

# Local Internet Registry Training Course

## Exercise Booklet

November 2015

## Exercise 1: First Day at Work as an LIR contact

Goal: Sort the tasks in the chronological order

The goal of this exercise is to identify the most important tasks of an LIR contact and put them in a logical order.

Storyline:

You have taken over the position of a 'LIR contact' in your company. Your company is already a long-established LIR. The 'LIR contact' is responsible for dealing with the RIPE NCC: requesting resources, maintaining the RIPE Database records and so on. What should you do now?

Instructions:

Work in small groups. With your group, sort the steps below in the chronological order in which you would carry out the tasks.

Tasks	Order
Check which ROAs have been created	
Correct invalid and unused assignments in the RIPE Database	
Compare your assignment records with the RIPE Database	
Ask the RIPE NCC to update any out-dated LIR information you can't update yourself	
Add your person object to the LIR role object	
Get a RIPE NCC Access account or link your existing Access account to the LIR Portal	
Request resources if needed (and possible)	
Check the LIR information and what resources you have	
Create a person object in the RIPE Database and protect it	
Update the LIR contact list in the LIR Portal	
Get the LIR maintainer password	
Correct any out-dated LIR information in the LIR Portal	

## Exercise 2: Making Assignments

**Goal:** Collect information and document End User assignments

**Storyline:**

You work for the LIR:      ORG-TCP -TEST

Your RegID is:              nl.ripencc-tcp 

You have a /22 IPv4 allocation and a /32 IPv6 allocation.

A new customer (End User) wants to use your services and needs address space from your registry.

**What to do:**

- Collect information about the End User's network by reading the email and asking questions to the "End User"
- Document the End User request by filling in the assignment details in the suggested form or create your own form (takes more time!)
- Ask yourself: what information is important/relevant? What do I need to know and why?

**Additional information:**

- IPv4 assignment size: limited to the amount of IPv4 space you have
- IPv6 assignment size:
  - between /64 and /48, no approval required
  - >/48 requires approval from the RIPE NCC
  - /64 = 1 subnet
  - /56 = 256 subnets
  - /48 = 65K subnets

**TIP:** Use the IPv4 and IPv6 CIDR charts!

## End-User's email:

From: marc@laika.example.com  
To: contact@lir.yourplace.com  
Date: Today

Dear Sir / Madam,

Our company is interested in moving from an IPv4-only platform to a dual-stacked one. It is important for us to be reachable from anywhere in the world.

We are a start-up Web hosting company (moving on from the web design business). We would like to get address space from you and then we would hand back the address space we currently have to our soon to be ex-ISP upstream provider TheOtherNet. We currently use the prefix 195.20.42.0/26.

It is also important for us to be reachable over IPv6, as we mentioned, so we would like to get a block from you as well.

We currently have 150 web hosting clients that we would move to your network. Additionally we also have 7 SSL web hosting clients that would need their own IP addresses.

Our goal is to double our clients every year.

For our supporting infrastructure we have 10 servers, which need their own addresses, to be able to get our services up and running.

I hope to hear from you soon.

Regards,

Marc Bromski  
MB54321-TEST  
Laika BV, Amsterdam  
<http://www.laika.example.com>

## Suggested form for collecting information

```
#[ADDRESS SPACE USER]#
%
% Who will use the requested address space?
%
legal-organisation-name:
ORG-object:
organisation-location:
website-if-available:

contact-person:
nic-handle:
email:
phone:

#[NETWORK DESCRIPTION]#
%
% What types of services will be provided?
%

#[ADDRESSING PLAN]#
%
% How much IPv4 address space will they get?
%
subnet:                subnet size:

amount of subnets:    total size:

IPv4 block size:

%
% How much IPv6 address space will they get?
%
subnet:
subnet:
subnet:
subnet:
subnet:

amount of subnets:

IPv6 block size:
```

## Exercise 3: Registering the Assignment

Goal: Register the Assignment in the TEST RIPE Database

Your task is to register the End User assignments from the previous exercise in the **TEST** RIPE Database.

### Storyline:

You work for the LIR:

ORG-TCP -TEST

You want to register the assignment from the previous exercise.

Preparations:

- Find out the name and password of your **maintainer** object
- Find your **person** object
- Identify your **IPv4 and IPv6 allocation** objects
- Choose the prefixes in your allocations suitable for the assignments

## Your database objects

For your convenience we have already created some objects in the **RIPE TEST Database**. You can use these objects during the practical exercises today.

We have created a maintainer, person, organisation and IPv4 allocation object for you.

To identify your objects, please look up your number in the participants list and substitute that in the placeholders.

For example, if your number on the list is **3**, your person object will be **TP3-TEST**.

On the next pages you will find the list of all your objects that are in the TEST Database.

