

Resource Certification (RPKI) @AFRINIC

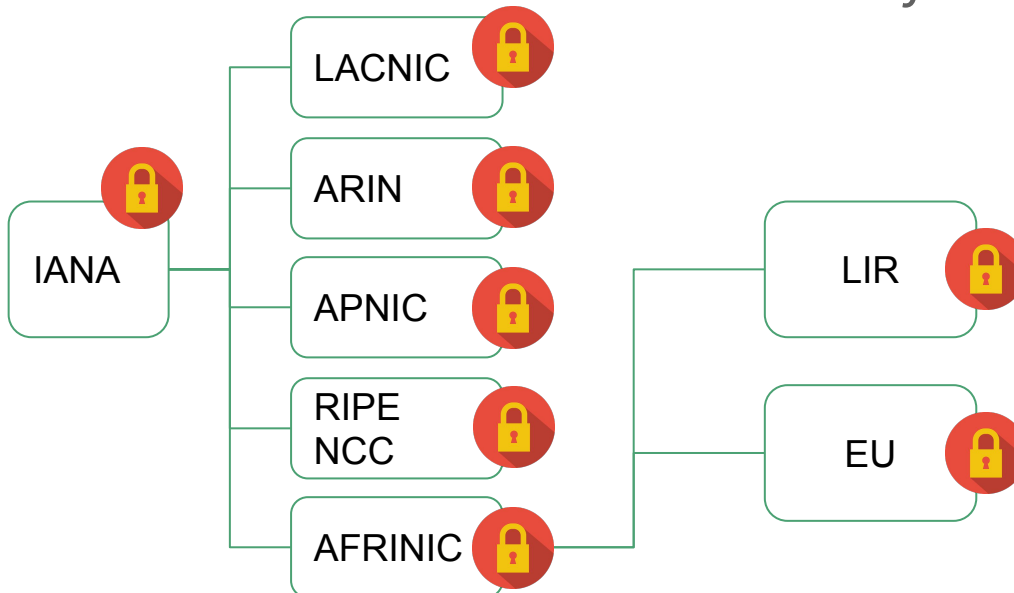
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Research Manager
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Role of the RIR

- Receives global allocations from IANA
- Distribute and manage resources at a regional level
- Make sure information are up-to-date and accurate
- Becomes the de-facto authority as sole registry regionally

