S-38.3192
ITGuru Excercise 1: IS-IS

Spring 2007

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Task Description

Step-by-step list of what to do in this exercise:

- Build up the network
- Configure IP-addresses on all required interfaces
- Configure IS-IS in the P- and PE-routers (provider routers)
- Test the network

Network

Use only Juniper M10 routers and 100BaseT Ethernet links. The network topology and configuration should be identical to the one shown in the *general.pdf* [General information of Configuration Parameters and Topology] document. This document can be found from the course web page:

http://www.netlab.tkk.fi/opetus/s383192/2007/harj/general.pdf

IP-addresses

All addresses are given in the *general.pdf* document. Remember to create loopback interfaces and name them as LB0.

IS-IS

Notice that there should not be any routing protocols active between the PE and CE routers (yet). This means that you have to disable RIP between CE and PE because it is turned on by default whenever two routers are connected.

You should use the following NSAP address format:

49.0000.0102.XXXX.800Y.00,

where the first *X*'s are sent to you via email and the *Y* is the last digit of the router's loopback address. Force all IS-IS routers to be Level 2 –routers. Enable IS-IS on all provider network interfaces that are connected and also on all provider loopback interfaces.

Testing

Use an *ip_ping_traffic*-demand with *record route* -option turned on to test the network. The traffic demand should go from PE to PE.

Exercise Sessions

The exercise session for this task will be arranged on January 25th at 14 o'clock in computer class Maari-A

Feedback Questions

Return your feedback before February 2nd 12:00. Each student does and returns this separately (this part of the exercise is not a group work). Return you feedback to **ttheikk2@netlab.tkk.fi**. Attach your feedback to your mail as a PDF file. Name your file as follows:

FB_T1_G*groupnumber_studentID*.pdf

for example *FB_T1_G2_56256T.pdf*.

The feedback questions are:

1. What kind of problems did you encounter and what did you learn when/by solving them?
2. What kind of sources of information did you use during this exercise? For example Google, other groups, the course personnel…
3. Did you share tasks inside the group or did you work mostly as a group?

Exercise report

The exercise report should be returned before the beginning of the next exercise session (February 1st, 14 o'clock). Return your exercise report to **ttheikk2@netlab.tkk.fi**. Attach your report to your mail as a PDF file. Name your file as follows:

T1_G*groupnumber*.pdf

for example *T1_G2.pdf*.

You should include the following tables in your report:

- IP-forwarding tables of all **P- and PE**-routers
- Ping report generated by using the *record route* option.

Export all tables as CSV or use the *export to spreadsheet* function. You can then import this data to the program you use to write the report.