RIPE NCC Certification Software

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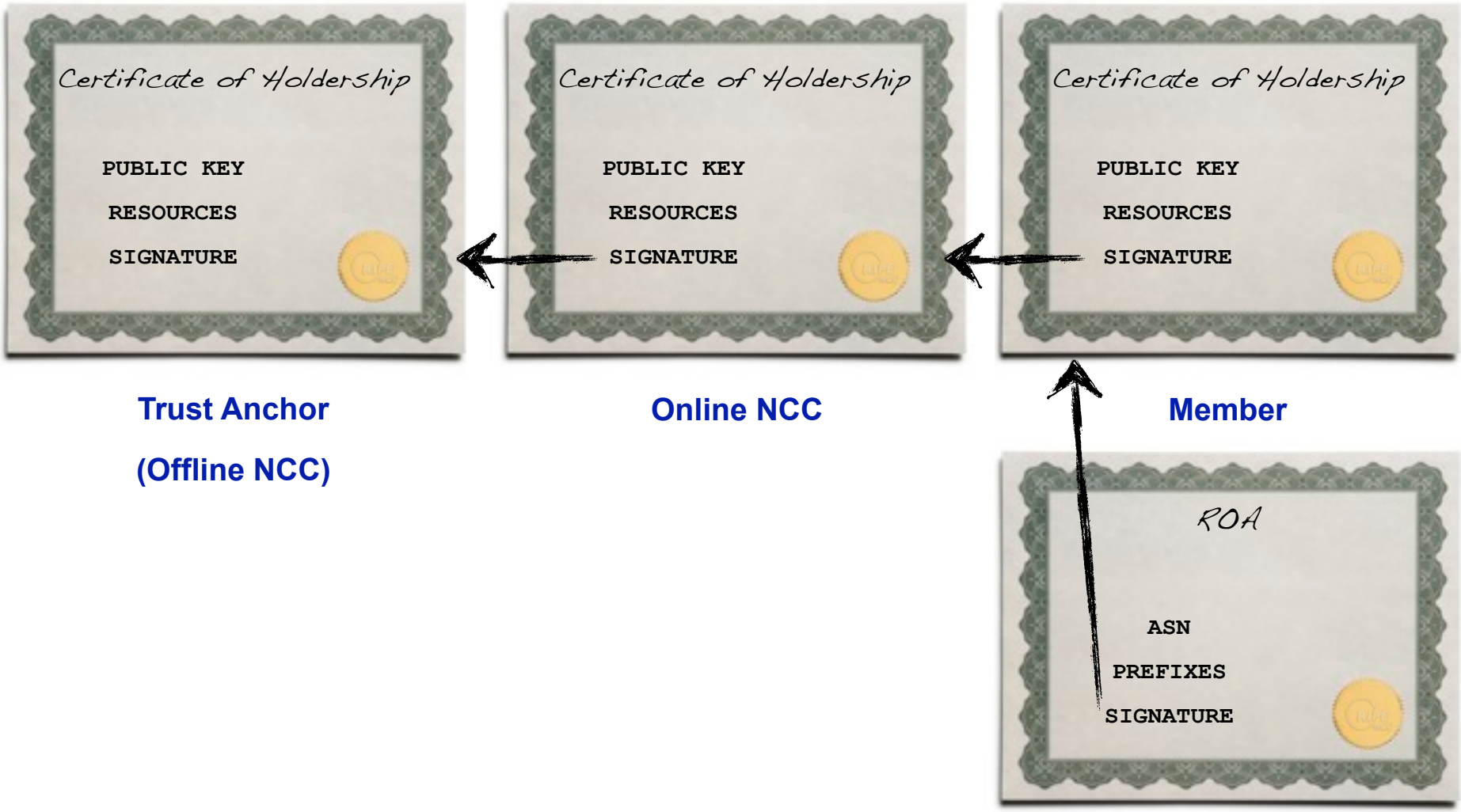
Resource Certificate

