



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE Database Tips & Tricks

Monday 23 May 2016 | RIPE72

Agenda



- **Global Resource Service**
- **Single Sign On**
- **PGP Updates**
- **Created and Last Modified**
- **Partial Route Object creation**



GRS

How to find stuff that's not from us



- **Allows you to query other RIRs databases**
 - And two Internet Routing Registries
- **Using the RIPE Database interface**
- **Returns RIPE Routing Policy Specification Language (RPSL) formatted objects**
 - So everything looks familiar
- **Also available in JSON and XML output**

How can we query?



- In Webupdates:

RIPE Database Query

☒ Show full object details ?
☐ Do not retrieve related objects ?

You can search up to 5 terms at once in the search box above, separating them with a semicolon.

Sources

Types

Hierarchy Flags

Inverse lookup

☒ Search resource objects in all available databases ?
☐ Search RIPE Database only

Are you looking for the [TEST Database?](#)

By submitting this form you explicitly express your agreement with the [RIPE Database Terms and Conditions](#)

Search

How can we query?



- **Command line:**

```
whois --resource as123
% This is the RIPE Database query service.
% The objects are in RPSL format.
%
% The RIPE Database is subject to Terms and Conditions.
% See http://www.ripe.net/db/support/db-terms-conditions.pdf

% Information related to 'AS123'

aut-num:        AS123
org:            7ESG
as-name:        LOGAIRCOMNET-AS
changed:        unread@ripe.net 20000101
source:        ARIN-GRS
remarks:        *****
remarks:        * THIS OBJECT IS MODIFIED
remarks:        * Please note that all data that is generally regarded as personal
remarks:        * data has been removed from this object.
remarks:        * To view the original object, please query the ARIN Database at:
remarks:        * http://www.arin.net/
remarks:        *****
```

Another example



- **Command line:**

```
whois -a as123
```

```
as-block:      AS29 - AS136
descr:         ASN block not managed by the RIPE NCC
remarks:       _____
```

```
as-block:      AS29 - AS136
descr:         ARIN ASN block
remarks:       These AS numbers are further assigned by ARIN
remarks:       to ARIN members and end-users in the ARIN region.
```

```
aut-num:       AS123
org:           7ESG
as-name:       LOGAIRCOMNET-AS
changed:       unread@ripe.net 20000101
source:        ARIN-GRS
remarks:       *****
remarks:       * THIS OBJECT IS MODIFIED
remarks:       * Please note that all data that is generally regarded as personal
remarks:       * data has been removed from this object.
remarks:       * To view the original object, please query the ARIN Database at:
remarks:       * http://www.arin.net/
remarks:       *****
```

Personal data



- **Because of European privacy laws, no personal information is visible**
- **Only AS Numbers, IP addresses, ORG objects, route and route 6 objects**
- **No risk of being blocked because you queried to many objects**

Dummy Objects



- **Some attribute values will be replaced by dummy data**
- **For example:**
 - Author
 - Admin-c and Tech-c
- **Or dummy values are created for missing mandatory attributes**

Differences



- **-resource**

- returns only aut-num, inet(6)num, route(6), domain
- doesn't return referenced objects
- **-i** doesn't work

- **-a**

- you can specify which sources
- returns referenced objects (even person) if they're in RIPE DB



SSO

Your one stop shop

Why Single Sign On?



- **We started in 2011 with SSO**
- **There were too many different log-in credentials for different services**
 - Labs
 - LIR Portal
 - RIPE Database
 - Atlas
 - Academy

Anyone can create SSO



- **Easy to create**
- **Mail address and self chosen password**
- **Can be linked to one or multiple LIRs**
 - To use for the LIR Portal
 - To use for authentication in the RIPE Database

Create a RIPE NCC Access Account



<http://access.ripe.net>

You are here: [Home](#) > [Access](#)

Create a new RIPE NCC Access account.

RIPE NCC Access enables you to sign into various RIPE NCC services using one password.

Already have an account? Then [click here](#) to manage it.

First name

Last name

Email

Password (minimum length: 8)

Confirm Password

Enter the words you see in the box below





[Privacy & Terms](#)

[Sign up](#)

Security



- **In audit logs, there is per-user granularity**
- **Two factor authentication**
- **Lost password is less cumbersome**
 - Provided that your e-mail address still works

SSO and the RIPE Database



- **Since 2014 you can use SSO in the RIPE Database**
- **It is simple to add it to your maintainer**
 - Log in with your SSO account to Webupdates
 - Modify your maintainer
 - Add SSO as your authentication (default)
 - Remove MD5 if you want

Default Authentication: SSO



- **If you create a new maintainer:**
 - your SSO account will be the authentication by default

MD5 and the RIPE Database

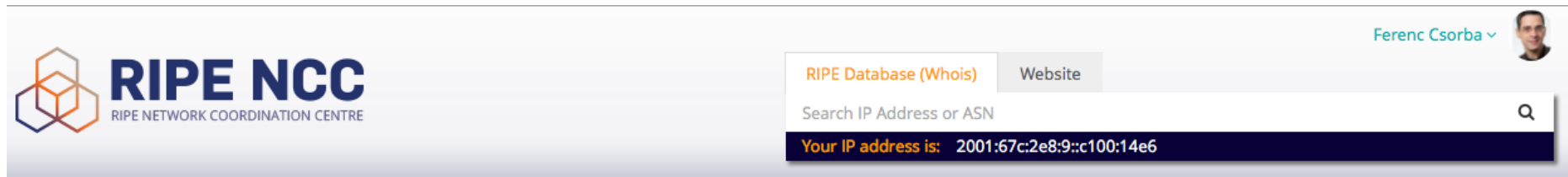


- We used to publish the MD5 hash in the RIPE Database
- These hashes could be computed and the passwords discovered
- So we hid the hashes
- In 2015 we blocked all the maintainers with an unchanged password since 2011

How to add SSO to your mntner



- Make sure you are logged in



How to add SSO to your mntner



Search results

PERMA XML JSON

This is the RIPE Database search service. The objects are in RPSL format.
The RIPE Database is subject to [Terms and Conditions](#).

Update

mntner:	PIROS-MNT
admin-c:	FC14280-RIPE
upd-to:	ferenc@ripe.net
auth:	MD5-PW # Filtered
mnt-by:	PIROS-MNT
created:	2016-05-17T08:55:57Z
last-modified:	2016-05-17T09:03:43Z
source:	RIPE # Filtered

How to add SSO to your mntner



default!

Password authentication

Select a maintainer to authenticate the update operation.

