

In the RIP lab description, you will find a line regarding the router settings as follows:

**Routing Table Export = Once at End of Simulation.** However in riverbed, you cannot do this from the router attributes window. To do this, you have to do the following.

Select the router -> select the Protocols menu -> IP -> Routing -> Export Routing Table

## **PART 6 – Configure the Simulation Parameters**

You may have noticed that there is a difference between setting parameters with respect to your network model, and setting parameters for the simulation you are running with that network model. There are often parameters which cross over from either being part of the model or part of the simulation. The effect of setting a simulation parameter which influences model behaviour is similar to globally setting parameters for your model. Experience using *Modeler* will allow you to better judge whether you should set certain parameters manually for network model objects or whether you can do it more efficiently via Simulation settings.

1. Usually to configure simulation parameters you would follow the menu to the

*Configure Simulation* window via – **DES->Configure/Run Discrete Event Simulation...**

Note that you can also press **Ctrl+R** to bring up this window or you can click its

associated icon on the Project Editor's toolbar:



2. Set the duration to **10.0 minutes**.

3. In the leftmost panel of the *Configure/Run DES* interface expand the

*Common->Inputs->Global Attributes* hierarchy (see below for screenshot)

Under *Global Attributes* change the following attribute values:

a) *IP->IP Dynamic Routing Protocol* = **RIP**

b) *IP->IP Interface Addressing Mode* = **Auto Addressed/Export**

c) *Simulation Efficiency -> RIP Sim Efficiency* = **Disabled**

d) *Simulation Efficiency -> RIP Stop Time (seconds)* = **600**

## Obtain the IP addresses of the Interface

You cannot open the files using Riverbed directly. For this you have to open file explorer and have to go the directory where your files are saved.

It **may be** something like

op\_models/<your\_initials>\_RIP.project/

On that directory you will find all the files such as

<your\_initials>\_RIP-NO\_failure-ip\_addresses.gdf

You have to open the file with wordpad. Then in wordpad, go to the page setup and set the page to be portrait. Then you can get the results similar to the one mentioned in the pdf.

Unfortunately, you have to draw the layout for now, since you cannot open the file using OPNET. If we find some easier way to do it, we will broadcast.

## Getting the Ping Report

From the Project Editor menu select – DES->Results->View Results... then in the

DES Run (1) Tables tab expand the following hierarchy: Object Tables->Campus Network->router#->Performance-> Ping Report for Campus\_Network\_router # at 100 seconds

Click Show to bring up the table of results in a separate window:

Report: Ping Report for Campus_Network_router4 at 100 seconds					
	IP Address	Hop Delay	Node Name	MPLS Label	MPLS EXP
1	192.0.4.2	0.000	router1		
2	192.0.5.1	0.000	router2		
3	192.0.10.1	0.000	router4		
4	192.0.5.2	0.000	router4		
5	192.0.4.1	0.000	router2		
6	192.0.4.2	0.000	router1		
7					
8	Total Response Time:	0.000 seconds			

Note: Your results may differ from the sample ping results given above.

### 9.3 Compare the Routing Tables

1) To check the content of the routing tables in **Router1** for both scenarios:

You need to go into the **NO\_Failure** and **Failure** scenarios separately. You can do this via the *Project Editor's Scenario* menu and select **Switch to Scenario**.

Then right click on the Router of interest, in this case **Router 1** in each scenario and choose *View Results* from the pop up menu:

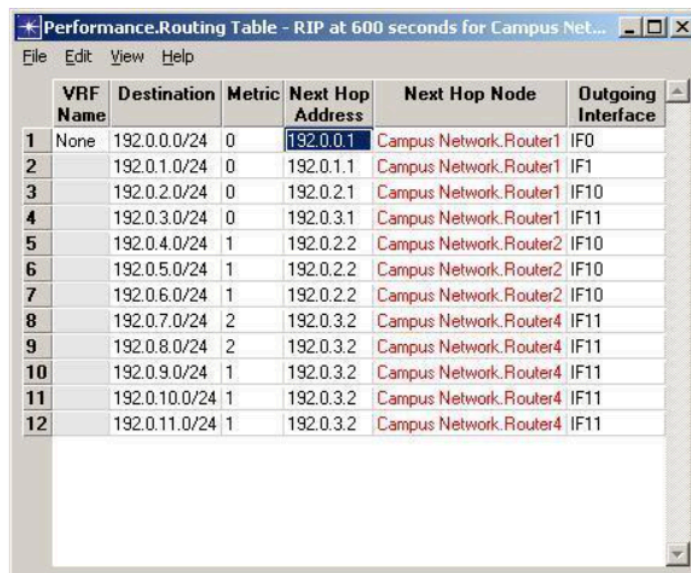
From the *Result Browser* – select the **DES Run (1) Tables** tab.

Expand the hierarchy: **Campus Network.Router1->Performance** Click on - **Routing Table – RIP at 600 seconds**

Click on the **Show** button to bring up the routing table in its own window.

The following figures show the two routing tables for each of the scenarios; note that there may be differences to your own depending on how you constructed your model.

Routing Table of Router 1 at the end of the **NO\_Failure** scenario simulation:



	VRF Name	Destination	Metric	Next Hop Address	Next Hop Node	Outgoing Interface
1	None	192.0.0.0/24	0	192.0.0.1	Campus Network.Router1	IF0
2		192.0.1.0/24	0	192.0.1.1	Campus Network.Router1	IF1
3		192.0.2.0/24	0	192.0.2.1	Campus Network.Router1	IF10
4		192.0.3.0/24	0	192.0.3.1	Campus Network.Router1	IF11
5		192.0.4.0/24	1	192.0.2.2	Campus Network.Router2	IF10
6		192.0.5.0/24	1	192.0.2.2	Campus Network.Router2	IF10
7		192.0.6.0/24	1	192.0.2.2	Campus Network.Router2	IF10
8		192.0.7.0/24	2	192.0.3.2	Campus Network.Router4	IF11
9		192.0.8.0/24	2	192.0.3.2	Campus Network.Router4	IF11
10		192.0.9.0/24	1	192.0.3.2	Campus Network.Router4	IF11
11		192.0.10.0/24	1	192.0.3.2	Campus Network.Router4	IF11
12		192.0.11.0/24	1	192.0.3.2	Campus Network.Router4	IF11

Note: Your results may differ from the sample results given above.