

WorldSkills Jamaica National Skills Competition

April 23 to 25, 2008

Test Project – IT PC Support and Networking

IT PC Support and Networking

Final Test Project



Test Project – IT PC Support and Networking

TEST PROJECT – IT PC Support and Networking

WorldSkills Jamaica Competition April 24 to 25, 2008

General Instructions

1. Each competitor will be required to carry out the test project as specified and will be available on the website three months before the competition. www.worldskillsjamaica.org
2. Each competitor will be required to carry out the test project as specified on the schedule to be handed out two days before the competition.
3. The time will be specified according to the test project.
4. 20% change will be made to the test project on the day of the competition where a new test project will be issued to the competitor.
5. All materials, ingredients, large equipment and specialized hand tools will be provided.
- 6. Please note that all competitors should provide their own small tools and utensils.**
7. Competitors are expected to identify all equipment/ materials/ingredients needed and submit list to the competitions committee no later than March 7, 2008.
8. Debriefings will also be conducted for all competitors on April 22, 2008.
9. All competitors will get an opportunity to arrange work areas the day before the competition. Where applicable competitors for the second day will arrange their work areas on the evening of day one. Competitors who fall in the second shift will get an opportunity to do their preparation at offsite locations (to be decided) where necessary.
- 10. Competitors and coaches are expected to find their way to the competition village on April 22, 2008 and to depart back home on April 26, 2008**
- 11. Transportation will be provided at designated times for all competitors and coaches to and from the competition venue.**
- 12. All coaches will play the role of experts (judges) for the competition**
- 13. Accommodation and meals will be provided for all competitors**

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- 14. Accommodation will be provided for coaches only.**
- 15. All other persons that support the competitors will need to make their own accommodation arrangements.**
- 16. Lunch and light refreshment only will be provided for coaches, (experts), workshop supervisors, national trade managers and volunteers.**
17. All competitors should be present for the opening ceremony along with their coaches.
18. Rehearsal for the opening ceremony will be held on the evening of April 22, 2008 in the Indoor Sports Centre.
19. Competitors are not allowed out of the competition village unless permission is granted by the dorm master.
20. All competitors are required to register at the competition village to qualify for entry into the competition.
21. Special permission must be granted if competitors need to reside off campus.

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NOTE:

Include the number of RIUS ends given to each competitor.

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Time: 4 hr. 00mins.

ASSEMBLE AND LOAD OPERATING SYSTEM & BUILD PEER TO PEER NETWORK

Section A - 1 ½ hrs

1. Complete the World Skills inventory sheet and assemble the PC

Objectives

The candidate will be required to:

- Identify the type of computer case to be used, the form factor of the unit, and the voltage selector switch on the power supply.
- Make an inventory of all the components that will be installed in the computer case.
- Assemble a PC using the components/ field replacements units provided.
- Set up a Small Network, Using Server with NOS (Windows 2000 Server)
- Install and Configure DHCP
- Configure DNS
- Create and Configure Active Directory Users and Groups
- Domain Security Policy
- Adding client PC to Domain
- Sharing Folders and Mapping Drives

Materials/ Equipment

The following are required for this exercise:

- ESD wrist strap
- Tool kit and screws
- Computer case with power supply
- Motherboard standoffs and screws
- Motherboard & manual
- CD-ROM, Sound Card, Modem, NIC, RAM, Hard Drive with IDE Cable, Floppy Drive with Cable,
- Devices that will not be installed yet, but are referenced:
- Mouse, Keyboard, Monitor

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Scenario

The student is assembling a personal computer for World Skills, and is ready to prepare the case for the installation of the motherboard. Set up a small networking with one server using Windows 2000 Server.

Procedures

Be sure to wear the antistatic wrist strap during the entire installation process. One end should be looped snugly around the wrist, with the other end attached to an unpainted metallic part of the computer case. This will prevent electrostatic discharge, which can be extremely hazardous to computer devices.

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Step 1

- The first step in the assembly process is to create an inventory of all computer components that will be installed into the computer.
- Lay out the computer components that will be used for this exercise.
- Gather all the information necessary to fill out the inventory sheet below.

