

OSPF Lab

Connecting to a Backbone

KTHNOC/SUNET

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This lab covers using the backbone net. You will connect your quad's nets to the backbone, thereby making them accessible to all other nets connected to the backbone.

Save the commands you commit in the router in your favourite text-editor (e.g. emacs, vi). By saving the configuration you can run the same commands several times with small modifications using the notorious copy and paste technique between windows. Make sure you save your buffer regularly so you can recover from “disasters”.

1 Setup

- Connect all four routers to each other using the serial cables.
- Split up your local /27 network into four /29 nets, and allocate them to your e0 interface and to three loopback interfaces.
- Tie your networks to your OSPF process so that any workstation can ping any other network in your group. Note that all networks should be assigned to area 0.
- Study your neighbour's advertized loopback ip networks. They should be configured as /29s, but they are /32s in your database. Why is this?

2 Connecting to the world

In this section, you will connect your quad to the “world”, and criticise each others setups. Note: Be polite to one another, do not hassle each other about “bugs” unless you are absolutely sure that it is a mistake. If unsure, ask your classmates first if they also think it is a mistake.

- Open a new terminal window, telnet to your router, and debug all spf events (`debug ip ospf spf`). Why should you do this via ethernet and not via the serial console cable?
- Before continuing- make sure your configuration is correct!
- Connect RTX1's e1 interface to the central hub and watch the new LSAs come flooding into your router.
- What happens when two networks (with two DRs) are connected to each other?
- Try to find some errors in other groups configuration by looking in your database.
- What conclusions can you draw from this lab?