

# RIPE NCC Measurements and Tools Training Course

Exercise Booklet

March 2017

# Introduction

This course material and available updates can be found under <http://www.ripe.net/lir-services/training/courses>

## Exercise A: Querying for a Resource

### Tasks:

In this exercise, you are going to use RIPEstat to query for resources (IP address ranges, AS Numbers) and find out more details about them.

1. Go to RIPEstat

<https://stat.ripe.net>

2. What network announces 140.78.50.90? \_\_\_\_\_

3. Is 193.3.4.2 routed? \_\_\_\_\_

4. In which country is 91.229.42.0/23 used? \_\_\_\_\_

5. What is its corresponding INETNUM object? \_\_\_\_\_

6. What widget provides real-time routing status? \_\_\_\_\_

7. By what percent did the number of prefixes announced within Greece increase over the last two years?

\_\_\_\_\_

8. How would you share interesting network events with a colleague?

\_\_\_\_\_

## Exercise B: BGPlay

### Tasks:

In this exercise use the BGPlay widget to find the answers

1. Go to RIPEstat (<https://stat.ripe.net>), after querying find the BGPlay widget on the 'Routing' tab.
2. Find the up-stream provider for AS1205: \_\_\_\_\_
3. Is 69.36.157.0/24 originated by only one or more ASNs?
4. \_\_\_\_\_
5. Check the IPv6 connectivity of your own network \_\_\_\_\_

## Exercise X1 (Optional): Handling Abuse

### Tasks:

1. In this exercise, you are going to find who to contact in case of abuse (hacking, spamming, etc)

2. Who is the abuse contact for 193.0.20.22 ?

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3. Who is the abuse contact for the hotel network ?

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4. What is the abuse contact for your home network ?

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5. Discussion: What can you do in these cases ?

- No abuse contact found ? \_\_\_\_\_

- No response on an abuse report ? \_\_\_\_\_

## Exercise X2 (Optional): MyView

### Tasks:

In this exercise, you are going to use the MyView feature of RIPEstat to select and arrange the widgets that you would like to have in your own personalised MyView tab.

1. Create a RIPE NCC Access account (if you don't already have one)  
<https://access.ripe.net>
2. Create a MyView for a prefix containing the following widgets:
  - Routing Status
  - Looking Glass
  - Routing History
3. Create another MyView with at least two widgets and give it a meaningful name

## Exercise X3 (Optional): Comparing Results

### Tasks :

In this exercise you test features to compare results in RIPEstat.

1. No login required
2. Go to the 'Use Cases' > 'Compare Results' menu item at the top of the RIPEstat page.
3. Add widgets AND input query for each widget (ASN or IP or...).
4. You get a result page with widgets and query results
5. Share it via a permanent link

## Exercise X4 (Optional): RIPEstat Use-Cases

### Tasks :

In this exercise we discuss common use-cases that network operators can encounter and try to solve them using RIPEstat.



## Exercise C Creating a Measurement

**Prerequisite:** You must have a RIPE NCC Account

You must have curl command installed.

### Exercise:

Create a ping measurement:

- Involving ten probes
- To a target of your choice
- Source is your country
- Duration of two days.
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**Task 1 : Warm-up: Create the measurement using the GUI**

**Task 2 : Create an API key** ( *Preparation for Task 3* )

**Task 3 : Create the measurement using API**

**Task 1 : Warm-up: Create the measurement using the GUI**

- a) log in to RIPE Atlas
- b) go to Measurements, Maps and Tools menu on the left >  
Measurements submenu
- c) Click on the green +Create Measurement button
- d) i): choose type=PING,  
ii) then choose target = (host name or IP)
- e) Click "Create My Measurement(s)"

## Task 2 : Create an API key ( Preparation for Task 3)

- a) go to MyAtlas > API Keys
- b) click on CreateAPIkey button  
fill out:
  - label (the name you give your key)
  - valid from and valid to fields  
(UTC time! Make sure your key is valid from this moment on)
  - from a pull down menu select”  
“Schedule a new measurement” permission
- c) Don't click on “Add Grant”
- e) Click on “Save”
- f) You will need the UUID of the key for Task 3)

## Task 3 : Create an measurement using API

- a) Create a measurement via the GUI as in Task1, but don't click on the “Create My Measurement(s)” button.
- b) Click on the “Measurement API Compatible Specification” button
- c) Copy all the text and paste it into a terminal window
- d) Replace the placeholder at the end of the text with you key UUID
- e) Enter!
- f) Check if your measurement has been created.

## Exercise D Using Streaming API

**Prerequisite:** Preconfigure web browser:

in Safari: Preferences > Advanced>Show Develop menu

Chrome or Firefox needs no reconfiguration.

**Scenario:** customers complain it takes a long time to reach your server

**Action:** -ping your server from 50 probes

- choose acceptable latency threshold

### Task 1:

-Use the existing ping measurement ID 2340408

-Choose which threshold (e.g. greater than 30ms)

-Impose threshold on “min” (the minimum result of the three ping attempts)

### Steps for Task1:

1) <http://atlas.ripe.net/webinar/streaming01.html>

Open it in the development console

(right click > “Inspect element” > “Console”)

2) Wait for results to arrive

3) Save the HTML file locally and **EDIT** the code

( Or save it as a text file, edit it, change extension to html)

4) Open edited html file in Web browser

(right click > “Inspect element” > “Console”)

What to **EDIT** ? (step 3)

-In the “socket-emit” command add your threshold for the alarm:

-find parameter in doc for “**greater than**”: <https://atlas.ripe.net/docs/result-streaming/>

-express minimum of three ping attempts as: {min: value\_of\_threshold}

## Task 2:

-Same situation as in the exercise before, but you didn't schedule a measurement in advance, so

You don't have a measurement ID

-You want to get all the measurements reaching 193.0.10.197

-Now restrict the results to just include ping measurements

-Use documentation, to find correct syntax and parameters:

<https://atlas.ripe.net/docs/result-streaming/>

## Exercise E Using RIPEAtlas API

### Prerequisites and Preparation

You must have a RIPE NCC Access Account

You must have an API key

Installation: (UNIX/LINUX/OSX:)

Terminal:

```
sudo easy_install pip
```

```
sudo pip install ripe-atlas-tools
```

choose “Install” in pop-up

```
ripe-atlas configure --set authorisation.create=MY_API_KEY
```

WINDOWS: Tools in GIT repository

### Task :

Use the traceroute command to test the reachability of wikipedia.org on TCP port 443 from 20 probes in France