PIROS-MNT

Provide the password for the selected maintainer

☒ Also authorise my RIPE NCC Access account for this maintainer. [Learn more.](#)

Submit

mntner

PIROS-MNT

admin-c

FC14280-RIPE

upd-to

ferenc@ripe.net

auth

MD5-PW

source

RIPE

By submitting this form you explicitly express your agreement with the [RIPE Database Terms and Conditions](#)

Delete this object

Cancel

Submit

2 Factor Authentication



- **Optional but recommended security feature**
- **Once enabled it requires a six digit security code in addition to your password**
- **Security code is generated by an authenticator app**
 - Using Time-based One-Time Passwords (TOTP)

Set up 2 Factor Authentication



1 Confirm password

2 Configure authenticator app

3 Recovery code

An authenticator app lets you generate security codes on your phone without needing to receive text messages. Any Time-based One-Time Password (TOTP) application should work. If you don't already have one installed, you can download any of [these apps](#). Please scan the QR code below to install the RIPE NCC account on your authenticator mobile app or use [the generated secret directly](#).



Please type in the PIN code generated by the authenticator app

PIN-code

6-digit code

Cancel

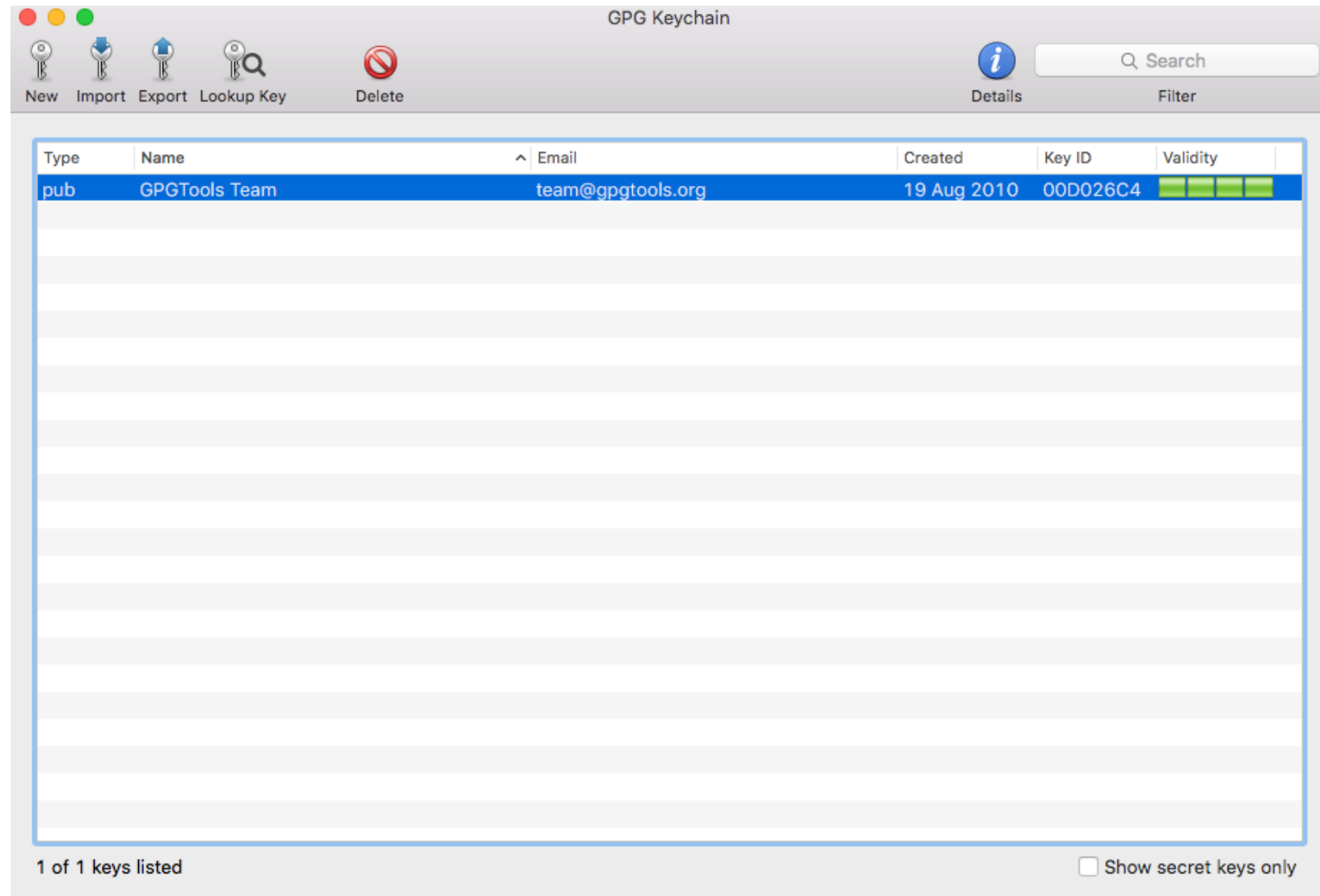
Confirm



PGP

Securing your email updates

Generate an RSA key



Generate RSA Key



GPB Keychain

New Import Export Lookup Key Delete

Details Search Filter

Type	Name
pub	GPBTools Team

Generate a new key pair.

Full name:

Email address:

☐ Upload public key

▼ Advanced options

Comment:

Key type:

Length:

☒ Key expires

Expiration date:

Passphrase:

Confirm:

Cancel Generate key

Key ID	Validity
10 00D026C4	

1 of 1 keys listed

☐ Show secret keys only

Export



Mac OS X window titled "GPG Keychain".