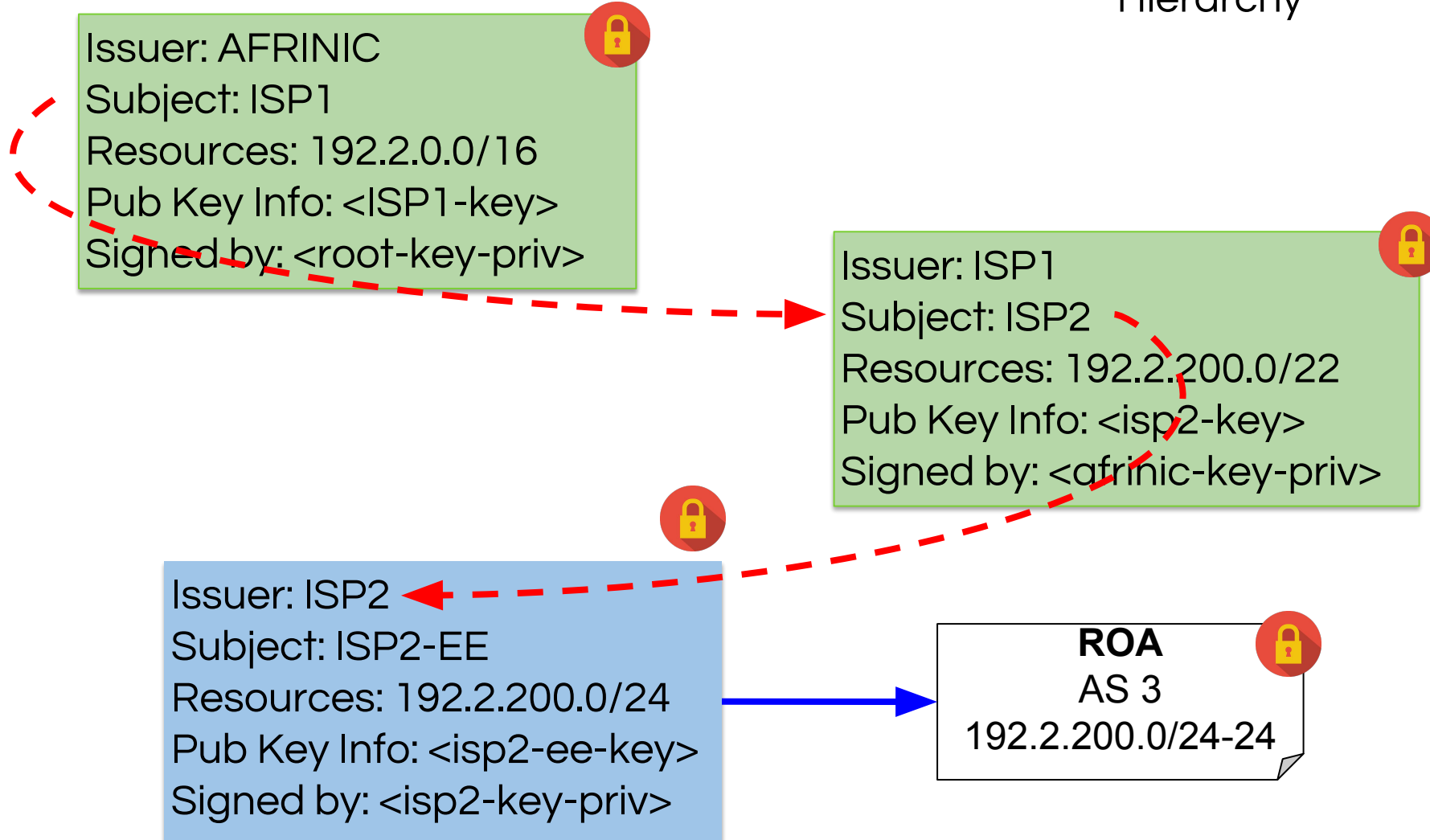


Resource Certificates

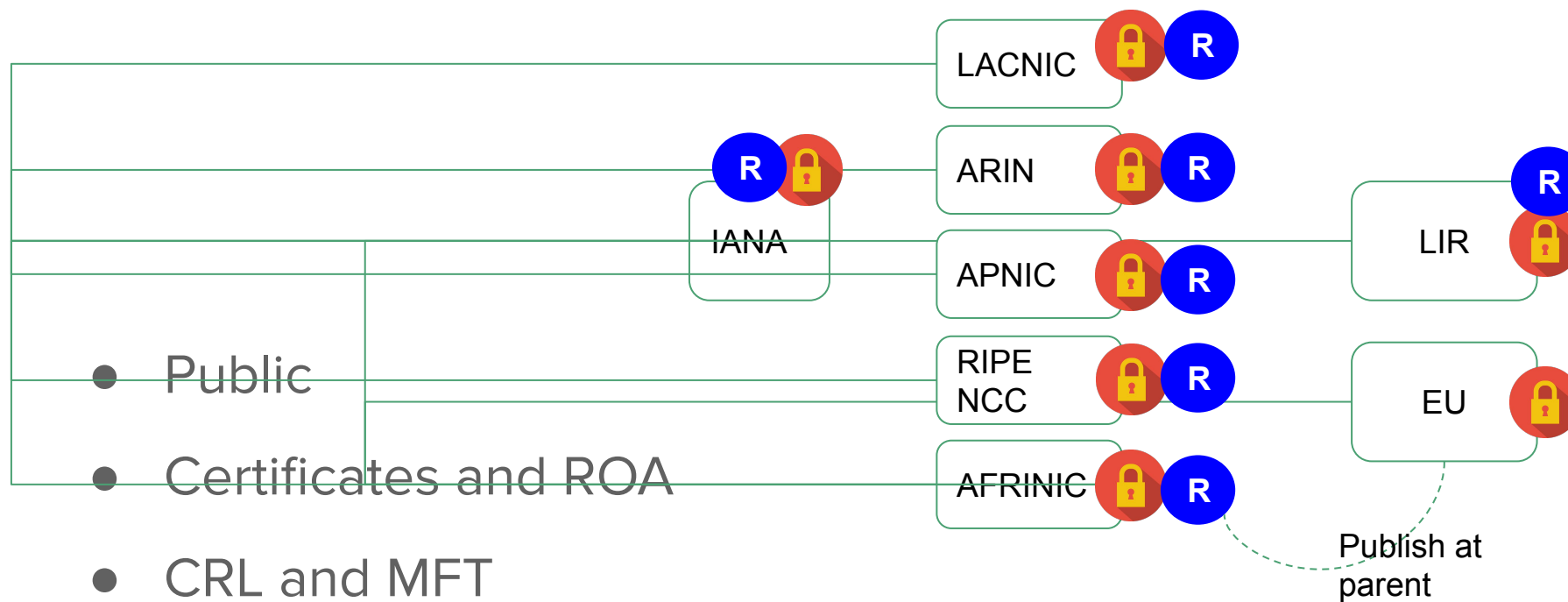
- RPKI defines two types of certificates:
 - CA - Certificate Authority (to issue CA or EE)
 - EE - End-entity (digital signature, etc)
- Certify resources - verifiable ownership!
- AFRINIC has a self-signed root certificate
- IANA one-day!
- Opt-in service, one year validity
- Exclude legacy space/members

