

# World Skills Competition

## Trade 39:

### IT PC and Network Support

## Day 2 Competition

- Small Business -

Competitor Name: \_\_\_\_\_

Country Code: \_\_\_\_\_

## **CONTENTS**

This Test Project consists of the following documentation/files:

1. TD39\_38FI\_Day2\_EN

## **DESCRIPTION OF PROJECT AND TASKS**

### **INTRODUCTION**

*You have recently been employed by Worldskills Hawaii to support and expand their current computer infrastructure. The company currently has 20 client desktops.*

*They have recently bought a computer but cannot afford an operating system. They have thus decided to use Linux. This computer will need to be used to act as a router to their newly installed internet connection.*

*This computer came preinstalled but the person who installed it did not have any clue.*

So one of your tasks will be to correct this and configure the server. You will be required to complete other tasks as the day progresses.

**READ THROUGH THE ENTIRE SCRIPT BEFORE STARTING AND YOU MAY WORK  
IN ANY ORDER.**

**PLAN CAREFULLY!**

**YOU ALSO HAVE A FINAL PART 4 WHICH YOU WILL RECEIVE AFTER LUNCH.**

Please refer to appendix A for the future plans for the company's network.

## DESCRIPTION OF PROJECT AND TASKS

### INSTRUCTIONS TO THE COMPETITOR

#### **PART 1**

##### Company Current Requirements

- Linux\_XX should route to the internet. The company can also only afford one external IP Address, please configure for this purpose.
- Linux\_XX should also be used for DNS cache.

{Where XX is your country code}

Linux is already installed but you must modify this installation.

Username for Linux: root

Password: P@ssword100

To access the Debian Installation Server, set your computer to use the IP address 10.3.x.2 / 24 with default gateway in 10.3.x.1. Apt Server IP Address is 10.2.1.10:80 or 10.2.1.11:80. {Where x is your station number}

The company has done well over the last few months thanks to your good work. You are now allowed to buy a 'real' server and install it as a Domain Controller.

##### Company's new Requirements

- DC\_XX will be a domain controller for **hawaii.skills.com**.
- DC\_XX will provide DHCP and DNS to the network.
- The company only wants **one** method of name resolution.
- You must create users with home folders.

The server has 4 SCSI drives. Windows is preinstalled on an array. Two of the drives are unused. Create a new fault tolerant array for storing data on the unused drives. This array should have two partitions of 10GB each.

Next you have to install Active Directory using an 'answer file' and print out this file.  
{If you can't do it in this way, install it manually. If you do not provide the answer file you will lose points. If you need help use "ref.chm" on the windows CD.}

The administrator password is now blank and it should be set to: P@ssword100

The company has no older DC's and the domain controller should include all possible features available in 2003 domain.

Configure Microsoft DNS to resolve internal names **only**. External name queries should first be sent to the Microsoft server and then to the Linux server before being resolved. The DNS zone should be secure and should only accept registration from members of the domain.

Clients should register automatically in DNS within their own suffix.

Configure the Linux server as a secondary DNS server for the internal namespace, to provide redundancy.

DHCP should be installed and used to provide leases within the range 192.168.1.10 to 192.168.1.150 including all other settings needed.

Desktop computers should have their leases renewed once a day.

Your boss's computer (MAC address: 00-11-43-C9-6C-E9) should always receive the same IP Address and use DNS on either the Microsoft and Linux DNS server.

## PART 2

The largest part of your job is now to add all the users in your company, you would like to do this in the easiest and quickest way possible.

Please create and print out a batch file containing the commands you have used to create the parts of the below table. Save this script as “C:\day2script.bat” on DC\_XX. If you have used another method please print out a sentence detailing this method. (Do this when you have installed your printer.)

The user names should be:

- “Trainer1” to “Trainer5” as members of the group “Training”.
- “SalesMan1” to “SalesMan7” as members of the group “Sales”.
- “Researcher1” to “Researcher5” as members of the group “Research”.
- “Manager1” to “Manager3” as members of the group “Managers”.

**All with the password of “P@ssword100”.**

On DC\_XX you need to create a few shares for your 20 users to use. These must not be stored on the OS partition.

Folder / Group Name	Share Name	Security Group	OU	Members	Profile
Training	Training	Domain Local	TRAINING	5 users	None
Sales	Sales	Global	SALES	7 users	Mandatory
Research	Research (Hidden)	Global	RESEARCH	5 users	None
Managers	Managers	Universal	MANAGERS	3 users	Roaming

- Members should not belong to more than one of these groups.
- Only member of the groups and administrators should be able to access the folders of their own group’s name.
- Home folder should be created for all users. Each user should have full access just to their own folder and *not* any access to other user’s folders.