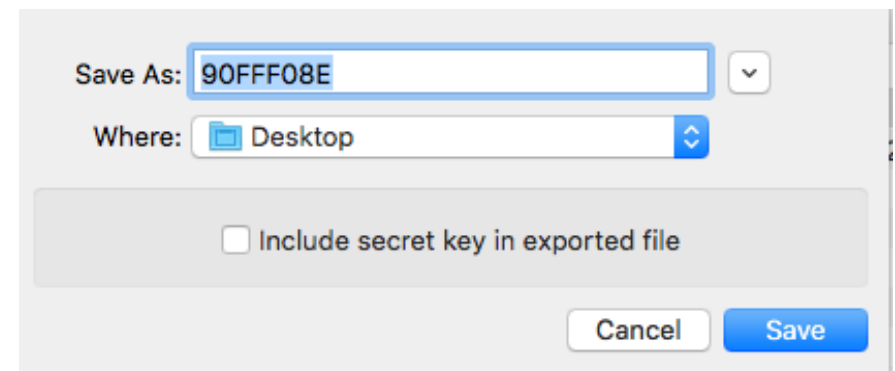
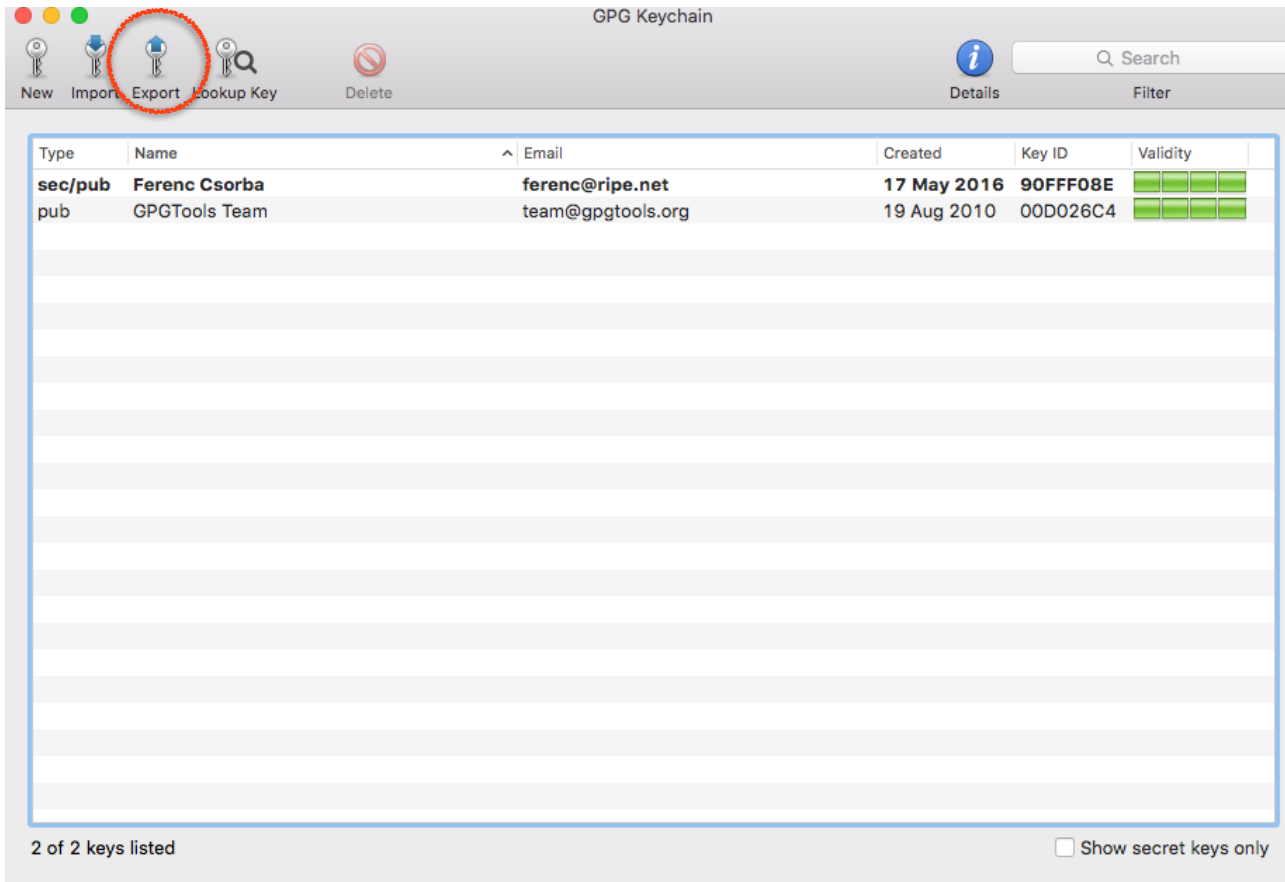
Toolbar: New, Import, Export, Lookup Key, Delete, Details, Search, Filter.

Type	Name	Email	Created	Key ID	Validity
sec/pub	Ferenc Csorba	ferenc@ripe.net	17 May 2016	90FFF08E	Valid
pub	GPGTools Team	team@gpgtools.org	19 Aug 2010	00D026C4	Valid

