Additional help

This document is intended to give additional help and list things that were presented at the exercise sessions. The assistants will be updating this document as needed.

Result gathering

To collect routing information from a simulation you must enable routing table exporting for each node. Figure 1 shows how to do this. Set the exporting time to, for example, the end of simulation.

★ (node_1) Attributes	×
Type: router	Make: Juniper M10
Attribute	Value
I name	node_1
ATM-IP Interface	i i i
▶ ATM	
VPN	
IP Routing Protocols	
③ BGP Routing Table	Do Not Export
IGRP Routing Table	Do Not Export
IGRP Routing Table	Do Met Export
🕐 🕞 IP Forwarding Table 🧲	Export at End of Simulation
🔹 🕐 🛛 🕂 IP Multicast Group-to-RP Table	Pe Mot Export
👔 🕐 IS-IS Routing Table 🛛 🔍	Export at End of Simulation
👔 🕞 OSPF Link State Database 📃	Po Not Export
OSPF Routing Table	Do Not Export
PIM-SM Routing Table	Do Not Export
RIP Routing Table	Do Not Export
RIPng Routing Table	Do Not Export
🕐 🕞 VRF Table	Do Not Export
MPLS	
<u>Apply changes to selected objects</u>	Ad <u>v</u> anced
Eind Next	<u>O</u> K <u>C</u> ancel

Figure 1. *How to export routing tables.*

Once the simulation is done you can find the collected results (routing tables etc.) from the *View results* –menu (*DES->Results->View Results...*). An easy way of attaching the collected results to a document is to press the *Show*-button in bottom right corner of the *Result Browser*-window (see figure 2). This opens up a new window which allows the results to be exported to other programs (such as Excel, OpenOffice etc.).

\star Results Browser					×	
DES Graphs DES Parametric Studies DES Run (1) Tables						
Global Tables	- Preview					
Object Tables	Destination	Source Protocol	Route Preference	Metric	Next Hop Add	
Office Network	192.0.1.0/24	Direct	0	0	192.0.1.1	
l l l hode_0	192.0.1.1/32	Local	0	0	192.0.1.1	
P node_1	192.0.2.0/24	Direct	0	0	192.0.2.2	
Performance	192.0.2.2/32	Local	0	0	192.0.2.2	
IP Forwarding Tabl	192.0.3.0/24	IS-IS	115	20	192.0.2.1	
Ping Report for Offi	192.0.4.0/24	IS-IS	115	20	192.0.2.1	
Routing Table - ISI	192.0.5.0/24	IS-IS	115	30	192.0.2.1	
Ď− node_2	192.0.6.0/24	IS-IS	115	30	192.0.2.1	
Ď− node_3	192.0.7.0/24	IS-IS	115	40	192.0.2.1	
Ď− node_4	192.0.10.1/32	Direct	0	0	192.0.10.1	
[▶]- node_5	192.0.11.1/32	IS-IS	115	20	192.0.2.1	
⊅- node 6	192.0.12.1/32	IS-IS	115	30	192.0.2.1	
	192.0.13.1/32	IS-IS	115	30	192.0.2.1	
	192.0.14.1/32	IS-IS	115	40	192.0.2.1	
	192.0.15.1/32	IS-IS	115	50	192.0.2.1	
	Gateway of last	not set				
					└────────────────	
Ignore views						
Results Generated: 10:21:40 Jan 25 2007						

Figure 2. Viewing the results.

DES simulation attributes

Before running a simulation, the simulation parameters should be set to match the following figure (figure 3). Set the *ARP* and *ISIS Sim efficiency* -parameters to *disabled* and set the *ISIS Stop Time* (*seconds*) to whatever your simulation duration is (1 hour is OK). These parameters do not stay between scenarios so remember to check them before starting a simulation.

*Configure/Run DES: Valmis_MPLS_BGP_IS	IS_verkko-ISISverkko_ping_reconrdroute	
Duration: 1 hour(s)		
values per statistic: 100		
Global attributes Reports		
Attribute	Value	
▶ IP		
▶ IP Routing		
MANET		
▶ MPLS		
Simulation Efficiency		
ARP Sim Efficiency	Disabled	
ATM SSCOP Sim Efficiency Moon		
ATM Sim Efficiency (None)	Disabled	
BGP Sim Efficiency Mode	Enabled	
EIGRP Sim Efficiency	Enabled	
EIGRP Stop Time (seconds)	365	
IGMP Sim Efficiency	Enabled	
IGRP Sim Efficiency	Enabled	
IGRP Stop Time (seconds)	365	
IPv6 ND Simulation Efficiency	Disabled	
ISIS Sim Efficiency	Disabled	
ISIS Stop Time (seconds)	3600	
LACP Simulation Efficiency		
OSPF Sim Efficiency	Enabled	
OSPF Stop Time (seconds)	260	
PIM-SM Sim Efficiency	Enabled	
RIP Sim Efficiency	Enabled	
RIP Stop Time (seconds)	65	
RIPng Sim Efficiency	Enabled	
RIPng Stop Time (seconds)	65	
RSVP Sim Efficiency	Enabled	
Compound_cell_enabled	Disabled	
Detailed Bun Cancel Apply Help		
<u></u>		

Figure 3. DES settings.