Certificate hierarchy

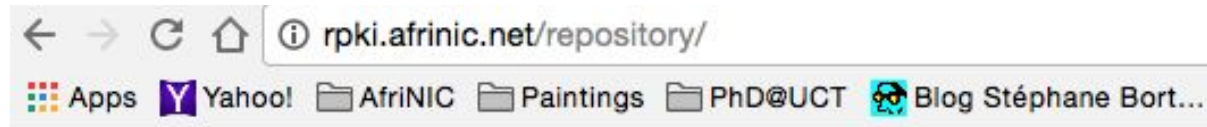
Resource
Allocation
Hierarchy



Repositories



AFRINIC's Repository



Index of /repository

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 04E8B0D80F4D11E0B657.>	2016-04-25 07:40	-	
 AfrinIC-simple.tal	2015-05-25 11:32	447	
 AfrinIC.cer	2015-05-25 11:32	4.1K	
 afrinic/	2016-09-18 20:00	-	
 apnic/	2016-09-18 20:05	-	
 arin/	2016-09-18 20:10	-	
 lacnic/	2016-09-18 20:15	-	
 member_repository/	2016-09-18 20:36	-	
 ripe/	2016-09-18 20:20	-	

AFRINIC Root Certificate

AFRINIC member's repository

Demo

African Network Information Center

https://my.afrinic.net/resources/rpki/

MyAFRINIC

Home Control Panel My Account Billing Resources Elections Meetings Help & Support

AS Numbers IPv4 Resources IPv6 Resources Reverse Delegation Resource Certification Resource Transfer [Sign-Out]

Amreesh Phokeer African Network Information Center - (AfrINIC Ltd.) Switch

You are here: Home > Resources > Resource Certification > Manage Your RPKI Resources

Version: V1.5.0

-- Quick Links -- Jump

Whois

Advanced Options

PUBLICATIONS

Registration Services Guidebooks

In our continuous effort to accompany our valued members through all of their initiatives, AFRINIC Registration Services Team has drafted 3 guidebooks to help you with IP planning and resources requests:

[IPv4 Request Guideline for LIR Members](#)

[IPv4 Addressing Plan, How To, Internet Routing Registry](#)

Manage Your RPKI Resources

You can manage your RPKI resources from this page

RPKI Operations

[List certificates](#)

[View ROAs](#)

[View Old ROAs](#)