## All pre-created objects

Fill in all  placeholders with your number on the list:

```

person:           Training Course Participant
remarks:         RIPE NCC training courses - Participant  Person
address:         Singel 258
address:         1016 AB Amsterdam
phone:           +31205354444
e-mail:          participant@example.com
nic-hdl:         TP-TEST
mnt-by:          CM-MNT
created:         2002-04-08T12:43:46Z
last-modified:   2014-02-24T13:15:13Z
source:          TEST

mntner:          CM-MNT
descr:           RIPE NCC training courses - Participant  Maintainer
admin-c:         TP-TEST
mnt-by:          CM-MNT
referral-by:     CM-MNT
auth:            MD5-PW $I$KBFVHR$e9$rljw3JMlXj.Qtyp2/VC6t/
upd-to:          participant@example.com
notify:          participant@example.com
created:         2002-04-08T12:43:46Z
last-modified:   2014-02-24T13:15:13Z
source:          TEST

organisation:    ORG-TCP-TEST
org-name:        RIPE NCC training courses - Participant  Organisation
org-type:        LIR
address:         Singel 258, 1016 AB Amsterdam
phone:           +31205354444
fax-no:          +31205354444
e-mail:          training@example.com
admin-c:         TP-TEST
tech-c:          TP-TEST
ref-nfy:         notify@example.com
notify:          notify@example.com
mnt-ref:         TEST-NCC-HM-MNT
mnt-by:          TEST-NCC-HM-MNT
created:         2002-04-08T12:43:46Z
last-modified:   2014-02-24T13:15:13Z
source:          TEST

```

The following Internet resources are available for you to be used in the exercise:

inetnum: 192..0.0 - 192..3.255  
netname: NL-RIPENCC-TCP-20140626  
org: ORG-TCP-TEST  
descr: RIPE NCC training courses - Participant  Allocation  
country: EU  
admin-c: TP-TEST  
tech-c: TP-TEST  
status: ALLOCATED PA  
mnt-by: TEST-NCC-HM-MNT  
mnt-lower: CM-MNT  
mnt-routes: CM-MNT  
created: 2002-04-08T12:43:46Z  
last-modified: 2014-02-24T13:15:13Z  
source: TEST

inet6num: 2001:ff::/32  
netname: NL-RIPENCC-TCP-20140626  
org: ORG-TCP-TEST  
descr: RIPE NCC training courses - Participant  Allocation  
country: EU  
admin-c: TP-TEST  
tech-c: TP-TEST  
status: ALLOCATED-BY-RIR  
mnt-by: TEST-NCC-HM-MNT  
mnt-lower: CM-MNT  
mnt-routes: CM-MNT  
created: 2002-04-08T12:43:46Z  
last-modified: 2014-02-24T13:15:13Z  
source: TEST

NOTE: If your number on the list is between 1 and 9, please write the number in the IPv6 prefix with a leading zero.

Example: "1" == "01" == 2001:ff01::/32

## Passwords

All your objects are protected by your own **maintainer** object. In order to modify any of them, you will need the password for this maintainer.

This password is "secret" + your number, so the password for participant 1 will be **secret1**, the password for participant 2 will be **secret2**, and so on.

## Test database

In the exercises we make use of the **RIPE TEST Database**.

This is a public system that acts and responds in exactly the same way as the RIPE Database would do. It does **not** contain the same data as in the RIPE database and it is reset every night.

You can access the **TEST** Database by selecting the correct source in the Webupdates or whois tools.

More information:

<http://www.ripe.net/data-tools/db/ripe-test-database>

## Additional information

- The "netname:" field is used to identify assignments. It is recommended to use a different netname for each different network.
- Example:

```
netname: RIPE-NCC
```

- The "descr:" field can contain a free text description of the network.
- Example:

```
descr: RIPE Network Coordination Centre
```

- The "admin-c:" and "tech-c:" fields point to a person or role that is responsible for administrative or technical issues.
- These fields require a NIC-handle value.
- The NIC-handle is the unique identifier of a person or role object.
- Example:

```
tech-c: OPS4-RIPE
```

### Create the inetnum object:

1. Go to the Webupdates tool on <http://www.ripe.net/webupdates>
  2. Choose "Create an object" from the left side menu
  3. Select "**inetnum**" as the object type
  4. Choose the "**RIPE TEST Database**" radio button
  5. Click on the [Create] button
  6. Fill in the inetnum object template with:
    - an **IP range** from your IPv4 allocation
    - the unique netname to identify the assignment
    - a very short description of the assignment
    - the country code of the end user's country
    - use the **customer person** object as the **admin-c**
    - use your **person** object as the **tech-c**
    - use the status **ASSIGNED PA**
- Which maintainer will you use to protect this new **inetnum** object?
  - Create the object. Was it successful?

### Create the inet6num object:

1. Go to the Webupdates tool on <http://www.ripe.net/webupdates>
  2. Choose "Create an object" from the left side menu
  3. Select "**inet6num**" as the object type
  4. Choose the "**RIPE TEST Database**" radio button
  5. Click on the [Create] button
  6. Fill in the inet6num object template with:
    - an **IPv6 prefix** from your IPv6 allocation
    - the unique netname to identify the assignment
    - a very short description of the assignment
    - the country code of the end user's country
    - use the **customer person** object as the **admin-c**
    - use your **person** object as the **tech-c**
    - use the status **ASSIGNED**
- Which maintainer will you use to protect this new **inet6num** object?
  - Create the object. Was it successful?

If you get any errors during this exercise:

- Did you select the RIPE TEST Database?
- Did you supply the correct password?
- Did you use valid data for the object fields?