opt-in service
  - Your choice to request a certificate
    - Linked to registration
    - Renewed every 12 months
- Certificate does not list any identity information



# Certificate Authority (CA) Structure

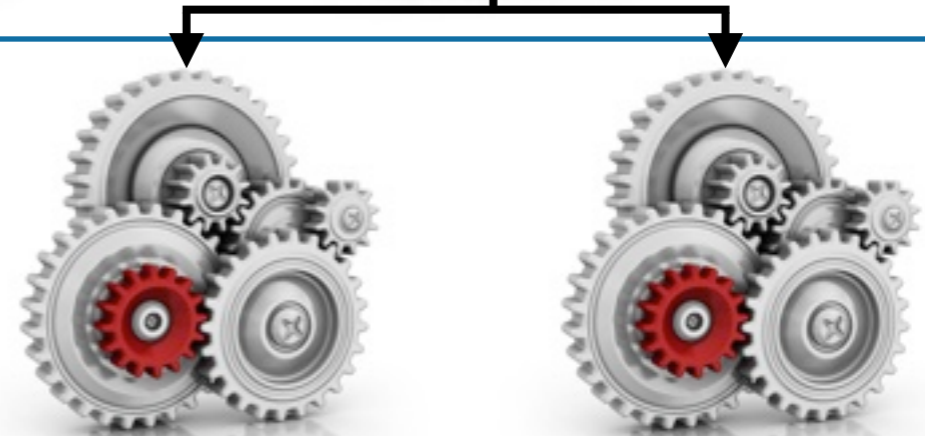
Root CA (RIPE NCC)



Member CA (LIR)



Customer CA



# Management: Your Choice

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- Open Source Software to run a member CA
  - Use the RIPE NCC as parent CA (trust anchor)
  - Generate and publish Certificate yourself
- RIPE NCC Hosted Platform
  - All processes are secured and automated
  - One click set-up of Resource Certificate
  - WebUI to manage Certificates in LIR Portal

# Certification to Secure Internet Routing

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- Members can use their resource certificate to make statements about their BGP Routing

Route Origin Authorisation (ROA):

*“I authorise this Autonomous System to originate these IP prefixes”*

- The ROA can also specify the smallest prefix that is authorised to be originated: Max Length

# Route Origin Authorisations

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- Only the registered holder of a Internet number resource can create a valid ROA
- A ROA affects the RPKI validity of a route announcement:
  - VALID: ROA found, authorised announcement
  - INVALID: ROA found, unauthorised announcement
  - UNKNOWN: No ROA found (resource not yet signed)

# RPKI Capable Test Routers

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- Cisco
  - rпки-rtr.ripe.net
  - telnet username: ripe, no password
  - “sh ip bgp 93.175.146.0/24 (or your prefix)”, “sh ip bgp rпки table”, “sh ip bgp ipv6 unicast rпки table”, “sh ip bgp rпки server”
- Juniper
  - 193.34.50.25, 193.34.50.26
  - telnet username: rпки, password: testbed
  - “show validation session detail”, “show validation statistics”, “show validation database”, “show route protocol bgp validation-state valid”

# Information and Announcements

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<http://ripe.net/certification>

 #RPKI





# Questions?

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