Route Origin Authorisation

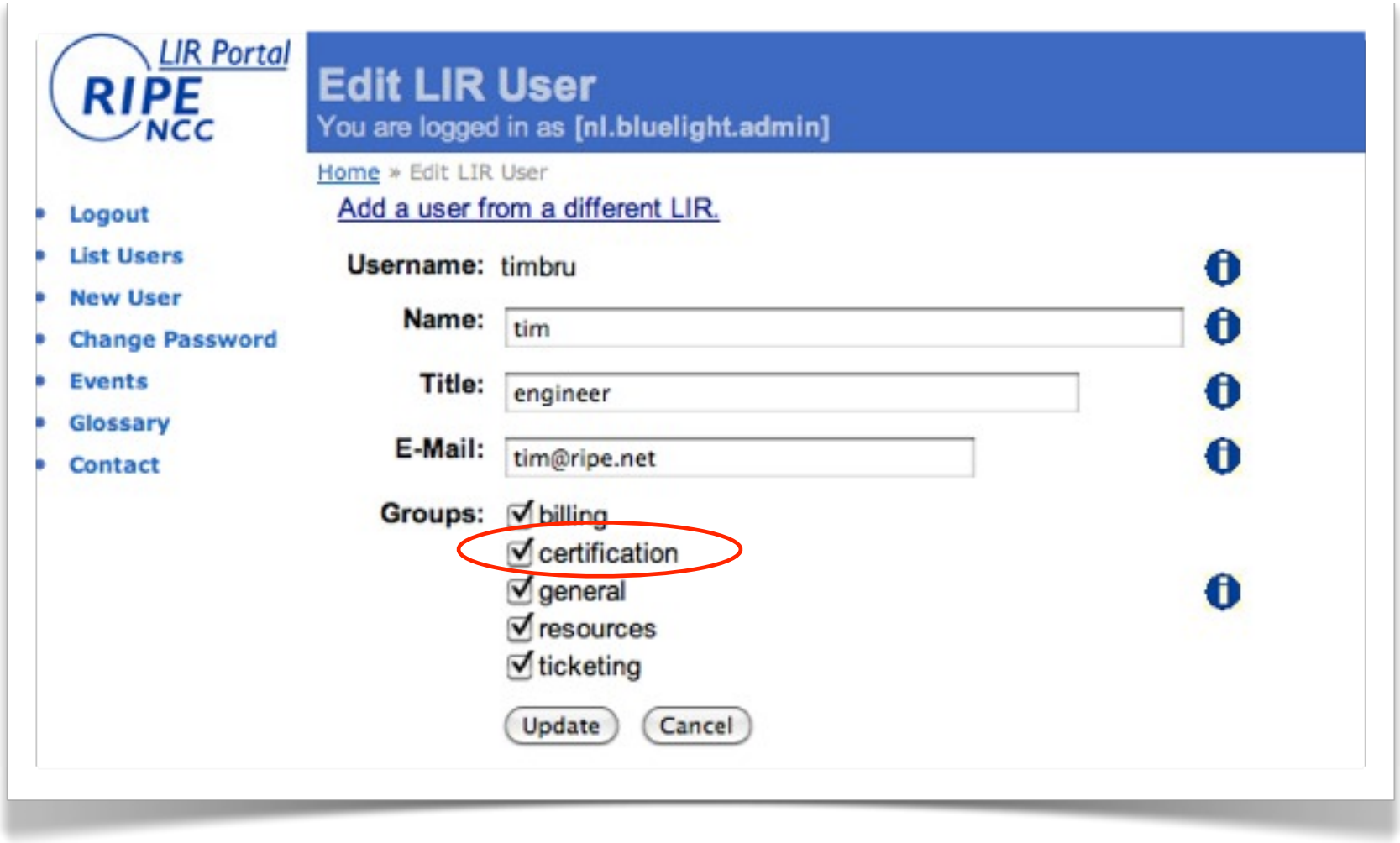
The **Resource** PKI



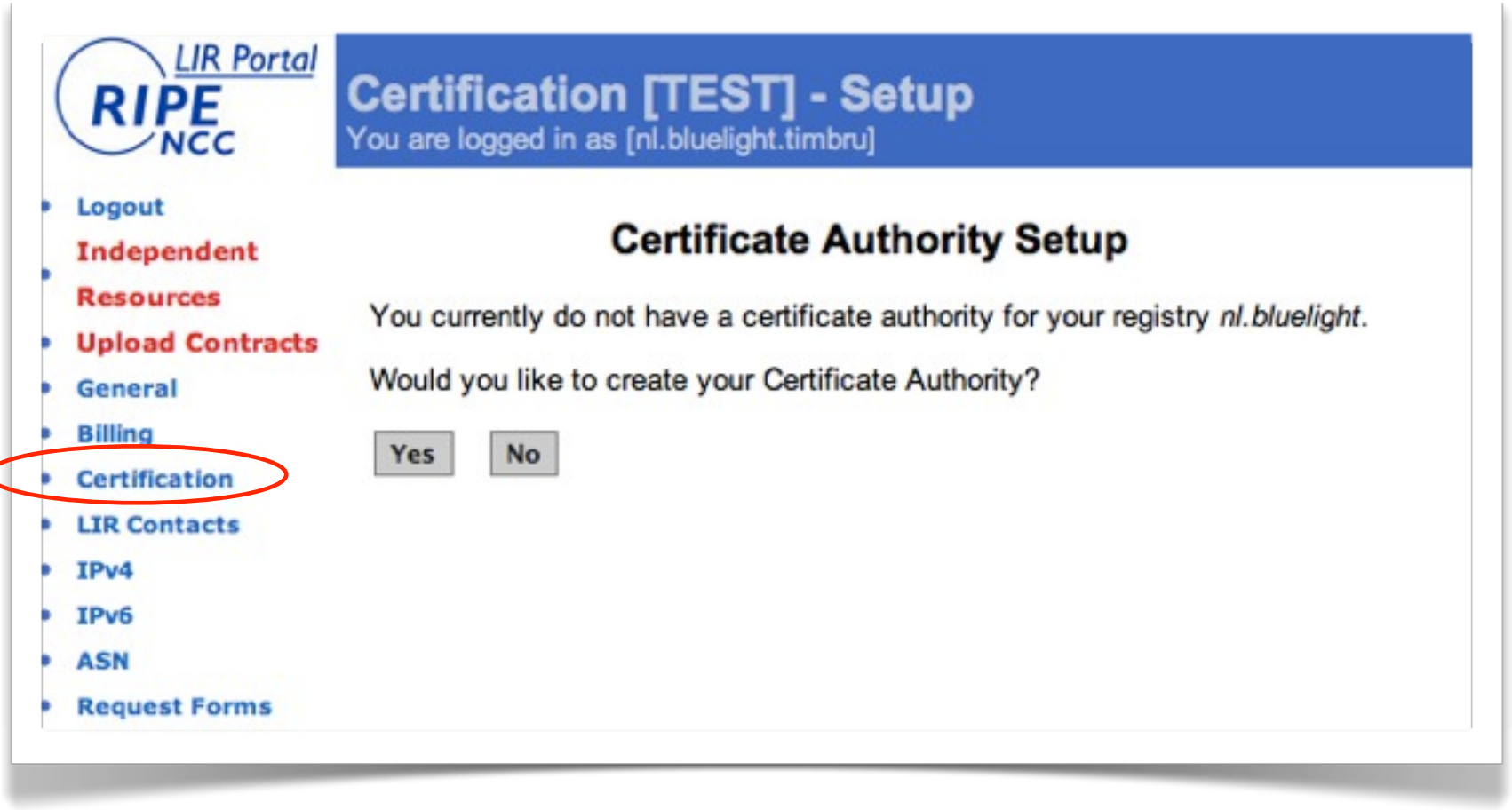
Hosted **Member** CA

- Simplify ROA management for members
- Available for all members
- Opt-in
- PA only, for now...