2 of 2 keys listed

☐ Show secret keys only

Save new Key



Copy and Paste into a Text Editor



```
-----BEGIN PGP PUBLIC KEY BLOCK-----
Comment: GPGTools - https://gpgtools.org

mQINBFc66nQBEADfmC9iKZz2XklaoujmN1le72LJMI1hYRmmF+giuGrA9iqfbFnY
3IQ8LPbhymx028scK9uewZ3PCBnQUGzhK7YrkWksYCF0B/gcmF9FsvdcZLjyRtYQ
GS0eh4FHun3kTWgi4wLKl+IxzV8NQ/dnRy7ktQXmLZkeYf81Xbp0u99G0nppURWk
GdwXmrVu+1JHUbro4gdCeBp1lTW00LoG9h0L7RPOXzwN/99xu1f0Mbq1ZtRYFDev
0+qRU38rdIIU87fu5Ek8ieLk0McsA0RtvRw+qMURQrc1IzTiDum5eFrIP0tIzMP
bfoPTVhKp654qyZmQ1cym/QKng0HJwXaQokw+By6pinzu30IHSYy8dQU3J4115o0
9pWhG/79ir9mAMLfyyAmvUWwglhe1lGkG6p1Ym16T2xf7CneLwFT7RFLvcLoc0T
qNTIWLoo3W3t9lq/YF0fjB99Dh4dKHQX8KIrHVcWew+BIxRDvQEIfdNhm1Gv/Lry
4CpqXWIPmqnUIBlnqRveSpRCXD50q8/+qVlJwUKQndWyrFw1N0HH4Bm69g40EFOa
g5c0QDxYRREaWgNa+vGzgRJoF5Sv1NyK2HYG6dbf9D0VQTWqLxvGYf0GytgINiyy
3Hvi7b8V4fWwZE/JoNLRcsRjBuGXIUWAbTm0bc9xQHVnSdCLIXa9aRU1pQARAQAB
tB9GZXJlbmMgO3NvcmlhIDxmZXJlbmNACmlwZS5uZXQ+IQI9BMBcGAnBQJX0up0
AhsDBQKHh+ABQsJCACDBRUCQGLBRYCAwEAh4BAhAAoJEKcjZsCQ//CO1CAQ
ANOMzh1dp9oUU+WlPhVTk8z1fxkYqW3ssPJB0tCCoiLdBW12u0mP1MK0w9Y8vpys
5juUu/usN/ztUnYuDb+X6eAX0VkwACT80D1IVJU853BGq6MCNEVnJL8av0QG10co
BAz7x5HSSeWY5D+a8Y2/eqfTLGzLC3sG8S15Tb93D1VSRYUAhf+AmLhtC9Tffh48
8uHmPyeEu91nUQ1VeTIF+pY+I+GzdHDYSypBwyYwMJGynHmJiCAPt/ON04uGvI9x
YMt+3rg7sW3//7hhHka0qJ4JwgXWUBZV68Eb5Q5sGV7YtYS9ish/DrZAYHvX1GR
CNwns8WwZgh1Q2qPf6NXbFvIv21wF9L0GV45Z8npV13VMIGWkG+MCZy1qaJSVWDM
cHmF6HM6+9wqNYHCEbCkZw+aWnhkdwHMVMc3hbmewYqRdoc0B921Ckr6qxMR5gd
iJl1f6GV0G+E71gyvxsbyrRR3Cpsb2Yf+gUqkY09UXrni1a7Tw179C2SmdKh7CNX0
FH049AC5e1ISrm42lq9a9f9j7ZdpEfhwQRKeyqZ40hFMHSZcBwUS22iU13Uzis80
7+rOf+BP8s/cjQxz5yx+ZXkZvJ8hpPJ00lmawmVJGTeVz9+Cc4YXz0QGk2Ev+e43
kd0FgkR3YjpKkO/EnJcn07Q93dBhreuji6E7i4fr2XLeuQINBFc66nQBEADhp4a6
WT9PAS7WRfZMQtW9KW0eRuI7tPsm7YZ36SmVXJTyek8CNzZ7M2iEHfkJPFquyoYQ
bqdAshD255kF2CfKJNt507cHuYdy+1lx6vz7QjImE1Wxo0J+0FVdWvRHwLElFemG
dVrWmXWnERd3GwAf5ybEvgT9GY0CKuTe31aSuSoCDr3ZwK8kkLo9NrT1hGkiYy9T
9XydU1r7EtpTE2Zxwk6yuJcD85c5h531SAPTNT6Xd5eJ1Tyv1cTByZwLweUEQLnt
V8RuIb8WlZK9mfJ3qZAz4LLWPNAbsA2t4bsQNKKrmt+m4EXovs3xNtC65J3pLuM+
Jcha7g9nRFPD661ym24+HUt/Q+2hJZBGG1fQI30LIC+BqM4dGnrBYRAnbKI1y1e5
/KFIHKhrmWZdZ+C4Se3qmM09v/ixrSGX/1UVtQF9vj7ESKBMXVhd5zemQm+24hCB
MaoKAPzUaXGLs6Py1KIidW480ScjmwXvq+nQqbFm4KNA10e/ES0Fd95Q00+8ZZNmB
une1kygJ4dgc4KlgwEI7ltiF/sQ9NMugb1cF/+MXrxy+I89eUis4Yr9c6NKKzkYR
h13kok/Xcq9mE0hhSna+t0MyvYCMFvixiBazKHkQfAIxVM7XvpVfoTX+Uia0gBF
wp8VPNG/7f1JlBCvLjMGeuJS7+U5GCod+SbRNwARAQABiQ1lBBgBCgAPBQJX0up0
AhsDBQKHh+AAoJEKcjZsCQ//CO2tUP/R/RnQFYCJ7cbrRHTGfSfGfNr5QMafG2
TV1NJ6A14oScF0Aoeq60CcGWU58NUK9iUwVnMb04wx0AonLfEw0cqI4ajaCQyF4t
XEDcx+8YZLARRPOXOAXwZHNnThTPW8CJYgRmeHGgNUZrglnlb3MtZKBw9+eikore
xAT06KTPUBvYx/yaEjBJJc1w5FxpB/3I/Zs21lmbw/TP7rI+LA/2nV91iqAndEnt
mnuBnSwyhfJvImfyGbW0/2CUgtYf/aKAYF734pE432/5SeJLNsCIzrsfz7qE4TB
M1JN9So7DEvEomauePqFQ5kD2JiQoZIi3bP8X8a0DH+n958t0QDCeU7oIEbnaugq
BCmqRNFPIyIRNMnX/GJNtTfMtSiglWntRHLkiZmN4BmiTcQVNu99TeAgCFKjF96J
PDLuXHgtFvNwJyx2fhRz8fhTGgWS87dcGcfDzhMXXUqul9uy14/+h2XzhA78Zo0A
90CQJn92LzaPnHycAHpwOG/8PrH63F95JWTTXHFwTafQsQlZ0s61lHgDhwXccLpy
E2oUeV5LxGLuWdps9S+99GJ161Sb7PE0FmW8P+93yR2Yb4cTroibxnuFgx1HN5LV
QKoTbEfyBmZiaaZJkEJV8Jq1R3u0VQdWZOWINfUVvJdGsmrVA1RH5bcPaRvB9yKf
Q5ZVdg5nQYPm
=FQ2d
-----END PGP PUBLIC KEY BLOCK-----
```

Now Create a key-cert Object



- Just a couple of mandatory attributes
- Only “certif:” attribute is a bit annoying 😊

key-cert: [mandatory] [single] [primary/lookup key]

certif: [mandatory] [multiple] []

mnt-by: [mandatory] [multiple] [inverse key]

source: [mandatory] [single] []

Edit the public key file...



- Open the public key in a text editor
- Paste “certif: ” in front of every line 🙄

```
1 ertif: -----BEGIN PGP PUBLIC KEY BLOCK-----
2 ertif: Comment: GPGTools - https://gpgtools.org
3 ertif:
4 ertif: mQINBFVLZkQBEADWgvSchk1N6QKcFxlFBAq7slQnHWshfHCb1HFgdiAeHHA7rL2Y
5 ertif: C5ALcItuSpaIktZD3MH88n/06NP0Im6n7XkxRch32Ctk+rgyjfBXbQfv1p56SPV3
6 ertif: A68gLj1nZSDh8s4YvcqULsz3U8fiH0onNRfpo2kcLrumuDw3I5hRABaqxpVPNjh
7 ertif: 5JfktLZGRaxq60CvEKCLlcqu/Ec+T2XTy3WRHJ0iwpuH2hxGc5vYzpl/355HYEzx
8 ertif: U79nxVgXe79l96e1EBCUgsqtCUTBM+Su0PfbI0XaUHeg9eVu7pCyYlMiKjGAKkuH
9 ertif: IT0Sz2dB6X0IMCLFZiCpEJEyAvJ1ZoX9/rRkHxz4VQlSEEVVgfbXar9Ebv0ZFtC2
10 ertif: MxvZkKiea2m/4aIFLTiaTenWqSPedf6WrNkefhwVE0AND0LwXCq6mJGQYdE7DZFl
11 ertif: s010cNoFKu1QsrhPzb9hWMrc0az9FD3o8AhQjBCShZyY2dNgg0rJHpVRvdj+Ei4a
12 ertif: x2nxxISLAdytQNSeyDloSdYQwnKTbdKRx7Q2H9Pwm4FUEAy7A/5vwfaMlHLPPBLw
13 ertif: cufs3jfe3XNdEXlkVJ3cnC9+/zt7He4vX3HRg4BjujAt8Xl00N842T/UqwwcTQMF
14 5hlKcmptmBVceD+AU0Uk5IicTd+EVCi4t9L4scpq05Bx4NJlLn4epWkRpwARAQAB
15 tB1BbGV4IEJhbmQgPGhhbGxvQGFSZXhiYW5kLm5sPokCPQQTaQoAJwUCVUtmRAIb
16 AwUJB4YfgAULCQgHAwUVCgkICwUWAgMBAAIEAQIXgAAKCRDxBkTY2Gi6wLtBEADU
17 ElFh6IsKtqcd44CUAR4+fJHfe78gVd0EFdL6cpTtJUyWjUi8qCPTZYPBQWZSM+R1
18 36srC31RGtdFpUSPlOV4YEjWs9PctrMdl+nuKyfQoo4X/jJpL22FwagI7KfXnp/G
19 3Ni0uSQBIl9hbQJPDkNaZsS0dhYh+UKL0866UIF5or03DAPhK4YwjTdtx9xZbt5
20 LvnoL090+iCy8mCYEZEI3Q1g2AFXkRX/Gkt+JA8bAik9xIooVs9ILU2cKXU3M0nt
21 fF7oDyePDkMM2XeVnB6Cw3tto/4Nryi4ohe8VGwvha2I7ujp8tWG4hDr8p4KKZ2
22 ySWKd0NVuNqq4HED1h72pFTXOeREPqM6Shu0fneKEx36fJJk/DP3tBE0a/hxVlWz
23 JmRBnjpQMI52uDKb3v9Hb0mdoGL++NmQjn7y5fMwZH+7Fh415byK+soompHpPpW
24 yNy2YQilDhDxz0zEUKdlmMrgCY2vFv0L0hH/GNJFgFCpJuLnkIR1604rnaCUu60u
25 vCgtnHZtCI0l5zV/SzemJd236eBJ+LlSonXEvLmEv8AbL42As58XmzFMaH9n3m+G
26 MA1Yyyjychpf/77hpPYCVhZWJC6rWxoF7E+gvDZed8SsISY8s04yUvYIXEV09Jht
27 XLUxi6nlBcXQ1Ly7a4980S4T2Mrk1HELZp5HfEeGPLKCDQRVS2ZEARAA2eFTDzep
28 3M0NDi3X...
```


