



RIPE NCC Certification Update

RIPE 59 - Lisbon

Alex Band

What is the topic again?

*“Resource certification is a reliable method
for proving the association between
resource holders and Internet resources.”*

Between who and what?

- Resource Holders
 - Regional Internet Registries
 - Local Internet Registries
 - End Users
- Internet Resources
 - IPv4 Address Blocks
 - IPv6 Address Blocks
 - AS Numbers



But why would I want that?

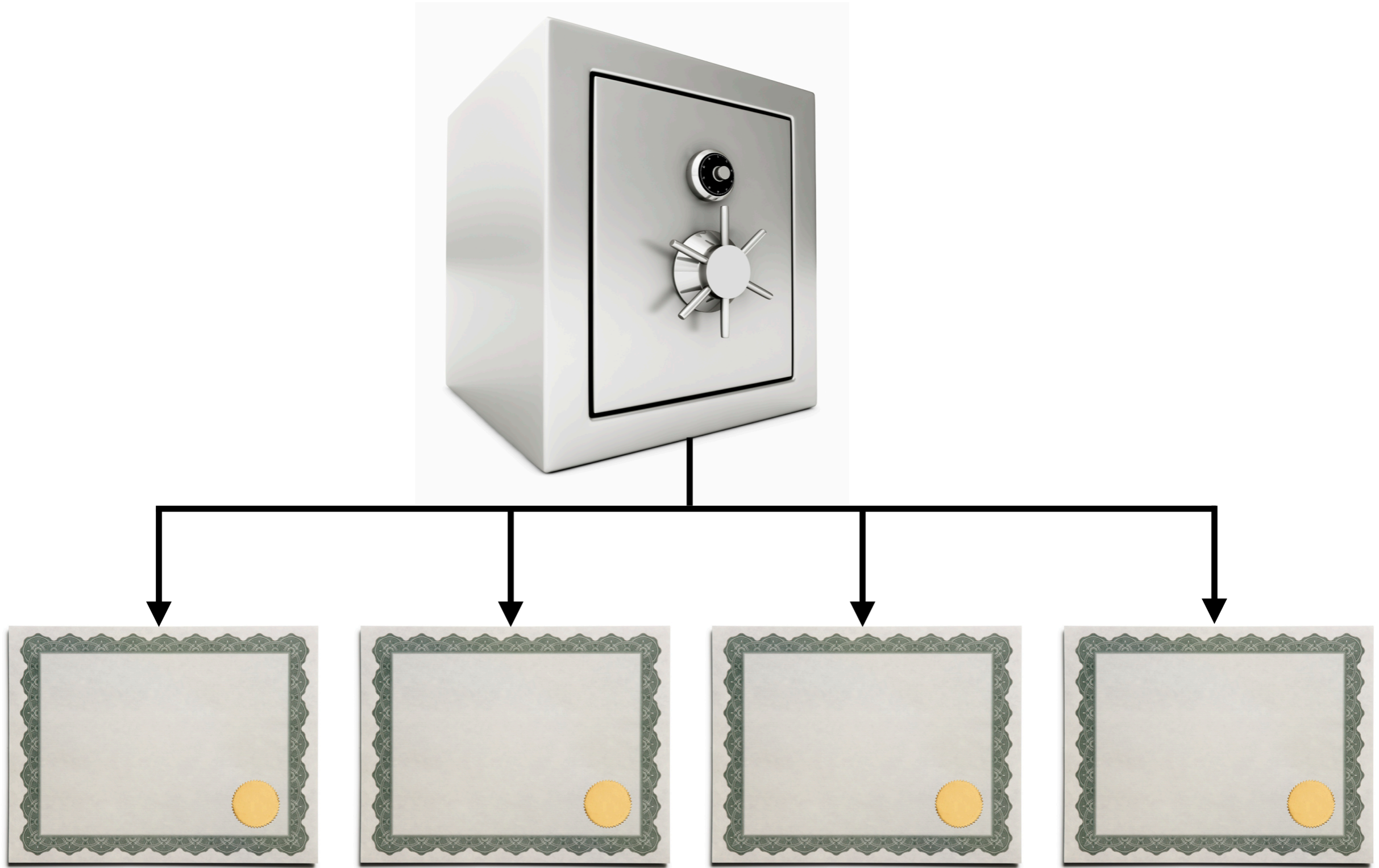
- Proof of holdership
- Secure Inter-Domain Routing
 - Route Origin Authorisation
 - Preferred certified routing
- Resource transfers
- Validation is the added value!



Our Technical Implementation

- Involved our membership from day one
 - Set up a task force
 - Addressed concerns of individual members
- Focused on offering immediate value
- Uses open standards and strong authentication
- Interoperable with APNIC's solution
- Source code given to ARIN and LACNIC