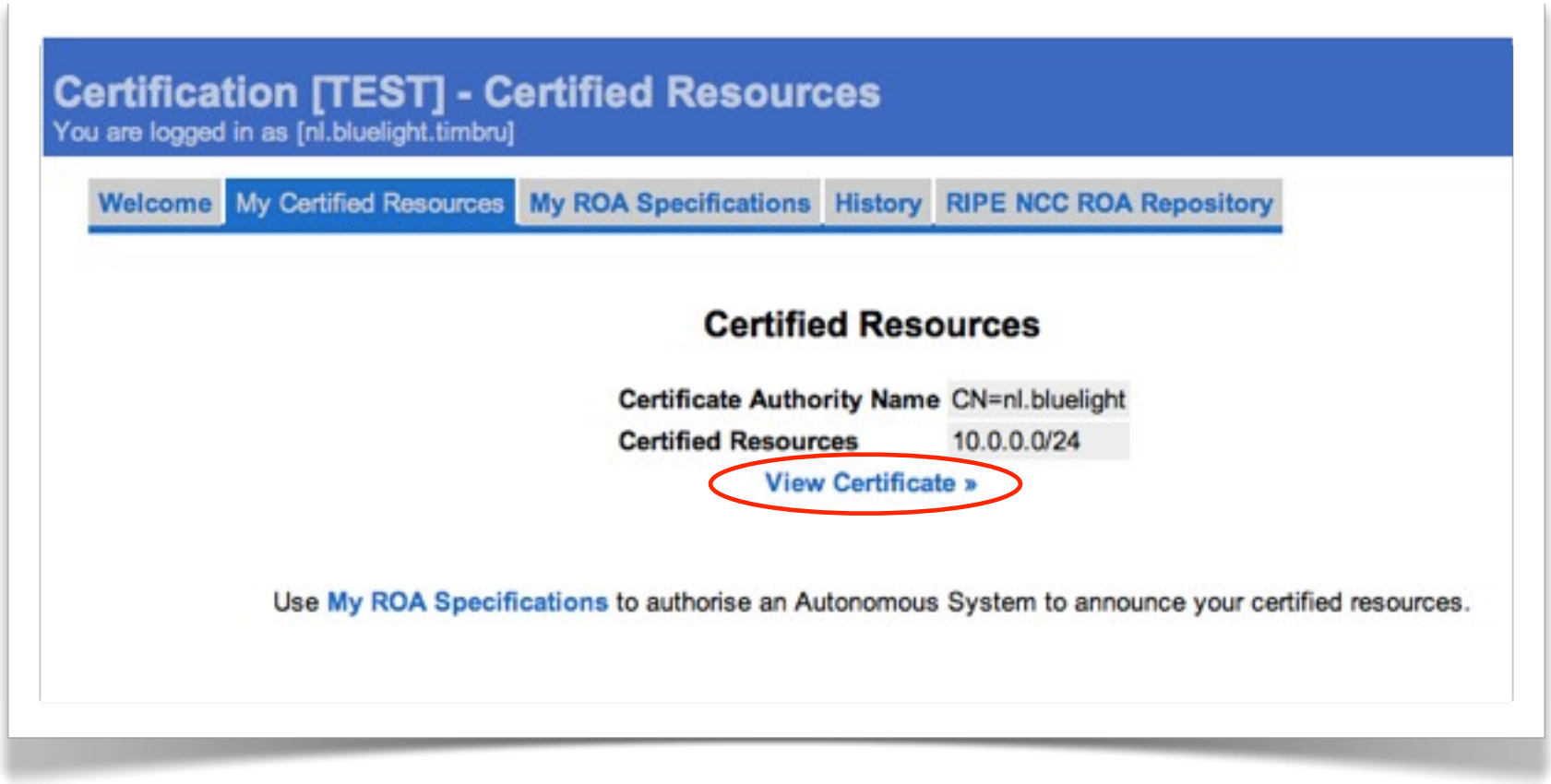
Hosted **Member** CA



Hosted **Member** CA



Hosted **Member** CA



Hosted **Member** CA

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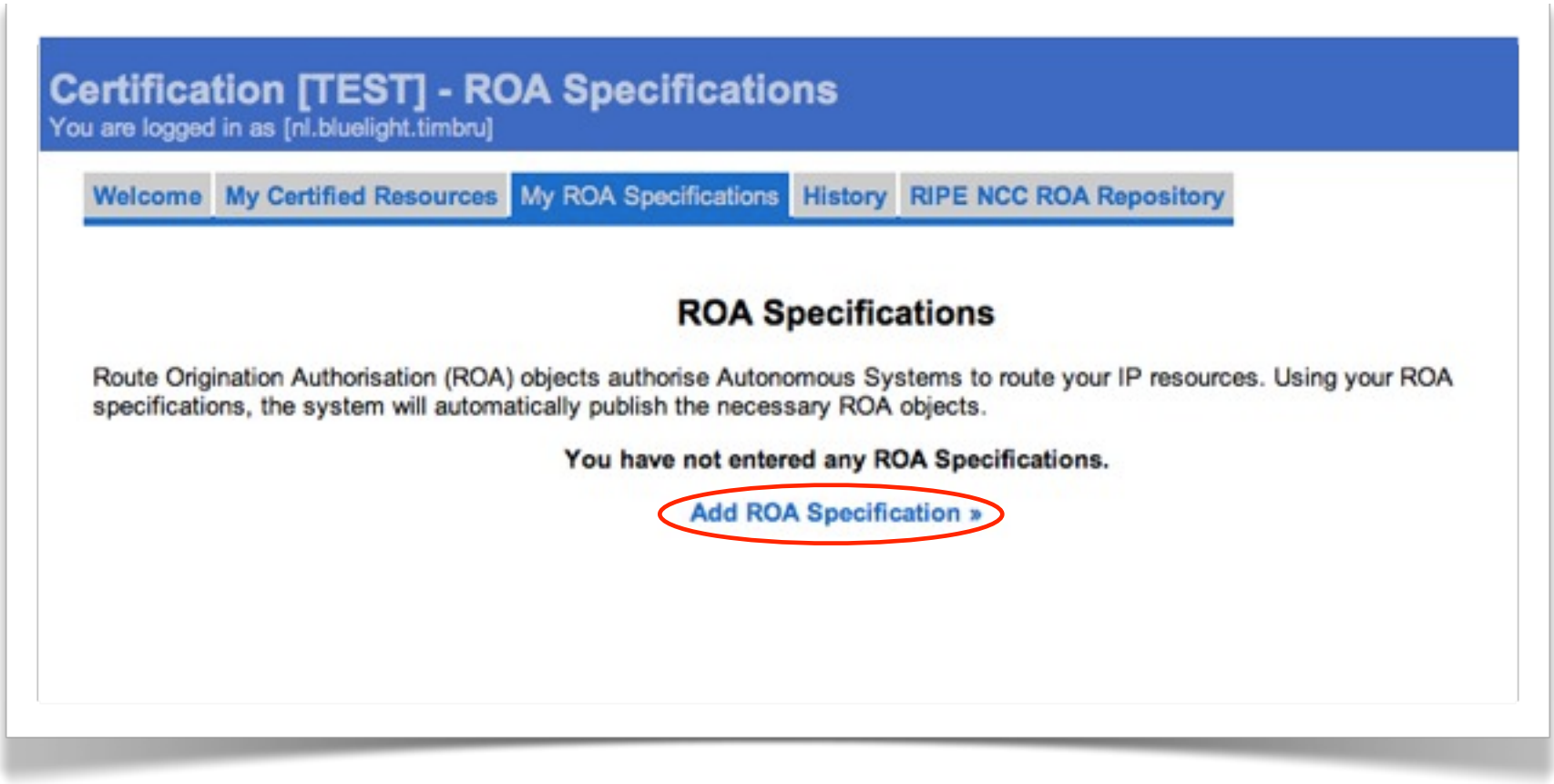