Submit using Syncupdates or Mail...



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Edit in text area

Lookup results

This is the RIPE Database search service. The objects are in RPSL format.
The RIPE Database is subject to Terms and Conditions.

Note: this output has been filtered.

```
key-cert:      PGPKEY-D868BAC0
method:        PGP
owner:         Alex Band <hallo@alexband.nl>
fingerpr:      EAD3 FB98 DF2A 7D71 CD4A 2115 F106 44D8 D868 BAC0
certif:        -----BEGIN PGP PUBLIC KEY BLOCK-----
certif:        Comment: GPGTools - https://gpgtools.org
certif:
certif:        mQINBFVLZkQBEADWgvSchk1N6QKcFxlfBAq7slQnHWshfHCb1HFgdiAeHHA7rL2Y
certif:        C5ALcItuSpaIktZD3MH88n/06NP0Im6n7XkxRch32Ctk+rgyjFBXbQfv1p56SPV3
certif:        A68gLj1nZSDh8s4YvcqULsz3U8fiH0onNRrfpo2kcLrumuDw3I5hRAbAqxpVPNjh
certif:        5JfktLZGRaxq60CveKCLlcqu/Ec+T2XTy3WRHJ0iwpuH2hxGc5vYzpl/355HYEzx
certif:        U79nxVgXe79l96e1EBCUgsqtCUtBM+Su0PfbI0XaUHeg9eVu7pCyYlMiKjGAKkuH
certif:        IT0Sz2dB6X0IMClFZiCpEJEyAvJ1ZoX9/rRkHxz4VQlSEEVVgfBxar9Ebv0ZFtC2
certif:        MxvZkKiea2m/4aIFLTiaTEnWqSPedf6WrNkefhwVE0AND0LwXCq6mJGQYdE7DZFL
certif:        s010cNoFKu1QsrhPzb9hwMrc0az9FD3o8AhQjBCShZyY2dNgg0rJHpVRvdj+Ei4a
certif:        x2nxxISLAdytQNSeyDloSdYQwnKTBdKRx7Q2H9PWm4FUEAy7A/5vwfaMlHLPpBLw
certif:        cufs3ife3XNdEXlkVJ3cnC9+/zt7He4vX3HRa4BiuiAt8Xl00N842T/UqwwcTOME
```

Update Delete

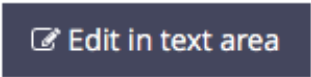
Add PGP authentication to mntner



- Now edit a mntner
 - add this line:
 - **auth: PGP-868BAC0**

Now use it!



- **Query object you want update**
 - (protected by minter with PGP auth)
- **Click Update** A dark blue rectangular button with a white pencil icon and the text "Edit in text area".
- **Copy entire object into text editor**
- **Sign it**
- **Copy it back into Webupdates**
- **Click Submit**

Signed Text



sdkaslkdj

Text

```
-----BEGIN PGP SIGNED MESSAGE-----  
Hash: SHA512
```

```
sdkaslkdj  
-----BEGIN PGP SIGNATURE-----  
Comment: GPGTools - https://gpgtools.org
```

```
iQIcBAEBCgAGBQJX0u32AAoJEKcjZsCQ//C0kFcP/jiF6USDyDd/hX0ndNB5IRmY  
w8BZLZrcmJFQZX88zalfnMiM9latH8h//lyN4ikSakTGzDhdE3AnygpomJV48R2p  
EB/e3qNug/wvHipPepylhxAYrjQZ9MdLX4yLQovEngkFWYSVWTju9fKB0QS7x+qs  
NDTqn1Vi/0RpNe9CZkA5LIxjEMgyyJrExw26Jt60nTs3gyqX/7YPXN9WBLfDEljN  
Z0KnPSvMUKvrSrl408k79uTStYruLOH9lpvZBxhFNBDNhDHID3KggJTiuQTLQ4WL  
0p9cvNKEaRTXdvfPbFNRAKdbI8xf8cI5Nh+8BhvvhH6PI/ykNrNvR4Z+f3/GVxYh  
lw+nv2tBz42z/damf6jZXPJdSCrk80stCleeHxiE9pd9bqbnWnAqXgTJls1G0xVN  
763slF0dDIhtroJbLaf2or8oTlpDG9MdDpkUf2MPGoMjVEHGctrHUGcDF0vKN0IY  
gHyssZaJD9FHAJRXYqwb6v6D8Aj4qiBQHDkp02o0kCBXZcMpgVULZ8XrfX4CJXGE  
oTilpv7T12EsFa65/+AH0LhyYPZUyUjKpNA4VEkm6vaSnXZe36RUaVuxMq//jiwL  
ONA4DBkGwk3zSs7E4sERIBpxyVtjk2lqtFHDmitexNRa1wH0gYDo/0GyUlztiiuH  
XXssCNwx9zcmefyuiD+h  
=s23r  
-----END PGP SIGNATURE-----
```

Signed Text

- Updated object is your text. Sign it!

