



# WorldSkills Competition 2003

19 to 22 July 2003 in St. Gallen, Switzerland

## Day 3

Trade 39

IT PC and Network Support

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To be filled out by the candidate

**Competitor**

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**Date**

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**Start time**

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**Stop time**

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**Signature**

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To be filled out by the judges

**Overall score**

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**Judge 1**

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**Judge2**

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**Read all of the tasks carefully. It is up to you to decide which order you do them.**

## **PART 1**

The boss of Trade 39 has decided to build up a webserver. This web server will also be acting as the PDC for the company. The IT management has decided that they will be using a Linux server.

Linux Server:

- Install RAID 1 utilising the entire capacity of the hard disks.
- IP is 192.168.x.10 / mask: 255.255.255.0 (x being your work area number eg: 192.168.5.10)
- Servers name : server1.trade39.com
- Install Samba domain
- Install x-windows but boot to text mode
- Install DNS
- Install Apache Web Server
- DHCP – should serve the whole available IP (192.168.x.0) network (reserve..)
- Define Disk quotas. You should limit each account's disk usage for it's own home directory to 10MB.
- Telnet will not be installed
- Audio is not needed at all on the server



## Windows 2000 Professional

- The password for the administrator account is 'password'
- IP from DHCP server
- Workstation name: wks.trade39.com
- The workstation should be joined to the Samba domain.
- Install the scanner.
- Scan your Identity card.
- Install IIS for development and testing of the web pages and create 3 simple web sites that consist of:
  - [www.trade39.com](http://www.trade39.com) – Content: The scanned picture of your Identity Card
  - [intra.trade39.com](http://intra.trade39.com) – Content: Your name
  - [extra.trade39.com](http://extra.trade39.com) – Content: Your Own country's name



The Chairman of the Trade 39 has heard rumors about external threats, such as hackers intruding networks, and therefore you need to emphasize on the system security while building up the environment.

- There should only be three users in the server, with an interactive login account.

<b><i>Username</i></b>	<b><i>Password</i></b>	<b><i>Comments/user rights</i></b>
webadmin	admin	Full control (user rights of administrator), log on locally user rights to both the server and workstation 1. Access to web pages over the file shares
jenbell	boss39	Normal Linux user.
michaelg	secret39	Normal Linux User.



The domain for the company is trade39.com. The server should have three virtual hosts, www.trade39.com, intra.trade39.com and extra.trade39.com. jenbell@trade39.com works as a webmaster for all of these three hosts.

- intra.trade39.com: Only to be accessed via the company intranet
- extra.trade39.com: Accessible via intranet and from your subcontractors networks
- www.trade39.com: Accessible via all networks.
- The host trade39.com needs to provide same content as [www.trade39.com](http://www.trade39.com)

SMTP server for trade39.com-domain is mail.trade39.com, which is handled by another company.





## PART 2

The system needs to be more reliable and customized. Your task is now configure the Linux server and to build up :

- The three web pages that you have made on the Windows 2000 should be copied to the Linux server within 5 minutes from the content being published. This task needs to be automated and controlled via the Linux server.
- Install Squid Web proxy (normal)
- Install VNC server to the Linux machine and the viewer to the Windows 2000 Professional machine to enable connection to the server from the workstation. Connection password should be: "vncpasswd".
- Install Wu-FTP so that you can only use it between 8.00-17.00
- The CD burner is to be utilized as a backup device. Install it in the linux server and burn your websites to the CD.
- Firewall: Configure the firewall in such a way, that FTP, DNS, HTTP, SSH and VNC are accessible from outside. Connections made from the Linux box must not be restricted. Ping must be allowed from outside. To countermeasure denial of service (dos) connection attempt rate should be limited to one per second.
- There are 1005 workstations within your company and they need to be found from your DNS under name pcxxxx.trade39.com, where the xxxx is a number between 1 and 1005. Use the address space of 10.2.0.0/16 for this.



*This part of the competition is to be attempted in the last hour of day three. You may continue with any other unfinished work when you have attempted this section.*

For added security the managing director (Jen Bell) has decided that a web cam should be installed on the Linux server. The images from the webcam can be accessed via the webserver so that access to the server can be monitored.

- Install and configure Web cam and associated software (the microphone function of this web cam is not needed).
  1. Load video driver / module
  2. Load the PWC module
  3. Install the video capture program: (vgrabj-0.9.3.tar.gz) from the CD supplied.