*The management of Worldskills Hawaii has agreed upon a policy that should be used on this network.*

- The users in the training OU should not be able to use the command prompt or the control panel and they should only be able to logoff but not shutdown.
- Create a new OU called “Kiosk” with a new user named “Kiosk”. Apply a new policy that will make only internet explorer and outlook express available and when the Kiosk user logs on only these two programs are accessible.

### **PART 3**

*A few months have passed and the company is ready to expand again. You have ordered a new server. You also have a previously created ghost image on a hard disk that you will use to install windows. However you are not sure if this image is working or not. You will have to fix problems before you can continue. You may ask for help but it will cost you, or you may reinstall the operating system.*

#### Company Requirements for this server

- Use Norton Ghost to install OS from image.
- IIS to host the company’s secure intranet website.
- A certificate server to allow this secure website to function.
- This server will act as the print server for the company.
- To automate windows updates, this server will act as a **Windows Software Update Services (WSUS)** server.

Use Norton ghost to create a floppy which will allow you to restore an image from the second harddisk to the server. Label this floppy and give to an expert. If you cannot do this ask for help and you will loose points.

The server should be named MS\_XX and belong to the company's domain. {Where XX is your country code}

Install a stand alone certificate service (MS\_XX) and issue a certificate to IIS for use with the secure website **only**.

Install IIS (MS\_XX) and use the files provided on CD "Day2" to create a **new** website. Store these files on "D:\website". Once the site is working correctly you will need to secure this site (HTTPS **only**). This site should be accessible from all clients using "www.hawaii.skills.com" or "www".

Setup the printer provided on this server and make it available to the whole company by using Internet Printing Protocol. This should be installed on the default website.

Install and setup Windows Software Update Server from the CD "Day2" provided onto a new website called WSUS within IIS. Setup WSUS to receive its updates from an upstream server with the IP address 10.2.1.12. The server should approve all update automatically for ALL Microsoft products and update types except drivers. The Windows XP SP2 update should only be detected and not installed. The final step to ensure WSUS functions is to deploy these setting to the clients via group policy.

The F-Secure policy manager application should be installed on MS\_XX. F-Secure antivirus engine should then be deployed to DC\_XX. Use the password of "TRADE39" for this application.

**YOU MUST DEMONSTRATE THIS. BEFORE DEPLOYING THE PACKAGE RAISE YOUR HAND SO YOU CAN SHOW THE EXPERTS.**

**Remember you have another short section which we will give you after lunch. You may continue working on any section after lunch.**

## **PART 4 (After lunch)**

*Once again your IT budget has been increased and you decide to use the money to upgrade your Domain Controller. This upgrade will have to include a tape drive and a backup plan to protect your information.*

### Upgrades needed

- Memory upgrade.
- Extra SCSI Hard disk as hot spare.
- Internal Tape drive.

Install the extra Hard disk and assign it as a hot spare within the RAID controller.

Install the tape drive onto Adaptec SCSI controller card and proceed to plan and perform a backup.

You will now have to implement a backup plan that will backup the Domain Controller's drive D and its system state at 12pm automatically. This backup should include the "/usr/local" directory on Linux\_XX. Create a backup scheme that will minimize the time it takes to run a backup without using more than two tapes to restore.

Finally for your own benefit you wish to enable remote administration on DC\_XX. This must be done over a secure PPTP tunnel using TSWeb with MS\_XX as the VPN server. The range that the VPN server hands out should be 172.16.0.1 – 172.16.0.10 and TSWeb should only accept connections from the VPN range. TSWeb must be installed on a new website called "TSWeb". {Use windows help files to complete this task if required.}

Congratulations on making it this far. We hope you enjoyed Day 2. Now go and get some rest.



## **EQUIPMENT, MACHINERY, INSTALLATIONS AND MATERIALS REQUIRED**

	Linux_XX	MS_XX	DC_XX
CPU(s)	1	1	1 (max 2)
HDD	2	2	5
RAM	1GB	1GB	1GB (upgradeable)
NIC	2	1	1
OS	Debian 3.1	Server 2003 Ent	Server 2003 Ent
Raid Controller	Onboard SATA	Onboard SATA	SCSI Card
SCSI Controller	-	-	Yes

## **MARKS**

### **Competitor Marking Scheme**

Linux Router	1,50
Hardware work	2,00
Domain Controller Active Directory and Services	9,00
Member server installation, repair and services.	9,00
Antivirus, Backup and Remote admin	3,50
	25,00

## **OTHER**

## Appendix A

{XX is your country code}