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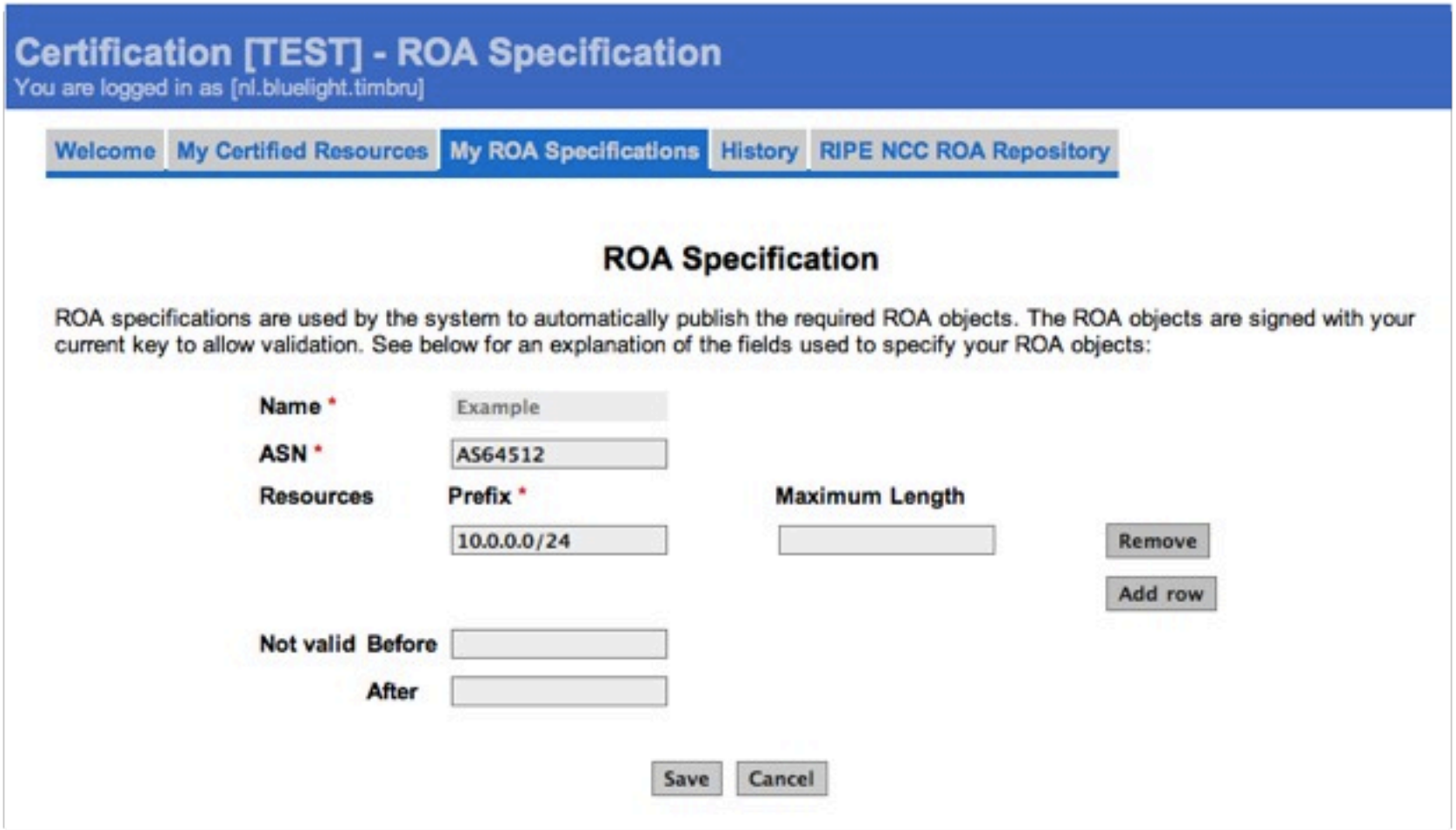

