Supporting Notes for the RIPE NCC Autonomous System Number Request Form

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Contents

Abstract

This document provides supporting notes to the Autonomous System Number Request Form. It contains instructions on how to complete the request form for AS Numbers, in the RIPE document: "RIPE NCC Autonomous System Number Request Form" at:

http://www.ripe.net/ripe/docs/asnrequestform.html

Instructions

Please read all the information below carefully before submitting your application for an AS Number. For more detailed explanations on routing policy objects, please refer to "Routing Policy Specification Language (RPSL)" (RFC 2622). For an explanation on when an AS Number is needed, please see: "Guidelines for Creation, Selection and Registration of an Autonomous System" (RFC 1930). For Autonomous System Number policies, please refer to the RIPE document: "European Internet Registry Policies and Procedures" at:

http://www.ripe.net/ripe/docs/ir-policies-procedures.html

When sending the completed AS Number request form to the RIPE NCC, all information requested in the form must be supplied, including the technical routing policy. In some cases, the RIPE NCC will request additional information.

Administrative and Technical Information

Current assignment guidelines only allow the RIPE NCC to assign AS Numbers to multihomed organisations that need to define their own unique routing policy. To evaluate the request in this regard, the enterprise will have to provide information on who they will be peering with by specifying a routing policy in the "import:" and "export:" attributes. The enterprise will also have to provide information about which IP addresses they will be routing (originating) with this AS.

The "aut-num:" attributes described below are a minimal set sufficient to register most common situations. Please consult RFC 2622 for full details on the syntax of these and other attributes.

Note: All Database objects (such as **mntner**, **as-set** or **router-set** objects) referenced in the aut-num template should be entered into the Database before submitting the request or included on the request form.

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Aut-num Template Fields

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aut-num:     <as number>
             Specifies  the temporary name of the AS to
             be assigned. This name is  usually  needed
             for  the "export:" expression  below. It
             is suggested to use NEW. In case multiple
             AS-es  are  required,  NEW1, NEW2, etc can
             be used. This field will be replaced with
             the AS Number that will be assigned to
             the organisation. This field is mandatory;
             only a single line is possible.


as-name:     <object-name>
             The "as-name:" attribute is a descriptive
             name (in RPSL name syntax) associated with
             the AS. It is recommended to use an as-name
             that relates to the organisation for which
             the AS number is being requested. The
             as-name should be written as a SINGLE word
             of alphanumeric characters or a hyphen
             ('-') or underscore ('_') ONLY. It cannot
             start with the prefix "AS". Please refer to
             RFC 2622 for more information.
             Example:
             NAME-OF-ORGANISATION-AS
             This field is mandatory; only a single
             line is possible

descr:       <free-form>
             A short description of the Autonomous
             System, including the organisation using
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             the AS Number and its location, to provide
             sufficient detail to distinguish your
             organisation from others in the RIPE Database.
             The full postal address is not needed as this
             is provided in the person template (see below).
             This field is mandatory; multiple lines are
             possible.


member-of:   list of <set-name>
             The value of the "member-of:" attribute
             identifies an as-set object that this object
             wants to be a member of. This claim, however,
             should be acknowledged by a respective
             "mbrs-by-ref:" attribute in the referenced
              object. Please refer to RFC 2622 for more
             information.This field is optional; multiple
             lines are possible.


import:      [protocol <protocol-1>] [into <protocol-2>]
             Specifies import policy expression.
             Syntax: from <peering-1> [action <action-1>]
             . . .
             from <peering-N> [action <action-N>]
             accept <filter>
             Example:
             aut-num: AS1
             import: from AS2 accept { 128.9.0.0/16 }
             The action specification is optional.
             The semantics of an "import:" attribute is as
             follows: the set of routes that are matched by
             <filter> are imported from all the peers in
             <peerings>; while importing routes at
             <peering-M>, <action-M> is executed. Please
             refer to RFC 2622 for more information.
             This field is optional; multiple lines are
             possible.

export:      to <peering-1> [action <action-1>]
             Specifies an export policy expression.
             Syntax:
             export: to <peering-1> [action <action-1>]
             . . .
             to <peering-N> [action <action-N>]
             announce <filter>
             The action specification is optional.
             The semantics of an export attribute is as
             follows: the set of routes that are matched
             by <filter> are exported to all the peers
             specified in <peerings>; while exporting
             routes at <peering-M>, <action-M> is executed.
             Example:
             aut-num: AS1
             export: to AS2 announce AS4
             Please refer to RFC 2622 for more information.
             This field is optional; multiple lines are
             possible.

default:     to <peering> [action <action>]
             [networks <filter>]
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Description of default routes. If a peer will
be used as a default for this network, an
indication of how default routing will be done
should be provided here.
Syntax:
default: to <peering> [action <action>]
[networks <filter>]
The <action> and <filter> specifications are
optional. The semantics are as follows:
The <peering> specification indicates the AS
(and the router if present) it is being
defaulted to; the <action> specification, if
present, indicates various attributes of
defaulting, for example a relative preference
if multiple defaults are specified; and the
<filter> specifications, if present, is a policy
filter. A router only uses the default policy
if it received the routes matched by <filter>
from this peer. This field is optional; multiple
lines are possible.

remarks: <free-form>
Remarks or comments, to be used for
clarification. This field is optional; multiple
lines are possible.

admin-c: The NIC handle referenced in the person object
(see below), which represents the administrative
contact for the Autonomous System. It is
recommended that the administrative contact is
physically located at the site that will be using
the AS Number. More than one contact can be
specified by adding more "admin-c:" fields.
This field is mandatory; multiple lines are
possible.

tech-c: The NIC handle referenced in the person object
(see below), which represents the technical
contact for the Autonomous System. There can
be more than one name specified in multiple
fields for this template. This field is mandatory;
multiple lines are possible.

cross-mnt: list of <mntner-name>
Contains a list of mntner(s) to be notified for
overlaps with any of the prefixes announced in
route objects in which the given AS number is
specified in the "origin:" attribute.
A notification will be sent to mailbox(es)
listed in cross-nfy and mailbox(es) listed in
the "mnt-nfy:" attributes of the maintainers
referenced by the cross-mnt whenever an
overlapping route is added or removed.
This field is optional; multiple lines are
possible.

cross-nfy: <nic-handle>
The "cross-nfy:" attribute contains a
NIC-handle pointing to a person or role object.