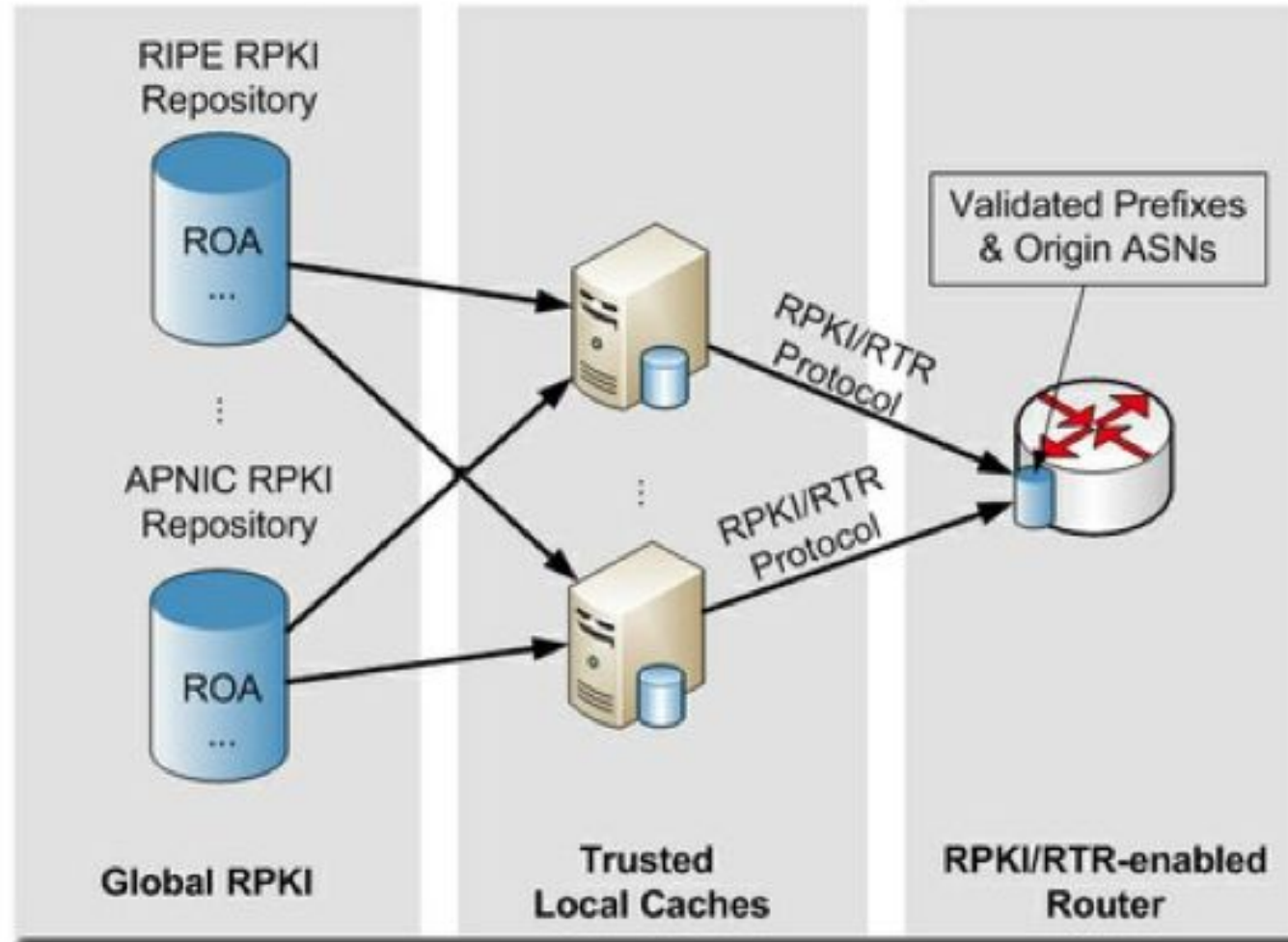
[Issue ROA](#)

[Refresh engine](#)

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Waiting for my.afrinic.net...

Validated caches



AFRINIC Validator Host: validator.afrinic.net Port: **8080**

Configure your router

```
router bgp 12345
```

```
...
```

```
bgp rpki server tcp 192.168.179.3 port 43779 refresh 60
```

```
bgp rpki server tcp 147.28.0.84 port 93920 refresh 60
```

Route announcement status

- **Valid** – A matching/covering prefix was found with a matching AS number
- **Invalid** – A covering prefix was found, but the AS number did not match, and there was no other matching one
- **NotFound** – No matching or covering prefix was found, same as today

You define your own policy

Fairly Secure

```
route-map validity-0
  match rpki valid
  set local-preference 100
route-map validity-1
  match rpki not-found
  set local-preference 50
! invalid is dropped
```

Paranoid

```
route-map validity-0
match rpki valid
set local-preference 110
! everything else dropped
```

RPKI tools

- Validators:
 - RIPE Validator
 - Rcynic - www.rpki.net (CA+Validator)
 - RPSTIR
 - Routinator
- Looking glasses:
 - bgp.he.net
 - RIPEStat

Questions

rpki-help@afrinic.net