PEMERINTAH PROVINSI BALI
DINAS PENDIDIKAN PEMUDA DAN OLAH RAGA
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LOMBA KETRAMPILAN SISWA
SEKOLAH MENENGAH KEJURUAN
TINGKAT PROVINSI BALI

Kelompok Teknologi Informasi
Standar WSC

LEMBAR SOAL

Nama Peserta :.....
Nomor Peserta :.....
Asal Sekolah :.....

BIDANG LOMBA
IT - PC And NETWORKING SUPPORT

Part 1 - Task for PC Server and Networking

1. Before assembly PC server, please identify the specification of components below (if available).

No.	Component Name	Manufacturer/Model/Size/Description
1	Casing	
2	Power Supply	
3	Motherboard	
4	CPU	
5	RAM	
6	Harddisk	
7	CD/DVD ROM	
8	Floppy disk	
9	External LAN Card	
10	Mouse	
11	Keyboard	
12	Monitor	

2. List all external components and peripherals that you will used to build a PC system with wired and wireless networking

No.	Component Name	Manufacturer/Model/Size/Description
1		
2		
3		
4		
5		

Part 2 - Preparation for PC Server Assembly

1. List 4 tools (at least) you will use to build a PC and a networking

No.	Tool Name	Function
1		
2		
3		
4		
5		
6		

2. Before you assembly the PC Server, write your major activity plan to assembly components of PC in the boxes below. The box number is the order of the activities.

1.	2.	3
4	5	6
7	8	9
10	11	12

Part 3 - PC Server Assembly

1. Assembly the PC according to your planning at Part 2 and attach all peripherals then boot the PC. Observe the booting process. Follow the safety procedures !
2. Set up your PC BIOS as a preparation to install the Server Operating System to the Harddisk
3. Set BIOS supervisor/user password = **lks2011**
4. If there is a problem with the PC component or peripheral, call the Judge so that could be checked weather it is a hardware problem or configuration problem.
5. Fill in the table below based on information in BIOS:

HDD	……..GB
Installed Memory	……..MB
Processor Speed	……..MHz
Display Adaptor	……..MB

Part 4 - Laptop Client Setup

1. Set up Laptop client using Operating System Windows 7.
   Ensure that all components are correctly installed.
2. Create 2 formatted partitions as follows:
   - C: 30% of harddisk capacity using NTFS partition
   - D: 70% of harddisk capacity using NTFS partition
3. Install network card drivers
4. Please configure Laptop client as follows:
   - Company name : **LKS2011**
   - Organization : **LKS2011**
   - Computer name : **Laptop-x** (x is the competitor's number, example: Laptop-1)
   - User name : **lks2011-x** (x is the competitor's number)
   - User password : **lksx** (x is the competitor's number)
   - IP address WLAN : Automatic from DHCP server

Part 5 - Cabling

1. Make a straighthrough cable with + 2 meters long then give label "**ST-x**" near to each connector (x is competitor's number)
2. Make a straighthrough cable with + 10 meters long then give label " **ST-x**" near to each connector (x is competitor's number)

Part 6 - Network Installation

Setup networks according to the figure 1 below:

