Extensions to the ripe-dbase Whois software

Managing your IP Addresses with the ripe-dbase Whois

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- `facility`
- `purpose`
- `range`
- `registry`
- `ticket`

The `facility` object

A sample `facility` object:

```
facility:       POP-MUC
address:        POP Munich
address:        Landsbergerstr. 155
registry:       eu.en
as-num:         AS1273
mnt-by:         LOCAL-DB-MNT
changed:        tcremer@de.cw.net 20040404
source:         EUCW
```

The `facility` object (cont.)

Defines the facility where the addresses are used.

- `address:  POP Munich`
  `address:  Landsbergerstr.  155`
  Gives information about the physical location.

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  Refers to the `reg-id` object.

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  Defines the ASN the address space is used in.

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- `registry: eu.en`
  Refers to the `reg-id` object.
- `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:        CUST-RANGE
descr:          LAN assignments for customers
mnt-by:         EUCW-DB-MNT
changed:        tcremer@de.cw.net 20040404
source:         EUCW
```

The purpose object (cont.)

Some additional attributes of the `purpose` object

- `purpose:  CUST-RANGE`
  For what to use the addresses.

The purpose object (cont.)

Some additional attributes of the `purpose` object

- `purpose: CUST-RANGE`
  For what to use the addresses.
- `descr: LAN assignments for customers`
  Describes the kind of utilisation.

The range object

A sample range object:

```
range:          10.0.47.0 - 10.0.47.255
netname:        CW-INTERN-NET
registry:       eu.en
descr:          reserved for cust-ranges POP-MCR
country:        DE
status:         ASSIGNED PA
location:       POP-MUC
usedfor:        CUST-RANGE
preference:     128
mnt-by:         EUCW-DB-MNT
changed:        rotherh@de.cw.net 20040624
source:         EUCW
```

The `range` object (cont.)

The meaning of some attributes:

- `range:  10.0.47.0 - 10.0.47.255`
  The range of IP addresses.

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- `range: 10.0.47.0 - 10.0.47.255`
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- `location: POP-MCR`
  Refers to the location object.

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- `usedfor: CUST-RANGE`
  Reference to the `purpose` object.

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The meaning of some attributes:

- `range: 10.0.47.0 - 10.0.47.255`
  The range of IP addresses.
- `registry: eu.en`
  Refers to the object defining the X-NCC-Regid information.
- `location: POP-MCR`
  Refers to the location object.
- `usedfor: CUST-RANGE`
  Reference to the `purpose` object.
- `preference: 128`
  Defines with which preference the addresses will be used.

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
changed:        tcremer@de.cw.net 20050426
source:         EUCW
```

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- `reg-id: eu.en`
  defines the X-NCC-regid the address space is used in
- `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:           /25
descr:          IP request of customer
created:        13.01.04
formurl:        /home/ipadmin/documentation/customer-10.0.47.0s25
mnt-by:         CW-IPGNOC-MNT
changed:        tcremer@de.cw.net
source:         EUCW
```

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- `formurl: /home/ipadmin/documentation/...`
  Where the IP request template (ripe-315) is stored

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- `ticket: CW-0815`
  The ticket number in your ticketing system
- `size: /25`
  The inetnum size the customer applied for.
- `created: 13.01.04`
  The assignment date
- `formurl: /home/ipadmin/documentation/...`
  Where the IP request template (ripe-315) is stored
- Other attributes are the same as in other “official” objects

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- 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
  IPv4 Space preservation

Additional Attributes to the `inetnum` object

The `inetnum` object is changed as well:

```
inetnum:        10.0.47.0 - 10.0.47.127
netname:        CW-CUSTOMER-NET
descr:          Our customer
comment:        Anystreet 17
comment:        2035 Someplace
country:        DE
admin-c:        GNOC4-RIPE
tech-c:         GNOC4-RIPE
assigned:       13.01.04
remarks:        NO-EXPORT
status:         ASSIGNED PA
mnt-by:         CW-EUROPE-GSOC
changed:        tcremer@de.cw.net 20040113
source:         EUCW
```

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  `comment:  2035 Someplace`
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- `assigned:  13.01.04`
  The date of the assignment.
- `remarks:  NO-EXPORT`
  May have the value NO-EXPORT
- `registry` is the same as in `range` objects.

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Work with IP addresses using `aisst`

- Acronym for *A*utomatic *I*P address *S*pace *S*election *T*ool
- Command line tool written in Perl.
- Simple Web interface available, needs to be extended
- GUI Development and close integration into existing ticket management or provisioning systems possible

Software to use the extensions (cont.)

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Software to use the extensions (cont.)

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` is subnetting automatically.
- Can check for exceeding A/Ws

Examples of aisst's listing functions

`aisst` can be used to display a range overview

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

Purpose     : CUST-RANGE
Location    : POP-MCR
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
-------------------------------------------------------------------------
```

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- Synchronisation by email or HTTP

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- Uses NRTM to identify last synchronised object
- Workaround for NRTM "feature" with dummy person object
- For all Whois DBs basing on ripe-dbase software

Other tools

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- `touchobj` updates a dummy person object

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

Contacts & Software

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- Comments and questions can be send to software@ipadm.eu.cw.net or av@nethead.de

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Questions?

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Thank you!