The email address of this person or role object will be used for notification for overlaps with any of the prefixes announced in route objects in which the given AS number is specified in the "origin:" attribute. This field is optional; multiple lines are possible.

notify: <e-mail>
Specifies the e-mail address to which notifications of changes to the aut-num object will be sent.
This field is optional; multiple lines are possible.

mnt-lower: list of <mntner-name>
Specifies the identifier of a registered mntner object used for hierarchical authorisation. Protects creation of objects directly (one level) below in the hierarchy of the aut-num object. The authentication method of this maintainer object will then be used upon creation of any object directly below this aut-num object.
This field is optional; multiple lines are possible.

mnt-routes: <mnt-name>
[{ list of <address-prefix-range> } | ANY]
This attribute references a maintainer object which is used in determining authorisation for the creation of route objects. After the reference to the maintainer, an optional list of prefix ranges inside of curly braces or the keyword "ANY" may follow. The default, when no additional set items are specified, is "ANY" or all more specifics. Please refer to RFC 2622 for more information.
This field is optional; multiple lines are possible.

mnt-by: list of <mntner-name>
Specifies the identifier of a registered mntner object used for authorisation of operations performed with the object that contains this attribute. This field is mandatory; multiple lines are possible.

changed: <e-mail> [<date>]
Specifies who submitted the update, and when the object was updated. The format of the date is YYYYMMDD; dates in the future are not allowed. If the date is not specified, the database will put the date when the update was actually processed. This field is mandatory; multiple lines are possible.

source: <registry-name>
Specifies the registry where the object is registered. Should be "RIPE" for the RIPE Database. This field is mandatory; only a single line is possible.

aut-num: NEW
as-name: XMAS-AS
descr: Santa’s Workshop Inc.
Christmas Toys Manufacturing Facility
Northern Nowhere
import: from AS1234
action pref=120;
accept ANY
import: from AS5678
action pref=100;
accept ANY
export: to AS1234
announce NEW
export: to AS5678
announce NEW
admin-c: CREW-RIPE
tech-c: OPS4-RIPE
mnt-by: SANTA-SECURITY-MNT
changed: hostmaster@ripe.net
source: RIPE

Maintainer Information

It is required for each **aut-num** (autonomous number) object to reference a **mntner** (maintainer) object. If the maintainer information is already in the RIPE Database, then the person handling the request should check to see if it is up to date. If there is no database entry, one should now be created by using the following template. An example is included below.

#[MAINTAINER TEMPLATE]#

mntner: *SANTA-SECURITY-MNT*
descr: *Santa’s Workshop Inc. maintainer*
admin-c: *CREW-RIPE*
tech-c: *AUTO-1*
tech-c: *OPS4-RIPE*
upd-to: *santa@xmas.nn*
auth: *CRYPT-PW peEw8Gb4xBNqI*
notify: *jbgood@antarctic.nn*
mnt-by: *SANTA-SECURITY-MNT*
referral-by: *RIPE-DBM-MNT*
changed: *hostmaster@ripe.net*
source: *RIPE*

Contact Information

Each **aut-num** and **mntner** object references contact persons, which also need to be entered in the RIPE Database. If the contact information is already in the RIPE Database, then the person handling the request should check to see if it is up to date. If there is no database entry, one should now be created by using the following template. An example is included below.

#[PERSON TEMPLATE]#

person: *Santa A Claus*
address: *Santa's Workshop Inc.*
Jingle Bell Lane 12
1224CH Christmastown
Northern Nowhere
phone: *+12 12 122 1122*
+12 12 122 2211 ext. 1221
fax-no: *+12 12 122 121*
e-mail: *santa@xmas.nn*
nic-hdl: *AUTO-1*
notify: *jbgood@antarctic.nn*
mnt-by: *SANTA-SECURITY-MNT*
changed: *jbgood@antarctic.nn*
source: *RIPE*

**NOTE: Each person or role object in the RIPE Database should contain a NIC handle which allows unambiguous identification of the appropriate persons as needed for Internet network administration. A RIPE NIC handle has the form "MK16-RIPE". To obtain a NIC handle, just put

nic-hdl: AUTO-1

OR

nic-hdl: AUTO-1YourInitials

in the "nic-hdl:" field of the object to be added to the database. If "YourInitials" are specified (no less than 2, and no more than 4 letters), the database will use them in constructing a NIC handle. Otherwise, it will determine the letters itself. In both cases, the NIC handle is guaranteed to be unique.

You can reference these (AUTO-1 or AUTO-1YourInitials) as temporary NIC handles in the same update message in the fields of other objects that require a NIC handle (e.g. the **inetnum** object described above). The database software will then fill in the freshly assigned NIC handles in the objects. Note that you can also use other numbers (example: AUTO-2) so that you can add more objects in one e-mail message.