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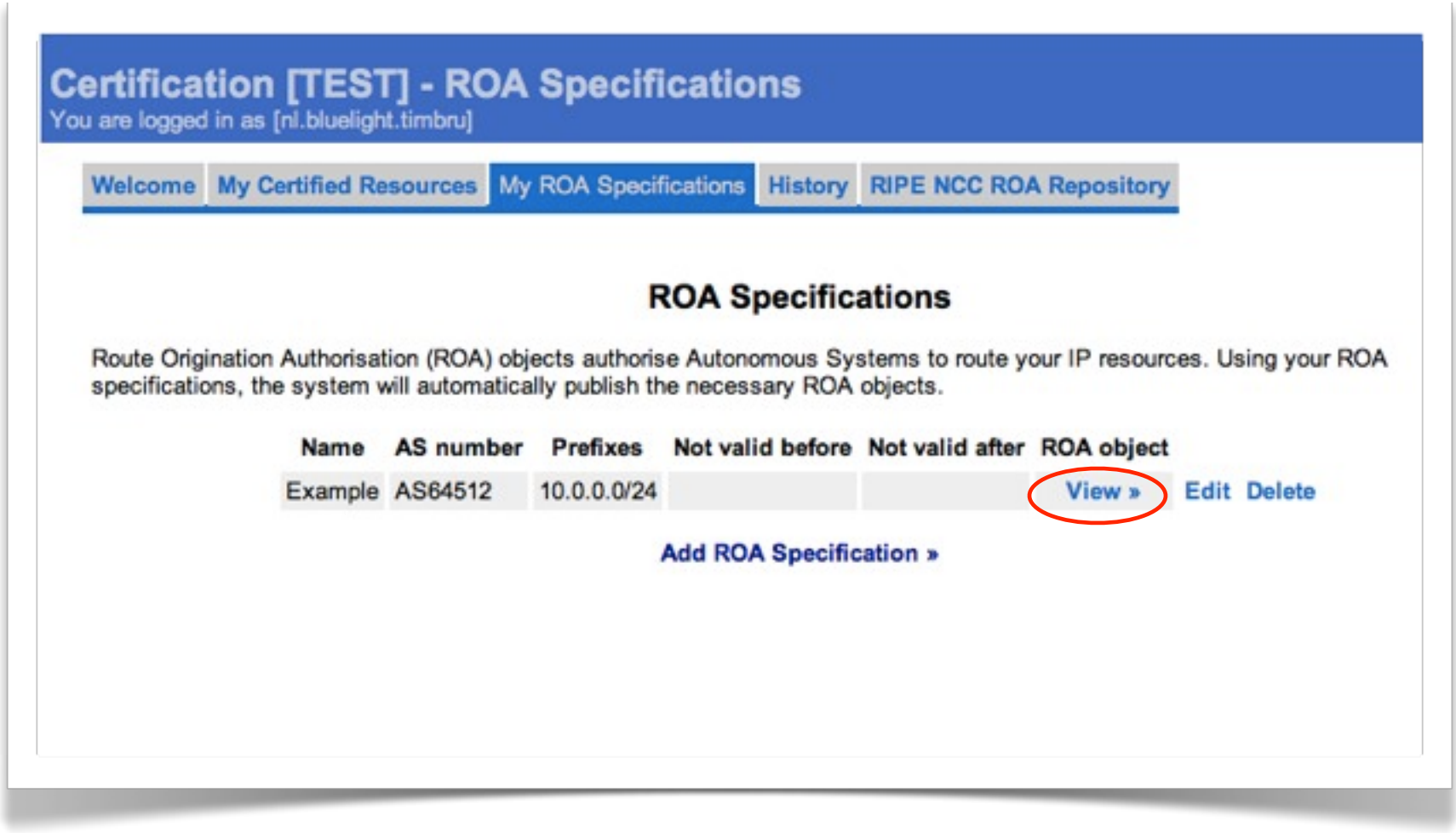