RIPE Database Interfaces and PGP



- **Update objects protected by PGP mntner**
 - via email
 - via Syncupdates



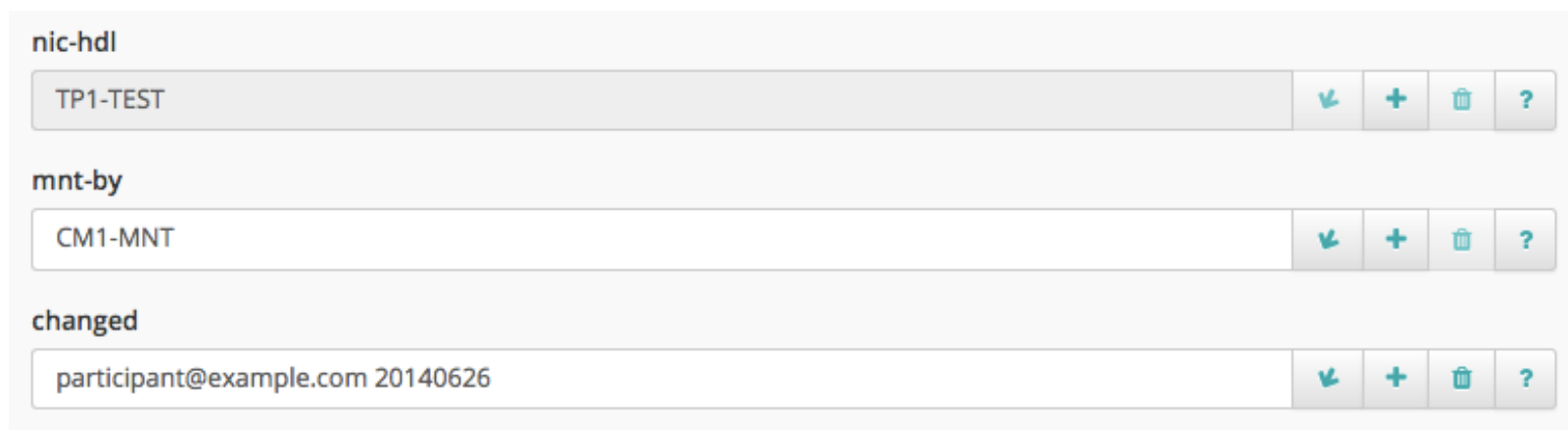
Created & Last Modified

For your logging pleasure

The changed attribute



- The “changed” attribute was a mandatory attribute in every object

A screenshot of a network object configuration interface. It shows three sections: 'nic-hdl' with a value 'TP1-TEST', 'mnt-by' with a value 'CM1-MNT', and 'changed' with a value 'participant@example.com 20140626'. Each section has a text input field and a set of four icons (down arrow, plus, trash, and question mark) to the right.

nic-hdl	TP1-TEST	▼	+	🗑️	?
mnt-by	CM1-MNT	▼	+	🗑️	?
changed	participant@example.com 20140626	▼	+	🗑️	?

- Could be used for logging

The changed attribute (deprecated!)



- This attribute has been deprecated!
- The community agreed it would be more useful to have a “created” and “last-modified” attribute

created	
2002-04-08T12:43:46Z	⏴ + 🗑 ?
last-modified	
2014-02-24T13:15:13Z	⏴ + 🗑 ?

Created and Last Modified



- **All RIPE Database objects have now a “created” and “last modified” attribute**
- **In case we don’t have the correct date, we used 1 January 1970**
- **This data is automatically generated**

Description attributes

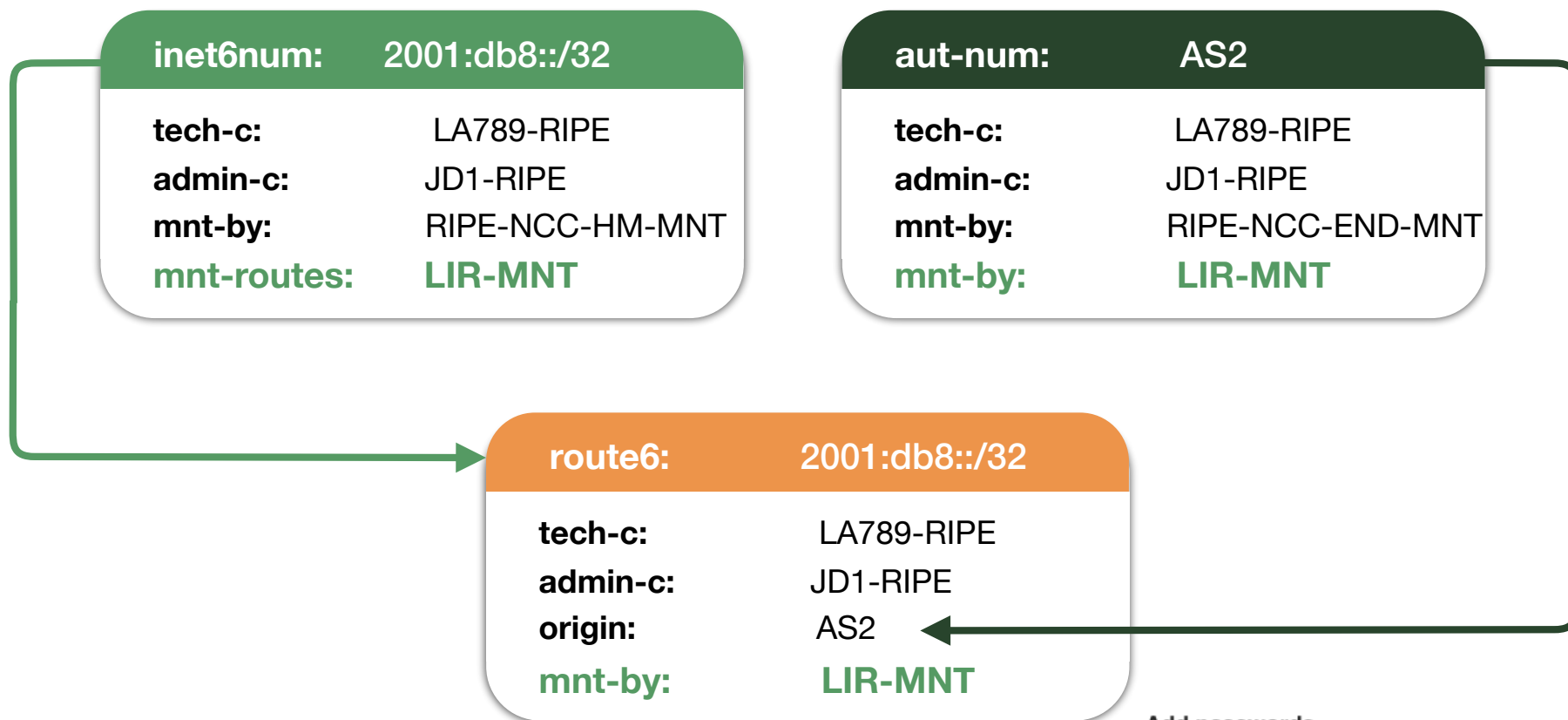


- **Registration Services had a business rule to use the first description attribute for the legal company name**
- **RIPE Community reached consensus that this is not needed anymore**
- **Now we have the ORG object containing that information**



Partial Route Object

route and route6 Object (1 mntner)



