**Task list for C 3 of the 42 WorldSkills Competition**

**“University”** is a power management research center for the whole world. They do conventional and green power research. Their goal is to share with the world discoveries that make for more power in a very green efficient way.

Their research has helped develop the use of less power needed in the home plus more electrical power being produced from less fossil fuels and more from renewable resources. Storage of power is very important to how renewable sources can be used so battery research and transportation is part of their work.

Your job is to connect the internal University network and services to the ISP network. You will be using NAT, OSPF, and configure an IP Phone. All of this is to assist in the Universities research on power production and delivery.

NOTE: NO PASSWORDS ARE USED on the routers or switches, you will not be able to open the datacenter clusters.

TASK 1

* Add an IP phone to the Battery Storage research area. Connect into the Engineering-SW port FA 0/3 .
* Assign line (Phone number 1102)

TASK2

* Configure NAT on the University Router
* Only public network is 192.0.2.0
* Associate the following IPs as a Static NAT
  + 192.168.4.5 to 192.0.2.69
  + 192.168.4.3 to 192.0.2.67
  + 192.168.4.2 to 192.0.2.66
  + 192.168.4.4 to 192.0.2.68
  + 192.168.2.1 to 192.0.2.70
  + 192.168.2.1 to 192.0.2.80

As you will discover by looking these IP are associated to the University servers so therefore allowing access from outside of the University network.

TASK3

* Configure EIGRP on University and Engineering routers.
* Autonomous system number 64000

TASK4

* Configure OSPF on ISP1, ISP2, ISP3, ISP4 routers
* ISP1, ISP2, ISP3 area 0
* ISP4 area 1

TASK5

* Ping from the Home Laptop to the following
  + [www.university.edu](http://www.university.edu)
  + [www.isp.com](http://www.isp.com)
* Ping from the CE-PC1 to the following
  + [www.university.edu](http://www.university.edu)
  + [www.isp.com](http://www.isp.com)

TASK6

* CE-PC1 mail client
  + email.university.edu
  + username:user1 password cisco
* Home Laptop mail client
  + email.isp.com
  + username: user2
  + password: skills
* Send an email from CE-PC1 to Home Laptop

When the email can be received by the Home Laptop and the pings are completed to the servers you are completed with this activity.

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Services on ISP and University Enterprise

|  |  |  |
| --- | --- | --- |
| Service Name | Information | IP Address |
| email | Email SMTP/POP3 mail.university.edu  Accounts: user1, user2  Password: cisco | 192.168.4.3 |
| ftp/tftp | ftp.univesity.edu  Account: cisco  Password: cisco | 192.168.4.2 |
| DNS | DNS Entries:  email.university.edu 192.168.4.3  ftp.university.edu 192.168.4.2  email.isp.com 192.0.2.131  ftp.isp.com 192.10.2.132  www.isp.com 192.0.2.133  www.university.edu 192.168.4.5 | 192.168.4.4 |
| HTTP | www.university.edu | 192.168.4.5 |
| Email | mail.isp.com  Accounts: user1, user2  Password: skills | 192.0.2.131 |

**Text on** [**www.isp.com**](http://www.isp.com) **website**

WWW.ISP:COM

Welcome to World Skills Leipzig 2013.

This is the outside network.

**Text on** [**www.university.edu**](http://www.university.edu)

University.edu

Welcome to the energy research area of University.edu

Proud sponsor of the World Skills Leipzig 2013 Event.