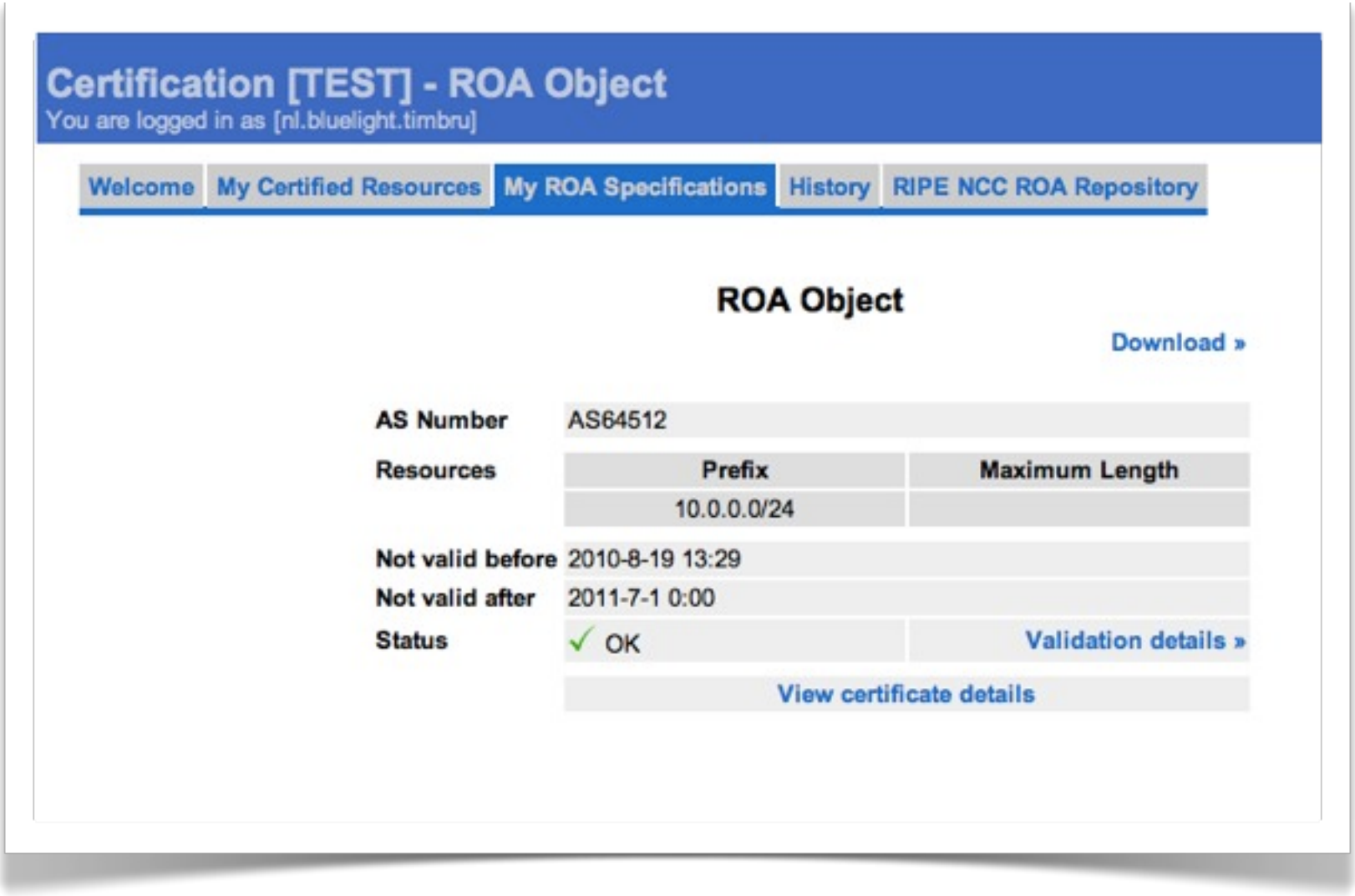
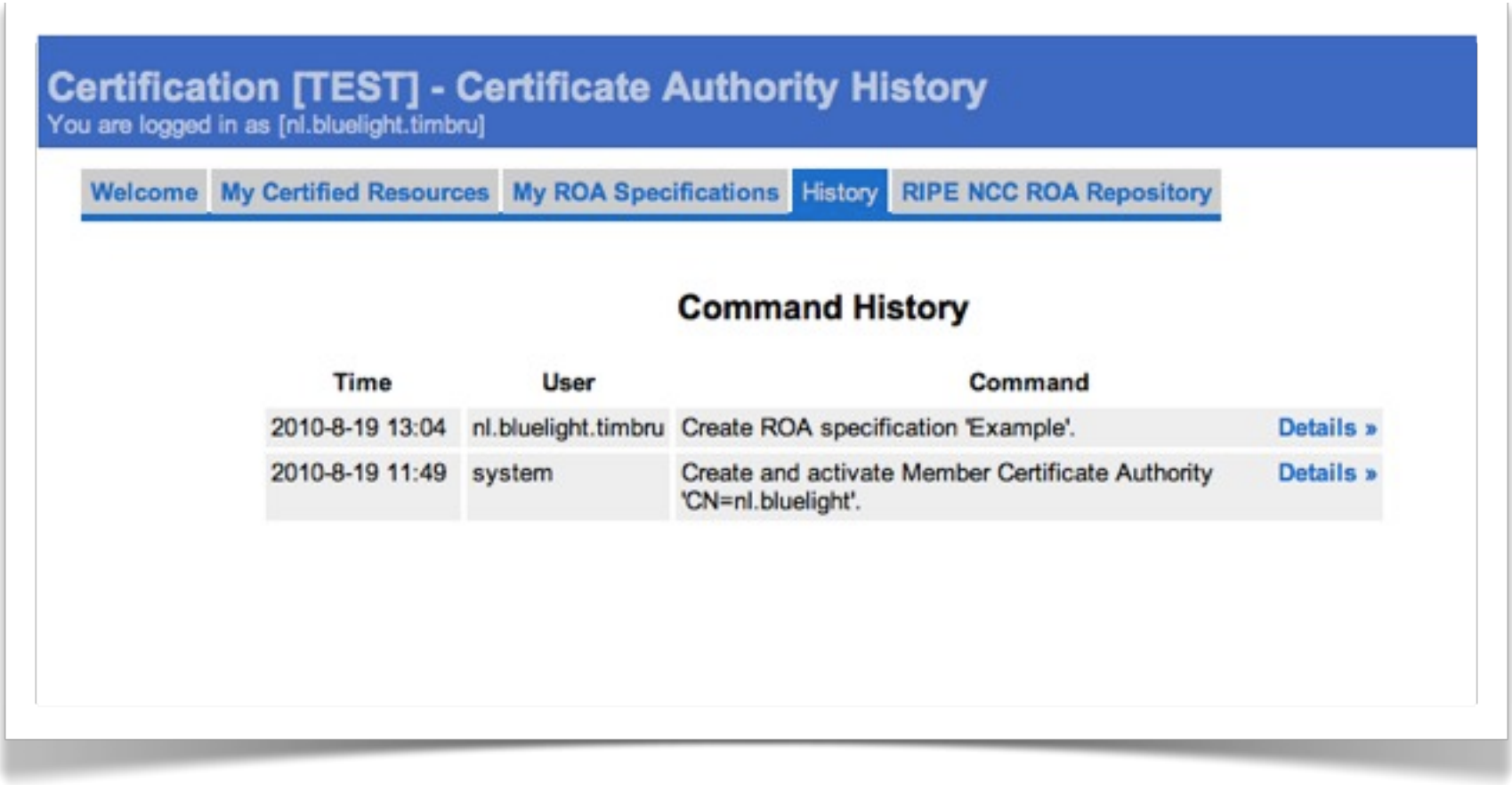


