

Extensions to the ripe-dbase Whois software

Manage your IP Address Space with a customized version of the ripe database whois software

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Introduction

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- **facility**
- **purpose**
- **range**
- **range6**
- **registry**
- **ticket**

The facility object

A sample `facility` object:

```
facility:      DECIX
address:      Frankfurt, Germany
address:      Krautstr. 42
registry:     eu.en
as-num:       AS1273
remedy-ref:   XXX
mnt-by:       LOCAL-DB-MNT
source:       EUCW
```


The facility object (cont.)

Defines the facility where the addresses are used.

- **address: Frankfurt, Germany**

- address: Krautstr. 42**

Gives information about the physical location.

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Refers to the **reg-id** object. Information about LIR.

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- **as-num:** AS1273

Defines the ASN the address space is used in.

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- **as-num:** AS1273

Defines the ASN the address space is used in.

- Attribute **remedyref** can be used to refer to other DB systems like Remedy.

The purpose object

An example of the `purpose` object:

```
purpose:      CIX-GER
descr:        addresses used at german
descr:        exchange points
mnt-by:       EUCW-DB-MNT
source:       EUCW
```

The purpose object (cont.)

Some additional attributes of the `purpose` object

- `purpose: CIX-GER`
For what to use the addresses.

The purpose object (cont.)

Some additional attributes of the `purpose` object

- `purpose: CIX-GER`
For what to use the addresses.
- `descr: addresses used at german CIX's`
Describes the kind of utilisation.

The range object

A sample range object:

```
range:          62.208.16.0 - 62.208.19.255
netname:        CW-DE-CWINTERN-NET
registry:       eu.en
descr:          reserved for internal usage at the
descr:          DECIX, Frankfurt, Germany
country:        DE
status:         ASSIGNED PA
location:       DECIX
usedfor:        CIX-GER
mnt-by:         LOCAL-DB-MNT
source:         EUCW
```


The range object (cont.)

The meaning of some attributes:

- **range: 62.208.16.0 - 62.208.19.255**

The range of IP addresses.

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Refers to object the with X-NCC-Regid information.

The range object (cont.)

The meaning of some attributes:

- **range:** `62.208.16.0 - 62.208.19.255`
The range of IP addresses.
- **registry:** `eu.en`
Refers to object the with X-NCC-Regid information.
- **location:** `DECIX`
Refers to the location object.

The range object (cont.)

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The range of IP addresses.
- **registry:** `eu.en`
Refers to object the with X-NCC-Regid information.
- **location:** `DECIX`
Refers to the location object.
- **usedfor:** `CIX-GER`
Reference to the `purpose` object.

The range object (cont.)

The meaning of some attributes:

- **range:** 62.208.16.0 - 62.208.19.255

The range of IP addresses.

- **registry:** eu.en

Refers to object the with X-NCC-Regid information.

- **location:** DECIX

Refers to the location object.

- **usedfor:** CIX-GER

Reference to the `purpose` object.

- **preference:** 128

Defines with which preference the addresses will be used.

The range6 object

A sample range6 object:

```
range6:          2001:5001:100::/40
netname:         CW-MUC-NET
registry:        eu.en
descr:           End-Customer Ranges for Node MUC
admin-c:         GNOC4-EUCW
tech-c:          GNOC4-EUCW
country:         de
location:        POP-MUC
usedfor:         CUST-RANGE
mnt-by:          CW-IPGNOC-MNT
source:          EUCW
```

The reg-id object

A sample `reg-id` object

```
reg-id:      eu.en
window:      22
descr:       Main CW X-NCC-Regid
as-num:      AS1273
mnt-by:      EUCW-DB-MNT
source:      EUCW
```

The `reg-id` object (cont.)

Some Attributes of the `reg-id` object

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- `window: 22`

defines the Assignment Window size

- Other attributes are self explaining.

The ticket object

A sample ticket object

```
ticket:          CW-0815
netname:         CW-CUSTOMER-NET
registry:       eu.en
size:           /24
descr:          Additional IP space for DEXIC
created:        13.01.04
formurl:        /docs/internal/62.208.16.0s24.txt
mnt-by:         CW-IPGNOC-MNT
changed:        tcremer@de.cw.net
source:         EUCW
```

The `ticket` object

Some attributes of the `ticket` object

- `ticket: CW-0815`

The ticket number in your ticketing system

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Where the IP request template (ripe-381) is stored

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- `formurl: /docs/internal/62.208.16.0s24.txt`

Where the IP request template (ripe-381) is stored

- Other attributes are the same as in other “official” objects

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- May be used to tag IP address ranges for specific company parts with reg-id objects.
- Connect assignment and request with `ticket` object

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- Dedicate IP addresses to location or regions
- Tag addresses for special purposes
- Control which addresses are preferred
- May be used to tag IP address ranges for specific company parts with reg-id objects.
- Connect assignment and request with `ticket` object
- Result: Better management of IP address space ⇒ IP Space preservation

Additional inetnum Attributes

The `inetnum` object is changed as well:

```
inetnum:      10.0.47.0 - 10.0.47.127
netname:      CW-CUSTOMER-NET
descr:        could be a customer
comment:      Customer-Nr: XR2342
comment:      Some internal comment
country:      DE
admin-c:      GNOC4-RIPE
tech-c:       GNOC4-RIPE
assigned:     13.01.04
remarks:      NO-EXPORT
status:       ASSIGNED PA
location:     POP-MELBURN
usedfor:      CUST-RANGE
mnt-by:       CW-EUROPE-GSOC
changed:      tcremer@de.cw.net 20040113
source:       APCW
```

Additional inetnum Attributes

What the new attributes are doing:

● **comment: Customer-Nr: XR2342**
comment: Some internal Comment

Additional attribute to store internal information.