Computer Identification – Inventory Sheet A

Name: _____

Number: _____

Case

Number of 3.5" bays _____ 5.25" bays _____

Manufacturer: _____

Motherboard

Manufacturer: _____

Model: _____

Bus Speed _____ MHz

Form Factor _____ AT _____ ATX

Chipset Manufacturer: _____

Model: _____

BIOS Manufacturer: _____

Version: _____

Does the CPU use a socket or a slot? _____

How many CPU socket/slots are there? _____

How many ISA slots are there? _____

How many PCI slots are there? _____

How many EIDE connectors are there? _____

How many floppy connectors are there? _____

How many serial ports are there? _____

How many parallel ports are there? _____

Is there an AGP slot? _____

How many USB ports are there? _____

How many other ports or slots are there? _____

What kind(s) are they? _____

CPU

Manufacturer: _____

Model: _____

Speed _____ MHz

Memory

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_____ 30-pin SIMMs _____ 72-pin SIMMs _____ 168-pin DIMMs _____ 160 pin RIMMs _____
184-pin RIMMs _____ Others: _____

Computer Identification – Inventory Sheet B

How many memory slots are there? _____

What is the fastest type of memory supported? _____

What is the maximum memory supported? _____

Hard Drive

Manufacturer: _____

Model: _____ Size _____

Cylinders _____ Heads _____

SPT _____

Interface Type _____ IDE _____ SCSI

CD-ROM

Manufacturer: _____

Model: _____ Speed: _____ Interface

Type _____ IDE _____ SCSI

Floppy Disk Drive

Manufacturer: _____

Monitor

Manufacturer: _____

Model Number: _____

Video Card

Manufacturer: _____

Model: _____

Memory _____ MB ISA _____

PCI _____ On Board _____

Sound Card

Manufacturer: _____ Model: _____

ISA _____ PCI _____ On Board _____

Mouse

Type _____ PS/2 _____ Serial

_____ USB

Keyboard

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Connector _____ 5-pin DIN _____ 6-pin mini DIN _____ USB

Power Supply

AT _____ ATX _____ Other _____ Power Supply Wattage _____

Step 2

Examine the screws that will be used for the case.

Are the screws Phillips, Flathead, Posidriver, or Torx? _____

Examine the computer case. Is it an AT or ATX case? _____

Briefly describe the difference between an AT and an ATX case:

Is the case a desktop, mini-tower, mid-tower, or a full tower?

Step 3

- Attach the motherboard standoffs to the case. Standoffs are small pegs made of a non-conductive material that helps avoid short circuits by preventing the motherboard from touching the case. Look at the holes on the motherboard to help place the standoffs in the proper locations.
- Install field replacement units

When this section is completed the judges will assess the work done to ensure that the occupational health and safety measures were carried out.

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Section B - 2 ½ hrs

Objectives

The candidate will be required to:

- Set boot sequence
- Install Operating System (**Windows 2000 Server**)
- Create and delete partitions
- Load drivers
- Install and Configure DHCP
- Configure DNS
- Create and Configure Active Directory Users and Groups
- Sharing Folders and Mapping Drives
- Configure Domain Security Policy
- Adding client PC to Domain
- Terminate cables
- Dynamically configure TCP/IP settings on host
- Logon to domain using Domain Users
- Back up File

Materials / Equipment

The following are required for this exercise:

- Cables
- Networking Kit
- RJ 45 ends
- Assembled Computer – from Section A
- Windows 2000 Server CD
- CD with Sound, LAN, and Video drivers
- 2 PCs – with Operating System (Windows 2000 Professional and or Windows XP Professional) Installed

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Tasks:

1. Set the Boot sequence in the order as shown below:
 - CD-ROM
 - IDE0/Hard Drive
 - Floppy
2. Install Windows 2000 Server
3. Delete all existing partition
4. Create **2** partitions [equal if possible]
5. Format the First Partition using **NTFS**
6. Install Windows 2000 Server on the *First Partition* [NTFS]
7. Computer name: **ComputerXX** where XX represent your computer number.
8. Create an administrator account with password 123456 **user must type password to log on**
9. Load the following Drivers:
 - *Sound*
 - *LAN*
 - *Video*
10. Complete Activities listed in Document **A1** & Document **A2**
11. Build the appropriate cables to connect the two PCs to the Network.
12. Add the client machines to the **Skills2008** Domain
13. Allow for Dynamical assignment of IP Address to the two PCs
14. Format The Create Partition on the Server using the Un-partition Space
15. [Perform Quick Format using NTFS]
16. Copy the files given to the appropriate **shared folders** on the **Server**.
JUDGES WILL PROVIDE PARTITIPANTS WILL FILES
17. Back up **My Documents** on the **Server** to the newly formatted drive.
18. Perform necessary dry-run test.

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Document A1

Create a small network with a Windows 2000 Server

You are required to create a small network of three (3) computers, two client computers (Windows 2000 Professional and or Windows XP Professional) and one server (running Windows 2000 Server). Use a switch and appropriate cables to network the computers.