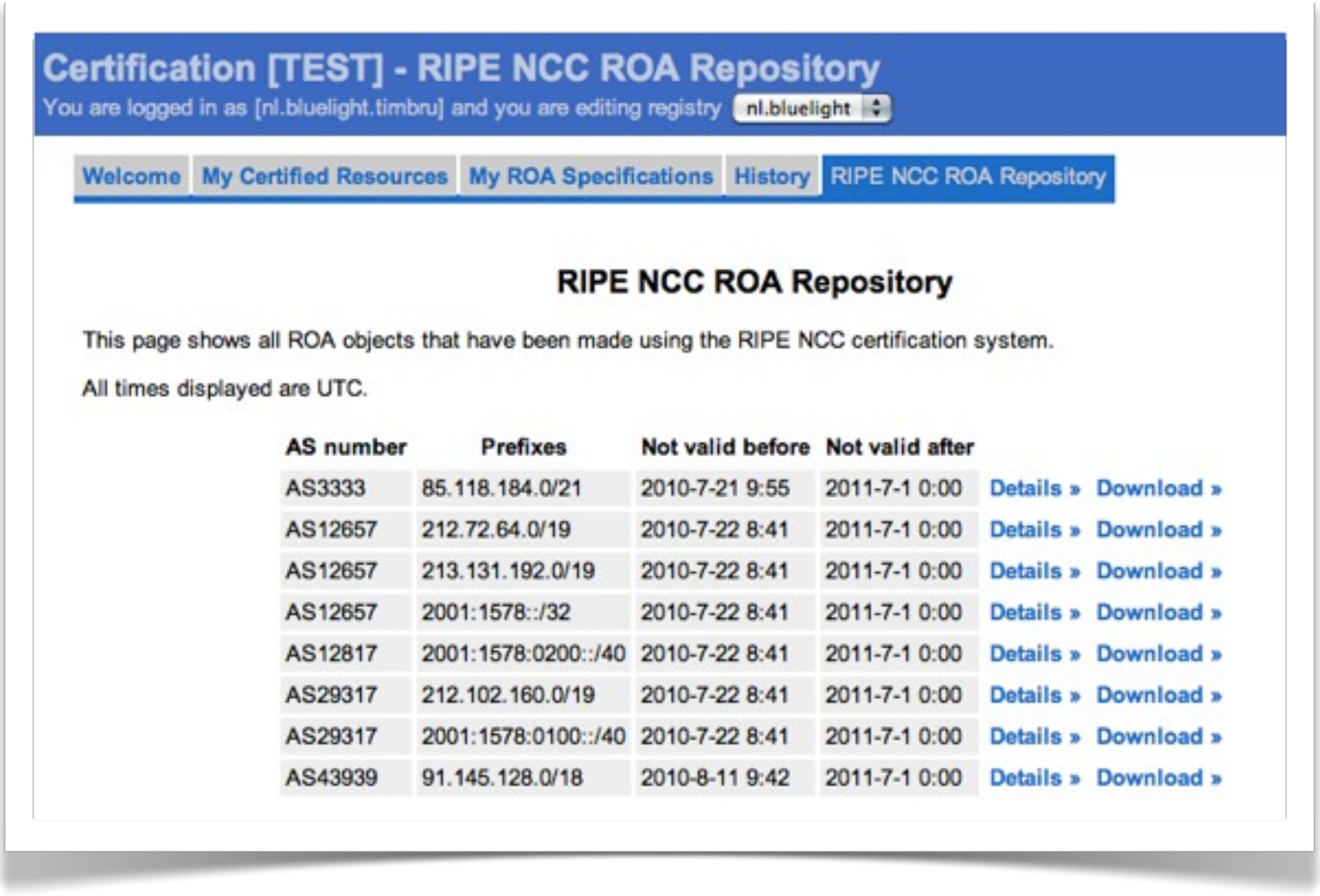
Hosted **Member** CA



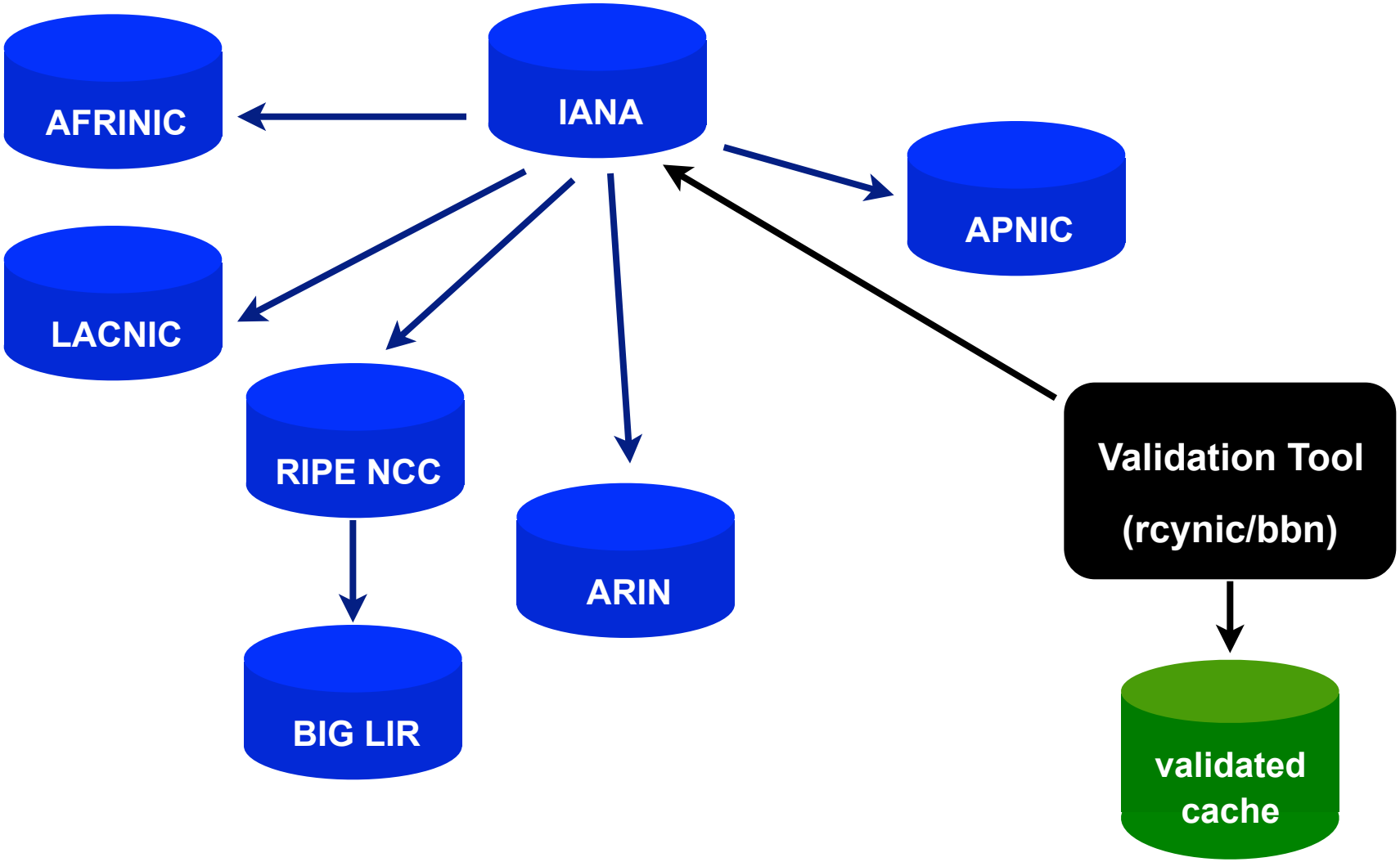
Hosted **Member** CA



Hosted **Member** CA



RPKI Validation: Distributed Repositories



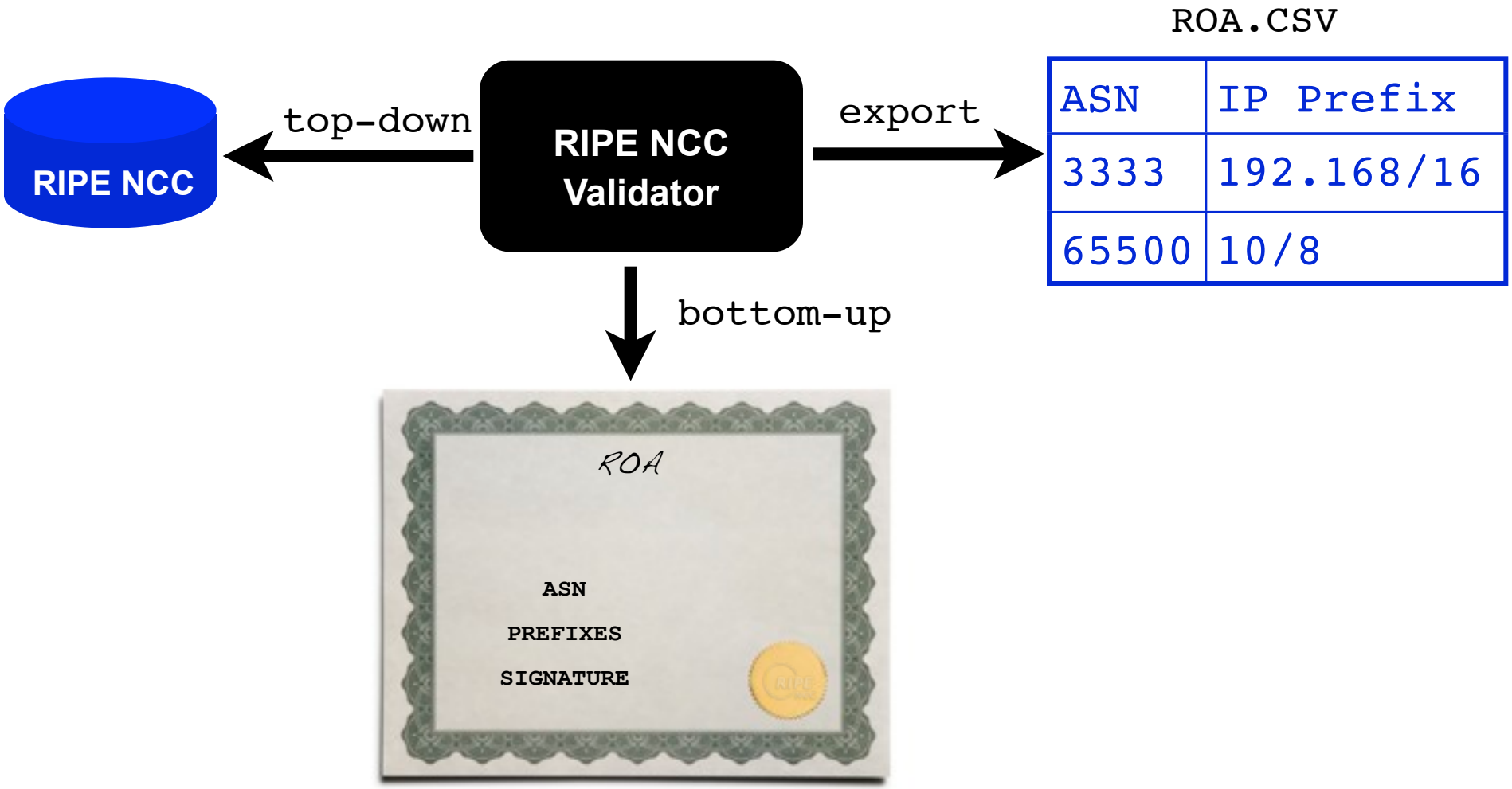
RPKI Validation: RPKI-RTR protocol

RPKI Validation: RPKI-RTR protocol


```
route-map validity-0
   match rpki-invalid
   drop
route-map validity-1
   match rpki-not-found
   set localpref 50

// valid defaults to 100
```

RPKI Validation: RIPE NCC Validator



RPKI Validation: RIPE NCC Validator

http://labs.ripe.net/Members/agowland/ripe-ncc-validator-for-resource-certification

ripencc-rpki-validator.zip

```
.../ripencc-rpki-validator $ find .
./bin
./bin/certification-validator
./jar
./jar/certification-validator-1.17-jar-with-dependencies.jar
./README.txt
```

RPKI Validation: RIPE NCC Validator

download TA

```
rsync rsync://certrepo.ripe.net/rta/CN=RTA,O=RIPE
%20NCC,C=NL.cer ./rta.cer
```

top-down validation

```
.../ripencc-rpki-validator $ bin/certification-validator \
    --top-down -t ./rta.cer -o out --roa-export roas.csv