Add passwords

Session passwords

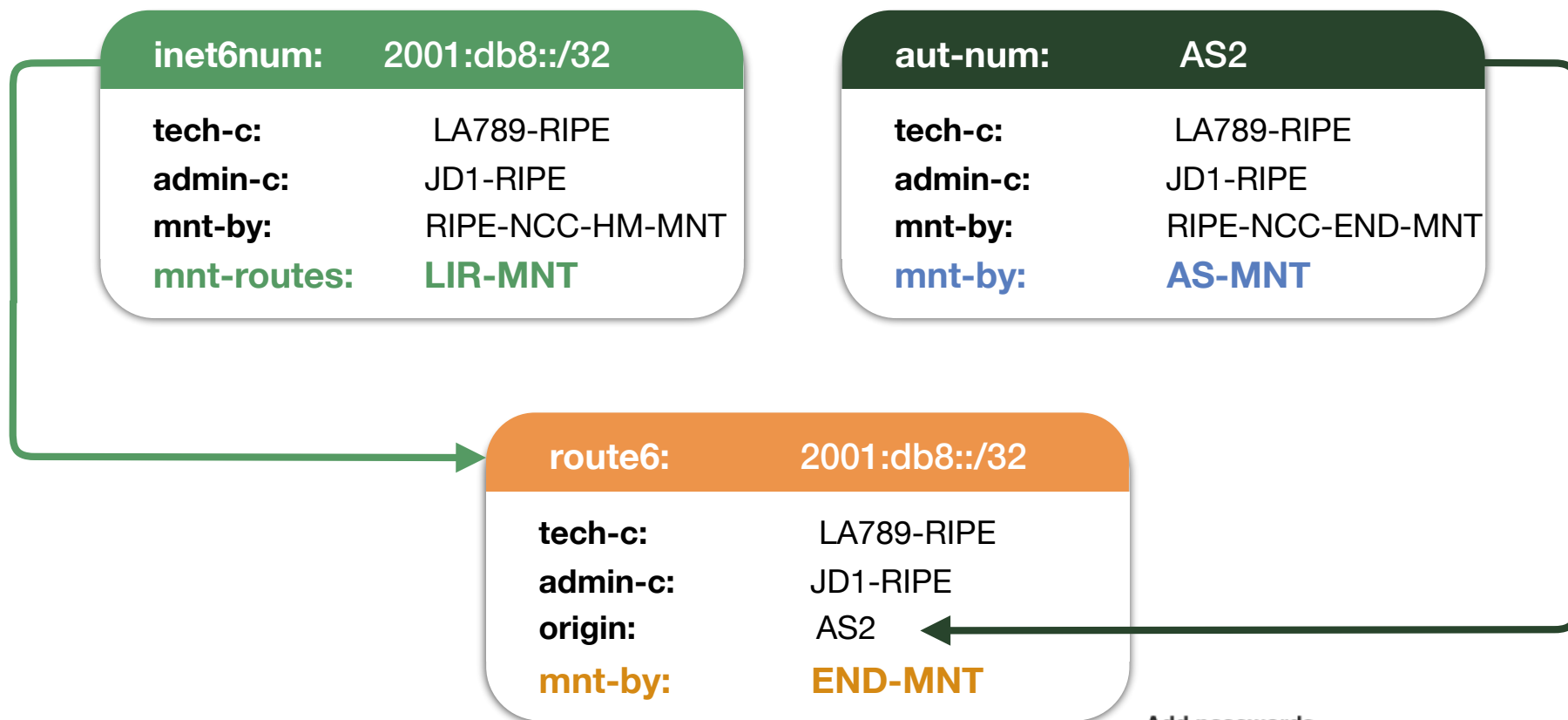
0 stored password(s)



12lir



route and route6 Object (3 mntners)



Add passwords

Session passwords

0 stored password(s)



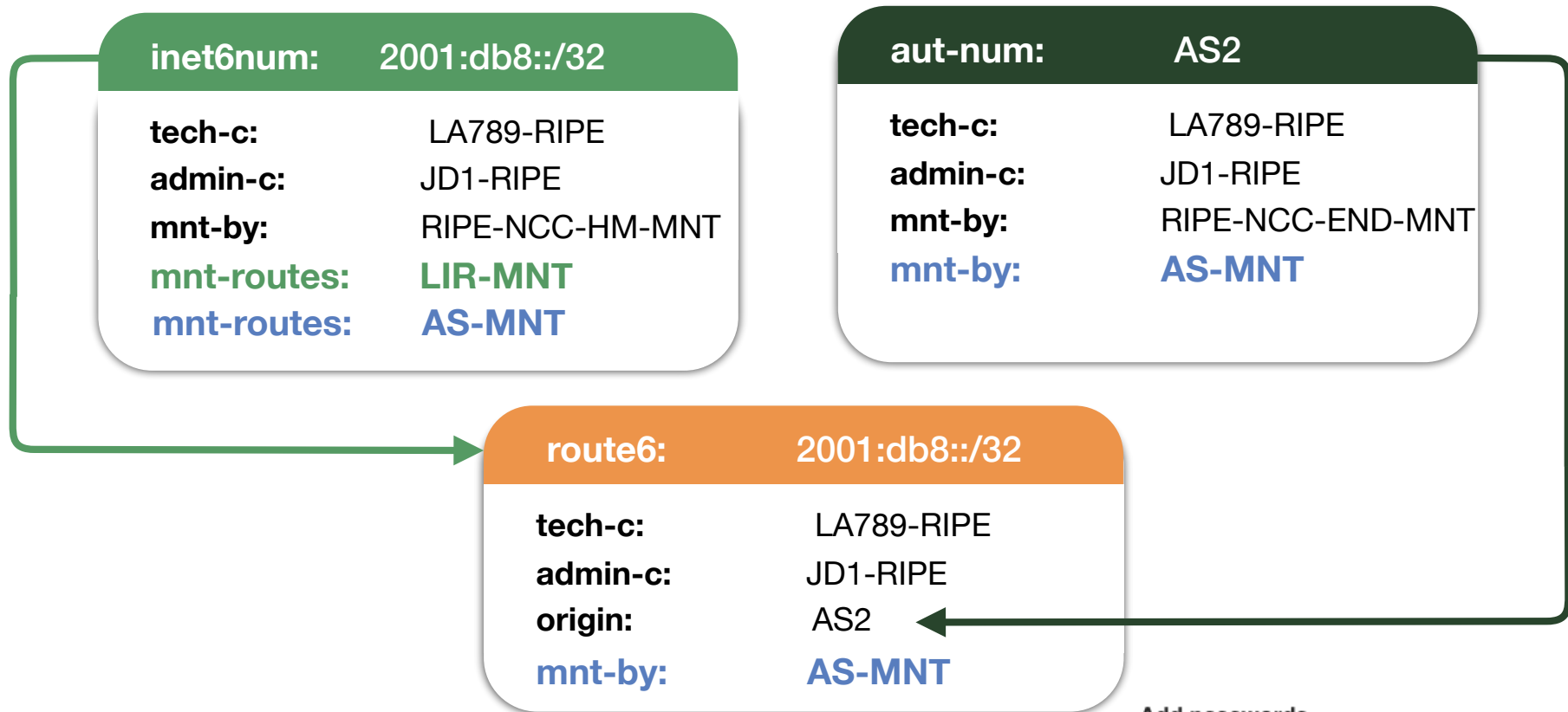
12lir

as999

end72



route and route6 Object (mnt-routes)