The system



Proof of holdership



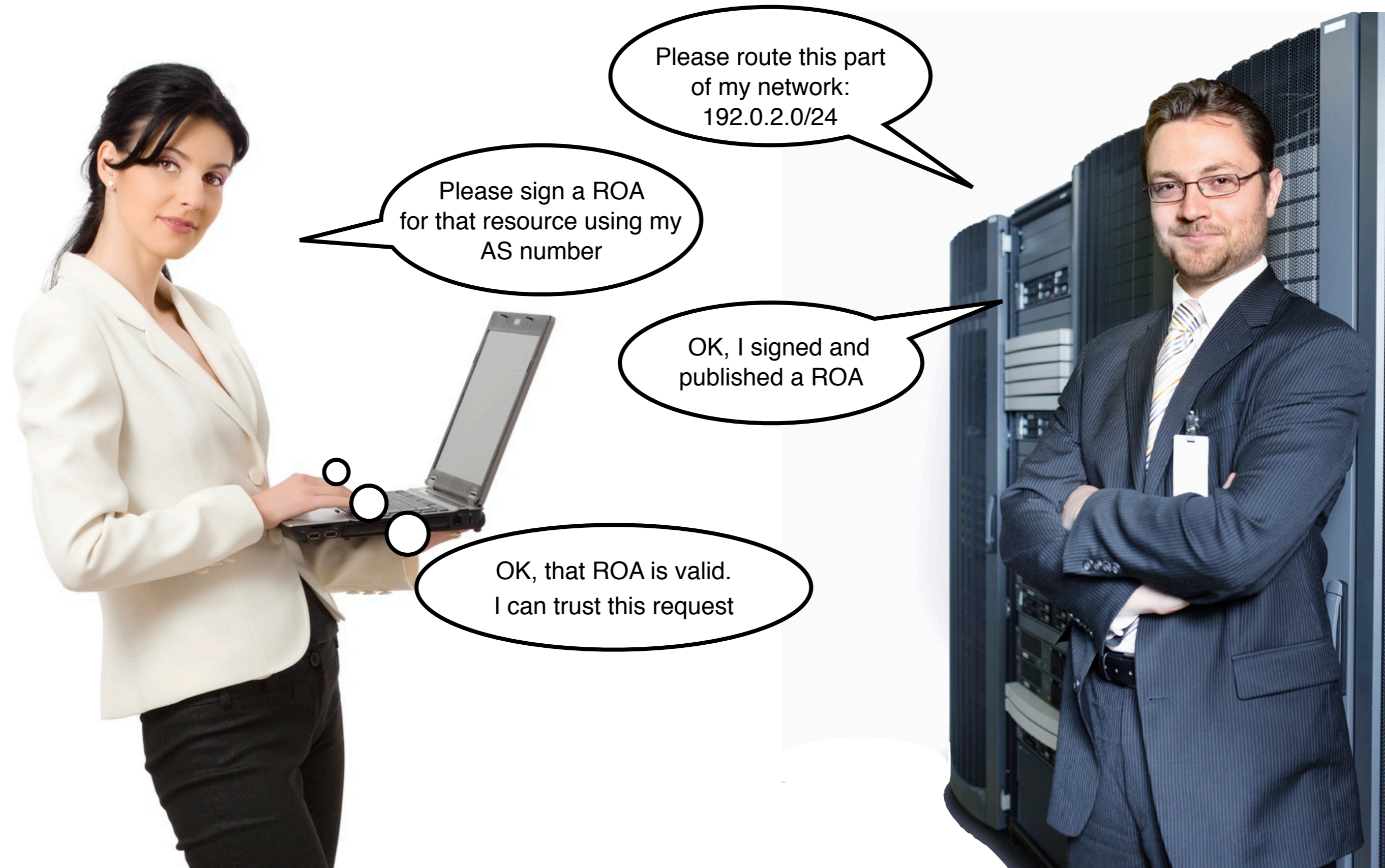
Route Origin Authorisation (ROA)

R.O.A. Specification

- IP Prefixes
- AS Numbers
- Signature



Automated Provisioning using ROAs



Please route this part
of my network:
192.0.2.0/24

Please sign a ROA
for that resource using my
AS number

OK, I signed and
published a ROA

OK, that ROA is valid.
I can trust this request

Preferred Certified Routing

- In case more than one AS announces the same address space:
 - Accept the one with a certificate
 - Reject the other

```
localhost:bin user$ ./certification-validator  
--trust-anchor ./ncc-root.cer  
--roa-export ./roa-data.csv
```





Home

[Home](#)

Welcome to the RIPE NCC LIR Portal

▶ [New Users Click Here](#)

Latest News!

We are continuously working on the software behind the LIR Portal requiring regular updates to our systems. To minimise the inconvenience we have decided to use the following regular maintenance interval for these updates:

Wednesdays 16:00 UTC - 18:00 UTC

Of course we will try to limit downtime as much as possible.

The LIR Portal lets you manage your registry data and make queries and updates. Features of the LIR Portal include:

- view and edit your LIR contact and addresses information
- view billing information
- view IP and AS resources
- view status of open tickets
- news and events board
- submit IPv4, IPv6 and AS Number request forms
- update certain attribute values in allocation objects
- request approval and have an assignment automatically registered in the RIPE Database

(All information exchanged is encrypted to ensure security.)

The [RIPE NCC Member Update](#) is a useful way to stay up-to-date with the latest RIPE and RIPE NCC developments, issues and policies.

LOGIN

Regid:

Username:

Password:

[Need new account?](#)

[Forgot your password?](#)

PKI Login

NCC LOGO FOR MEMBERS

If you would like to indicate on your website or any other publication that your organisation is a member of the RIPE NCC, Please use the following graphic available in [GIF](#), [JPG](#), [PNG](#) and [EPS Formats \(zip file\)](#)



The road ahead...

- Hardware Security Module is being installed and tested now
- Only Provider Aggregatable (PA) space can be signed
 - Once 2007-01 changes are implemented, this can be extended to Provider Independent (PI) space and Autonomous System (AS) numbers.

The road ahead...

- Currently in development:
 - Certification Policy
 - This is being developed in the IETF
 - Certification Practice Statement
 - This will be drafted by the RIPE NCC and the RIPE Certification Task Force

Production launch for all RIRs
on 1 January 2011

