

RIPE Database Training Course

Exercise Booklet

December 2024



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Preparation for the training course

In this training course, you will be doing many things. Each section consists of a series of activities where you will have to do something with the TEST Database. Some activities will involve the RIPE Database.

Your RIPE NCC Access Account

All services that the RIPE NCC offers are supported by the RIPE NCC Access Single Sign On system, including the RIPE Database and the TEST Database.

The course participants **MUST** have a RIPE NCC Access account to follow this training course. If you don't have one, create it now.

<https://access.ripe.net>

Note: Two-factor authentication is now mandatory for all Access accounts.

The TEST Database

During this training course we will work a lot with the TEST Database. This is a public system that acts and responds exactly the same way as the RIPE Database would.

It contains a few pre-created objects for testing and training purposes and it is reset every night. This means that all the objects we create today will be deleted tonight.

You can access the TEST Database here:

<https://apps-test.db.ripe.net>

It is also accessible from the RIPE Database WHOIS page:

<https://www.ripe.net/whois/>

Click on the link "TEST Database" under the query form.

Your database objects

Use this page to write down the identifiers of the objects you create during the course activities.

Your person object (nic-hdl): _____

Your maintainer object: _____

Your role object: _____

Email 1

From the RIPE NCC Member Services dept.

(Note: **XX** is your number on the list of participants)

Dear new LIR,

We have created the following objects in the RIPE Database for **nl.bluelightXX**'s public profile:

ORGANISATION object	ORG-IC XX -TEST
MNTNER object	SM XX -MNT
ROLE object	AR XX -TEST
PERSON object	JB XX -TEST

You can find more information about your public profile and the next steps you can take as a RIPE NCC member at:

<https://www.ripe.net/participate/member-support/new-lir/new-account>

If you have any questions about updating these objects, please contact us at [<ripe-dbm@ripe.net>](mailto:ripe-dbm@ripe.net).

Best regards,

RIPE NCC Member Services

Email 2

From the RIPE NCC Registry Services dept.

(Note: **XX** is your number on the list of participants)

Dear LIR,

Today, the RIPE NCC allocated the following IPv4 prefix:

10.**XX**.0.0/22 to Internet Company **XX** (nl.bluelightxx)

The RIPE Database shows the following information:

inetnum:	10. XX .0.0 - 10. XX .3.255
netname:	NL-BLUELIGHT XX -20170531
country:	NL
org:	ORG-IC XX -TEST
admin-c:	JB XX -TEST
tech-c:	JB XX -TEST
status:	ALLOCATED PA
mnt-by:	TEST-NCC-HM-MNT
mnt-by:	SM XX -MNT
created:	2017-05-31T09:05:31Z
last-modified:	2017-05-31T09:05:31Z
source:	TEST

Please update your records accordingly.

You may announce this prefix to your BGP peers and request reverse delegation.

You can use your Default Maintainer to update some of the attributes in the object above using webupdates:

<https://www.ripe.net/webupdates>

Further information about Default Maintainers can be found here:

<https://www.ripe.net/manage-ips-and-asns/db/support/security/maintainers#default-mnt>

You are required to document the usage of this address space by registering assignments in the RIPE Database using

<https://www.ripe.net/webupdates>

If you have any questions, please send us an email to <lir-help@ripe.net>

Kind regards,

IP Resource Analyst
RIPE Network Coordination Center

Email 3

From the RIPE NCC Registry Services dept.

(Note: **XX** is your number on the list of participants)

Dear LIR,

Today, the RIPE NCC allocated the following IPv6 prefix:

2002:ff**XX**::/32 to Internet Company **XX** (nl.bluelight**XX**)

The RIPE Database shows the following information:

inet6num:	2002:FF XX ::/32
netname:	NL-BLUELIGHT XX -20170531
country:	NL
org:	ORG-IC XX -TEST
admin-c:	JB XX -TEST
tech-c:	JB XX -TEST
status:	ALLOCATED-BY-RIR
mnt-by:	TEST-NCC-HM-MNT
mnt-by:	SM XX -MNT
created:	2017-05-31T09:05:31Z
last-modified:	2017-05-31T09:05:31Z
source:	TEST

Please update your records accordingly.

You may announce this prefix to your BGP peers and request reverse delegation.

You can use your Default Maintainer to update some of the attributes in the object above using webupdates: www.ripe.net/webupdates

Further information about Default Maintainers can be found here:
<https://www.ripe.net/manage-ips-and-asns/db/support/security/maintainers#default-mnt>

You can allocate and assign from this range according to policies described in "IPv6 Address Allocation and Assignment Policy" document, <http://www.ripe.net/ripe/docs/ipv6policy.html>

You are required to document the usage of this address space by registering assignments in the RIPE Database using
<https://www.ripe.net/webupdates>

For more details on how to document these IPv6 assignments, please see:
<http://www.ripe.net/data-tools/support/documentation/documenting-ipv6-assignments-in-the-ripe-database>
<http://www.ripe.net/ripe/docs/ipv6policy.html#assignment>

If you have any questions, please send us an email to [<lir-help@ripe.net>](mailto:lir-help@ripe.net)

Kind regards,

IP Resource Analyst
RIPE Network Coordination Center

Email 4

From the RIPE NCC Registry Services dept.