1. Rename the client computers to **Comp1** & **Comp2**
2. Rename the computer with the Windows 2000 Server OS to **Server**
3. Change the Administrator Password on the **Server** to **OneGod**

Configure Active Directory on Server using the following guidelines

4. Domain Name: **Skills2008.com**
5. Netbios Name: **Skills2008**
6. Database Location: **C:\WINNT\NTDS**
7. Log Location: **C:\WINNT\NTDS**
8. Folder Location: **C:\WINNT\SYSVOL**
9. Directory Services Restore Mode Administrator Password: **654321**

Install DHCP Server

10. Statically Assign the IP Address on the **Server**

IP Address 10.0.0.1
Default Subnet Mask
Default Gateway 10.0.0.1

Configure DHCP Server with the following guidelines

11. Scope Name: **Skills2008-LAN**
12. Description: **Skills2008 Jamaica (Region 3)**
13. The range of addresses that the scope distributes is: Start IP address: **10.0.0.2** & End IP address: **10.0.0.100**; Length: **24**
14. Exclusions: Start IP address: **10.0.0.2** & End IP address: **10.0.0.50**
15. Lease duration **4** days.
16. Complete the rest of the wizard with the appropriate information and ensure that the scope is authorized.

Create & Share the following folders in My Document on the Server

17. jbryant | kdaley | sdowdie | lebanks | nfyne | dmarriott | mhipps |

**** Configure Security Option on the Folders in order to allow each user to access their shared folder****

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Create the following Active Directory Users

Document A2

- **PASSWORD NEVER EXPIRE**
- **User should be prompted to change their password at their first login**
- **Please re-use initial password or record new password for judges to perform test**

Firstname	Lastname	Username	Password	Log on to	Connect to	Drive Letter	Restrictions
Jermaine	Bryant	jbryant	Abcs123456Ks	Comp1	\\server\jbryant	M	Cannot log in on Weekends
Kenny	Daley	kdaley	Abcs123456Ks	Both	\\server\kdaley	M	
Shawn	Dowdie	sdowdie	Abcs123456Ks	Comp2	\\server\sdowdie	M	Sessions expire after 2 hours
Linton	Ebanks	lebanks	Abcs123456Ks	Both	\\server\lebanks	M	
Nicholas	Fyne	nfyne	Abcs123456Ks	Both	\\server\nfyne	M	
Demahj	Marriott	dmarriott	Abcs123456Ks	Both	\\server\dmariott	M	

Enable the following Password Policies:

INTRUCTION

Keep **Password History** for next **32 Days**

Password must be **renewed** after **21 Days**, however user can **change password** after **11 days**

Password must have **at least 6 characters** and must be complex (*enforce encryption*)

If a user enters an invalid password for more than **three attempts**, then the system must lock the user out for **30 Minutes**, the resets the password automatically to the original settings. The administrator however can reset the password on or before the 30 minutes.

OBJECTIVE MARKING

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FORM 5

SKILLS JAMAICA 2008

Skill Area: IT PC Support and NETWORK

Competitor # _____ Competitor Name _____

Criterion #	Aspect of Criterion Description	Mark allotted for objective marking	Total Mark received for objective Marking	Total Mark received for Subjective Marking	Overall Mark Awarded
1					
2					
3					
4					
5					
6					

Total Mark awarded _____

Type of Medal _____

Signatures

Judge 1	Judge 2	Judge 3	Judge 4

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Chief Judge
<i>Date</i>

CIS scoring

All competitors will be scored using the Computer Information System (CIS) – (400 to 600 possible points)

500 – Medallion of excellence

Top three scores will receive gold, then silver, then bronze

SUBJECTIVE MARKING

FORM 5A

SKILLS JAMAICA 2008

Skill Area: IT PC Support and Networking

Competitor # _____ Competitor Name _____

Criterion #	Aspect of Criterion - Description	Judge score (Out of 10)					Mark Awarded
		1	2	3	4	5	
1	Preparation						
2	Selection of material						
3	Use of equipment						
4	Job Knowledge						
5	Material Usage						
6	House Keeping						
7	Safety						

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8	Presentation					
9	Creativity					
10	Originality					

Formula for Subjective Marking total score:

Exclude the highest and the lowest score and find the average of the remaining three.

Total Mark awarded _____

Signatures

Judge 1	Judge 2	Judge 3	Judge 4

Chief Judge
<i>Date</i>

Score for subjective marking should be entered on form 5 for total score.