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Additional attribute to store internal information.

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The date of the assignment.

- **remarks:** NO-EXPORT

May have the value NO-EXPORT

- **registry** is the same as in **range** objects.

Additional inetnum Attributes

- **location:** POP-MELBURN
OPTIONAL facility reference

Note that all private attributes (fields) will be filtered when syncing with the corresponding RIR database.

Additional inetnum Attributes

- **location:** POP-MELBURN
OPTIONAL facility reference
- **usedfor:** CUST-RANGE
OPTIONAL purpose reference

Note that all private attributes (fields) will be filtered when syncing with the corresponding RIR database.

Software to use the extensions

Work with IP addresses using `aisst`

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Software to use the extensions

Work with IP addresses using `aisst`

- Acronym for *Automatic IP address Space Selection Tool*
- Command line tool written in Perl.
- Basic web interface available for interfacing with `aisst` script
- No "real" GUI available at the moment

Software to use the extensions (cont.)

What `aisst` can do:

- Selects IP addresses from location and purpose.

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- Lists free or assigned addresses or all assignments.

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What `aisst` can do:

- Selects IP addresses from location and purpose.
- Lists free or assigned addresses or all assignments.
- Returns inetnum template for a given size
- If requested size isn't available, `aisst` will subnet automatically.

Examples of aisst's listing functions

`aisst` can be used to display a range overview

```
bash$ aisst -a EUCW -f POP-MUC -p CUST-RANGE -list
```

```
-----  
Address range                total cidr  Network  
-----  
10.0.47.0 - 10.0.47.15      16 /28     CW-CUSTOMER1-NET  
10.0.47.16 - 10.0.47.23      8 /29     CW-CUSTOMER2-NET  
10.0.47.24 - 10.0.47.31      8 /29     CW-CUSTOMER3-NET  
10.0.47.32 - 10.0.47.39      8 /29     CW-CUSTOMER4-NET  
10.0.47.40 - 10.0.47.47      8 /29     * * FREE * *  
10.0.47.48 - 10.0.47.63     16 /28     * * FREE * *  
10.0.47.64 - 10.0.47.95     32 /27     CW-CUSTOMER5-NET  
10.0.47.96 - 10.0.47.127    32 /27     CW-CUSTOMER6-NET  
10.0.47.128 - 10.0.47.255  128 /25     * * FREE * *  
-----
```

Samples of aisst's template functions

`aisst` can return a inetnum template

```
bash$ aisst -a EUCW -f POP-MUC -p CUST-RANGE -size /28 \  
-t CW-TESTING-NET ~/.inetnum
```

```
password: [password]  
inetnum: 10.0.47.48 - 10.0.47.63  
netname: CW-CUSTOMER-NET  
comment:  
[...]  
status: ASSIGNED PA  
mnt-by: CW-EUROPE-GSOC  
assigned:  
changed: tcremer@de.cw.net  
source: EUCW
```

Samples of aisst's statistic functions

`aisst` can be used for simple statistical analysis.

```
bash$ aisst -a EUCW -f POP-MUC -p CUST-RANGE -rs
Range Statistics
```

```
Purpose      : CUST-RANGE
Location   : POP-MUC
Ranges     :      3
Total      :    1024
Free       :    592 (57.8%)
Used      :    432 (42.2%)
```

Range	Total	Free	Used	Preference
10.0.47.0 - 10.0.47.255	256	104 (40.8%)	151 (59.2%)	128
10.0.49.0 - 10.0.49.255	256	128 (50%)	128 (50%)	128
10.0.60.0 - 10.0.61.255	512	360 (70.3%)	152 (29.7%)	128

Scripts to synchronise with other Whois DB

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- Synchronisation by email or HTTP

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- Uses NRTM to identify last synchronised object
- Custom objects and attributes are filtered
- For Whois DBs based on ripe-dbase software

Other tools

Some other tools to ease daily business:

- Diff check (RIPE|APNIC) Whois ⇔ C&W Whois

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- `Import person handles from other Whois DB`
- `xchange` does an inverse query and changes given attributes
- `touchobj` updates a dummy person object

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- `Import person handles from other Whois DB`
- `xchange` does an inverse query and changes given attributes
- `touchobj` updates a dummy person object
- `rhist` creates history for IP range/netname from log files

Do you have ...

Questions?

Contacts & Software

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- Software, patch and documentation available at <http://nethead.de> and <http://ipadmin-software.eu.cw.net>

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- I will available for questions after the presentation
- Demonstration of the software possible. Please contact me via e-mail (av@nethead.de) or after this presentation.

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Special Thanks to Andrei Robachevsky and the whole RIPE DB Development Team for their help and support over the years!

Last but not least...

Thank you!