Add passwords

Session passwords

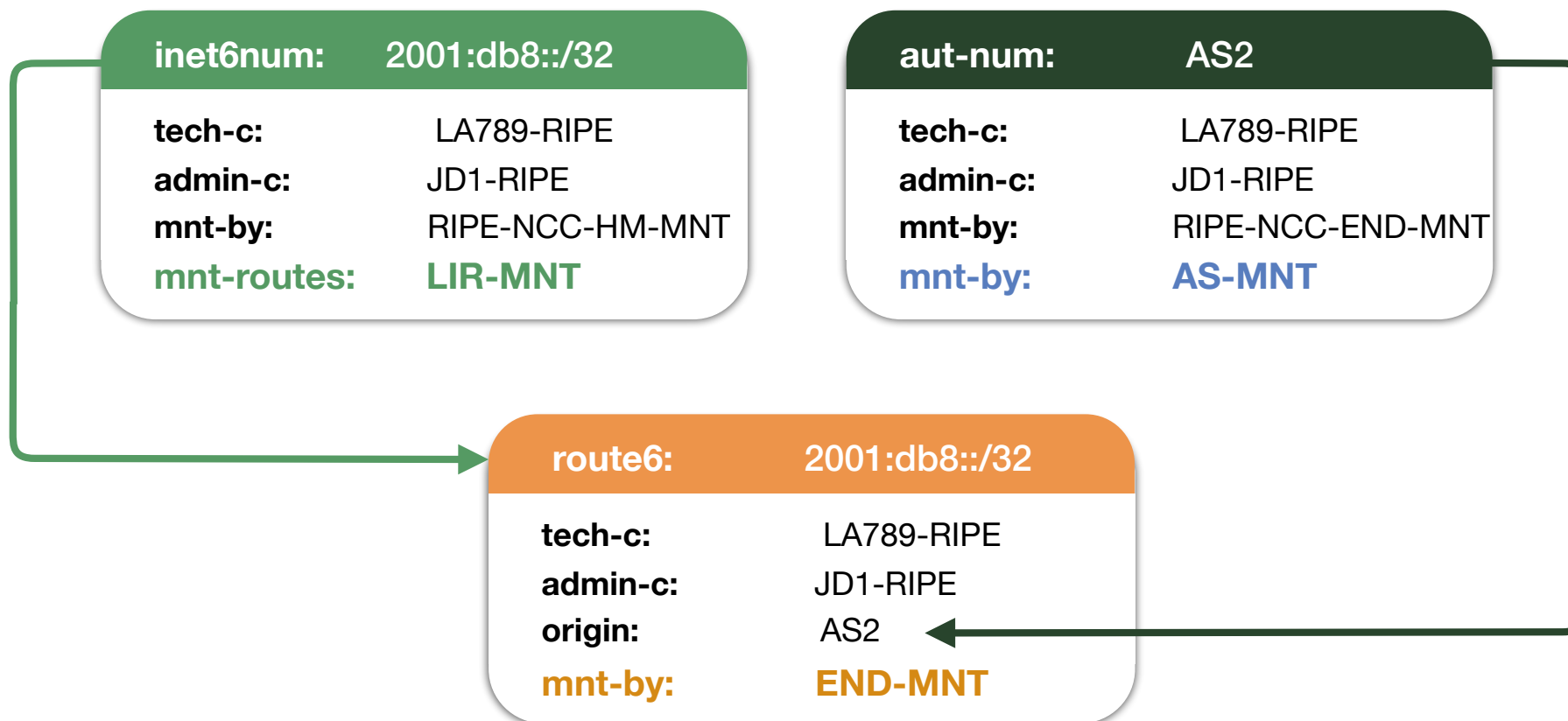
0 stored password(s)



as999



There is a better way



Add passwords

Session passwords

0 stored password(s) ?

end72 +

E-mail notification



- **An e-mail will be sent to the other maintainers contacts**

The email



Subject: RIPE Database updates, auth request notification
Date: 2016-05-22 17:18
From: RIPE Database Administration local <unread@ripe.net>
To: awolski@ripe.net

This is to notify you of changes in RIPE Database or
object authorisation failures.

This message is auto-generated.
Please DO NOT reply to this message.

If you do not understand why we sent you this message,
or for assistance or clarification please contact:
RIPE Database Administration <ripe-dbm@ripe.net>

Change requested from:

- From-Host: 91.143.127.69
- Date/Time: Sun May 22 17:18:54 2016

~~~~~  
Some objects in which you are referenced as a  
maintainer were requested to be changed, but need  
your authorisation to complete the change.  
This update must be completed within one week.

Please submit the following objects \*exactly as shown\*  
and add your authorisation.

-----  
CREATE REQUESTED FOR:

route: 192.1.0.0/22  
origin: AS130  
mnt-by: CM30-MNT  
created: 2016-05-22T15:18:54Z  
last-modified: 2016-05-22T15:18:54Z  
source: TEST

The RIPE Database is subject to Terms and Conditions:  
<http://www.ripe.net/db/support/db-terms-conditions.pdf>

For assistance or clarification please contact:  
RIPE Database Administration <ripe-dbm@ripe.net>

Generated by RIPE WHOIS Update version 1.86 on DB-TEST-1  
Handled rest api (TEST, 2016-05-22 17:18:54)



# Syncupdates



- The other maintainers create the exact same object in synch updates and authorise it

## Create a new route6 object

The mandatory attributes in a template are shown in upper case for convenience. The final submission to the database is case insensitive. Any optional attributes not required must be removed. Blank values (except for remarks) will cause errors.

ROUTE6: 2001:0db8::/32  
DESCR: My route6 object  
ORIGIN: AS2  
notify: test@ripe.net  
MNT-BY: END-MNT  
SOURCE: RIPE  
password: apfelstrudel

By submitting this form you explicitly express your agreement with the [RIPE Database Terms and Conditions](#)

CancelCreate



# Questions





The End!    Край    Y Diwedd  
النهاية    Соңы    פֿאַר    Fí    Finis  
Ende    Finvezh    Liðugt    Кінець  
Konec    Kraj    Ěnn    Fund    پایان  
Lõpp    Beigas    Vége    Son    Крај  
An Críoch    Kraј  
Fine    הַסֵּוּף    Endir    Sfârșit    Tέλος  
Einde    Fin    Slutt  
Koneц    Канец    Slut  
დასასრული    Pabaiga    Tmiem    Koniec  
Fim    Amaia    Loppu