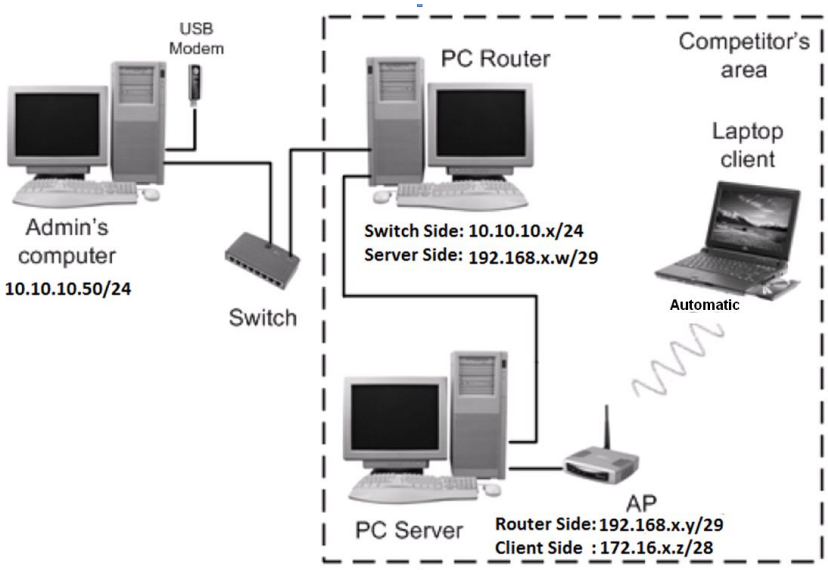


Figure 1. Network topology

Part 9 - Access Point Setup

1. Connect the Access Point to Laptop Client
2. Configure the Wireless Access point as follows:
   - IP address as **172.16. x. z /28** (x is the competitor's number and z is the valid number)
   - WPA-PSK authentication with pre-shared key (**lksxx00000**), xx is the competitor's number
   - SSID as **AP-x** (x is the competitor's number)
   - SSID broadcast "disable"
   - Bridge mode

Part 10 - PC Router Setup

1. Setup PC Router with the operating system Linux Debian 5.
2. Use DVD(s) as installation source. All software packages needed will be gathered from DVD(s).
3. PC Router configuration:
   - Host : **routerx** (x is the competitor's number)
   - IP Address to outside network : **10.10.10.x/24** (x is the competitor's number)
   - IP Address to local network : **192.168. x. w /29** (x is the competitor's number and w is the valid number)
   - Root password : **lks2011**
4. Configure PC Router to connect local network and outside network.
5. Write the modification or configuration you have done in the paper given by Admin's computer .

Part 11 - PC Server Setup

1. Setup PC Server with the operating system Linux Debian 5
2. Use DVD(s) which used to setup PC Router as installation source. All software packages needed will be gathered from DVD(s).
3. PC Server configuration:
   - Host : **serverx** (x is the competitor's number)
   - IP Address of router side : **192.168. x. y /29** (x is the competitor's number and y is the valid number)
   - IP Address of client side : **172.16.x.z /28** (x is the competitor's number and z is the valid number)
   - Root password : **lks2011**

Part 12 - Configure DNS Server

1. Configure DNS Server with domain: http://www.lksx.sch.id (x is the competitor's number).
2. Write the modification or configuration you have done in the paper given by Admin's Computer.

Part 13 - Configure HTTP Server

1. Configure HTTP Server as follow:
   - Support html
   - Support php
   - Index.html: "Welcome to Lomba Keterampilan Siswa Provinsi Bali 2011" (index.html has to be a valid html file)
2. Write the modification or configuration you have done in the paper given by Admin's Computer.

Part 14 - Configure Proxy Server

1. Configure Proxy Server to block the websites listed below. Use the ACL (access control list) to achieve this.
   - www.debian.org
   - www.redhat.org
   - www.google.com
   - www.susefaq.sourceforge.net
   - www.linux.or.id
2. Notebook client must enter username and password to use proxy server using the following credential :
   Username : admin
   Password : admin
3. Configure notebook to use proxy server manually.
4. Write the modification or configuration you have done in the paper given by Admin's Computer.

Part 15 - Configure Mail Server

1. Configure Mail Server as follows:
   - Postfix
   - SMTP no relay
   - Make user client
     - User name : **admin**
     - Password : **admin**
   - E-mail address admin@lksx.sch.id (x is the competitor's number)
   - IMAP/POP
2. Write the modification or configuration you have done in the paper given by Admin's Computer.

Part 16 - Configure Web Mail Server

1. Configure Web Mail Server as follows:
   - Squirrel Mail
   - Domain is http://www.lksx.sch.id/webmail (x is the competitor's number)
2. Write the modification or configuration you have done in the paper given by Admin's Computer.

Part 17 - Configure DHCP Server

1. Fill IP Address of DHCP Server with valid available IP address.
2. Configure laptop client to receive automatic IP address from DHCP server.

Part18 - Configure NTP Server

1. Match your Server time with local time.

Part19 - Configure Firewall

1. Filter only PC server’s IP addres that can connect to internet.
2. Makes web page on PC server accessible from Admin's computer by forward http request from Admin's PC to PC Server