15:55:49,927 INFO  rsync://certrepo.ripe.net/rta/CN=RTA,O=RIPE
%20NCC,C=NL.crl is VALID
15:55:49,932 INFO  rsync://certrepo.ripe.net/rta/CN=RTA,O=RIPE
%20NCC,C=NL.mnf is VALID
......
```

RPKI Validation: RIPE NCC Validator

roas.csv

URI	ASN	IP Prefix	...
rsync://..	AS3333	85.118.184.0/21	
rsync://..	AS12657	2001:1578::/32	
rsync://..	AS29317	212.102.160.0/19	
....			

RPKI Validation: RIPE NCC Validator

bottom-up validation

```
.../ripencc-rpki-validator $ bin/certification-validator \
          -t ./rta.cer -f bl.roa --print

16:47:56,381 INFO  rsync://certrepo.ripe.net/rta/CN=RTA,O=RIPE
%20NCC,C=NL.cer is VALID
....
16:47:58,357 INFO  file:/Users/tim/Desktop/Brisbane/ripencc-rpki-
validator/bl.roa is VALID
Signing time: 2010-08-19T09:28:53.000Z
ASN: AS3333
Prefixes:
    85.118.184.0/21
```

RIPE NCC Validator

- Initially developed to test server implementation
- Command line tool released to support ad-hoc validation and ROA exports right now
- Can be extended if community wants:
  - usability
  - caching / distributed repositories
  - RPKI-RTR
- Open Source Release planned

Questions?