(Note: **XX** is your number on the list of participants)

Dear LIR,

Today, the RIPE NCC assigned the following Autonomous System Number:

AS655**XX** to Internet Company **XX** (nl.bluelight**XX**)

The RIPE Database shows the following information:

aut-num:	AS655 XX
as-name:	BLUELIGHT XX
org:	ORG-IC XX -TEST
import:	from AS999 accept ANY
export:	to AS999 announce AS655 XX
import:	from AS321 accept ANY
export:	to AS321 announce AS655 XX
admin-c:	JB XX -TEST
tech-c:	JB XX -TEST
status:	ASSIGNED
mnt-by:	TEST-NCC-HM-MNT
mnt-by:	SM XX -MNT
mnt-routes:	SM XX -MNT
created:	2017-05-11T09:30:03Z
last-modified:	2017-05-11T09:30:03Z
source:	TEST

Please update your records accordingly.

The object above can be updated using the Webupdates tool at
<https://www.ripe.net/webupdates>

More information about AS Number Assignment Policies is available at
<http://www.ripe.net/ripe/docs/asn-assignment>

If you have any questions, please send us an email to <lir-help@ripe.net>

Kind regards,

IP Resource Analyst
RIPE Network Coordination Center

Email 5

From your colleague (Jean Blue)

(Note: **XX** is your number on the list of participants)

Hey!

Sorry I can't be there to help you with the RIPE Database. It's quite busy over here and I really must get working on the new project. I'm sure the RIPE NCC training course will help you get started!

I sent you all the emails from the RIPE NCC Member Services and Registry Services. You should be able to find all the objects for our LIR quite easily, specially our maintainer **SMXX-MNT**.

The maintainer is important, because you will have to register some assignments and delete old ones.

After we got our IPv4 and IPv6 allocations, we got a request for address space from Laika BV, one of our new customers. They wanted a /24 of IPv4 space and a /48 of IPv6 space. The documentation part is done, but I registered the assignments wrong. I registered a /25 IPv4 block and a /40 IPv6 block!

Can you register the correct assignments and then delete the old wrong ones?

Don't forget to create your own person object first! You will be the tech-c for these networks and the customer, Marc Bromski (MB54321-TEST) should be the admin-c.

Thank you!

Jean

P.S. These are the ranges you should use for the new assignments.

IPv4: 10.**XX**.2.0 - 10.**XX**.2.255

IPv6: 2002:ff**XX**:1001::/48

Email 6

From your colleague (Jean Blue)

(Note: **XX** is your number on the list of participants)

Hey!

How's it going with the RIPE Database? You're making progress quite fast, so I'm going to delegate to you another task.

Our upstream provider Transit Provider 1 just called. It seems we have been announcing our address space for some time now and we didn't register the announcements! That's not very nice of us. :(

We need to create a route object for our IPv4 space and a route6 object for our IPv6 space.

Our AS Number is **AS655XX**. You will find the assignment in the email from the RIPE NCC Registry Services department.

If you have any problems with the RIPE Database, you can always contact the Member Services dept. of the RIPE NCC.

Thanks!

Jean

Email 7

From your colleague (Jean Blue)

(Note: **XX** is your number on the list of participants)

Hey!

Marc Bromski called again. He's extremely happy with everything we are doing for him. Great work!

This time he requested us to set up reverse DNS for his IPv4 and IPv6 address space. You know, the two blocks you registered for him:

IPv4: 10.**XX**.2.0 - 10.**XX**.2.255
IPv6: 2002:ff**XX**:1001::/48

Marc said we should use his name servers:

ns1.laika.net
ns2.laikabv.com

Before you go and do anything, check first if the reverse DNS was set up by someone else in our company.

Remember: If you have any problems with the RIPE Database, you can always contact the Member Services dept. of the RIPE NCC. ;-)

Thanks!

Jean

Play Time!

Use this list of different tasks to practice your RIPE Database skills. If you need any help, check your course notes or ask the trainer to assist you.

Querying for objects

Search in the **RIPE Database** (not the TEST Database!) for the following data:

1. The telephone number of the person Hans Petter Holen
2. The email address of the role object RIPE NCC RIS Operations
3. The admin-c of the organisation ORG-LC4-RIPE
4. The tech-c of the role object AS15879-RIPE
5. The tech-c of the IP address 193.0.24.1
6. The allocation where the IP address 2.3.4.5 comes from
7. The third assignment in the allocation 213.0.0.0/16
8. The email address of the tech-c of 2001:6e8::/29

Updating existing objects

In the **TEST Database** (not the RIPE Database!) modify the following objects:

9. Change the e-mail address of Jean Blue's person object (JBXX-TEST) to jean.blue@example.com
10. Add another telephone number to Jean Blue's person object (JBXX-TEST)
11. Change the tech-c of your customer's IPv6 assignment to MB54321-TEST
12. Add a "notify:" attribute to the route(6) object you created during the course
13. Add your person object as an admin-c to your customer's IPv4 assignment
14. Add a new SSO authentication to your maintainer SMXX-MNT
15. Add Jean Blue as a tech-c to your role object
16. Add your person object as a tech-c to the IPv6 sub-allocation you created

Creating new objects

In the **TEST Database** (not the RIPE Database!) create the following objects:

17. A /26 IPv4 assignment
18. A /56 IPv6 assignment
19. A /24 IPv4 sub-allocation
20. A /46 IPv6 sub-allocation
21. A group of IPv4 assignments
22. A group of 4000 x /56 IPv6 assignments
23. A role object for your NOC team
24. A new maintainer object with an x509 certificate or PGP key authentication
25. A route(6) object for any of the assignments/sub-allocations you created